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Graduate/Professional Catalog

General Information - West Virginia University

West Virginia University (https://www.wvu.edu/) (WVU) was founded in 1867 as a result of the 1862 Land-Grant Act, otherwise known as the Morrill Act. As the state's flagship, land-grant university, WVU's mission reflects its dedication to serving the state and citizens of West Virginia through access to higher education, research and scholarship, and comprehensive health sciences. The WVU System, which includes the flagship campus in Morgantown, WVU Institute of Technology in Beckley, and WVU Potomac State in Keyser enrolls approximately 32,000 students, who represent all 55 counties of West Virginia, 50 states and the District of Columbia, and over 100 other countries. West Virginia University is accredited by the Higher Learning Commission (https://www.hlcommission.org/). Many WVU programs hold specialized accreditation.

WVU Morgantown provides programs of instruction through 14 colleges and schools and offers over 190 degree programs at the baccalaureate, master's, doctoral, and professional levels, as well as numerous certificate programs. These programs are offered online and on campuses in Morgantown, Keyser, and Beckley.

WVU Morgantown facilities are built on more than 1,000 acres and include several buildings on the National Register of Historic Places.

The West Virginia University Robert C. Byrd Health Sciences Center (http://home.hsc.wvu.edu/) has five schools serving undergraduate, graduate, and professional students at three locations in Morgantown, Charleston, and Martinsburg.

WVU Potomac State College (https://www.potomacstatecollege.edu/), situated in West Virginia's Eastern Panhandle in Keyser, offers associate and baccalaureate degree programs and serves both residential and commuting students. WVU Institute of Technology (https://www.wvutech.edu/) is located in Beckley, and serves the region and the state by offering technology-intensive baccalaureate degree programs.

The WVU Extension Service (https://extension.wvu.edu/) has offices in all of West Virginia's 55 counties, staffed by county agents. WVU operates experimental farms and forests throughout the state, as well as WVU Jackson's Mill, near Weston, WV, home of West Virginia 4-H camping and the West Virginia Fire Academy.

Visit About WVU (http://about.wvu.edu/) for updated WVU facts and achievements.

In this section:

- WVU Mission (p. 8)
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- Commitment to Diversity, Equity, and Inclusion (p. 9)
- West Virginia University Center for Excellence in Disabilities (p. 9)
- Office of Accessibility Services (p. 9)

WVU Mission

As a land-grant institution, the faculty, staff and students at West Virginia University commit to creating a diverse and inclusive culture that advances education, healthcare and prosperity for all by providing access and opportunity; by advancing high-impact research; and by leading transformation in West Virginia and the world through local, state and global engagement.

WVU Vision

As One West Virginia University, we are purposeful in our studies and our work so that we can partner with our communities-both near and far-to bring needed and valued solutions to real-life problems within the pillars of education, healthcare and prosperity.

WVU Values

Service: We seek opportunities to serve others and are committed to providing the highest quality of service.

Curiosity: We ask questions, seek new opportunities, and change through innovation.

Respect: We are respectful, transparent and inclusive with each other.

Accountability: We perform at our very best every day to create a University that is responsive, efficient and effective.

Appreciation: We support and value each other's contributions as we build a community that is One WVU.

RESEARCH AND SCHOLARSHIP

As West Virginia's flagship research institution, WVU undertakes scholarly activity to improve the lives of West Virginians and others across the globe. WVU is classified as a Doctoral University-Highest Research Activity (R1) in the Carnegie Classification of Institutions of Higher Education.

SERVICE

West Virginia University's land-grant mission underscores its obligation to serve the public and the state of West Virginia by promoting economic development, enhancing the well-being and the quality of life of the people of West Virginia, and increasing opportunities for the citizens of the state through workforce education, lifelong learning, and outreach to every county.

West Virginia University is the only institution in West Virginia–and one of only 6% of institutions nationwide–to earn the Carnegie Foundation for the Advancement of Teaching "Community Engagement Classification."

WVU's dedication to its service mission is manifested through its instructional programs, educational outreach, and initiatives and centers that engage external constituencies and support public service.

WVU Extension Service

The Smith-Lever Act of 1914 created a Cooperative Extension Service for each land-grant institution. The purpose of the Extension Service was to disseminate the findings of the universities' agricultural stations and provide training and programs on home economics and other practical subjects. WVU has sustained its commitment to the state by supporting an Extension Service office with a presence in all of West Virginia's 55 counties, staffed by county agents.

The educational programs and initiatives of the WVU Extension Service (https://extension.wvu.edu/) focus on service to the state and exemplify West Virginia University's commitment to the public good by connecting the knowledge and research of WVU with citizen and community needs. The Extension Service's programs are driven by four major initiatives: (1) 4-H youth development; (2) family and health; (3) agriculture and natural resource education; and (4) community, workforce, and economic development.

Commitment to Diversity, Equity, and Inclusion

West Virginia University is committed to fostering a diverse and inclusive culture by promoting diversity, inclusion, equality, and intercultural and intercommunity outreach. Accordingly, the University does not discriminate on the basis of race, color, national origin, ancestry, age, physical or mental disability, marital or family status, pregnancy, veteran status, service in the uniformed services (as defined in state and federal law), religion, creed, sex, sexual orientation, genetic information, gender identity, or gender expression in the administration of any of its educational programs, activities, or with respect to admission or employment.

In keeping with this commitment, members of the academic community are expected to demonstrate civility and mutual respect for all persons as well as understanding and appreciation for all persons, to express that perspective in every dimension of the institution's life and mission, and to work cooperatively, representing not only the interests of their own groups but also those of the wider community.

Individuals believing they may have been illegally discriminated against by any member of the university community at West Virginia University may file a complaint with the Division of Diversity, Equity, and Inclusion (https://diversity.wvu.edu/).

Center for Excellence in Disabilities

The mission of the WVU CED (http://www.cedwvu.org/) is to improve the lives of West Virginians with disabilities by supporting more diverse, inclusive communities. The WVU CED is a federally-funded center that provides direct clinical and community disability services; training opportunities; a variety of information on best practices, services throughout the state, and policy; and innovative research.

WVU CED is recognized, and trusted, as a leader and innovative agent in a statewide network of individual and community supports that promote respect, inclusiveness, interdependence, and access for everyone.

Office of Accessibility Services

The Office of Accessibility Services (http://accessibilityservices.wvu.edu/) is dedicated to enhancing educational opportunities for students with temporary or permanent disabilities at West Virginia University and all of its campuses. Our team works individually with students to ensure access to University programs and to help them achieve academic success.

Commitment to Assessment

West Virginia University conducts comprehensive and systematic assessment of student learning across all locations and delivery methods. Continuous improvement of student learning is faculty-driven (authentic and embedded), conducted at the course, program, and institutional levels, and grounded in the work of the Provost's Office, the Undergraduate Council, the Graduate Council, the University Assessment Council (UAC), the Assessment Resource Group, and the Teaching and Learning Commons.

UAC members from all WVU locations align assessment with WVU's mission. UAC members collaborate with the Faculty Senate's Curriculum Committee to ensure quality and rigor of academic programs and courses, the Teaching and Assessment Committee to ensure quality and rigor across sections of courses regardless of modality of delivery or location, and the General Education Foundations Committee to conduct assessment of the general education program. The Council works to strengthen the effectiveness of assessment across all programs by:

- Serving as an institutional-level resource for assessment best practices.
- Providing sustained attention on centralized, consistent, and systematic processes and policies across the University to reduce variability in assessment quality and engagement.
- Overseeing, reviewing, and commenting upon program review policies, processes, and reports.
- Facilitating faculty professional development in assessment.
- Providing consulting to departments to enhance their assessment planning and reporting.
- Compiling supporting documentation and evidence of the assessment work at WVU.

In this section:

Governor of West Virginia

- Jim Justice, *Governor*

West Virginia University Board of Governors

- David B. Alvarez, *Chair, Bridgeport*
- J. Thomas Jones, *Vice Chair, Boynton Beach, FL*
- Taunja Willis Miller, *Secretary, Morgantown*
- W. Martson "Marty" Becker*, Charleston*
- Charles L. Capito, Jr., *Charleston*
- Elmer F. Coppoolse, *Bethesda, MD*
- Thomas A. Heywood*, Charleston*
- Dr. Stanley Hileman, *Faculty Representative, Morgantown*
- Lisa A. Martin, *Classified Staff Representative*, *Morgantown*
- Dr. Emily Murphy, *Faculty Representative, Chairperson of the Faculty Senate, Morgantown*
- Richard A. Pill, *Martinsburg*
- *Chase Riggs, Student Representative, West Virginia*
- Edward L. Robinson, *Charleston*
- J. Robert "JR" Rogers, *Ponte Verda Beach, FL*
- Benjamin M. Statler, *Naples, FL*
- Dr. Kimberly Weaver, *Silver Spring, MD*
- William D. Wilmoth, *Wheeling*

*Committee list is effective through July 1, 2020

The West Virginia University Board of Governors (the "Board") was created by the West Virginia Legislature as the governing body of the West Virginia University System, including West Virginia University, West Virginia University Potomac State College, and West Virginia University Institute of Technology (collectively the "University"). The Board has the mission of general supervision and control over the academic and business affairs of the University.

Equal Opportunity/Affirmative Action Institution

West Virginia University is an Equal Opportunity/Affirmative Action Institution. The University does not discriminate on the basis of race, color, national origin, ancestry, age, physical or mental disability, marital or family status, pregnancy, veteran status, services in the uniformed services (as defined in state and federal law), religion, creed, sex, sexual orientation, genetic information, gender identity, or gender expression by the University's non-discrimination policy (BOG Governance Rule 1.6 (https://policies.wvu.edu/finalized-bog-rules/bog-governance-rule-1-6-rule/)) in the administration of any of its educational programs or activities or with respect to admission or employment. Further, faculty, staff, students, and applicants are protected from

retaliation for filing complaints or assisting in an investigation under the University's Equal Opportunity/Affirmative Action Plan. Inquiries regarding the University's non-discrimination policy may be sent to the Division of Diversity, Equity, and Inclusion (https://diversity.wvu.edu/).

West Virginia University Administration

- E. Gordon Gee, *President*
- Maryanne Reed, *Provost and Vice President for Academic Affairs*

Deans

- *Benjamin M. Statler College of Engineering and Mineral Resources*, Pedro J. Magro
- *College of Business and Economics*, Javier Reyes
- *College of Creative Arts*, H. Keith Jackson
- *College of Education and Human Services*, Tracy L. Morris
- *College of Law*, John E. Taylor (Interim)
- *College of Physical Activity and Sport Sciences*, Jack C. Watson
- *Davis College of Agriculture, Natural Resources, and Design*, Darrell W. Donahue
- *Dean of Students*, G. Corey Farris
- *Eberly College of Arts and Sciences*, R. Gregory Dunaway
- *Extension Service,* Jorge H. Atiles
- *Honors College*, Kenneth P. Blemings
- *Reed College of Media*, Diana Martinelli
- *School of Dentistry*, Fotinos Panagakos (Interim)
- *School of Medicine*, Clay Marsh
- *School of Nursing*, Tara Hulsey
- *School of Pharmacy*, William P. Petros
- *School of Public Health*, Jeffrey Coben
- *University Libraries*, Karen Diaz
- *WVU Online and Continuing and Professional Education*, Keith Bailey

Distinguished Professors

- Kashy Aminian, Charles T. Holland Professor in Petroleum and Natural Gas Engineering
- James Anderson, Davis Michael Professor of Forestry and Natural Resources
- Vinay Badhwar, Gordon F. Murray Chair of Cardiothoracic Surgery
- Karl Barth, Samples Professorship of Civil and Environmental Engineering
- Robert M. Bastress, John W. Fisher II Professor of Law
- Debangsu Bhattacharyya, GE Plastics Professor in Chemical and Biomedical Engineering
- Robert E. Blobaum, Eberly Family Distinguished Professor of History
- Forest J. Bowman, Jackson Kelly Professor of Law, Emeritus
- Gregory W. Bowman, William J. Maier, Jr. Dean
- Naomi Boyd, Fred T. Tattershell Chair in Finance
- Laura Brady, Eberly Family Professor of Outstanding Teaching
- John F. Brick, JF Brick Endowed Chair in Neurology
- William I. Brustein, Eberly Family Distinguished Professor of History
- Vincent P. Cardi, Bowles, Rice, McDavid, Graff and Love Professor of Law
- Timothy Carr, Marshall S. Miller Energy Professor of Geology
- Linda M. Carson, Ware Distinguished Professor, Emerita
- Judie F. Charlton, Judie F. Charlton Chair for Glaucoma Outreach
- Shawn A. Chillag, Patricia T. Ayash Distinguished Professorship
- Nigel N. Clark, George B. Berry Chair of Engineering
- Roger Congleton, BB&T Chair of Economics
- Patrick W. Conner, Eberly Centennial Professor in English, Emeritus
- Jody L. Crosno, Joseph E. Antonini Chair in Marketing
- Annie Peng Cui, Kmart Chair in Marketing

- Robert Dailey, Davis Michael Professor of Animal and Nutritional Sciences
- Lisa DeFrank-Cole, Harriet E. Lyon Professorship in Women's and Gender Studies
- Walter Dekeseredy, Anne Deane Carlson Endowed Chair of Social Sciences
- A. Courtney DeVries, John T. and June R. Chambers Chair of Oncology Research
- Lisa DiBartolomeo, Armand E. and Mary W. Singer Professor in the Humanities
- Robert DiClerico, Eberly Family Professor Outstanding Teaching, Emeritus
- Charles R. DiSalvo, Woodrow A. Potesta Professor of Law
- Gregory Dudley, Eberly Family Distinguished Professor of Chemistry
- Richard Dull, GoMart Professor in Accounting Information Systems
- Barry A. Edelstein, Eberly Family Professor of Psychology
- Emma Morton Eggleston, Quad/Graphics Chair in Internal Medicine
- James R. Elkins, Arthur S. Dayton Professor Law
- Eloise Elliott, The Ware Family Distinguished Professorship
- Judith Feinberg, Dr. Edmund B. Flink Chair of Internal Medicine #1
- John W. Fisher, II, William J. Maier Jr. Dean, Emeritus and Robert M. Steptoe and James D. Steptoe Professor of Property Law, Emeritus
- Paula F. Fitzgerald, Nathan Haddad Professor of Business Administration
- Kenneth Fones-Wolf, Stuart and Joyce Robbins Chair in History
- Stephanie Foote, Jackson and Nichols Chair of English
- Mathis P. Frick, O. F. Gabriele Chair of Radiology
- James J. Friedberg, Hale J. and Roscoe P. Posten Professor of Law
- Hota S. GangaRao, Wadsworth Professorship
- Laura Gibson, Alexander B. Osborn Distinguished Professor in Hematological Malignancies Research
- Richard M. Goldberg, Lawrence S. and Jean DeLynn Chair of Oncology
- Alan Goodboy, Peggy Rardin McConnell Chair in Communication Studies
- Rakesh K. Gupta, Berry Chair of Chemical Engineering
- Michael Gutensohn, Ray Marsh and Arthur Pingree Dye Professor
- Joseph D. Hagan, Barnette Professor of Political Science
- Trevor M. Harris, Eberly Family Professor of Geography
- Erik Herron, Eberly Family Professor of Political Science
- John Hu, Statler Chair in Engineering for Natural Gas Utilization
- Tara Hulsey, E. Jane Martin Professor of Nursing
- Glen P. Jackson, Ming Hsieh Teaching Professor of Forensic and Investigative Science
- H. Keith Jackson, Philip J. Faini/Falbo Family Dean of the College of Creative Arts
- Thomas Kammer, Eberly College Centennial Professor, Emeritus
- Vlad Kecojevic, Murray Chair of Mining Engineering
- Alexander Kurov, Fred T. Tattersall Chair in Finance
- Kennon A. Lattal, Eberly College Centennial Professor of Psychology
- Nathan Lerfald, Anthony G. DiBartolomeo Professorship in Medicine
- Lian Li, Robert L. Carroll Chair of Physics
- Xingbo Liu, Statler Endowed Chair of Engineering
- Paul Lockman, Douglas D. Glover Endowed Chair of the Department of Basic Pharmaceutical Sciences
- Anne Marie Lofaso, Arthur B. Hodges Professor of Law
- Yi Luo, Charles E. Lawall Endowed Chair for Energy and the Environment in Mining Engineering
- Joseph Lupo, J. Bernard Schultz Endowed Professor of Art
- Diana Martinelli, Widmeyer Professorship in Public Relations
- Thomas Mauger, Jane McDermott Shott Chair of Ophthalmology
- Marjorie A. McDiarmid, Steptoe and Johnson Professor of Law and Technology
- Patrick C. McGinley, Charles H. Haden, Jr. Professor of Law
- James McGraw, Eberly Family Professor of Biology
- Maura McLaughlin, Eberly Family Distinguished Professor of Physics and Astronomy
- Daniel McNeil, Eberly Family Professor for Outstanding Public Service
- Mark D. Miller, Dana L. & Peggy M. Farnsworth Chair in Educational Psychiatry

- Brijes Mishra, Syd and Felicia Peng Professor of Mining Engineering
- Keith Morris, Ming Hsieh Distinguished Professor of Forensic and Investigative Science
- Tracy Morris, Eberly Family Professorship for Outstanding Teaching
- Scott Myers, Peggy Rardin McConnell Chair of Communication Studies
- R. Osvaldo Navia, Grace Kinney Mead Chair of Geriatrics
- Randy J. Nelson, Hazel Ruby McQuain Chair for Neurological Research
- Steven Neuenschwander, Mabel DeVries Tanner Endowed Professor of Theatre
- Peter Ngan, Branson-Maddrell Endowed Professorship in Orthodontics
- Timothy Nurkiewicz, E. J. Van Liere Medicine Professorship
- Daniel Panaccione, Davis Michael Professor of Plant and Soil Sciences
- Syd S. Peng, Charles E. Lawall Chair in Mining Engineering, Emeritus
- William P. Petros, Gates E. Wigner Endowed Deanship
- Jason Phillips, Eberly Family Professor of Civil War Studies
- Ubolrat Piamjariyakul, WVUH Evidence Based Research Endowed Professorship
- L. Christopher Plein, Eberly Family Professor for Outstanding Public Service
- Joseph Prudomme, Christopher Cline Chair in Orthopedic Surgery
- Ronald Reed, Arthur I. Jacknowitz Chair for Clinical Pharmacy
- Hayne W. Reese, Centennial Professor of Psychology, Emeritus
- Ali Rezai, John D. Rockefeller IV Chair in Neuroscience
- Larry A. Rhodes, James H. Walker, MD Chair of Pediatric Cardiology
- Patricia Rice, Eberly Family Professor for Outstanding Teaching, Emerita
- Bryan Richmond, William J. Maier, Jr. Chair of Research
- Richard A. Riley, Louis F. Tanner Distinguished Professor of Public Accounting
- Terry L. Rose, Ernest L. Hogan Chair of Life Insurance
- J. Michael Ruppert, Jo and Ben Statler Eminent Scholar and Chair, Breast Cancer Research
- Kathleen "Katy" O'Hearn Ryan, Eberly Family Professorship for Outstanding Teaching
- John P. Saldanha, Sears Chair in Global Supply Chain Management
- Arif R. Sarwari, Dr. Edmund B. Flink Chair of Internal Medicine
- Ludwig Christian Schaupp, David W. and Nancy F. Hamstead Professor of Accounting
- Earl Scime, Oleg D. Jefimenko Professor of Physics
- Mohindar Seehra, Eberly Professor in Physics, Emeritus
- Partho P. Sengupta, Abnash C. Jain Chair in Cardiology
- Sunil Sharma, N. Leroy Lapp Endowed Professorship
- Kenneth Showalter, C. Eugene Bennett Distinguished Chair in Chemistry
- James Simpkins, Barbara B. Highland Chair in Stroke
- Gordon Smith, Stuart and Joyce Robbins Distinguished Professor in Epidemiology
- Gay Stewart, Eberly Professor of STEM Education
- Donley Studlar, Eberly Family Professor of Political Science, Emeritus
- Timothy Sweet, Eberly Professor of American Literature
- John Taylor, Jackson Kelly Professor of Law
- Richard Turton, Russell and Ruth Bolton WVU Professorship for Outstanding Teaching
- Stephen Valentine, Eberly Family Professor of Chemistry
- Kung Wang, Eberly Family Professorship of Chemistry
- Bryan Weaver, Dr. Edward C. Armbrecht Oral and Maxillofacial Surgery Professorship
- Alison Wilson, Skewes Family Chair for Trauma
- Charles Yuill, Davis Michael Professor of Design and Community Development
- John Zaniewski, Asphalt Technology Professorship
- C. Q. Zhang, Eberly Family Professorship of Mathematics
- Sam Zizzi, Dr. Pat Fehl Endowed Professor

Academic and Professional Standards

Academic Rights, Penalties, and Appeals

The policies described in this section are based on the Board of Governors Rules and Policies (https://policies.wvu.edu/finalized-bog-rules/) **Academics Rule 2.5, Student Rights and Responsibilities. This section expands the general policy to include procedures for undergraduate, graduate, and professional students at WVU (including the divisional campuses in Beckley and Keyser, but subject to exclusions as defined in individual policies).**

A student, by voluntarily accepting admission to West Virginia University (WVU) or enrolling in a class or course of study offered by WVU, accepts the academic requirements and criteria of the institution. Normally students may finish a program of study according to the requirements under which they were admitted to the program. However, requirements are subject to change at any time with reasonable notice provided to students. It is the student's responsibility to fulfill coursework and degree or certificate requirements and to know and meet criteria for satisfactory academic progress and completion of the program. Students are expected to adhere to academic requirements and standards in all academic settings, such as classrooms, laboratories, and clinics, and during any activities that are part of academic requirements. Further, WVU students are citizens of a broader academic community. As such, the University expects that every member of its academic community share its historic and traditional commitment to honesty, integrity, and the search for truth. To meet these standards, academic dishonesty is prohibited and is subject to both academic and disciplinary penalties. Information on these penalties, as well as all associated procedures, are found in the West Virginia University Academic Integrity Policy (https://academicintegrity.wvu.edu/policies/student-academic-integrity/). Please note that, to the extent there is any inconsistency with the language in the catalog and the BOG Academics Rule 2.5 or the WVU Policy on Student Academic Integrity, the BOG Rule and the WVU Policy govern; please refer to the BOG Rule and WVU Policy for the most current language.

Any question of interpretation regarding student rights and responsibilities, academic penalties, or appeal processes for final grades or other academic penalties shall be referred to the Provost and Vice President of Academic Affairs, the Vice President for Health Sciences, or the divisional campus President, as appropriate, for final determination.

Any behaviors not academic in nature but related to student conduct should be referred to the Campus Student Code as stipulated in Board of Governors Rules and Policies (https://policies.wvu.edu/finalized-bog-rules/) Student Life Rule 6.1.

Academic Rights

Each student at West Virginia University has the following academic rights (as well as others; see BOG (https://policies.wvu.edu/finalized-bog-rules/) Academics Rule 2.5):

1. Right to have their performance evaluated solely upon performance as measured against academic standards. The student shall not be evaluated prejudicially, capriciously, or arbitrarily. The student shall not be graded, nor shall their performance be evaluated on the basis of race, color, national origin, ancestry, age, physical or mental disability, marital or family status, pregnancy, veteran status, service in the uniformed services (as defined in state and federal law), religion, creed, sex, sexual orientation, genetic information, gender identity, or gender expression (see BOG (https://policies.wvu.edu/finalized-bog-rules/) Governance Rule 1.6), or other protected status.
2. Right to appeal any final grade, charge of academic dishonesty, or other academic penalty.
3. Right to access a copy of the University catalog and program documents in which all current program requirements and standards are described (e.g. required courses, total credit requirements, time in residence requirements, special program requirements, minimum grade point average, probation standards, professional standards, etc.).
4. Right to receive course syllabi with descriptions of content and requirements for any course in which they are enrolled (e.g., attendance expectations, special requirements, laboratory requirements including time, field trips and costs, grading standards and procedures, professional standards, etc.).
5. Right to assigned grades issued from the instructor of each course to students enrolled in the course consistent with the academic rights set out in the preceding sections.

Academic Dishonesty

Students are expected to adhere to the academic standards set forth by West Virginia University, and to avoid academic dishonesty in all its forms. West Virginia University defines academic dishonesty as follows:

1. Plagiarism means the theft or unauthorized use of work, typically created by another. It includes but is not limited to:
   a. the use of another's words, ideas, or media – whether published or unpublished, partial or complete, by paraphrase or direct quotation – without complete and accurate acknowledgement;
   b. the unacknowledged use of materials prepared by another individual, including an individual engaged in the selling of term papers or other academic materials; or
   c. repeated submission of one's own work, specifically submission of the same material in multiple courses or iterations of a course, without the instructor's express permission.

2. Cheating means reliance on unauthorized resources, in connection with examinations or academic assignments. It includes but is not limited to:
   a. collaboration with peers beyond that authorized by the instructor in the completion of an examination or academic assignment;
   b. cheating on an examination or academic assignment, by either (i) utilizing unauthorized physical or technological resources (e.g., cheat sheets, online resources), or (ii) receiving unauthorized personal assistance (e.g., copying from another student); or
   c. the acquisition or use, without permission, of examinations or other academic material belonging to a member of the University faculty or staff.

3. Fabrication or Falsification means acts of misrepresentation, forgery, or fraud as they relate to academic or educational matters. It includes but is not limited to:
   a. fabricating or falsifying citations, data, or other records;
   b. wrongfully fabricating or falsifying attendance or participation records for a University course or in an experiential or clinical setting;
   c. wrongfully fabricating or altering an educational record (e.g., admission, grade, or attendance record) after it has been created;
   d. use of University documents or instruments of identification for fraudulent purposes (e.g., impersonation of another student); or
   e. knowingly furnishing false statements in any University academic proceeding.

4. Other Prohibited Academic Conduct means:
   a. engaging in behavior specifically prohibited by a faculty member in the course syllabus; or
   b. violating other departmental, college, or university academic standards, and/or legal or professional standards.

5. Facilitation means:
   a. providing unauthorized materials or personal assistance to another student when such assistance allows them to commit academic dishonesty; or
   b. compelling someone else to commit academic dishonesty on one's behalf.

Information on all associated procedures are found in the West Virginia University Academic Integrity Policy (https://provost.wvu.edu/governance/academic-standards-resources/academic-integrity-policy/). Please note that, to the extent there is any inconsistency with the language in the catalog and the Board of Governors Rules and Policies (https://policies.wvu.edu/finalized-bog-rules/) or the WVU Policy on Student Academic Integrity, the BOG Rule and the WVU Policy govern; please refer to the BOG Rule and WVU Policy for the most current language.

Types of Academic Penalties

In this section:

- Penalties for Failure to Meet Academic Requirements or Standards (p. 15)
- Penalties for Academic Dishonesty (p. 16)

PENALTIES FOR FAILURE TO MEET ACADEMIC REQUIREMENTS OR STANDARDS

A student at West Virginia University who fails to meet academic requirements or standards will be subject to one or more of the following academic penalties:

1. A lower final grade, including failure of a course. A lower grade or failure of the course can be imposed by the course instructor/coordinator. If a student appeals a final grade, the grade shall remain in effect until the appeal is completed.
2. Exclusion of a student from further participation in class prior to any appeal proceedings requires that the course instructor/coordinator obtain approval of the dean of the college or school offering the course.
3. Required repetition or revision of a program requirement, or termination of the student's participation in specific program-related activities.
4. Failure of a program requirement or failure to meet academic standards. Program requirements and standards must be described in the catalog or other program documents provided or available to students. Program requirements may include such items as passing a qualifying exam, maintaining progress on research, developing required technical skills, or meeting professional standards of conduct (including the avoidance of academic dishonesty).
5. Academic probation or suspension at the program, college, or school level for failure to meet program requirements and academic standards, or at the university level for failure to meet grade point average standards. More information concerning probation and suspension of undergraduate students at the university level (http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification/#probationsuspensiontext) is available in the Academic Standards section of undergraduate catalog. More information about probation and suspension of graduate or professional students at the program, college, or school level (http://catalog.wvu.edu/graduate/enrollmentandregistration/#probationsuspensiontext) is in the Academic Standards section of the graduate catalog as well as in program documents. If a graduate or professional student appeals a penalty of program suspension, the dean of the college or school offering the student's program will determine if the student shall be allowed to continue in the program, and the conditions of that continuation, until the case is determined.
6. Dismissal from a program, college, school or the university. Dismissal is defined as termination of student status, including any right or privilege to receive some benefit or recognition or certification. A student may be academically dismissed from any program and remain eligible to enroll in courses in other programs at the institution, or a student may be academically dismissed from the institution and not remain eligible to enroll in other

courses or programs at the institution, including other divisional campuses (BOG (https://policies.wvu.edu/finalized-bog-rules/) Academics Rule 2.5). If a student appeals a penalty of program dismissal, the dean of the college or school offering the student's program will determine if the student shall be allowed to continue in the program, and the conditions of that continuation, until the case is determined. Dismissal from a program, college, or school must be communicated to the Associate Provost for Undergraduate or Graduate Academic Affairs, the Health Sciences Associate Vice President for Academic Affairs, or the divisional campus President once the time limit for a student appeal has expired or the appeal process has been completed. The Associate Provost, Associate Vice President, or divisional campus President submits a request to the appropriate office to change the student's status to non-degree. Academic dismissal from the university requires consultation and approval from the student's dean, the Associate Vice President for Academic Affairs (Health Sciences students only), and the Provost's or divisional campus President's Office.

PENALTIES FOR ACADEMIC DISHONESTY

Information for both students and faculty on procedures related to the resolution of allegations of academic dishonesty can be found on the Academic Standards Resources (https://provost.wvu.edu/governance/academic-standards-resources/) website. A student at West Virginia University who is found responsible for academic dishonesty will be subject to one or more of the following academic and/or disciplinary penalties:

1. Remedial and/or educational sanctions. Community service, educational classes, and other work or research projects may be imposed by the Director of Academic Integrity instead of or in addition to other specified sanctions.
2. Required repetition or revision of the academic assignment at issue.
3. A lower grade on the academic assignment or course at issue.
4. Failure of the academic assignment or course at issue.
5. Unforgivable failure (UF) of the course. When a UF is assigned, a student may repeat the course at issue, but the undergraduate (and where applicable, the graduate or professional school) D/F repeat process will not be applied. A permanent record will appear on the student's transcript, and the F will be permanently factored into the student's GPA.
6. Failure of the course with exclusion from further participation. The student will receive a final grade of an "F" for the course at issue but will be prohibited from continued enrollment or participation in the course for the duration of the semester.
7. Disciplinary probation, deferred suspension, or disciplinary suspension at the university level. More information concerning disciplinary probation, deferred suspension, and disciplinary suspension of students at the university level is available in the West Virginia University Campus Student Code and in the regional campus handbooks (https://studentconduct.wvu.edu/campus-student-code/).
8. Dismissal from a program, college, or school. Dismissal is defined as termination of student status, including any right or privilege to receive some benefit or recognition or certification, from a specific academic program. A student may be academically dismissed from any program and remain eligible to enroll in courses in other programs at the institution.
9. Expulsion. Permanent separation of the student from the University. More information concerning expulsion of students at the university level is available in the West Virginia University Campus Student Code and in the regional campus handbooks (https://studentconduct.wvu.edu/campus-student-code/).
10. Other sanctions. Other sanctions may be imposed instead of or in addition to those specified, where those sanctions bear a reasonable relationship to the nature and severity of the violation.

Appeals

In this section:

General Information about Appeals

Students may appeal any final grade, charge of academic dishonesty, or other academic penalty described above and imposed by a course instructor/coordinator, the institution, or its constituent academic units through the procedures described in this section of the catalog with the following exceptions:

- Grades for individual course assignments cannot be appealed except in the context of a final grade appeal or a charge of academic dishonesty.
- University, college/school, or program probation based on failure to meet minimum GPA standards may not be appealed. University suspension of undergraduate students based on GPA may be appealed as described in the Academic Standards section of the undergraduate catalog (http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification/#probationsuspensiontext).
- When imposed for academic dishonesty, disciplinary penalties imposed by the Office of Student Conduct, including but not limited to probation, suspension, or expulsion from the university, are appealed as described here. However, disciplinary penalties imposed by the Office of Student Conduct for any other form of misconduct may not be appealed through these processes, and students should refer to the Campus Student Code for appropriate procedures.

The primary purpose of the appeal procedure is to allow review of a final grade, charge of academic dishonesty, or other academic penalty in cases where a student believes that due process was not followed or that the grade, charge, or penalty was imposed unfairly or inconsistently with course, program, and university standards and regulations.

Students are expected to present written grounds (typically via email) for an appeal. Students have the right to appeal a final grade, charge of academic dishonesty, or academic penalty that they believe reflects a capricious, arbitrary, or prejudiced academic evaluation, or reflects discrimination based on criteria listed in BOG (https://policies.wvu.edu/finalized-bog-rules/) Governance Rule 1.6, Section 1.2. Additional grounds for appeal may include: unreasonable severity of the penalty; demonstrable prejudice in the decision-making process; a belief that the evidence does not support the finding of responsibility (in the case of academic dishonesty) or the choice of penalty; or additional evidence or new information that was not considered in determining the penalty. Further guidance for students on preparing an appeal is available on the Academic Standards Resources (https://provost.wvu.edu/governance/academic-standards-resources/) webpage.

If a student does not appeal a final grade, charge of academic dishonesty, or other academic penalty, fails to follow the appeal procedures described below, or does not attend a scheduled meeting regarding the appeal, the final grade, charge of academic dishonesty, or other academic penalty will be upheld, regardless **of whether or not the student is still enrolled in the course or program.**

COMMUNICATION ABOUT APPEALS:

All communication with a student concerning an appeal must come directly from, or be directed to, the student, except in cases of academic dishonesty that proceed through the Office of Student Conduct, when communication through attorneys or advisors is explicitly allowed. Otherwise, although students and others involved in the appeal process may consult with third parties, appeals and communication about appeals should be conducted between the student and individuals or committees charged with reviewing the appeal. Communication may take place through written documents, e-mail (using official University e-mail accounts whenever possible), and direct contact (telephone, face-to-face meetings, etc.). Decisions at each level of appeal must be communicated to the student and other individuals involved with the appeal at prior levels in writing transmitted via WVU e-mail. In addition, all penalties for academic dishonesty and the outcomes of all appeals involving academic dishonesty must be reported via the Academic Dishonesty Form found on the Academic Standards Resources (https://provost.wvu.edu/governance/academic-standards-resources/) webpage.

RESPONSIBILITY FOR APPEAL DECISIONS:

Detailed information about which individuals or committees are responsible for handling different types and levels of appeals is available on the Academic Standards Resources (https://provost.wvu.edu/governance/academic-standards-resources/) webpage. These individuals may delegate this responsibility to a designee or to a standing or ad-hoc committee. In some cases, program, college, or school documents may provide additional guidance on who is charged with reviewing specific types of appeals. If an appeal reviewer was involved in the determination of a sanction, or otherwise has a conflict of interest relevant to the appeal, a different appeal reviewer must be identified. When necessary, decisions about who is responsible for appeal decisions will be made by the Associate Vice President for Academic Affairs in Health Sciences, the Provost, or the divisional campus President, or the designee of any of these.

EVIDENCE AND MEETINGS CONCERNING APPEALS:

Individuals and committees reviewing appeals may convene individual or joint meetings or request additional materials to collect further evidence. The student may be accompanied to meetings concerning the grade, charge, penalty, or appeal by a person of his or her choice from the institution. Such advisors may consult with but may not speak on behalf of their advisees or otherwise participate directly in the proceedings, unless they are given specific permission to do so by the individual or committee conducting the appeal. Attorneys, operating in that capacity, may only participate in appeals in cases of academic dishonesty that proceed through the Office of Student Conduct, and are subject to the limitations imposed by the Campus Student Code.

The Appeal Process for Failure to Meet Academic Requirements or Standards

STEPS IN THE APPEAL PROCESS:

The following is a summary of the steps in the appeal process for failure to meet academic requirements or standards. In addition, a detailed list of the steps involved in each type of appeal is available on the Academic Standards Resources webpage on the Detailed Appeal Procedures (https://provost.wvu.edu/governance/academic-standards-resources/detailed-appeal-procedures/) tab to assist students, instructors, and administrators in managing the appeal process.

- Students are notified of final grades and other academic penalties.
  - Students are informed of final grades for courses at the end of each academic term through the WVU Portal accessible at https://portal.wvu.edu.
  - The individual or chair of the committee who imposed an academic penalty must notify the student in writing via WVU e-mail of the academic penalty.
- Prior to filing an appeal, students are strongly encouraged (but not required) to contact the individual or chair of the relevant committee who reported a final grade or imposed an academic penalty to express their concerns and attempt to resolve the issue. The individual or committee chair, or another informed individual, must meet with the student to provide information and evidence forming the basis for the grade or penalty.

- Level 1 appeal (for final grades and other academic penalties):
  - The student may begin an appeal by submitting a written appeal via WVU e-mail to the Level 1 appeal reviewer named on the Academic Standards Resources (https://provost.wvu.edu/governance/academic-standards-resources/) webpage within the time limit provided below. The student's appeal must include the documentation and evidence forming the basis of their appeal.
  - The individual or committee that gave the grade or imposed the penalty must provide all relevant documentation (including the criteria for determining the student's final grade in the case of a final grade appeal) to the Level 1 appeal reviewer upon their request.
  - The Level 1 appeal reviewer assesses the available evidence and makes a decision about the appeal based on that evidence. The sanction(s) under review may be upheld, lessened, or dismissed entirely, but not aggravated, by the Level 1 reviewer.
  - The reviewer communicates the decision in writing via WVU e-mail to the student and other individuals or committees that have been involved in the grade, penalty, or appeal to that point. The reviewer retains all documentation related to the appeal for 5 years. In the case of a final grade appeal, the Level 1 appeal reviewer ensures that a grade modification is submitted if necessary.
  - If the student accepts the Level 1 appeal decision, the appeal is concluded.
- Level 2 appeal (for final grades and other academic penalties):
  - If the student does not accept the Level 1 appeal decision, the student may continue their appeal by submitting a written appeal via WVU e-mail to the Level 2 appeal reviewer named on the Academic Standards Resources (https://provost.wvu.edu/governance/academic-standards-resources/) webpage within the time limit provided below.
  - The Level 1 appeal reviewer forwards all materials included in the appeal to the Level 2 reviewer and the student upon request from the Level 2 reviewer. Both the student and other individuals or committees may provide additional information if they wish.
  - The Level 2 appeal reviewer assesses the available evidence and makes a decision about the appeal based on that evidence. The sanction(s) under review may be upheld, lessened, or dismissed entirely, but not aggravated, by the Level 2 reviewer.
  - The reviewer communicates the decision in writing via WVU e-mail to the student and other individuals or committees that have been involved in the grade, penalty, or appeal to that point, including the Level 1 appeal reviewer. The reviewer retains all documentation related to the appeal for 5 years. In the case of a final grade appeal, the Level 2 appeal reviewer ensures that a grade modification is submitted if necessary.
  - If the student accepts the Level 2 appeal decision, the appeal is concluded. If the appeal concerned a final grade or an academic penalty other than program dismissal, the appeal is concluded.
- Level 3 appeal (for dismissal from a program):
  - If the penalty is dismissal from a program, the student may continue their appeal by submitting a written appeal via WVU e-mail to the Level 3 appeal reviewer named on the Academic Standards Resources (https://provost.wvu.edu/governance/academic-standards-resources/) webpage within the time limit provided below.
  - The Level 2 appeal reviewer forwards all materials included in the appeal to the Level 3 reviewer and the student upon request from the Level 3 reviewer. Both the student and other individuals or committees may provide additional information if they wish.
  - The Level 3 appeal reviewer may (but is not required to) appoint and convene a Student Academic Hearing Committee (SAHC) to hear the case and review the appeal. SAHC procedures follow.
    - Members are appointed to the SAHC at the discretion of the Level 3 appeal reviewer and shall comprise at least three faculty members. At least one SAHC member should be from the program offering the course or the student's program; at least one should be from outside the program offering the course or the student's program.
    - The SAHC holds a joint hearing with the student and any individuals involved in making the academic dishonesty charge or imposing the academic penalty and may also convene additional individual meetings or request additional materials to collect further evidence. The hearing is set outside of the student's scheduled classes; should the student choose not to appear, the meeting will proceed as scheduled.
    - The student may be accompanied to the hearing or meetings or be advised by a person of his or her choice from the institution. Likewise, the faculty member, academic officer, or committee recommending dismissal may have an advisor from the institution. Such advisors may consult with but may not speak on behalf of their advisees or otherwise participate directly in the proceedings, unless they are given specific permission to do so by the individual or committee conducting the appeal.
    - Witnesses may be called by any of the parties involved.
    - A record of the SAHC hearing shall be prepared in the form of summary minutes or an audio recording. This record and relevant attachments and will be provided to the student upon request.
  - The Level 3 appeal reviewer assesses the available evidence, including the recommendation of the Student Academic Hearing Committee, when available, and makes a decision about the appeal based on the evidence and recommendation. The reviewer communicates the decision in writing via WVU e-mail to the student, and other individuals or committees that have been involved in the penalty or appeal to that point, including the Level 1 and 2 appeal reviewers. The reviewer retains all documentation related to the appeal for 5 years.
  - The appeal is concluded.

TIME LIMITS FOR STEPS IN THE APPEAL PROCESS:

- Level 1:
  - Final Grade Appeal
    - The student files an initial appeal within 10 academic days* after the grade is posted. See the Academic Standards Resources (https:// provost.wvu.edu/governance/academic-standards-resources/) webpage for the last date the final grade appeals can be filed for each academic term in the current academic year.
    - The decision about the appeal is communicated to the student within 10 academic days* after the student submits the appeal.
  - Academic Penalty
    - The student files an initial appeal within 10 academic days* after the penalty is sent to the student.
    - The decision about the appeal is communicated to the student within 10 academic days* after the student submits the appeal.
- Level 2 (for final grades and other academic penalties):
  - The student files a continuation of the appeal within 10 academic days* after the decision at Level 1 is sent.
  - The decision about the appeal is communicated to the student within 10 academic days* after the student submits the Level 2 appeal.
- Level 3 (appeals of program dismissal only):
  - The student files a continuation of the appeal within 10 academic days* after the decision at Level 2 is sent.
  - The decision about the appeal is communicated to the student at the discretion of the Provost's office.

*Academic days are defined as days during which the University is open and on-campus classes are officially in session. If classes are canceled for the entire campus, for any portion of a day, the day will not be deemed an academic day.

The Appeal Process for Academic Dishonesty

STEPS IN THE APPEAL PROCESS:

The following is a summary of the steps in the appeal process for academic dishonesty. In addition, a detailed list of the steps involved in each type of appeal is available on the Academic Standards Resources webpage on the Detailed Appeal Procedures (https://provost.wvu.edu/governance/academic-standards-resources/detailed-appeal-procedures/) tab to assist students, instructors, and administrators in managing the appeal process.

- If the course-level process is followed and only course-level sanctions are recommended:
  - A student who has been held responsible for academic dishonesty may begin an appeal by submitting a written appeal via WVU e-mail to the course-level appeal reviewer named on the Level 1 Reviewers (https://provost.wvu.edu/governance/academic-standards-resources/detailed-appeal-procedures/appeal-of-a-charge-of-and-or-penalty-based-on-academic-dishonesty/level-1-reviewers/) tab of the Academic Standards Resources webpage, within the time limit provided on the Academic Integrity Policy (https://provost.wvu.edu/governance/academic-standards-resources/academic-integrity-policy/) tab of the Academic Standards Resources webpage, following the instructions provided in the notice of outcome. The student's appeal must include the documentation and evidence forming the basis of their appeal. The student may appeal the charge, the penalty, or both.
  - The individual or committee that made the charge must provide all relevant documentation to the course-level appeal reviewer upon their request.
  - The course-level appeal reviewer assesses the available evidence and makes a decision about the appeal based on that evidence. The sanction(s) under review may be upheld, lessened, or dismissed entirely, but not aggravated, by the course-level reviewer.
  - The reviewer communicates the decision in writing via WVU e-mail to the student and other individuals or committees that have been involved in the charge or appeal to that point. The Office of Academic Integrity retains all documentation related to the appeal for 5 years.
  - Once the course-level appeal reviewer has issued a decision, the matter is final and binding upon all involved.

- If the Academic Dishonesty Conduct Process is followed and both/either course-level and/or disciplinary sanctions are recommended:
  - A student who has been held responsible for academic dishonesty may begin an appeal by submitting a written appeal via WVU e-mail to the Provost within the time limit provided on the Academic Integrity Policy (https://provost.wvu.edu/governance/academic-standards-resources/academic-integrity-policy/) tab of the Academic Standards Resources webpage, following the instructions provided in the notice of outcome. The student's appeal must include the documentation and evidence forming the basis of their appeal. The student may appeal the charge, the penalty, or both.
  - The individual or committee that made the charge must provide all relevant documentation to the Provost upon their request.
  - The Provost assesses the available evidence and makes a decision about the appeal based on that evidence. The sanction(s) under review may be upheld, lessened, or dismissed entirely, but not aggravated, by the Provost.
  - The Provost communicates the decision in writing via WVU e-mail to the student and other individuals or committees that have been involved in the charge or appeal to that point. The Office of Academic Integrity retains all documentation related to the appeal for 5 years.
  - Once the Provost has issued a decision, the matter is final and binding upon all involved.

TIME LIMITS FOR STEPS IN THE APPEAL PROCESS:

- Course-Level Process:
  - The student files an appeal within 10 academic days* after the notice of charge is sent to the student.
  - The decision about the appeal is communicated to the student within 10 academic days* after the student submits the appeal.
- Academic Dishonesty Conduct Process:
  - The student files an appeal within 10 academic days* after the notice of charge is sent to the student.
  - The decision about the appeal is communicated to the student within 30 academic days* after the student submits the appeal.

*Academic days are defined as days during which the University is open and on-campus classes are officially in session. Summer sessions and final exam days are included in this definition. If classes are canceled for the entire campus, for any portion of a day, the day will not be deemed an academic day.

In this section:

- Probation (p. 20)
- Suspension (p. 20)
- Dismissal from a program (p. 20)
- Sanctions for Campus Student Code Violations (p. 21)

Probation

Graduate students may be placed on probation by the director of their program or by the dean of their college/school by failing to maintain acceptable grades in their courses or by failing to show acceptable performance in other areas such as research progress or professional behavior (as determined by the program or the University). Graduate students with a cumulative grade point average (GPA) below 2.75 may be subject to probation by the dean of their college/school and are considered by the University to not be in good standing. Individual academic units may designate a higher GPA or other academic standards required for students to remain in good standing within the program.

Probation, which is not recorded on a student's permanent record, constitutes a warning to the student that standards are not being met. A letter of probation, delivered by the graduate program to the student, must outline the reason for the probation sanction as well as delineate academic or other benchmarks for the student to attain in order to have the probation sanction removed. Students may appeal (http://catalog.wvu.edu/graduate/enrollmentandregistration/#appealstext) a probation sanction.

At the conclusion of the semester in which a student was placed on probation, the academic program shall review the academic record and performance of the student. If the stipulations set forth in the letter of probation have been met, the student is removed from probation. If the stipulations have not been met, student standing is reassessed by the program. The student may continue on probation or be suspended or dismissed by the program.

Suspension

Graduate students may be suspended from their program by the director of their program or by the dean of their college/school by failing to maintain acceptable grades in their courses, by failing to show acceptable performance in other areas such as research progress or professional behavior (as determined by the program or the University), or by failing to meet the terms of probation. Suspension from a program normally follows a probation sanction. Typically, students are suspended from a program at the end of an academic term and are notified formally by the department and/or the dean of the college/school of suspension. However, students can be suspended from their program without a prior probation period and at times other than the end of a term in the case of serious violations of academic or professional standards, with approval of the college/school dean and either the Associate Provost for Graduate Academic Affairs or Associate Vice President of Academic Affairs (for Health Sciences programs).

A student who is suspended from their program will not be permitted to register for classes offered by their program or participate in other program activities until the student has been notified that the suspension sanction has been lifted. The normal period of suspension is either one academic semester or one calendar year. Students may appeal (http://catalog.wvu.edu/graduate/enrollmentandregistration/#appealstext) a suspension sanction. At the end of the suspension period, the program must reinstate or dismiss the student from the program. If appropriate, the student may be reinstated and placed on probation.

Dismissal from a program

Graduate students may be dismissed from their program by the director of their program or by the dean of their college/school by failing to maintain acceptable grades in their courses, by failing to show acceptable performance in other areas such as research progress or professional behavior (as determined by the program or the University), or by failing to meet the terms of probation. Dismissal from a program normally follows a probation sanction. Typically, students are dismissed from a program at the end of an academic term and are notified formally by the department and/or the dean of the college/school of dismissal. However, students can be dismissed from their program without a prior probation period and at times other than the end of a term in the case of serious violations of academic or professional standards, with approval of the college/school dean and either the Associate Provost for Graduate Academic Affairs or Associate Vice President of Academic Affairs (for Health Sciences programs).

A student who is dismissed from a program will not be permitted to register for classes offered by their program or participate in other program activities. A student who is dismissed from a program will be reclassified as a non-degree student unless they are admitted into a different degree program. Students may appeal (http://catalog.wvu.edu/graduate/enrollmentandregistration/#appealstext) dismissal from a program.

Sanctions for Campus Student Code Violations

In some cases of student conduct violations, such as serious academic dishonesty and research misconduct, the program may recommend dismissal from the University (i.e., expulsion) or other University-level sanctions explained in the Campus Student Code (https://studentconduct.wvu.edu/campus-student-code/). In these circumstances, the case is referred to the Office of Student Conduct (https://studentconduct.wvu.edu/) and Student Conduct processes apply.

Research Integrity and Compliance

Integrity in research and scholarship is an obligation of all who engage in the acquisition, application, and dissemination of knowledge. Research and scholarly work by West Virginia University faculty, staff, and students is governed by a number of federal, state, and institutional policies. The Office of Research Integrity & Compliance (https://oric.research.wvu.edu) provides information related to the Human Research Protections Program, Conflict of Interest, Animal Welfare and IACUC, and Responsible Conduct of Research.

Any graduate student who conducts research involving human subjects must have their protocol approved (or determined exempt) by the Institutional Review Board for the Protection of Human Subjects before starting the research. Any graduate student who conducts research using animals must have their protocol approved by the Animal Welfare and IACUC Committee before starting the research. Any graduate student who is supported by a National Science Foundation research award must complete the Responsible Conduct of Research training. All researchers must disclose any potential conflicts of interest related to their research.

Finally, all members of the University community are obligated to maintain high ethical standards and to report observed, suspected, or apparent misconduct in research.

Reports of research misconduct should be made to the University's research integrity officer. The General Guidance page on the Research Integrity & Compliance website (https://oric.research.wvu.edu/general-guidance/) provides useful links to introductory videos, to the Academic Integrity page (which includes the West Virginia University Research Integrity Procedure), and to an online reporting form (select "Reporting").

Intellectual Property

The Office of Technology Transfer (https://techtransfer.research.wvu.edu/) is responsible for the protection and commercialization of intellectual property for all WVU organizations.

Intellectual property can be protected through patents, copyrights, trademarks, and trade secrets. Graduate students are encouraged to review WVU's Intellectual Property Policy (https://techtransfer.research.wvu.edu/inventor-resources/ip-policy/). Other useful information about intellectual property and technology transfer activities at WVU is available at the Intellectual Property website and the WVU Libraries Research Guide on Intellectual Property (https://libguides.wvu.edu/ip/).

Graduate students with other concerns about intellectual property, such as ownership and storage of research data, authorship considerations when presenting or publishing, and use of course materials, should discuss these concerns with faculty members and administrators in their discipline as well as with their collaborators in any research activities. Additional information is available from the Office of Research Integrity & Compliance (https://oric.research.wvu.edu/).

Admissions

In this section:

Applicants for Degree and Certificate Programs

Prospective graduate students (including transfers) are encouraged to complete an inquiry form (for on-campus programs (https://wvugrad.askadmissions.net/emtinterestpage.aspx?ip=grad) or online programs (https://wvugrad.askadmissions.net/emtinterestpage.aspx?ip=extendedlearning)) and are urged to contact the relevant academic department regarding specific admissions requirements and opportunities for pursuing graduate study. For a list of available degree and certificate programs, websites, and contacts, see this list of degree programs. (http://

majors.wvu.edu/) The Office of Graduate Admissions and Recruitment (https://graduateadmissions.wvu.edu/) provides information and links relevant to the application process with additional information regarding programs of interest found on individual programs' websites.

To be considered for admission to a WVU graduate program, prospective students must complete the WVU graduate admissions application found under the WVU Graduate Admissions How to Apply (https://graduateadmissions.wvu.edu/how-to-apply/) website. Some professional programs may require application through another central service before or after completing the WVU Application.

Each degree or certificate program has specific admission requirements that should be carefully reviewed prior to submitting an application. Even if applicants meet the minimum University requirements, admission to degree and certificate programs is determined by each academic program. Final admission cannot be granted until all final transcripts have been received and successful completion of the student's bachelor's degree (or master's degree, if required) has been verified by the Office of Graduate Admissions and Recruitment. (https://graduateadmissions.wvu.edu/)

Applicants who fail to enroll within a year after acceptance must reapply. Students admitted to and enrolled in a degree program who have not been enrolled in course work for two or more years also must reapply for admission. Students classified as non-degree must apply for admission if they wish to pursue a degree or certificate program. Applicants who wish to pursue more than one degree must apply separately to each degree program. Because some programs may not allow simultaneous enrollment in another program, both programs will be asked to approve the simultaneous enrollment arrangement.

Non-Degree Applicants

Students not wishing to pursue an advanced degree may apply for admission as a non-degree graduate student. A student who wishes to take courses as a non-degree graduate student after completing a degree at WVU must submit a new graduate admissions application.

Admission as a non-degree student does not guarantee admission to any course or program. Not all programs allow non-degree students to enroll in their courses; students should check with the program of interest. No more than 12 credits earned as a non-degree student may be applied to a degree (see section on Credit Sharing Limitations for Graduate Degrees and Majors under the Rules for Attaining Multiple Credentials (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/#Rules) information).

Currently Enrolled Students: Adding or Changing Programs

A current WVU graduate student who wishes to pursue a different or additional graduate degree, or to pursue a certificate, must first contact the program to determine the admissions process and procedures. In most cases, the student must formally apply to the other program by completing the WVU graduate admissions application found under the WVU Graduate Admissions How to Apply (https://graduateadmissions.wvu.edu/how-to-apply/) website.

When a student changes from one program to another within the University, the faculty of the new program determines if any credit (up to 12 credits) earned while enrolled in the prior program may be applied to the new program (see section on Credit Sharing Limitations for Graduate Degrees and Majors under the Rules for Attaining Multiple Credentials (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/#Rules) information).

Minimum Admission Standards

The WVU Graduate Council (https://graduateeducation.wvu.edu/graduate-council/) establishes the minimum standards for admission to graduate study detailed in the Classifications (http://catalog.wvu.edu/graduate/graduateeducationatwestvirginiauniversity/#classificationstext) tab. Beyond this point, however, specific graduate programs control who is to be admitted to their graduate program of study. While a student may be admitted to the University to enroll in advanced coursework as a non-degree graduate student, only graduate programs may grant permission for the pursuit of a graduate degree.

Standardized Tests

Many programs at WVU require specific graduate admission standardized test scores from applicants. These admission requirements are found in the admissions section of each program description in the Academics (https://graduateadmissions.wvu.edu/academics/graduate-programs/) page on the Graduate Admissions website. If standardized test scores are required, the applicant should ask the testing agency to send the scores to WVU. In addition, applicants are encouraged to upload a copy of their test scores, if available, as part of their online application in order to facilitate the WVU evaluation process.

Admission Denial

If an application for admission into a graduate program is denied, the applicant may request the reasons for refusal of admission by writing to the specific graduate program coordinator (see Academics (https://graduateadmissions.wvu.edu/academics/graduate-programs/) page). Note that meeting the minimum requirements for admission into a graduate program does not ensure admission. Many programs restrict the number of admissions by selecting among the qualified applicants. An applicant may appeal to the graduate program coordinator for reconsideration if the applicant can document either factual errors in processing the application or that the decision was arbitrary, capricious, or discriminatory in nature. Appeals must be submitted within 30 calendar days of the date of the admission denial.

If the matter is not resolved satisfactorily within 30 calendar days of the receipt of the appeal by the graduate program coordinator, the applicant may appeal to the dean of the college or school. The decision of the dean, as the provost's designee, shall be rendered within 20 calendar days of the receipt of the appeal and is final.

Admission Revocation

An offer of admission can be revoked if an applicant's application materials are found to be falsified or if an admitted student engages in behavior that is not in compliance with the WVU Student Conduct Code (https://studentconduct.wvu.edu/campus-student-code/) prior to the first day of classes in the term of admission. If admission is revoked prior to the first day of classes, the admitted student may appeal the action to the Associate Provost for Graduate Academic Affairs. An enrolled student may be dismissed from the program or University if the student's application materials are found to be falsified, consistent with applicable policies or procedures on Academic and Professional Standards (http://catalog.wvu.edu/graduate/enrollmentandregistration/).

In this section:

Regular Graduate Students

Regular graduate students are degree- or certificate-seeking students who meet all the criteria for regular admission to a program of their choice. Regular graduate students must have earned a baccalaureate, graduate, or professional degree from a regionally accredited college or university (or an international institution approved by the Ministry of Education or other appropriate agency in the institution's country); must have had an undergraduate or graduate grade point average of 2.75 or higher on a 4.0 scale; and must have met all the criteria established by the degree or certificate program and must meet WVU's English proficiency requirements. International applicants (https://graduateadmissions.wvu.edu/information-for/international-students/) must meet WVU's English language proficiency (https://graduateadmissions.wvu.edu/how-to-apply/apply-for-2020-2021/international-graduate-applicant/) requirements.

Provisional Graduate Students

Provisional graduate admission may be offered to students when they have earned a baccalaureate, graduate, or professional degree from a regionally accredited college or university (or an international institution approved by the Ministry of Education or other appropriate agency in the institution's country) and have met WVU's English language proficiency (https://graduateadmissions.wvu.edu/how-to-apply/apply-for-2020-2021/international-graduate-applicant/) requirements but do not meet the criteria for regular admission. Provisionally admitted graduate students may have incomplete credentials, program-defined deficiencies, or an undergraduate or graduate scholastic record that shows promise but is below the 2.75 grade point average required for regular admission. The offer of provisional admission from the graduate program must specify the requirements that must be met for a student to be re-classified as a regular graduate student.

In addition, undergraduate students who have not yet completed their baccalaureate degree may be given provisional admission to allow them to take graduate courses as part of an approved combination program that allows simultaneous undergraduate and graduate work (such as accelerated bachelor's/master's programs (http://catalog.wvu.edu/undergraduate/programs_courses__enrollment/#ABM), pathway programs, and other combination programs that include graduate work prior to completion of the baccalaureate degree).

International students may not be admitted provisionally because such students are not eligible to receive a student visa. WVU will only submit visa paperwork for regularly admitted graduate students.

Non-Degree Graduate Students

To be admitted as a non-degree graduate student, students must present evidence of a baccalaureate degree from a regionally accredited college or university (or an international institution approved by the Ministry of Education or other appropriate agency in the institution's country). International applicants must also meet English proficiency requirements. Non-degree graduate students must also earn a 2.5 grade point average in the first twelve credit hours of coursework taken at WVU and then maintain this average to continue to enroll as non-degree graduate students.

Reclassification of Graduate Students

Provisional graduate students who are not in an approved combination program may be reclassified as regular graduate students when they meet the program requirements specified in the offer of admission from the student's program and the WVU minimum grade point average of 2.75 in all coursework taken while a provisional graduate student. A unit must review provisional students' records no later than the end of the term in which the students complete 18 credit hours. Provisional graduate students who fail to meet the provisions of admission or who fail to achieve the required grade point average will be dismissed from the program and reclassified as non-degree. Dismissed students may reapply for admission to another program or continue as non-degree students. Further registration by provisional graduate students who have completed 18 or more credit hours will only be

permitted when students are in an approved combination program, or are reclassified as regular graduate students, provisional graduate students in a different program, or non-degree graduate students. An exception may be granted by an academic dean.

Provisional graduate students in approved combination programs (such as accelerated bachelor's/master's programs (http://catalog.wvu.edu/undergraduate/programs_courses__enrollment/#ABM), pathway programs, and other combination programs that include graduate work prior to completion of the baccalaureate degree) may continue in the provisional status until they are reclassified as regular graduate students when their baccalaureate degrees are completed.

Non-degree graduate students must have earned a 2.75 or higher-grade point average in all coursework taken since admission as a non-degree graduate student to be eligible to enter a degree program as a regular graduate student.

Regular and provisional students may become non-degree graduate students by choice.

Regular graduate students who are dismissed or suspended from a program will be reclassified as non-degree graduate students.

International Student Admission

WVU is authorized under federal law to enroll non-immigrant foreign nationals as students. International students wishing to enroll for graduate study at WVU must comply with the academic requirements for admission listed on the Classifications (http://catalog.wvu.edu/graduate/graduateeducationatwestvirginiauniversity/#classificationstext) tab and with certain additional academic and nonacademic requirements listed on the Information For International Graduate Students (http://graduateadmissions.wvu.edu/information-for/international-students/) page.

Details regarding application requirements for international graduate students are provided by the Office of Graduate Admissions and Recruitment (https://graduateadmissions.wvu.edu/). Applicants are encouraged to contact the academic program of interest for program-specific information about requirements other than the general admissions criteria listed above, and to begin the process of applying for admission well in advance of the desired admission deadline.

International students who are seeking or who have been offered financial support as graduate teaching assistants (GTAs) and whose native language is not English are required to pass the WVU SPEAK test. The WVU SPEAK test must be passed prior to engaging in any classroom instruction. Information can be found on the WVU Intensive English Program (https://intensiveenglishprogram.wvu.edu/) page.

Advising, Enrollment & Evaluation

IN THIS SECTION:

Advisors

Academic and scholarly advising varies by graduate program across the University. Each graduate academic unit has one or more graduate advisors, and every graduate student must be assigned an advisor throughout their graduate study and training. This advisor may also be the student's thesis or dissertation advisor. The advisor and student typically meet soon after the student's admission to the program to develop a plan of study and on a regular basis thereafter to monitor and review progress.

Plan of Study

All graduate students must have a Plan of Study, which is a formal agreement between the student and their program or committee regarding the conditions the student must meet to earn the desired degree. The Plan of Study usually lists required courses and activities and may describe the timeline for these requirements. The Plan of Study may also include suggested or optional courses and activities. Each college or school determines the mechanisms for establishing, changing, and monitoring students' progress on plans of study. The Plan of Study should be in place no later than the end of the student's first semester.

Degree Works is the online advising and degree auditing tool at WVU. Plan of Study requirements must be included in students' Degree Works audits. Some programs may choose to use Degree Works as students' plans of study.

Advising of Non-Degree Students

Each college or school establishes a mechanism to advise non-degree graduate students who intend to take the majority of their coursework in that college or school. Non-degree students with an interest in programs in two colleges or schools may be assigned to either by the Office of Admissions. Students are responsible for understanding the policies of each program and facilitating any needed communication between advisors.

Yearly Evaluation

All graduate students enrolled in at least one credit hour during the academic year must be provided with a written evaluation from their program following the end of each spring term. This requirement may be waived for students in good standing who are expected to graduate in spring or summer.

Degree Works

Degree Works is the online advising and degree auditing tool at WVU. All students are required to have a completed audit for graduation. Students can access Degree Works through the WVU Portal accessible at https://portal.wvu.edu. More information is available in the Degree Works section of the Academic Records tab on the Office of the University Registrar website (https://registrar.wvu.edu/academic-records/degreeworks/).

All degree requirements must be verified by a student's college prior to graduation. Students are responsible for complying with all academic policies published in the University catalog and relevant program documents. If students have any questions about the information presented in the Degree Works audit, they are encouraged to contact their advisor.

In this section:

- Registration (p. 25)
- Credit Hour Loads and Limits (p. 25)
- Minimum Enrollment (p. 25)
- Leave of Absence (p. 26)
- Non-Degree Students (p. 26)
- Auditing courses (p. 26)
- Attendance Policy (p. 26)
- Emergency Leave Policy (p. 27)
- Withdrawal Policy (p. 28)

Registration

Students must use STAR to register for each course they attend in person or online.

West Virginia University offers priority registration to veterans as part of the Forever GI Bill - Harry W. Colmery Veterans Educational Assistance Act. Registration dates for other students are posted on the Office of the University Registrar's (https://registrar.wvu.edu/calendars/pre-registration-priority-dates/) website.

CREDIT HOUR LOADS AND LIMITS

To be considered full-time, a graduate student must enroll in at least nine credit hours in a fall or spring term and six credit hours in the summer term, including audited courses. Graduate students are not permitted to take more than 17 credit hours in a term without approval by their college or school and by the Office of Graduate Education and Life. No overload requests will be considered for the summer term. Requests for more than 18 credit hours in a fall or spring term will not normally be approved. Although students may enroll for up to 17 credit hours in the summer term, they are strongly discouraged from enrolling in more than 12 credit hours.

MINIMUM ENROLLMENT

In any term during which a graduate student is using University research facilities, consulting with graduate committee members, or completing a thesis or dissertation (including the thesis or dissertation defense and submission of the Electronic Thesis and Dissertation, or ETD), the student must enroll for at least one credit hour of graduate credit. These students are assumed to be utilizing University services, facilities, and other resources, including faculty expertise, even if they are not enrolled in formal coursework.

In addition, students formally admitted to candidacy for graduate degrees are required to register for at least one credit hour each fall and spring term as a condition of their continued candidacy. Individual programs may also require summer enrollment to maintain candidacy. Students admitted to candidacy who fail to maintain continuous enrollment may be dropped from candidacy.

Students who are not admitted to candidacy may enroll in courses intermittently if allowed by their program and if they are not using University facilities or consulting with faculty while they are not enrolled.

Students who have completed all requirements for a degree (including the thesis or dissertation defense and submission of the ETD) prior to the first day of classes of the term of graduation do not need to enroll during that term.

Students who are veterans should refer to the Veterans section of this catalog (http://catalog.wvu.edu/graduate/veterans/) to determine minimum enrollment requirements.

Leave of Absence

Graduate students in good standing who wish to be away from their academic endeavors at WVU for one or more semesters but intend to return at a later date may request a leave of absence. Students should consult with their program or school/college concerning the required procedure to request a leave of absence. Some programs (such as some master's programs or part-time programs) may not require students to request a leave of absence in order to enroll intermittently and remain in good standing. Doctoral students admitted to candidacy who do not wish to enroll for one or more semesters must be granted a leave of absence in order to maintain their candidacy. Leaves of absence are not required for summer terms unless otherwise specified by a student's program.

When possible, requests for leaves of absence should be submitted in writing to students' program directors or department chairs prior to the beginning of the semester for which the leave is desired. Program directors or department chairs (or their designees) determine whether or not to grant leaves of absence, the length of time granted, and any conditions students must meet to return to their program following the leave of absence (including a date by which students must inform their program that they plan to return). Students are informed in writing of the outcome of their requests, and copies of the outcomes are retained in students' departmental or program records.

Information concerning military deployments during a semester is available under the Military Leave section of the undergraduate catalog (http://catalog.wvu.edu/undergraduate/enrollmentandregistration/#Military_Credit).

NON-DEGREE STUDENTS

Non-degree students may enroll in any course in the University for which they meet the prerequisites and any other restrictions on the course. Some departments restrict enrollments to majors only or require non-degree students to obtain instructor permission to enroll.

A non-degree graduate student may accumulate unlimited graduate credit hours. Non-degree students may not apply more than 12 credit hours of previously earned credit toward a degree (see section on Credit Sharing Limitations under the Rules for Attaining Multiple Credentials section of this catalog (p. 73)). If a non-degree student is later admitted to a degree program, the faculty of that program will decide whether any credit earned as a non-degree student may be applied toward the degree.

AUDITORS

A student who audits a course must register and pay full fees for the course but does not receive credit for the course. A student who audits a course must let one semester pass before enrolling in the same course for credit. A student may only change their status from audit to grade or grade to audit through their advisor, during the registration period. Advisors will notify the Office of the University Registrar or Enrollment Services at the Keyser location of the student's intention prior to the end of the drop/add period. Attendance requirements for auditors are determined by the instructor of the course. The instructor may direct the Office of the University Registrar or Enrollment Services at the Keyser location to remove an auditor from a class list or grade report if attendance requirements are not met.

Attendance Policy

Instructors or programs set attendance requirements and policies that are appropriate for the goals and instructional strategies of their courses. Instructors are responsible for keeping accurate attendance records when attendance is used in grading. Students who are absent from class for any reason are expected to take full responsibility for their own academic work and progress and are required to complete missed work or equivalent work, as deemed appropriate by the instructor.

UNIVERSITY SANCTIONED ABSENCES

University sanctioned absences are absences in which instructors provide opportunities to make up missed substantial class work or activities (e.g., assignments, exams) and will not penalize students for those absences. University sanctioned absences include mandatory military obligation, COVID-19 related absence, mandatory court appearances, and participation in university activities at the request of university authorities. Quarantined students are not to be penalized for physical absence, but may be expected to complete class work and activities as assigned. Instructors are expected to be flexible in allowing students to make up work missed due to university sanctioned absences. Instructors and students may consult with their Dean's Office on events that constitute official university sanctioned events.

WVU supports its students who are also members of the United States armed forces, reserve units, and National Guard. Absences of less than three weeks of course work for military obligation (i.e., drill or training) are university sanctioned absences. WVU's Center for Veteran, Military, and Family Programs website (https://wvuveterans.wvu.edu/) has additional information on the drill schedule for the West Virginia National Guard and can provide official verification of a student's military orders upon request.

For university sanctioned absences totaling more than three weeks of course work resulting from military obligation, see WVU's Military Leave section of the undergraduate catalog (http://catalog.wvu.edu/undergraduate/enrollmentandregistration/#Military_Credit).

Students who will miss more than a week of course work due to health condition or personal trauma should refer to WVU's Emergency Leave Policy (p. 27).

Students wishing to appeal an instructor decision regarding an absence for a university sanctioned event may appeal to the Dean of the college/school for the relevant course.

Final course grades affected by attendance in an individual course may be appealed using the normal course grade appeal process located on the Appeals tab of the Academic Standards section of this catalog (p. 16).

EXCUSED ABSENCES

Other events may justify an excused absence at the discretion of the instructor or program. Instructors appropriately notified regarding anticipated absences that are not university sanctioned may use their judgment as to whether to allow make-up work.

Examples of events that may justify an excused absence include religious observances, illness of the student, illness of an immediate family member, death of an immediate family member, or extreme weather.

Students may miss class or assignments due to a variety of medical and health-related issues. There are two broad categories for such absences: those resulting from unexpected injuries and illnesses, and those related to a disability(ies) and/or chronic condition. When a student must be absent from class due to an unexpected and medical illness they should contact their instructors directly. For an extended illness the WVU Division of Student Life can assist the student in notifying his or her instructors. Students missing class due to a disability should contact the Office of Accessibility Services for assistance.

Students who will miss more than a week of course work due to health condition or personal trauma should refer to WVU's Emergency Leave Policy (p. 27).

Several high holy days have been added to the academic calendar for instructors to reference in their academic planning. Instructors may consult the Division of Diversity, Equity, and Inclusion website (https://diversity.wvu.edu/about/staff/) for support regarding religious observances.

The Office of Accessibility Services can serve as a resource to discuss student absences related to accommodations. Contact Information can be found on the About Us tab of the Office of Accessibility Services website (https://accessibilityservices.wvu.edu/about/).

Absences stemming from work duties other than military obligation (e.g., unexpected changes in shift assignments) and traffic/transit problems are not university sanctioned and should not typically qualify for excused absences.

If an instructor chooses to allow excused absences for these other events, the stated attendance policy for the course should specify the number of days that may be missed and instructions for contacting the instructor for the excused absence.

Instructors may request third party documentation.

PROCEDURES

All attendance polices must be made available to students in writing (typically within the course syllabus) within the first week of class.

Students are responsible for notifying their instructors of expected university sanctioned absences within two weeks of the event or as soon as possible. Instructors may require written documentation in advance of the university sanctioned absence from the academic or athletic unit sponsoring the activity for students participating in official activities. Instructors may request additional verification from the Center for Veteran, Military, and Family Programs website (https://wvuveterans.wvu.edu/) for students serving military obligation.

Students who are absent from class for any reason are responsible for contacting their instructors promptly, unless the instructors' policies require otherwise.

Students wishing to appeal an instructor decision regarding an absence for a university sanctioned event may appeal using the final grade appeal process (https://provost.wvu.edu/governance/academic-standards-resources/detailed-appeal-procedures/appeal-of-a-final-grade/) for the relevant course.

Final course grades affected by attendance in an individual course may be appealed using the normal course grade appeal process located on the Appeals tab of the Academic Standards section of this catalog (p. 16).

Emergency Leave Policy

During any semester, students may experience serious emergencies that will prevent them to be present in class or participate in a course for more than a week.

SHORT TERM LEAVE

Upon presentation of documentation, students who will miss between one and three weeks of classes will work with their instructor to develop a plan to catch up on the work that they have missed.

1. Up to the 13th week of instruction, students have the ability to withdraw from one or several classes.

2. If the event and its subsequent related absences takes place after the 13th week of instruction, students may petition the Dean of the College, found on the Office of the Provost website under the Level 2 Reviewers webpage, (https://provost.wvu.edu/governance/academic-standards-resources/detailed-appeal-procedures/appeal-of-a-final-grade/level-2-reviewers/) where the course is housed to obtain a late withdrawal from a single class. Students who wish to withdraw from all their classes can petition the Dean of the College where their major is housed for a full, retroactive withdrawal. Students unable to attend or participate after the 13th week for a relatively short duration (which may include exam week) may arrange for an Incomplete with provision to make up the final exam.

LONG TERM LEAVE

Students who will miss more than three weeks of course work due to a health condition or personal trauma should notify the appropriate Dean of the College, found on the Office of the Provost website under the Level 2 Reviewers webpage (https://provost.wvu.edu/governance/academic-standards-resources/detailed-appeal-procedures/appeal-of-a-final-grade/level-2-reviewers/), where their major is housed**.** The student should explain the circumstances of their absence and, with the assistance of the Dean, work with each of faculty members to agree upon a plan of action. In most cases, students will be asked to provide documentation or other evidence.

If necessary, these students may withdraw from the university and will go through one of the two following processes depending upon when the student withdraws.

1. Withdraw from the University up to and including the 13th week of instruction. Students who withdraw before the end of the 13th week of instruction may need to return portions of their financial aid award. A W will be placed on all courses.

2. Withdraw from the University after the 13th week of instruction. Students who leave the University after the 13th week of instruction should work with their home college/school's Dean's Office.

The relevant Dean's Office will assist the student in reviewing the student's eligibility for credit for their courses on a course-by course basis with the instructors.

- If the course is substantially complete and the student has done passing work, the student should receive the grade earned at that time.
- If the instructor establishes that the course is not quite substantially complete and the student requests it, the instructor can follow the procedure for an Incomplete, with the agreement of the department chair and the Dean of the College where the course is housed.
- When it is deemed that no credit can be awarded, the student can be administratively withdrawn from the course.

Course Withdrawal and University Withdrawal Policy

There are three time periods during which students may withdraw from courses. The tuition refund policy can be reviewed on the Refunds tab on the Student Accounts website (https://studentaccounts.wvu.edu/refunds/). The specific term deadlines can be found on the Withdrawal section of the Refunds tab on the Student Accounts website (https://studentaccounts.wvu.edu/refunds/withdrawal/).

WITHDRAWAL DURING THE DROP/ADD PERIOD

Students may withdraw from an individual course or all courses during the drop/add period, which runs until the end of the first week of a standard fall or spring 16-week term. Withdrawals from courses beginning on different parts of term or in the summer must be within the deadline as indicated on the Add and Drop Dates section of the Calendars tab on the Office of the University Registrar website (https://registrar.wvu.edu/calendars/add-and-drop-dates/). Courses dropped during the appropriate drop/add period will not be recorded on the student's transcript.

WITHDRAWAL BY THE WITHDRAWAL DEADLINE

Generally, students can withdraw from one or more courses after the Drop/Add period but prior to the withdrawal deadline published in the University Calendar (during the 13th week of instruction for 16-week courses during the spring and fall terms). A grade of W will be recorded on the transcript, indicating the student withdrew from the course. The grade point average is not affected, but student progress within an identified major may be impacted, as well as the ability to retain financial aid. Additional information can be found about Withdrawing from Courses in the Maintaining Your Aid section of the Home tab on the Student Financial Services website (https://financialaid.wvu.edu/home/maintain/withdrawing/). "Attempted Hours" on the transcript include all courses for which a W is recorded. If a student does not follow the university's withdrawal procedures, the final grades earned by the student will be recorded on the transcript. NOTE: No longer attending a course does not constitute withdrawal. Students who do not formally drop or withdrawal from a course they are no longer attending will receive a failing grade for the course.

WITHDRAWAL FROM ALL COURSES AFTER THE WITHDRAWAL DEADLINE (RETROACTIVE WITHDRAWAL)

Withdrawal from all courses after the withdrawal deadline is considered a retroactive withdrawal from the University for that term. A retroactive withdrawal for one or more terms may be granted only under extreme circumstances and will require the approval of the academic college or unit in which the student was enrolled for the respective term(s). The retroactive withdrawal must be requested within 12 months of the withdrawal deadline for the term in question. If the withdrawal is granted, a grade of W will be recorded on the transcript for each course. A withdrawal from all courses constitutes withdrawal from the University for the approved term only.

IMPORTANT NOTICE: *Financial aid recipients who withdraw from all courses before sixty percent of the term is completed may be required to return a portion of any financial aid disbursed for the term. Grades of W are counted in Attempted Hours and affect student completion rate, one of the standards for determining financial aid satisfactory academic progress. Students who do not receive at least one passing grade in a term may be required to return a portion of any financial aid disbursed for that term according to their last date of attendance or participation on record. If a student, whose financial aid has been impacted, believes this date is incorrect, they may provide documentation that supports attendance or participation beyond the last date of attendance or participation on record.*

MILITARY NOTE: *Students who are called to active military service during a term must submit a copy of their deployment orders to the appropriate institutional officer. For additional information relative to military withdrawals, or if students are being deployed after the 13th week of instruction of the fall or spring terms and want to keep their grades earned at the time of deployment, please refer to the* Military Leave section of the undergraduate catalog *(*http://catalog.wvu.edu/undergraduate/enrollmentandregistration/#Military_Credit*).*

PROCEDURES

Withdrawal during Drop/Add period or by the Withdrawal Deadline

To withdraw from one or more courses by the withdrawal deadline, students should log on to the WVU Portal accessible at https://portal.wvu.edu and drop their courses through STAR.

Retroactive Withdrawal

To withdraw from the term after the withdrawal deadline, a student must request the retroactive withdrawal in writing from the college dean or designee. A successful petition will demonstrate that the student's performance was uncharacteristically low for that term, that the extreme circumstances arose after the withdrawal deadline, and that the student can now make satisfactory progress. If the petition is granted, the college/school in which the student is enrolled will request the withdrawal from all classes for the approved term directly to the appropriate institutional officer.

GENERAL CONSIDERATIONS WHEN WITHDRAWING FROM COURSES

- Students who wish to withdraw from one or more courses are encouraged to meet with their academic adviser.
- Students should determine if their course load would be reduced below the minimum requirement set by their program.
- Students should contact the appropriate office to contact to determine if their course load might be reduced below the minimum hours required to qualify for financial aid, scholarships, international full-time student status, or a graduate assistantship or fellowship..
- If a student is enrolled in two co-requisite courses (courses that must be taken and completed simultaneously) and withdraws from one of those courses, the student will be automatically withdrawn from the other co-requisite course as well.
- If withdrawal from the University for a semester would jeopardize the student's standing in a particular program or major.
- Students who receive financial aid, veteran benefits, or scholarships should consult with the appropriate unit to see if the withdrawal will affect their status for the current or subsequent terms.
- It is the student's responsibility to ensure that all outstanding financial obligations to the University are satisfied and all required forms are received and processed. The withdrawal becomes official only after the request is received and processed by the appropriate institutional officer.
- Students withdrawing from all of their courses in a term who are living in university residential housing should vacate housing and turn in keys via the proper procedure. Check with the main desk at the residential hall for procedural details.

In this section:

GRADES IN GRADUATE COURSES

Letter grades are assigned in many graduate courses. Grades of C or below are considered substandard. Some programs allow credit toward the degree for courses in which any grade of C is earned; others do not. No credit is earned for graduate courses in which a grade of D is earned; individual programs determine if credit is earned toward the degree for professional courses in which a grade of D is earned.

Grading System

Grade	Description
A	Excellent
B	Good
C	Fair

D	Poor (College of Law only)
F	Failure
I	Incomplete
W	Withdrawal from a course before the date specified in the University calendar.
P	Pass (See Pass/Fail grading below)
X	Auditor, no grade and no credit.
CR	Credit but no grade
PR	Progress; final grade to be issued at end of second semester (used by Health Sciences only)
S	Satisfactory
U	Unsatisfactory
H	Honors (used by Professional courses only)
IF	Incomplete grade not removed by next regular term (computed as an F)
UF	Unforgivable F
FNA	Failure Never Attended
FSA	Failure Stopped Attending (Last date of attendance required)

Note: Grades that are not reported by faculty at the end of a term will be designated with an NR on the official transcript. All grades of NR must be resolved in order to graduate from West Virginia University.

SATISFACTORY/UNSATISFACTORY AND PASS/FAIL GRADING

At the graduate level, the satisfactory-unsatisfactory ("S/U") is the only grading option for the Research common course numbers 697/797. The "S" and "U" grades for 697/797 are not applied to the calculation of the GPA.

Other courses for which faculty wish to use a binary grading option use the pass-fail ("P/F") grading option. Grades of "F" earned using this option do apply to the GPA.

Grade Point Average (GPA)

GRADE POINTS

Each letter grade has a numeric value. Grade points are based on this number value and the credit hour value of the course.

- A = 4
- B = 3
- C = 2
- D = 1 (College of Law only; 0 points for all others)
- F/FNA/FSA/IF/UF = 0

The GPA is computed on all work for which a student registers, with the following exceptions:

- Courses with a grade of CR, H, PR, P, S, W, I, U, and X carry no grade value.
- When a student receives the grade of "I" and the incomplete grade is replaced, the grade point average is calculated on the basis of the replacement grade. If the "I" grade is not changed within the next semester, the grade is replaced with an IF, which is included in the grade point average.

GRADE POINT AVERAGE

To be eligible to receive a graduate degree, a student must have an overall GPA of at least 2.75 at the time of graduation. To be eligible to receive a graduate certificate, a student must have an overall GPA of at least 2.75 in courses applied to the certificate.

Some graduate degrees or graduate certificates require an overall grade point average higher than a 2.75. Graduate degrees or certificates also may require higher or specifically defined grade point averages. Refer to the specific program for more information.

Probation and most financial aid eligibility are determined by the institutional grade point average. Please review information on the Student Financial Services (https://financialaid.wvu.edu/) page for detailed information regarding financial aid eligibility.

GPA CALCULATION

The example below illustrates how to calculate a GPA.

Assume a student registered for the following courses and earned the following grades:

- HIST 700 (3 credits) - A
- HIST 718 (3 credits) - B
- HIST 793 (3 credits) - C
- HIST 795 (1 credit) - F
- HIST 797 (1 credit) - S

Multiply the credit by the grade value to get the grade points earned for each course using the values for letter grades as described in the Grade Points section.

(Number of Credit Hours) multiplied by the (Letter Grade Value) = Grade Points

- HIST 700 with a grade of A (**3 credits**) * (Letter Grade Value for an A) **(4 points)** = **12 Grade Points**
- HIST 718 with a grade of B (**3 credits**) * (Letter Grade Value for a B) **(3 points)** = **9 Grade Points**
- HIST 793 with a grade of C (**3 credits**) * (Letter Grade Value for a C) **(2 points)** = **6 Grade Points**
- HIST 795 with a grade of F (**1 credit**) * (Letter Grade Value for an F) **(0 points)** = **0 Grade Points**
- HIST 797 with a grade of S (*1 credit*) * (N/A Letter Grade Value for a S - not calculated in grade points) = **N/A**

Add the total grade points earned: 12 + 9 + 6 + 0 + N/A = **27**

Add the total number of credit hours attempted: 3 + 3 + 3 + 1 + 0 (S grade credits not included) = **10**

Divide the total number of grade points earned divided by the total number of credit hours attempted

GPA calculation = **27** (total number of grade points earned) / **10** (total number of credit hours attempted) = **2.7 semester GPA**

Students may also login to Degree Works to utilize the GPA Calculator.

Incomplete Grade Policy

A grade of I (Incomplete) is a temporary grade assignment used when unforeseen, non-academic circumstances arise that prohibit students from completing the last course assignments or examinations at the end of the semester. The grade of Incomplete is typically assigned because of an excused absence from the final examination, or because assignments are unavoidably incomplete, as determined by the instructor. Generally, the student will have been active in the course up until the last day of the 13th week of classes and earned at least a D- to be eligible to request an incomplete.

- An instructor may not assign a grade of I without the student's agreement and an Incomplete Contract (https://undergraduate.wvu.edu/strategies/academic-policy-committee/forms/). If a student has not requested an Incomplete, or the request for an Incomplete grade has been denied, the instructor should assign the grade earned in the course.
- Within the Incomplete Contract, the instructor is required to indicate a grade earned for the course assuming no additional work will be completed. Should the signed contract not be fulfilled, the instructor must either submit a grade of F or the grade indicated in the contract.
- If the student is unable to complete the work during the following term for non-academic reasons, the term of the contract may be extended with permission of the Dean. Additionally, the term of the contract can be extended if the instructor is not available for a portion of the course, for some legitimate reason, cannot be completed within the original time frame.
- An Incomplete grade not changed by the end of the next regular term, (fall and spring semesters) will be replaced with a grade of IF, and the class must be retaken to satisfy degree requirements as necessary. Under legitimate, extraordinary circumstances, with supporting documentation and the approval of the Dean, an instructor can submit a grade change for an IF within five years of when the course was taken.
- All grades of I must either be resolved or replaced with an IF in order to graduate from West Virginia University.

PROCEDURES

- Students who wish to be considered for an Incomplete must request the incomplete grade prior to the end of the term. If instructors agree, they will set the contractual conditions under which the grade of I will be changed to a letter grade, and students will sign their online contracts. The grade of incomplete is not granted until the Incomplete Contract has been approved by the department and college.
- The instructor should establish the date by which all work must be completed. Ideally, the date will be prior to the mid-semester point of the following regular term but may not be later than the last day of class of that term.
- If the student does not complete the terms of the contract, the instructor will assign the earned grade recorded on the contract at the time the Incomplete was assigned.
- The student is not permitted to re-register for the course to complete the missing work and remove the grade of I.
- Students may appeal any final grade imposed by a course instructor/coordinator, institution, or its constituent academic units through the procedures described in the Academic Standards (http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification/) section of the catalog.

REPEATED COURSES

The process below is for courses that are not designated as repeatable for credit.

1. Both the original course grade and the second course grade are included in determining the overall GPA. The original course is excluded from earned or degree hours and is marked with an (A).
2. The original grade is not deleted from the student's permanent record.
3. The second grade is entered on the student's transcript and marked as included (I) in the semester that the course was repeated.
4. Courses repeated more than once are handled the same way with the final attempt carrying earned or degree hours. All attempts are used for determining the GPA.

OFFICIAL TRANSCRIPTS

A West Virginia University transcript is a complete record of a student's enrollment at WVU that includes all undergraduate, graduate, and professional courses. A WVU Potomac State College transcript is a complete record of a student's enrollment at Potomac State College. A WVU Institute of Technology College transcript is a complete record of a student's enrollment at WVU Tech.

Students can order official transcripts through the Request Transcript webpage (https://registrar.wvu.edu/academic-records/request-transcript/) for students at the Morgantown campus location, Transcript Request Procedures webpage (https://admissions.potomacstatecollege.edu/forms/transcript-request-procedures/) for students at the Keyser campus location, or the Transcript Request webpage (https://techregistrar.wvutech.edu/academic-records/transcript-request/) for students at the Beckley campus location. Before ordering transcripts, students should ensure that all grades and degrees have been posted. Transcript requests are processed immediately on the Morgantown Campus. All financial obligations to West Virginia University must be cleared before transcripts can be released.

Academic Calendar

ACADEMIC CALENDAR 2020-2021

The publication of the Fall 2020, Spring 2021 and the 12-Week Summer Session 2021 is forthcoming.

*The annual academic calendar dates are subject to change. Please refer to the academic calendar on the Office of the Provost website for most up-to-date information.

Degree Regulations

STATEMENT ON AWARDING DEGREES

All degrees are conferred by the WVU Board of Governors as recommended by the faculties of the various colleges and schools. A degree is granted at the end of the semester or summer term in which a student completes all the requirements for that degree, provided the student has submitted an application for graduation and the Dean has certified completion of all degree requirements.

Students become eligible to graduate when they complete the requirements of the University, college or school, and major degree program according to the Undergraduate or Graduate/Professional Catalog in effect at the time they first entered WVU, although these requirements are subject to change at any time with reasonable notice provided to students. With the consent of the student's advisor and Dean, a student may choose to meet the conditions published in a later catalog. If a student entered WVU more than 7 years previously, the student must complete the requirements in a catalog that is no more than 7 years old.

Students must comply with any program changes that are enacted by the West Virginia University Graduate Council, West Virginia University Faculty Senate, West Virginia University Board of Governors, or by local, state, or federal law.

WVU will not issue a diploma or a transcript to any student until payment of all tuition, fees, and other indebtedness to any unit of the University is made.

Time Limits

IN THIS SECTION:

MASTER'S DEGREE

Master's degree students are permitted to continue in a program for a maximum of eight years following their term of admission to the program. Students who have been inactive for two or more years or who exceed eight years following their term of admission are required to apply for readmission to the University and their graduate program.

Graduate course work used to meet master's degree requirements must be satisfactorily completed within a period of eight years immediately preceding the conferring of the degree to ensure that students earning a master's degree have current knowledge in their field. Courses completed in the same term as degree conferral (fall, spring, summer) eight years previously are considered to fall within the eight-year limit (e.g., a course completed in fall 2012 would fall within the limit for fall 2020 degree conferral). A course completed more than eight years prior to the term of degree conferral must be revalidated if it is to be used toward meeting degree requirements. Revalidation can be accomplished through the following procedure:

- The current instructor of the course determines the method used to revalidate the course.
- The student may be required to complete specific activities, such as repeating all or some of the course or completing a set of readings.
- The instructor must assess the student's knowledge of course material through a written or oral examination, a paper, a project, or some other assessment and determine if the student's knowledge is adequate to justify revalidation of the course.
- The instructor submits a description of the revalidation method and results of the assessment to the college or school dean or designee.
- The college or school dean or designee submits a letter of support describing the revalidation process and assessment results to the Associate Provost for Graduate Academic Affairs.
- The Associate Provost informs the Office of the Registrar that the course has been revalidated.

DOCTORAL DEGREE

Doctoral candidates are allowed no more than five years in which to complete the remaining requirements of their program after being admitted to doctoral candidacy to ensure that students earning a doctoral degree have current knowledge in their field. Admission to doctoral candidacy is normally expected to precede work on the dissertation (check program guidelines for exceptions to this expectation).

The five-year time limit begins with the start of the semester following the completion of a program's requirements for doctoral candidacy. A student will be considered to have gained *admission* to doctoral candidacy in the first full semester after they have completed their program's requirements to become a doctoral candidate (i.e. passing an exam, being voted to candidacy, successfully defending a proposal or a different activity). It is the semester of admission that is used to calculate the five year time limit, not the semester in which requirements were completed.

Students officially admitted to candidacy at the beginning of a spring term must graduate by the end of the fall term in the calendar year of admission plus 4 years. For example, if a student successfully meets the requirements of candidacy during the fall 2015 semester, their admission to doctoral candidacy officially begins in spring 2016. The student must graduate by fall 2020.

Students officially admitted to candidacy at the beginning of a fall term must graduate by the end of the summer term in the calendar year of admission plus 5 years. For example, if a student successfully meets the requirements of candidacy during the spring 2016 semester, their doctoral candidacy officially begins in fall 2016. The student must graduate by summer 2021.

Completion of the requirements for admission to doctoral candidacy must precede the semester of graduation.

In the event a student anticipates failing to complete the doctorate within five years after admission to candidacy, an extension of up to 12 months may be requested. Prior to requesting an extension, the student must repeat the program's candidacy examination or an alternate procedure (approved by the college or school dean or designee) for assessing the student's academic competence and current knowledge in their field of study. If appropriate, the student may be expected to retake or revalidate courses (using the procedure described for master's students) in order to ensure that the student's subject knowledge is up-to-date. A request for an extension of time in order to complete degree requirements must be submitted by the college or school dean or designee to the Associate Provost for Graduate Academic Affairs and must include the following:

- A statement documenting the circumstances that justify the request, including information about any leaves of absence approved for the student.
- A description of the procedures followed to ensure the student's academic competence and up-to-date knowledge in the field of study (repetition of the candidacy examination or alternate procedure).
- A timeline by which the student is expected to complete remaining degree requirements, including a final deadline by which all degree requirements must be completed. The extension may not exceed 12 months.
- Evidence of endorsement of the request from the student's advisory committee and the office of the dean.

If the initial candidacy period expires, a student will be changed to non-degree status and must be readmitted to the program before an extension can be requested.

PROFESSIONAL DEGREES

Professional degree programs may set their own time limits for completion.

In this section:

GPA Standards

A minimum GPA of 2.75 based on all courses taken while a graduate student (including undergraduate level courses) is required for conferral of a degree (although some professional programs use different grading systems and standards; see individual listings). Individual academic units may designate a higher GPA or other academic standards required for students to receive a degree.

A minimum GPA of 2.75 based on courses applied to a certificate is required for the award of a certificate. Some certificates may have higher or additional standards.

Master's Degree Requirements

Students in a master's program must complete a minimum of 30 total credits, of which at least 24 credits must be coursework other than research, thesis, project, internship, etc. Many programs set requirements for higher numbers of coursework credits to earn the master's degree. Some, but not all, master's programs require completion of a thesis.

Doctoral Degree Requirements

The doctorate is a research or performance degree and does not depend solely on the accumulation of credit hours. The requirements of the degree are admission to candidacy, residency, completion of the program of doctoral study (plan of study (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/advising_and_evaluation/#Plan_of_Study)), and completion and defense of a dissertation.

ADMISSION TO DOCTORAL CANDIDACY

Admission to graduate study and enrollment in graduate courses do not imply acceptance of the student as a candidate for a doctoral degree. Admission to doctoral candidacy is accomplished only by satisfactorily passing a candidacy examination (which may have a certain label in different programs) and by meeting other requirements specified by the program.

Because the candidacy examination attests to the academic competence of the student and is the formal mechanism for admitting the student to candidacy, it cannot precede the conferring of the degree by more than 5 years (refer to the section on time limits for the doctoral degree (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/degree_regulations/#timelimitstext)).

The candidacy examination typically assesses the student's knowledge of the important issues in their field of study, as well as their ability to engage in research. The examination is intended to determine whether the student has the academic competence to undertake independent research in the discipline and to ensure that the student possesses a thorough grasp of the fields outlined in the plan of study. The exam is generally taken after a student has completed the major portion of the program course requirements and other program-specific requirements (such as the acceptance of a prospectus, a grant exercise, or other forms of student evaluation).

Candidacy examinations are evaluated by a faculty examining committee consisting of at least three members. If two or more members vote to fail the student, all or part of the candidacy examination must be repeated. A candidacy examination may not be administered more than three times; many programs limit administration to two times.

RESIDENCY

Doctoral education involves many learning experiences that take place outside the formal classroom setting. These involve observing and participating in activities conducted by the graduate faculty, using departmental and University libraries, attending lectures presented by visiting scholars, informally debating other students, and similar activities. To ensure that graduate students experience this kind of informal learning, doctoral programs at WVU generally require at least two semesters in residence on campus. However, an individual student or graduate committee may propose an alternative plan by which the student can gain equivalent educational experience. This plan must be submitted in writing, approved by the college or school dean or designee, and placed in the student's program file.

PROGRAM OF DOCTORAL STUDY

Plan of Study *(*http://catalog.wvu.edu/graduate/advisingcoursesdegrees/advising_and_evaluation/#advisingtext*)*

The program of doctoral study ("plan of study") is planned with the student's graduate advisor and committee to combine any or all of the following: graduate courses of instruction, special seminars, independent study, supervised research, and supervised training designed to promote a broad and systematic knowledge of the major field and to prepare the student to complete the requirements for admission to candidacy and to successfully complete the dissertation.

PROFESSIONAL DEGREE REQUIREMENTS

Professional program degree requirements are determined by the program, and often are determined or guided by accreditation standards.

Committees

In this section:

General Requirements for All Graduate Committees

The chair of the graduate thesis or dissertation committee must be a regular member of the graduate faculty and a current WVU faculty member at the time of the defense. Co-chairs of committees are allowed, but at least one of the co-chairs must be a regular member of the graduate faculty and at least one of the co-chairs must be a current WVU faculty member at the time of the defense. The committee may include a nonmember of the graduate faculty, and associate members of the graduate faculty, as long as there is no more than one nonmember, and the nonmember and associate members together do not constitute the majority of the committee (i.e., the majority of the committee must be regular members of the graduate faculty). No family member may serve on the graduate committee of his or her relative. Committee members who are not graduate faculty members are normally expected to hold the same or higher degree (or equivalent professional experience) as that sought by the student. All graduate thesis and dissertation committees are subject to the approval of the chair/director or designee of the department/program and the dean or designee of the college or school.

Once a graduate thesis or dissertation committee has been officially established, it will not be necessary to alter it if the graduate faculty status of a member of the committee is downgraded. Any changes in the membership of a graduate thesis or dissertation committee require approval of the dean or designee of the college or school. Depending on circumstances and the judgment of the dean or designee, replacement of the chair may require that activities already completed (such as a prospectus approval meeting) be repeated.

Membership of graduate committees other than thesis or dissertation committees is subject to the rules of individual programs. It is recommended that such committees include a majority of graduate faculty members (regular or associate).

Master's Thesis Committees

Master's thesis committees consist of no fewer than three members. It is recommended that at least one member of the committee be from outside the student's department/program.

Doctoral Dissertation Committees

Doctoral dissertation committees consist of no fewer than four members. At least one member of the committee must be from a department/program other than the one in which the student is seeking a degree. Programs may set their own standards for these "external" committee members. Qualified individuals from outside WVU are allowable, as long as the general requirements for committee membership are followed.

IN THIS SECTION:

THESES AND DISSERTATIONS

Many master's degrees and all research doctoral degrees require the completion of a research project under the direction of the faculty of the University on some topic in the field of the major subject. The thesis must present the results of the master's degree candidate's investigation. The dissertation must present the results of the doctoral candidate's individual investigation and must embody a definite contribution to knowledge. Regulations concerning the constitution of thesis and dissertation committees are in the Committees section of this catalog (p. 35).

DEFENSE

Only after the thesis or dissertation committee has tentatively approved the student's written thesis or dissertation, can the final defense be scheduled. This defense is usually held in the term in which all other requirements for the degree are to be met. At the discretion of the faculty responsible for doctoral degree programs, a comprehensive final written examination also may be required of doctoral students.

The student's committee chairperson must obtain approval of the time, place, and committee members for the defense from the college or school dean or designee at least two weeks before the defense date. All dissertation defenses are open to the public and the university community and must be posted on the University calendar by the college or school dean or designee.

The student cannot be considered as having satisfactorily passed their defense if there is more than one unfavorable vote among members of the committee. All committee members, including the chair, are considered equal voting members. Results of each defense must be reported to the college or school dean or designee within two business days. If the defense is not passed, a repeat of the defense may be scheduled only with approval from the college/school dean or designee.

The student and all committee members are normally expected to be physically present for a defense. In extraordinary circumstances, and only with the approval of the college or school dean or designee, individuals may attend by audio or videoconference (with videoconferencing preferred). Anyone attending the defense electronically must remain available during the entire time of the defense.

In extraordinary circumstances, the dean or designee may permit another person to attend the defense as a substitute for one of the committee members, provided that the original committee member was not the chair. There can be no substitute at the defense for the chair. Only one substitute at the defense is allowed, and the request for a substitute must be made in writing to the dean or designee prior to the defense. The request for a substitute at the defense should be signed by the committee chair, the student, and both the original member (if available) and the substitute member. A substitute committee member must have the same or higher graduate faculty status as the original committee member and represent the same academic discipline or specialization. If a substitute committee member attends the defense, the substitute signs the form indicating whether the student passed or failed the defense. However, the original committee member should provide written comments to the student on the thesis or dissertation and sign the Thesis and Dissertation Signature Form required for submission of the document to the University Libraries. This paragraph applies only to a substitution for a committee member at the defense; see the section on General Requirements for All Graduate Committees (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/degree_regulations/#committeestext) for information on changing the formal membership of a committee.

SUBMISSION

Once approved by a student's graduate committee, the final version of all WVU theses and dissertations must be submitted electronically through the University Libraries Electronic Theses and Dissertations (https://etd.lib.wvu.edu/) website. Information about formatting, submission, and approval of electronic theses and dissertations is provided at this website.

IN THIS SECTION:

GRADUATION

Students anticipating completion of all degree requirements by the end of a term must submit an Application for Graduation by the posted deadline for that term. The candidate must then complete all requirements by posted deadlines. If the degree is not earned during that term, the student must submit a new Application for Graduation by the posted deadline for the term in which completion is again anticipated. Information can be found on the Graduation & Diploma tab on the Office of the University Registrar website (https://registrar.wvu.edu/graduation-diploma/).

Colleges and schools are responsible for certifying that master's, doctoral, and professional students meet the minimum requirements of the University as well as any additional college or school requirements.

Participation in commencement ceremonies is a public recognition of students' academic efforts and accomplishments but does not necessarily imply that all degree requirements have been met. Students who have completed all requirements for their degree may participate even if final degree certification is still pending at the time of the ceremony. The dean of the relevant college/school determines which students may participate in their college/school's commencement ceremonies.

In some cases, a student who is likely to complete all degree requirements in the academic term following the commencement ceremony *may* be allowed to participate with the dean's permission. However, when a ceremony for a certain degree includes hooding, only candidates for those degrees who have successfully defended their thesis or dissertation can participate in the ceremony. The dean may allow graduate students to participate and be hooded if they have successfully defended the thesis or dissertation work, even if all follow-up work has not yet been completed, as long as the dean believes that the work will be completed in the academic term following the commencement ceremony. Students should be hooded by an individual who holds the same or higher degree as that being awarded. Other individuals may hood or assist with hooding only if approved by the dean of the student's college or school.

Diploma Retention Policy

Diplomas retained by or returned to the Office of the University Registrar will be held for two years. This includes diplomas that are retained in the office for financial holds, that have been returned to sender, or that have been shipped to the office for pick up. After two years of the conferral date, any request for a diploma by the student will incur fees and fall under all policies associated with ordering a replacement diploma.

FERPA

In this section:

Notice to Students Regarding FERPA

Students at West Virginia University (WVU) have rights according to the Family Educational Rights and Privacy Act (FERPA) of 1974. This Act, was designed to protect the privacy of educational records, to establish the right of students to inspect and review their educational records, and to provide guidelines for the correction of inaccurate or misleading data. A more detailed explanation of rights afforded to students by FERPA can be found at the WVU FERPA (http://ferpa.wvu.edu/home/) website.

Designation of Directory Information

Directory Information is public and may be disclosed at West Virginia University's discretion for any purpose. WVU designates the following categories of student information as "Directory Information".

- Name of Student
- Official Address
- Telephone Number
- Place of Birth
- Age of Student
- Names and Addresses of Parents
- Major and Minor Fields of Study
- Class Status (e.g., freshman)
- Enrollment Status (e.g., full time or part time)
- Dates of Attendance
- Previous Educational Institution(s) Attended
- Degree(s) and Date(s) Conferred, including anticipated graduation dates
- Awards
- Honors
- Participation in Officially Recognized Activities and Sports
- Weight and Height of Members of Athletic Teams
- Duties and Responsibilities, including Dates of Service, of Graduate Assistants, Student Workers, Interns, or Student Volunteers

Designation of Limited Use Directory Information

WVU designates the following categories of student information as "Limited Use Directory Information":

- University issued student electronic mail addresses ("Email Addresses")
- Photographs, videos or other media containing a student's image or likeness (collectively "Student Images")

Use and disclosure of this information shall be limited to (1) those officials within the University who have access, consistent with FERPA, to such information and only in conjunction with an official institutional purpose; and (2) publication on websites hosted by, on behalf of, or for the benefit of the University, including the online directory available at: http://directory.wvu.edu.

Limited Use Directory Information may only be provided to external parties that are contractually affiliated with the University.

Withholding Directory Information

Students who do not request withholding of Directory Information are assumed to have approved disclosure of this information. Currently enrolled students, using the official West Virginia University Student Confidentiality Form, (listed under Records of the Forms tab), may withhold disclosure of Directory Information under the FERPA. To withhold disclosure, completed forms must be submitted in the Mountaineer Hub or mailed to the Office of the University Registrar.

A request to withhold Directory Information shall have no effect on disclosures made prior to receipt of the Student Confidentiality Form, and will not revoke third-party access to student records granted through the Parent/Guest Portal. Students may reinstate disclosure of Directory Information by completing the Release Confidentiality (Reinstate Directory Information) form.

Parent/Guest Access to Online Student Records

The Parent/Guest Portal (https://parent-guest.portal.wvu.edu/) is the exclusive method by which a University student may grant third-party access to their records. Information that is protected from disclosure pursuant to FERPA, such as grades, financial aid details, and student account/billing information is maintained in a secure online environment. A student may grant permission to a parent or guest to access this information and make payments through this portal. A student may restrict the information that a parent or guest is able to access or may revoke access at any time.

For FERPA updates and more information on West Virginia University's FERPA policy, please visit the WVU FERPA (http://ferpa.wvu.edu/home/) website, or contact the applicable office:

- Office of the University Registrar for the Morgantown location
- Office of Enrollment Services for the Keyser location
- Office of Enrollment Services for the Beckley location

Financial Aid

Department website: http://financialaid.wvu.edu/

IN THIS SECTION:

- Application Process (p. 38)
- Aid Offer Notification (p. 38)
- Employment Opportunities (p. 38)

To receive an offer of aid, a student must be admitted as a degree-seeking student within the WVU System. Students who take courses but who are not pursuing a degree may be eligible for limited Federal Direct Loans if they meet certain criteria (https://financialaid.wvu.edu/students/non-degree-student/). Students who need financial aid should apply as early as possible.

APPLICATION PROCESS

To apply for federal and some state and institutional aid, students must submit the Free Application for Federal Student Aid (FAFSA). For steps that need taken in preparation, see Preparing for the FAFSA (https://financialaid.wvu.edu/applying-for-aid/preparing-for-fafsa/). See Complete the FAFSA (https://financialaid.wvu.edu/applying-for-aid/fafsa/) for information on how to submit the FAFSA and priority deadlines. WVU will only receive students' FAFSA information electronically, if they include the WVU System school code (003827) on the FAFSA.

AID OFFER NOTIFICATION

WVU will receive students' FAFSA information electronically if the WVU System's school code (003827) was included on the FAFSA. The WVU Mountaineer Hub will notify students via their WVU email account if additional information is needed. Once a financial aid offer is available, a notification will be sent to the student's WVU email.

EMPLOYMENT OPPORTUNITIES

Students are encouraged to use the job search database (https://studentemployment.wvu.edu/) at studentemployment.wvu.edu (https://studentemployment.wvu.edu/) to search for on- and off-campus part-time employment opportunities.

In this section:

- Satisfactory Academic Progress (p. 38)
- Consequences of Withdrawal (p. 38)

Satisfactory Academic Progress

Students must make measurable academic progress toward degree completion to remain eligible for most financial aid programs. Federal regulations require that students meet minimum standards for grade point average, successfully complete a minimum percentage of attempted credit hours, and complete their degree within a certain amount of attempted credit hours. The complete Satisfactory Academic Progress Policy (https://financialaid.wvu.edu/home/maintain/academic-progress/) is available online.

Consequences of Withdrawal

If a student receives federal, state, or institutional financial aid and withdraws from all classes during the semester, the student may be required to return all or a portion of their financial aid even if it has already disbursed as payment on the student's account. Refer to Withdrawing from Courses (https://financialaid.wvu.edu/home/maintain/withdrawing/) for more information. Withdrawing from one or more classes may also impact future financial aid eligibility per the Satisfactory Academic Progress Policy (http://financialaid.wvu.edu/home/maintain/academic-progress/).

Additional Information

For more information on applying for financial aid and maintaining aid eligibility, visit the Student Financial Services (https://financialaid.wvu.edu/) website.

Financial Assistance for Graduate and Professional Students

WVU graduate and professional students may be eligible for financial assistance through fellowships and scholarships (https://graduateeducation.wvu.edu/funding-and-cost/scholarships-and-internships/), graduate assistantships (https://graduateeducation.wvu.edu/funding-and-cost/graduate-assistantships/), tuition waivers (https://graduateeducation.wvu.edu/funding-and-cost/tuition-waivers/), loans (https://financialaid.wvu.edu/loans/#GRLOANS), and other forms of aid. In addition, students can use the job search database at studentemployment.wvu.edu (https://studentemployment.wvu.edu) to search for on- and off-campus part-time employment opportunities.

Fellowships and scholarships (https://graduateeducation.wvu.edu/funding-and-cost/scholarships-and-internships/) provide students with funds that do not require employment. Fellowships managed by the Office of Graduate Education and Life usually include a stipend, University tuition waiver, College tuition scholarship, and student health insurance, and may also provide funds for research and travel. Scholarships provide funds to help defray students' educational expenses.

Graduate assistantships (http://graduateeducation.wvu.edu/funding-and-cost/graduate-assistantships/) (teaching, research, or service) may be available through a student's own department/program or other units on campus. Regular graduate assistantships require 20 hours per week of work and at least 9 credit hours per semester. Partial graduate assistantships require 10 hours per week of work and at least 9 credit hours per semester. Assistantships provide the student with a stipend and a full or partial waiver of University tuition (but typically not college tuition or University fees; see Tuition, Fees, and Residency (http://catalog.wvu.edu/graduate/graduateeducationexpenses/) and the student health insurance (http://studentinsurance.wvu.edu/) website).

Tuition Waivers (http://graduateeducation.wvu.edu/funding-and-cost/tuition-waivers/) may be provided to some students based on merit, employment with the University, or prior participation in certain programs such as McNair Scholars (https://graduateeducation.wvu.edu/funding-and-cost/tuition-waivers/special-program-tuition-waivers/mcnair-scholars/) or the Health Science and Technology Academy (HSTA (http://www.wv-hsta.org/resources-events/graduate-resources/)).

The WVU Mountaineer Hub (https://mountaineerhub.wvu.edu/) provides information and instruction to students interested in obtaining federal and private loans (https://financialaid.wvu.edu/loans/#GRLOANS) to help cover educational expenses.

Graduate Certificates

Graduate Certificates

ACADEMIC CERTIFICATE POLICIES

A graduate certificate program comprises 12 to 21 credits and can be completed either independently or along with a degree program and comprises 12 to 21 credits. Credits earned as a non-degree student may be applied to a graduate certificate. Admission to a certificate program may be required prior to enrollment in specified certificate courses. Students must be admitted to the certificate program in order to be awarded the certificate.

With approval from the certificate program, up to 6 of the required credits for a graduate certificate can be transferred from a different institution or applied from another previous or concurrent WVU degree or certificate. Individual course credits may be applied to no more than two degrees, majors, or certificates. Courses applied to a certificate must have been completed no more than eight years prior to certificate conferral as stated on the Time Limits tab of the Degree Regulations section of this catalog (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/degree_regulations/#timelimitstext).

See information on Graduate Multiple Curricula on the Academic Definitions tab under the Programs, Courses & Credits section of this catalog (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/#academicdefinitionstext) for rules concerning the application of credits from a completed certificate to a subsequent WVU degree.

Applied Biostatistics

Graduate Certificate in Applied Biostatistics
CERTIFICATE CODE - CG32

The Applied Biostatistics Certificate is designed for those individuals who lack formal training in biostatistics and would like to gain skills needed to understand and apply standard statistical techniques. It is an **in-person and/or online program** that is available to practitioners and/or students at WVU and elsewhere.

The primary objectives of the program are to:

- Describe basic concepts of probability and statistical inference
- Demonstrate standard techniques of database management and analysis
- Compare and contrast study designs common to health research
- Recognize the primary sources of bias observed in health research
- Interpret appropriate inferences from data based on strengths and limitations of major epidemiologic study designs as well as the results of descriptive and inferential statistical analyses

Individuals who would be interested in such a Certificate include clinical and translational researchers at varying levels of their career (faculty, fellows, residents, basic scientists) as well as public health practitioners, in the state of West Virginia or beyond. Interested individuals in the program should have a desire to be more self-sufficient with their research, specifically being able to know basic study design principles, analyze their data, and interpret their results.

The entire curriculum will be available both **online and in-person (live)**, thus being accessible to individuals from a variety of backgrounds, locations, and experiences. The program will take advantage of existing course technology where courses are taught in a synchronous fashion in which the instructor lectures in-class, and the lecture (along with associated PowerPoint slides or other files, such as SAS programs) is broadcast online. While the lecture is available live during the lecture itself, the video or audio of the lecture is archived and available on the course for access at any time.

All course notes, homework, programs, etc. are available online, and the instructor is available in a number of formats (online chat, email, phone) to accommodate distance-learning students.

Applied Biostatistics Certificate Program students will typically take one class per semester. Completion of the program will typically take two years.

BIOS 601	Applied Biostatistics 1	4
BIOS 603	Applied Biostatistics 2	3
BIOS 604	Applied Biostatistics 3	3
BIOS 605	Applied Biostatistics Capstone	2
EPID 601	Public Health Epidemiology	3
Total Hours		15

Certificate Learning Outcomes

APPLIED BIOSTATISTICS

Upon completion of the certificate students should be able to:

- Describe basic concepts of probability and statistical inference
- Demonstrate standard techniques of database management and analysis
- Compare and contrast study designs common to health research
- Recognize the primary sources of bias observed in health research
- Interpret appropriate inferences from data based on strengths and limitations of major epidemiologic study designs as well as the results of descriptive and inferential statistical analyses

Applied Statistics

Graduate Certificate in Applied Statistics

CERTIFICATE CODE - CG29

The Certificate in Applied Statistics (CAS) is designed for professionals or students who what to take applied statistics courses to enhance their quantitative skills and job opportunities. The certificate will provide students with a solid foundation in statistical methodology, and depending on the elective courses selected, predictive analytics, statistical computing, or statistical theory.   The flexibility in the certificate course work is intended to allow the student to select courses that will meet their needs, whether enhancing professional quantitative skills or research productivity.

Admissions to the CAS may be done at any time. Students who are currently admitted to or enrolled in a graduate degree program that are wishing to earn the CAS should contact the Statistics Department to enroll in the CAS. Students who wish to pursue the CAS independent of a graduate degree program must be admitted as a non-degree graduate student prior to registering their intent to earn the certificate.

Students must earn a grade of C- in all courses applied to the CAS, and must earn at least an overall 3.0 GPA in the courses counted toward the certificate.

REQUIRED COURSES:

Students in the certificate program will complete a minimum of 15 credit hours of graduate level Statistics courses. The courses required for the completion of the CAS are defined below.

Students must earn a grade of C- in all courses applied to the CAS.		
Students must earn at least an overall 3.0 GPA in the courses counted toward the certificate.		
STAT 512	Statistical Methods 2	3
STAT 513	Design of Experiments	3
Electives (500, 600, 700-level STAT Courses) [*]		9
Total Hours		15

[*]   Credit towards the Certificate is also given for STAT 461 and STAT 462.

[**]   All courses applied to the certificate must be Statistics (STAT) courses; courses listed as equivalent to Statistics courses in the Catalog may not be counted.

Certificate Learning Outcomes

APPLIED STATISTICS

Upon completion of the certificate students will be able to:

- Identify appropriate statistical methods for the analysis of real-world data;
- Analyze data using statistical programming tools;
- Apply the principles of experimental design in a science and engineering context;
- Interpret the results of designed experiments and observational studies.

Artist Diploma in Music Performance

Artist Diploma in Music Performance

CERTIFICATE CODE - CG40

The **Artist Diploma in Music Performance** is a one-year graduate certificate designed for the artistic refinement of highly advanced performers. With an emphasis on applied and ensemble study, the program offers a uniquely focused opportunity to further develop both professionalism and artistry in musicians gifted with the ability and motivation to succeed in the contemporary world. The program is an elite offering for a limited number of qualified students.

The 18-credit program consists of two semesters of applied study, two full-length recitals, and participation in two music ensembles. Students who have completed an undergraduate or graduate degree in Music are eligible to apply, and are evaluated for admission on the basis of transcripts and audition before a faculty committee.

All international students whose first language is not English must achieve a TOEFL Internet-Based of 79, TOEFL Paper-Based of 550, or IELTS of 6.5 to be admitted into this program.

Recital [*]		8
MUSC 689	Master's Recital	
Performance		**8**
MUSC 700	Performance: Bassoon	
MUSC 700A	Performance: Cello	
MUSC 700B	Performance: Clarinet	
MUSC 700C	Performance: Horn	
MUSC 700D	Performance: Percussion	
MUSC 700E	Performance: Piano	
MUSC 700F	Performance: Pipe Organ	
MUSC 700G	Performance: Saxophone	
MUSC 700H	Performance: Trumpet	
MUSC 700I	Performance: Voice	
MUSC 700J	Performance: Conducting	
MUSC 700K	Performance: Euphonium	
MUSC 700L	Performance: Flute	
MUSC 700M	Performance: Guitar	
MUSC 700N	Performance: Harpsichord	
MUSC 700O	Performance: Oboe	
MUSC 700P	Performance: String Bass	
MUSC 700Q	Performance: Trombone	
MUSC 700R	Performance: Tuba	
MUSC 700S	Performance: Viola	
MUSC 700T	Performance: Violin	
MUSC 700U	Performance: Applied Jazz	
Ensemble		**2**
MUSC 640	Chamber Music: Brass	
MUSC 641	Chamber Music: Guitar	
MUSC 642	Chamber Music: Jazz	

MUSC 643	Chamber Music: Percussion	
MUSC 644	Chamber Music: Percussion-Ethnic	
MUSC 645	Chamber Music: Percussion-Gamelan	
MUSC 646	Chamber Music: Percussion Steel Band	
MUSC 647	Chamber Music: Piano	
MUSC 648	Chamber Music: String	
MUSC 649	Chamber Music: Voice	
MUSC 650	Chamber Music: Woodwind	
MUSC 651	Chamber Music: Other	
MUSC 501	Music Ensemble	
MUSC 704	Opera Theatre	
Total Hours		18

*	A minimum grade of B- is required in the first recital for continuation purposes.

Suggested Plan of Study

First Semester	Hours
MUSC 689	4
MUSC 700	4
Ensemble	1
	9
Second Semester	**Hours**
MUSC 689	4
MUSC 700	4
Ensemble	1
	9

Total credit hours: 18

Business Cybersecurity Data Analytics

Graduate Certificate in Business Cybersecurity Data Analytics

CERTIFICATE CODE - CG54

Cybersecurity and data analytics have a symbiotic relationship where data of all types relies on robust cybersecurity management for security and accuracy. This certificate program orients both data and technology analysts to the demands and requirements of both securing and analyzing data.

Course Requirements: Students must have a cumulative GPA of 3.0 to graduate from the program. Each required class must be completed with a grade of a C- or better. Graduate students with a cumulative grade point average (GPA) below 2.75 will be placed on academic probation.

CYBR 530	Business Data Communications	3
BUDA 520	Data Management	3
CYBR 540	Information Ethics and Legal Procedures	3
ACCT 582	Fraud Data Analysis	3
or BUDA 550	Business Data Visualization	
Total Hours		12

Certificate Learning Outcomes

BUSINESS CYBERSECURITY DATA ANALYTICS

Upon completion of this certificate, students will be able to:

- Establish and maintain robust data collection and warehousing infrastructure.
- Develop ethical and legal frameworks for storing and using data within databases and digital systems.
- Analyze and draw conclusions about the accuracy and validity of data within databases and digital systems.

Business Cybersecurity Foundations

Graduate Certificate in Business Cybersecurity Foundations

CERTIFICATE CODE - CG55

Course Requirements: Students must have a cumulative GPA of 3.0 to graduate from the program. Each required class must be completed with a grade of a C- or better. Graduate students with a cumulative grade point average (GPA) below 2.75 will be placed on academic probation.

BUDA 510	Foundations of Business Intelligence	3
BUDA 520	Data Management	3
CYBR 525	Information Security Assurance Management	3
CYBR 530	Business Data Communications	3
Total Hours		12

Certificate Learning Outcomes

BUSINESS CYBERSECURITY FOUNDATIONS

Upon completion of this certificate, students will be able to:

- Develop and maintain data-driven justification for cybersecurity management in firms of any size or in any industry.
- Identify cybersecurity management vulnerabilities and suggest strategies to eliminate or mitigate such vulnerabilities.
- Establish and maintain robust data collection and warehousing infrastructure.

Business Cybersecurity Management

Graduate Certificate in Business Cybersecurity Management

CERTIFICATE CODE - CG56

Course Requirements: Certificate completion requires a 3.0 GPA overall. Minimum grade of a C- is required in all courses applied toward the certificate. Students whose cumulative GPA falls below 2.75 will be placed on academic probation. If the GPA is not brought up to 2.75 by the end of the following semester, the student will be suspended from program.

CYBR 525	Information Security Assurance Management	3
CYBR 530	Business Data Communications	3
CYBR 535	Business Network Security	3
CYBR 540	Information Ethics and Legal Procedures	3
or CYBR 545	Business Cybercrime Management	
Total Hours		12

Certificate Learning Outcomes

BUSINESS CYBERSECURITY MANAGEMENT

Upon completion of this certificate, students will be able to:

- Conduct enterprise-level cybersecurity risk assessments.
- Describe the underlying communication protocols relevant to cybersecurity management.
- Identify cybersecurity management vulnerabilities and suggest strategies to eliminate or mitigate such vulnerabilities.

Business Data Analysis

Graduate Certificate in Business Data Analysis

CERTIFICATE CODE - CG44

The Certificate in Business Data Analysis requires 12 credit hours, the coursework is intended to prepare students to extracts insights and knowledge from data. The courses in this certificate are focused on advanced analytical methods and visualizations to help students make the most of their data and communicate their findings.

Course Requirements. In order to satisfy the requirements of the certificate, a student must completed the required courses below. Note, that a cumulative GPA of 3.0 is required for completion of the certificate (a C or better is required in courses, with an overall cumulative GPA of 3.0).

BUDA 525	Business Statistical Methods 1	3
BUDA 530	Business Statistical Methods 2	3
BUDA 535	Business Data Mining	3
BUDA 550	Business Data Visualization	3
Total Hours		12

Certificate Learning Outcomes

BUSINESS DATA ANALYSIS

Upon completion of this certificate, students will be able to:

1. Perform advanced predictive analytics techniques using statistical software and communicate their results.
2. Deploy machine learning for mining big data.
3. Communicate data inferences visually using data visualization software packages.

Business Data Science

Graduate Certificate in Business Data Science

CERTIFICATE CODE - CG45

The Certificate in Business Data Science requires 12 credit hours, the coursework unifies statistics, machine learning and information technology to make discoveries otherwise out of sight. The methods emphasized in this certificate are capable of discovering hard-to-find trends in large, population-sized data sets.

Course Requirements. In order to satisfy the requirements of the certificate, a student must complete the required courses below. Note, that a cumulative GPA of 3.0 is required for completion of the certificate (a C or better is required in courses, with an overall cumulative GPA of 3.0).

BUDA 515	Ethics and Data Collection	3
BUDA 525	Business Statistical Methods 1	3
BUDA 530	Business Statistical Methods 2	3
BUDA 535	Business Data Mining	3
Total Hours		12

Certificate Learning Outcomes

BUSINESS DATA SCIENCE

Upon completion of the certificate, students will be able to:

1. Organize and securely retrieve data from data warehousing infrastructure.
2. Perform advanced predictive analytic techniques using statistical software and communicate their results.
3. Deploy machine learning for mining big data.

Business Data Technology Management

Graduate Certificate in Business Data Technology Management

CERTIFICATE CODE - CG46

The Certificate in Data Technology Management requires 12 credit hours, the coursework focuses on building, managing and applying the technological infrastructure that supports a solid and robust data collection as the foundation underpinning newer statistical techniques for business.

Course Requirements. In order to satisfy the requirements of the certificate, a student must complete the required courses below. Note, that a cumulative GPA of 3.0 is required for completion of the certificate (a C or better is required in courses, with an overall cumulative GPA of 3.0).

BUDA 510	Foundations of Business Intelligence	3
BUDA 515	Ethics and Data Collection	3

BUDA 520	Data Management	3
BUDA 525	Business Statistical Methods 1	3
Total Hours		12

Certificate Learning Outcomes

BUSINESS DATA TECHNOLOGY MANAGEMENT

Upon completion of the certificate, students will be able to:

1. Establish and maintain robust data collection and warehousing infrastructure.
2. Explain the role of data analytics in business intelligence and operations.
3. Perform predictive analytical techniques using statistical software and communicate their results.

Business Operations Research

Graduate Certificate in Business Operations Research

CERTIFICATE CODE - CG47

The Certificate in Business Operations Research requires 12 credit hours, the coursework focuses on the rigorous evaluation of different scenarios to hep firms find the optimal scenario to pursue.

Course Requirements. In order to satisfy the requirements of the certificate, a student must complete the required courses below. Note, that a cumulative GPA of 3.0 is required for completion of the certificate (a C or better is required in courses, with an overall cumulative GPA of 3.0).

BUDA 520	Data Management	3
BUDA 525	Business Statistical Methods 1	3
BUDA 540	Decision Sciences and Analytics	3
BUDA 545	Business Simulation Modeling	3
Total Hours		12

Certificate Learning Outcomes

BUSINESS OPERATIONS RESEARCH

Upon completion of this certificate, students will be able to:

1. Establish and maintain robust data collection and warehousing infrastructure.
2. Perform predictive analytics techniques using statistical software and communicate their results.
3. Conduct data simulation experiments of business scenarios and make inferences based on the results.

Clinical and Translational Science

Graduate Certificate in Clinical and Translational Science

CERTIFICATE CODE - CG28

Information on the 15-credit **graduate Certificate in Clinical & Translational Science** is available at http://wvctsi.org/programs/education-mentoring-career-development/certificate-in-clinical-translational-science/

Mentored research opportunities exist with faculty in the Health Sciences schools of Dentistry, Medicine, Nursing, Pharmacy, and Public Health. The WVCTSI facilitates the recruitment and support of physician-scientists, who may serve as faculty mentors to students.

Required Courses

BIOS 601	Applied Biostatistics 1	4
EPID 601	Public Health Epidemiology	3
EPID 625	Principles of Clinical Trials	3
Research/Grant Preparation		
WVCTSI Research Seminar Series		
CTS 697	Research	2

Electives	3
Total Hours	15

Certificate Learning Outcomes

CLINICAL AND TRANSLATIONAL SCIENCE

Upon completion of the certificate students will be able to:

- convey knowledge and skill in the areas of clinical and translational research, manuscript preparation, and communication of research findings;
- become clinical and translational researchers who can integrate findings, information, and observations across basic, population, and clinical sciences, to accelerate and transform how we improve the health of individuals and populations;
- be well prepared to engage in their own career in clinical or translational science in academia, government, industry, etc.

Community Development Policy and Practice

Graduate Certificate in Community Development Policy and Practice

CERTIFICATE CODE - CG42

The Graduate Certificate in Community Development Policy and Practice (CDPP) is designed to provide professional development for in-service practitioners in the field of community development, which pursues holistic improvements to the social, economic, and environmental qualities of local communities. The CDPP graduate certificate program is available to certificate seeking students as well as those pursuing another graduate degree. Each student must successfully complete 18 credit hours, including three required courses and three electives from those listed in the Graduate Catalog or as approved by the Program Director.

Required Courses		
PUBA 650	Local Governance	3
PUBA 750	Public Planning	3
PUBA 755	Sustainable Community Development	3
Elective Courses		**9**
Select 9 credit hours from electives or courses approved by Graduate Certificate Coordinator		
PUBA 651	Equitable Community Development	
PUBA 655	Public Engagement	
PUBA 730	Advanced Public Service Research	
PUBA 791	Advanced Topics	
AGEE 650	Program Development in Community Education	
AGEE 651	Program Evaluation in Comm Ed	
ART 523	Graduate Graphic Design	
DSM 650	The Creative Economies	
FMAN 523	Advanced Urban Forest Management	
FOR 670	Human Dimensions of Natural Resource Management	
GEOG 550	Geographic Information Science	
HIST 609	Field Methods in Historic Preservation	
HIST 613	Local History Research Methodology	
HIST 620	Practicum in Cultural Resource Management	
LARC 570	Meanings of Place	
LAW 612	Agriculture & Food Law	
LAW 625	Nonprofit Organizations	
LAW 635	Land Use and Resilience Law	
LAW 774	Local Government	
LEGS 760	Administrative Ethics	
RPTR 714	Outdoor Recreation Behavior	
RPTR 738	Tourism Planning	
SOWK 656	Financial Management and Grant Writing	

WGST 530	Feminist Theory	
Total Hours		18

Certificate Learning Outcomes

GRADUATE CERTIFICATE - COMMUNITY DEVELOPMENT POLICY AND PRACTICE (CDPP)

- Identify, distinguish, and summarize the institutions, processes, and powers of local government in a federalist system.
- Recognize, summarize, and recommend the basic operations and finances of local government.
- Investigate and judge historic and current systems of privilege and oppression.
- Analyze community power dynamics in a particular case.
- Recognize and distinguish various rationales for engaging the public in policy making and implementation.
- Illustrate and model various techniques for mobilizing stakeholders and citizens in collaborative public policy making, planning, and program implementation.
- Identify, define, and compare common arenas of public planning.
- Research and organize planning data to formulate recommendations using a logic model approach, including both data-driven (needs/assets assessment) and mission-driven (strategic) planning practices.
- Distinguish and interpret theoretical approaches to community development.
- Prepare, investigate, develop, and recommend a community development project through implementation, management, and resource development planning.
- Construct a theory of change logic model based on program theory.
- Create a program evaluation research design.

Computer Forensics

Graduate Certificate in Computer Forensics

CERTIFICATE CODE - CG08

The Lane Department of Computer Science and Electrical Engineering (LDCSEE) offers a Graduate Certificate in Computer Forensics (CF). By providing systematic graduate courses in this field, our graduates and others should be better prepared to assist business, industry, government, and academia in attaining a new level of protection from cyber-criminals.

The graduate certificate program consists of fifteen credit hours of required courses. Admission to the graduate certificate program in Computer Forensics requires admission to the M.S. Computer Science or M.S. Electrical Engineering (with Computer Engineering major). One wishing to complete only the Certificate must still be admitted to the M.S.C.S. or M.S.E.E. programs.

The purpose of the certificate program is to:

1. Provide further education to computer professionals with technical undergraduate degrees to enable them to track and protect institutional computer and cyber crime. This knowledge in corporate settings should lead to better protection of company computer assets, company intellectual property, and company data and financial assets. These professionals should be able to support law enforcement in detection and prosecution of cyber-crime when needed.
2. Provide further education for those technical individuals who work in law-enforcement. It is expected that these would be highly technical people with bachelor's degrees in either computer science, computer engineering, or software engineering.

Many (if not most) of the students expected will be full time and pursuing a Masters of Science degrees in Computer Science or Computer Engineering. Other students may come from industry and law enforcement. These students will achieve the Certificate as another resume item that will improve employability while supplying a demand for computer people with such backgrounds. Some students may choose to pursue the Certificate with no intent of completing a Masters degree but will have achieved significant competence in this field.

The Certificate requires fifteen credit hours through required core curriculum courses. In addition to the fifteen credit hours upon course completion, the student will be required to complete a capstone project. The following are the fifteen credits hours:

Required Courses

CPE 435	Computer Incident Response	3
CPE 536	Computer Data Forensics	3
CPE 538	Intro Computer Security Management	3
CS 539	Computer Forensics and the Law	3

CS 568	Computer Network Forensics	3
Total Hours		15

These five courses cover the major areas of study. The first is an overview of the entire area; two will be taught with an emphasis throughout on vulnerabilities and counter-measures. One course emphasizes management practices and oversight required to maintain the best defense against attacks in organizations and how to respond to them. The final course deals with the law and cases governing the area of computer crime, its detection and prosecution, keeping in mind the constraints placed on security by the rights of citizens.

Certificate Learning Outcomes

COMPUTER FORENSICS

Upon completion of the certificate students should be able to:

- Provide further education to computer professionals with technical undergraduate degrees to enable them to track and protect institutional computer and cyber crime. This knowledge in corporate settings should lead to better protection of company computer assets, company intellectual property, and company data and financial assets. These professionals should be able to support law enforcement in detection and prosecution of cyber-crime when needed.
- Provide further education for those technical individuals who work in law-enforcement. It is expected that these would be highly technical people with bachelor's degrees in either computer science, computer engineering, or software engineering.

Creative Strategy

Graduate Certificate in Creative Strategy

CERTIFICATE CODE - CG48

The Creative Strategy Certificate is offered exclusively online with no on-campus classroom attendance required.

The Creative Strategy certificate champions creative strategy and execution as our students engage in building strategic and relevant marketing campaigns. Emphasis is placed on creative thinking as it is applied to writing, discussion, conception and presentation. In writing, it plays a significant role in paraphrasing, fine-tuning ideas and avoiding plagiarism. In coursework and classroom discussion, creative thinking allows students to take risks and more fully express their ideas and opinions while building creative and insight driven marketing campaigns.

Students will be exposed to course work focused in advanced creative concepts, digital storytelling, visual information design and content creation.

The program is taught by a diverse faculty who are recognized leaders in their fields.

Program Format

The program's academic year consists of five accelerated terms corresponding to the University's existing parts of term: Early Fall (August–October), Late Fall (October–December), Early Spring (January–March), Late Spring (March–May) and Summer (May–July).

Certificate Requirements

Minimum cumulative GPA of 2.75 required.

Minimum grade of C- required in all courses provided that a cumulative 2.75 GPA is maintained.		
IMC 625	Advanced Creative Concepts	3
IMC 634	Digital Storytelling	3
IMC 635	Visual Information Design	3
IMC 639	Content Marketing	3
Total Hours		12

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
Early Fall Term		Early Spring Term	
IMC 634	3	IMC 625	3
Late Fall Term		Late Spring Term	

IMC 635		3	IMC 639	3
				6
		6		

Total credit hours: 12

Certificate Learning Outcomes

CREATIVE STRATEGY

1. Design marketing and communications branding to create a visual identification for an IMC brand strategy.
2. Explore branding in terms of mission, voice, color psychology and visual identity.
3. Convey and learn to express complex visual ideas and concepts.
4. Research, analyze and recommend appropriate media from a selection of print, digital and social media vehicles used by contemporary publishers for content delivery and brand marketing.
5. Conceive, develop and express complex visual ideas and concepts, translating them into a coherent visual identity that builds a brand and reinforces its marketing objectives.
6. Explore how the role of content is evolving in the modern marketing landscape and how to apply different types of content generation to new and traditional marketing channels.
7. Create storyboards for content development and develop script writing techniques for production. Understand how color, layout, and typography can be used to create a compelling visual message and brand.
8. Apply professional creative direction and art direction techniques across print, digital and social media.

Cultural Resource Management

Cultural Resource Management Certificate

CERTIFICATE CODE - CG02

The Eberly College of Arts and Sciences also offers an interdisciplinary graduate-level fifteen-hour certificate in cultural resource management (CRM) that is coordinated by the Department of History. Most CRM students earn the graduate certificate in conjunction with an M.A. in history, public administration, recreation parks and tourism, geography, design, art history, or one of several other related graduate degree programs. The requirements for the CRM certificate consist of twelve credit hours of coursework and a three-hour internship or an individual research project (HIST 620). All CRM students must successfully complete HIST 600. Students who are currently admitted to or enrolled in a graduate degree program must register their intent to earn the CRM certificate with the CRM coordinator during the semester prior to their internship. Students who wish to pursue the graduate certificate independent of a graduate degree program must be admitted as non-degree graduate students prior to registering their intent to earn the CRM certificate. Each student is expected to maintain an average GPA of 3.0.

Minimum GPA of 3.0 is required.

Required Courses		
HIST 600	Cultural Resource Management	3
HIST 620	Practicum in Cultural Resource Management	3
Additional Graduate Coursework		9
Total Hours		15

Data Marketing Communications

Graduate Certificate in Data Marketing Communications

CERTIFICATE CODE - CG49

The Data Marketing Communications Certificate is offered exclusively online with no on-campus classroom attendance required.

The Data Marketing Communications certificate is intended to provide access to data-driven coursework for professional students whose career aspirations include utilizing available data as part of a greater integrated marketing communications strategy. Students will be exposed to course work focused in overarching data marketing communications strategy, audience segmentation, campaign planning and programmatic media buying, and campaign metrics and assessment.

The program is taught by a diverse faculty who are recognized leaders in their fields.

Program Format

The program's academic year consists of five accelerated terms corresponding to the University's existing parts of term: Early Fall (August–October), Late Fall (October–December), Early Spring (January–March), Late Spring (March–May) and Summer (May–July).

Certificate Requirements

Minimum cumulative GPA of 2.75 required.

Minimum grade of C- required in all courses provided that a cumulative 2.75 GPA is maintained.		
DMC 660	Introduction to Data Marketing Communications [*]	3
DMC 661	Audience Segmentation	3
DMC 672	Campaign Planning & Programmatic Media Buying	3
DMC 673	Campaign Metrics and Assessment	3
Total Hours		12

[*]   Completion of DMC 660 is required before students can proceed to the rest of the certificate courses. Students must also pass the quantitative assessment exam prior to moving on to upper level courses in the certificate.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
Early Fall Term		Early Spring Term	
DMC 660	3	DMC 661	3
Late Fall Term		Late Spring Term	
DMC 672	3	DMC 673	3
	6		6

Total credit hours: 12

Certificate Learning Outcomes

DATA MARKETING COMMUNICATIONS

1. Explain the basic principles of marketing, media and digital analytics.
2. Discover how metrics and analysis inform business decision making.
3. Describe how marketers use current analytic methods such as segmentation, profiling, and RFM to deliver ROI for their clients.
4. Distinguish between the different types of primary and secondary data available to marketers from response data, to compiled and crowdsourced data.
5. Compare B2B and B2C data requirements and available data modules for targeting, segmentation, data append ? not sure what "append" is and Account Based Marketing.
6. Define the programmatic ecosystem and the resources required to execute programmatic buying.
7. Evaluate and recommend various buying approaches that deliver on campaign objectives and align with brand goals.
8. Identify key performance indicators from a variety of metrics to track the results of a marketing communications campaign.
9. Design campaign tracking methods and dashboards to assess and improve effectiveness during the marketing communications campaign and communicate with key stakeholders.

Digital and Social Media

Graduate Certificate in Digital and Social Media

CERTIFICATE CODE - CG50

The Digital and Social Media Certificate is offered exclusively online with no on-campus classroom attendance required.

The Digital and Social Media certificate intends to prepare students for careers utilizing digital and social media as part of a greater integrated marketing communications strategy. Students will be exposed to course work focused in social media, web metrics and search engine optimization, digital storytelling and video production.

The program is taught by a diverse faculty who are recognized leaders in their fields.

Program Format

The program's academic year consists of five accelerated terms corresponding to the University's existing parts of term: Early Fall (August–October), Late Fall (October–December), Early Spring (January–March), Late Spring (March–May) and Summer (May–July).

Certificate Requirements

Minimum cumulative GPA of 2.75 required.

Minimum grade of C- required in all courses provided that a cumulative 2.75 GPA is maintained.

IMC 634	Digital Storytelling	3
IMC 641	Social Media and Marketing	3
IMC 642	Web Metrics and Search Engine Optimization	3
IMC 643	Digital Video Production	3
Total Hours		12

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
Early Fall Term		Early Spring Term	
IMC 634	3	IMC 643	3
Late Fall Term		Late Spring Term	
IMC 641	3	IMC 642	3
	6		6

Total credit hours: 12

Certificate Learning Outcomes

DIGITAL AND SOCIAL MEDIA

1. Identify, incorporate and implement digital and social media marketing tactics in an integrated marketing communications strategy.
2. Define legal and ethical considerations and federal guidelines associated with digital and social media marketing activities.
3. Develop a comprehensive social media marketing communications plan.
4. Plan digital content to utilize on social media sites: i.e. vlogging, video news letters, short video for social media site production, podcasts, etc.
5. Develop digital content relevant to the target audience for owned, earned, and paid digital and social media channels.
6. Interpret key social media metrics and demonstrate knowledge in tracking social media sites. Learn to utilize web analytics tools and SEO in campaign assessment.
7. Evaluate ROI for digital and social media marketing plans.

Forensic Accounting and Fraud Examination

Graduate Certificate in Forensic Accounting and Fraud Examination (FAFE)

CERTIFICATE CODE - CG31

A minimum GPA of 3.0 is required.

ACCT 581	Fraud Investigation	3
ACCT 582	Fraud Data Analysis	3
ACCT 583	Fraud: Criminology/Legal Issues	3
ACCT 584	Advanced Fraud Investigation	3
Total Hours		12

*   The program also requires students to attend two on-campus residencies.

Certificate Learning Outcomes

FORENSIC ACCOUNTING AND FRAUD EXAMINATION

Upon completion of the certificate students will be able to:

- apply electronic techniques and data-mining to identify fraud and other irregularities;
- analyze and interpret evidentiary material;
- make decisions using analytical techniques and principles;
- complete fraud examinations that meet judicial standards of investigation;
- document and effectively communicate the results of forensic analysis related to valuations, financial reporting fraud and other litigation issues.

GIS and Spatial Analysis

Graduate Certificate in GIS and Spatial Analysis

CERTIFICATE CODE - CG37

Required Courses

Select four of the following courses:		12
ARE 729	Spatial Econometrics	
or ECON 729	Spatial Econometrics	
RESM 540	Geospatial Modeling	
RESM 575	Spatial Analysis for Resource Management	
RESM 545	Spatial Hydrology and Watershed Analysis	
GEOG 550	Geographic Information Science	
GEOG 651	Geographic Information Science: Technical Issues	
GEOG 654	Environmental Geographic Information Systems Modeling	
GEOG 655	Remote Sensing Principles	
GEOG 753	Exploratory Spatial Data Analysis	
GEOG 755	Advanced Remote Sensing	
Independent Study Requirement		3
RESM 585	GIS and Spatial Analysis Project	
Total Hours		15

Certificate Learning Outcomes

GIS AND SPATIAL ANALYSIS

Upon completion of the certificate, students should be able to:

- Critique and make defendable decisions on the proper selection and use of geographic data (format, scale, lineage, accuracy) in spatial analysis and modeling problems.
- Develop statistically valid spatial models which test and then correct for potential issues of randomness, independence, and autocorrelation.
- Recognize how GIS and Spatial Analysis can be used to solve spatial issues in the fields of hydrology, forestry, wildlife, soils, geology, planning, economics, energy, and conservation, under changing land use/cover and climate scenarios.
- Conduct a GIS and Spatial Analysis study which applies all aspects of spatial data collection, development, analysis, modeling, and interpretation following the scientific method.

Health Data Science

Graduate Certificate in Health Data Science

CERTIFICATE CODE - CG59

Health Data Science is the science of applying data analytic and visualization methods to address questions or problems in a variety of public health and healthcare related areas.The Health Data Science Certificate is designed to develop a basic understanding of standard analytic techniques, data visualization tools, practical methods for modeling problems and interpreting data content. This program is especially useful for public health practitioners and positions where health data is collected and utilized in a practical setting.

PROGRAM OVERVIEW

The Health Data Science Certificate program is offered in two formats:

- In-Person/On Campus
- Online/Blended Synchronous

By offering the curriculum in both formats, WVU's program is accessible to individuals from a variety of backgrounds, locations and experiences. The program will take advantage of existing course technology where courses are taught in a synchronous fashion in which the instructor presents a lecture in-class, and the lecture (along with associated slides or other files) is broadcast online. The video or audio recording of the lecture is archived and available on the course for access at any time.

All course notes, homework assignments and programs are available online, and the instructor is available in a number of formats (online chat, email, phone) to accommodate distance-learning students.

Students in the Health Data Science Certificate program typically take one to two classes per semester. Completion of the 16-credit-hour program usually takes two years.

ADMISSIONS GUIDELINES

To apply to the Health Data Science Certificate program, student must complete the WVU graduate application for code CG59, and pay the processing fee and submit a statement of purpose, official GRE test scores, two letters of reference, a current resume/curriculum vitae, and all university transcripts.

To be considered for the fall, students should submit their applications by July 1. Completed applications are sent to the Health Policy, Management, and Leadership department for review. Students will receive an e-mail from the department regarding their recommendation for acceptance.

Interested students must apply online for admission consideration. Students currently enrolled at WVU should also submit the online application but need to contact Dr. Robert Duval (rduval2@hsc.wvu.edu) prior to application.

A minimum GPA of 3.0 is required.

BIOS 601	Applied Biostatistics 1	4
HPML 622	Analytic Methods for Health Policy, Management, and Leadership	3
HPML 661	Health Services Research Informatics	3
HPML 671	Population Health Policy Analysis Informatics 1	3
HPML 675	Healthcare and Insurance Policy: Medicaid, Medicare, and the Affordable Care Act	3
Total Hours		16

Suggested Plan of Study

First Semester	Hours	
BIOS 601	4	
	4	
Second Semester	**Hours**	
HPML 661	3	
HPML 671	3	
	6	
Third Semester	**Hours**	
HPML 622	3	
	3	
Fourth Semester	**Hours**	
HPML 675	3	
	3	

Total credit hours: 16

Certificate Learning Outcomes

HEALTH DATA SCIENCE

The purpose of this certificate is to prepare professionals across a variety of public health and healthcare-related disciplines to skillfully use data in an increasingly data-driven industry. In particular, the proposed program has the following educational outcomes for its students, which will be refined as the program is developed:

- Enhance understanding of the way data is used within the health care system and (including privacy protections)
- Collect, interpret, and visualize a variety of types of commonly-used health-related data

- Develop analytic skills that inform health care policy analysis and management
- Use basic data analytic knowledge to design and implement studies that answer important health care questions oriented for practitioners in the field.
- Use common analytic and statistical software to implement analysis and description for health oriented organizational decision-making underpinning studies

Healthcare Administration

Graduate Certificate in Healthcare Administration

CERTIFICATE CODE - CG01

The Public Administration Department offers a healthcare administration certificate for students who are interested in a career in a variety of healthcare settings, including hospitals, health departments, nursing homes, mental health services, home health services, nonprofit voluntary agencies, health research foundations, public and private insurance, and a variety of governmental agencies. The certificate program is available to students pursuing a degree other than the MPA degree or as a non-degree seeking student. For more information, please consult: http://publicadmin.wvu.edu/.

Certificate Requirements

Required Courses

PUBA 670	Health Systems	3
PUBA 671	Healthcare Organization and Operation	3
PUBA 672	Healthcare Finance	3
Healthcare Electives (Select electives to total 3 credits. Others approved by Healthcare Advisor)		3
PUBA 673	Alternative Healthcare Delivery Systems	
PUBA 674	Rural Healthcare	
PUBA 675	Organization Performance Improvement	
PUBA 678	Population Health Management	
PUBA 716	Creativity and Innovation	
PUBA 717	Performance Management	
PUBA 770	Managed Care	
PUBA 772	Integrated Delivery System	
PUBA 773	Policy Issues in Women's Health	
PUBA 774	Healthcare Law and Ethics	
PUBA 775	Healthcare Policy	
PUBA 776	Healthcare Planning/Marketing	
PUBA 777	Healthcare Information Systems	
Capstone Experience		
PUBA 780	Healthcare Administration Practicum (or equivalent capstone course approved by the Director.)	3
Total Hours		15

Certificate Learning Outcomes

HEALTHCARE ADMINISTRATION

Upon completion of the certificate, students should be able to:

- Understand, identify, and explain key social, political, and economic issues that shape the delivery of healthcare in the United States.
- Examine and identify the variety of organizations and entities in the healthcare delivery environment.
- Assess current workforce, funding, organizational delivery, quality and equity trends in healthcare administration.
- Understand, interpret, and utilize financial information, reports, policies and tools to implement decision-making in healthcare administration.

Healthcare Communication

Graduate Certificate in Healthcare Communication

CERTIFICATE CODE - CG51

The Healthcare Communication Certificate is offered exclusively online with no on-campus classroom attendance required.

The Healthcare Communication certificate in is intended to prepare students for careers focusing on implementing a comprehensive integrated marketing communications strategy within the healthcare industry. Students will be exposed to course work focused on legal and ethical issues as they apply to healthcare communications via content marketing and utilizing new technologies, including augmented and virtual reality.

The program is taught by a diverse faculty who are recognized leaders in their fields.

Program Format

The program's academic year consists of five accelerated terms corresponding to the University's existing parts of term: Early Fall (August–October), Late Fall (October–December), Early Spring (January–March), Late Spring (March–May) and Summer (May–July).

Certificate Requirements

Minimum cumulative GPA of 2.75 required.

Minimum grade of C- required in all courses provided that a cumulative 2.75 GPA is maintained.		
IMC 624	Cause Marketing	3
IMC 627	Healthcare Marketing	3
IMC 639	Content Marketing	3
IMC 646	Augmented Reality & Virtual Reality in IMC	3
Total Hours		12

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
Early Fall Term		Early Spring Term	
IMC 646	3	IMC 627	3
Late Fall Term		Late Spring Term	
IMC 624	3	IMC 639	3
	6		6

Total credit hours: 12

Certificate Learning Outcomes

HEALTHCARE COMMUNICATION

1. Effectively develop healthcare communication campaign plans using an integrated marketing communications strategy.
2. Identify the latest ethical considerations and federal guidelines associated with digital and social media marketing activities within the health care space.
3. Plan content to utilize in web and social media assets: i.e. b/vlogging, video news letters, short video for social media site production, podcasts, etc. for public education, advocacy and/or corporate purposes.
4. Identify target audiences and understand behavior change theories as they relate to healthcare marketing campaign planning for these audiences.
5. Recognize how to brand, build credibility, and effectively manage public relations efforts.
6. Demonstrate the benefit of cause marketing strategies for corporations, nonprofits and consumers.
7. Recognize how AR/VR can be used in IMC campaigns to enhance user experience.
8. Develop strategy and learn tactics and techniques that relate to the use of AR/VR technologies within a healthcare marketing communications campaign.
9. Evaluate ROI for healthcare communications activities and public interest communication plans.

Health Professions Education

Graduate Certificate in Health Professions Education

CERTIFICATE CODE - CG34

"Orientation to HPE" Module - To be completed before or during first semester

Professional Development Plan - To be posed on the Health Sciences program portfolio site during the first course

HPE Core Content

Must maintain a 3.0 GPA for all coursework

EDP 600	Educational Psychology	3
EDP 640	Instructional Design	3
EDP 612	Introduction to Research	3
EDP 617	Program Evaluation	3
Total Hours		12

PROGRAM FEATURES FOR GRADUATE CERTIFICATE IN HEALTH PROFESSIONS EDUCATION

The Certificate in Health Professions Education consists of the following major features: (1) Required online orientation module: This online "Orientation to HPE" module provides an overview of the Certificate program, opportunities in the HPE field, and educational/medical education terminology. This module, housed on Health Science's SOLE platform, must be completed before or during the semester in which the first course is taken. (2) Professional Development Plan: This written document helps to identify a student's HPE career interests and goals, learning products developed through each course, and how each product meets the student's career goals. (3) 4 three-credit hour courses from CEHS: Educational Psychology (see table above). (4) Capstone experience: An educational plan and program evaluation plan to address a health care need is developed in EDP 617, Program Evaluation.

Certificate Learning Outcomes

HEALTH PROFESSIONS EDUCATION

Upon completion of the certificate, students should be able to:

- Use a systematic process to conduct a needs assessment of learners in healthcare education, design educational interventions and materials, integrate emerging technologies.
- Design face-to-face, blended, and online learning environments incorporating research-based learning principles that address teaching and assessment decisions.
- Evaluate the efficiency, effectiveness, and appeal of healthcare learning environments.
- Design studies and disseminate impacts of designed learning environments to prepare healthcare professionals to translate skills and knowledge for benefit of patient care and healthcare systems.
- Develop an educational intervention plan for a healthcare environment.

Higher Education Marketing

Graduate Certificate in Higher Education Marketing

CERTIFICATE CODE - CG52

The Higher Education Marketing is offered exclusively online with no on-campus classroom attendance required.

The Higher Education Marketing certificate in is intended to prepare students for careers focusing on implementing a comprehensive integrated marketing communications strategy for institutions of higher learning. Students will be exposed to course work focused on marketing to higher education audiences, ensuring multicultural/inclusive ethical considerations are intrinsically tied to campaign planning, development of content to engage with prospective student audiences, and reach them via social media channels.

The program is taught by a diverse faculty who are recognized leaders in their fields.

Program Format

The program's academic year consists of five accelerated terms corresponding to the University's existing parts of term: Early Fall (August–October), Late Fall (October–December), Early Spring (January–March), Late Spring (March–May) and Summer (May–July).

Certificate Requirements

Minimum cumulative GPA of 2.75 required.

Minimum grade of C- required in all courses provided that a cumulative 2.75 GPA is maintained.

IMC 639	Content Marketing	3
IMC 641	Social Media and Marketing	3
IMC 645	Diversity & Inclusion in IMC	3
IMC 647	Higher Education Marketing	3
Total Hours		12

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
Early Fall Term		Early Spring Term	
IMC 645	3	IMC 647	3
Late Fall Term		Late Spring Term	
IMC 639	3	IMC 641	3
	6		6

Total credit hours: 12

Certificate Learning Outcomes

HIGHER EDUCATION MARKETING

1. Research target markets, and develop an understanding of cross-cultural marketing communications.
2. Develop branding strategies that speak to consumers cross culturally.
3. Define ethical marketing in a multicultural society.
4. Create a strong multicultural IMC campaign.
5. Explain how to track social media metrics.
6. Develop a strong social media IMC campaign for higher education.
7. Estimate ROI for social media.
8. Define federal guidelines associated with social media channels and networks.
9. Demonstrate how to target specific markets through social media campaigns.
10. Develop content for higher education IMC campaigns.
11. Recognize strategies involved with creating strong content for marketing.
12. Describe how to utilize technology in content creation.
13. Define the difference between Owned, Earned & Paid media and demonstrate how to write for each.

Integrated Marketing Communications

Graduate Certificate in Integrated Marketing Communications (IMC)

The 12-credit IMC graduate certificate provides students with a broad overview of IMC, focusing on several integral aspects of the discipline.

The program's academic year consists of five eight-week terms:

- Early Fall (Aug. – Oct.)
- Late Fall (Oct. – Dec.)
- Early Spring (Jan. – March)
- Late Spring (March – May)
- Summer (May – July)

Students working toward their IMC certificate take one course per term for one calendar year (four terms). Certificate-seeking students can begin coursework in any term.

IMC 610	Introduction to Integrated Marketing Communications	3
IMC 612	Audience Insight	3

IMC 613	Brand Equity Management	3
IMC 619	Emerging Media and the Market	3
Total Hours		12

COURSE REQUIREMENTS

Admission requirements to the IMC certificate track are the same as for the master's degree track. For certificate students who may be interested in applying courses to the full master's degree: University Policy states that a maximum of 12 credits obtained by a non-degree student can be applied toward any degree. The IMC graduate certificate programs are 4 classes/12 credits and our master's degree in IMC is 10 classes/30 credits. If you complete the IMC graduate certificate, all 12 credits would apply toward our IMC master's degree.

Certificate Learning Outcomes

INTEGRATED MARKETING COMMUNICATIONS

1. Illustrate critical thinking, creativity and innovation in collaboration with colleagues and in the completion of written assignments.
2. Demonstrate a global and multicultural awareness in the development and implementation of marketing communications strategies.
3. Compare and contrast the benefits and limitations of various qualitative and quantitative research methods relevant to marketing communications.
4. Recognize the roles and implications of law and ethics in marketing communications.
5. Design and organize marketing communications materials in a professional manner consistent with contemporary industry-specific standards.

Leadership

Graduate Certificate in Leadership

CERTIFICATE CODE - CG43

Core Coursework		
LDR 501	Advanced Leadership Theory and Practice	3
LDR 551	Advanced Problems in Leadership	3
LDR 601	Applied Leadership in the Workplace	3
Electives		**6**
LDR 435	Women and Leadership	
LDR 445	Intersections in Leadership	
LDR 545	Leading Social Change	
LDR 610	Operationalizing Leadership	
LDR 615	Leadership in Contemporary Organizations	
Total Hours		15

Certificate Learning Outcomes

LEADERSHIP

Students completing this graduate certificate will have proven competencies in the following:

1. Examining a variety of leadership theories and approaches.
2. Analyzing ethical considerations in leadership practices.
3. Critiquing environments (based on race, class, gender, etc.) and how leaders and followers interact.
4. Synthesizing applicable leadership skills that can be used in professional, political and civic settings.
5. Applying outcomes/simulations where leaders, followers and context are all incorporated to manage conflict and change.

Linguistics

Graduate Certificate in Linguistics

CERTIFICATE CODE: CG60

Students must earn a minimum overall GPA of 3.00 in coursework applied to the Certificate	
A minimum grade of C- is required in any course applied to the certificate.	
Knowledge	**3**

Choose one of the following:		
LING 411	Phonology	
or LING 412	Syntax	
Extensions		**9**
Choose three of the following:		
LING 501	Structure of Spanish	
LING 514	Sociolinguistics	
LING 516	Discourse Analysis	
LING 517	Cognitive Foundations of Language	
LING 611	Advanced Phonology	
LING 612	Advanced Syntax	
LING 614	Psycholinguistics	
LING 616	Language Typology	
LING 620	Spanish Prosody	
SPAN 521	Dialectology and Sociolinguistics	
LANG 621	Teaching Foreign Language in College	
Any other graduate level course approved by the advisor.		
Total Hours		12

Note: Not more than one course at the 400-level can count towards the Certificate.

Certificate Learning Outcomes
LINGUISTICS

Students completing this graduate certificate will be able to:

1. Explain the concepts of syntactic or phonological theory, and analyze relevant linguistic data by using the basic tools of phonological or syntactic theory.
2. Apply their knowledge of phonological or syntactic theory to the study of language in use or in the description of the world's languages.

Music Industry

Graduate Certificate in Music Industry
CERTIFICATE CODE - CG36

Required Courses

MUSC 611	Music Industry Regulations	3
MUSC 612	Music Product Advancement	3
MUSC 613	Music Performance Organization and Commerce	3
MUSC 614	Advanced Recording Industry	3
MUSC 615	Advanced Music Publishing	3
Total Hours		15

Certificate Learning Outcomes
MUSIC INDUSTRY

Upon completion of the certificate, students should be able to:

- Delineate and analyze current music industry regulations regarding their commercial implications, business opportunities, and appropriate music industry management practices across the industry income streams.
- Perform and manage standard and management level music business procedures and processes utilized in the music publishing, recording, and live music industries, including conception and management of various music product development and placement strategies and plans.
- Construct and evaluate budgets and financial projections across the music industry income streams based on the project parameters, and the relevant market level, regulations, indicators and trends.

- Plan and manage organizational processes and activities in live music business sectors including scheduling, budgeting, equipment, personnel, union issues, and regulatory requirements.

Post-MSN Certificate Adult Gerontology Acute Care Nurse Practitioner

Graduate Certificate in Post-MSN Certificate Adult Gerontology Acute Care Nurse Practitioner

CERTIFICATE CODE - CG58

Students are required to maintain a 3.0 in all work attempted in the program.

NSG 755	Acute Care Professional Role Development	1
NSG 758	Acute Care 1	5
NSG 759	Acute Care 2	5
NSG 757	Acute Care Practicum	5
Total Hours		16

First Year

Fall	Hours	Spring	Hours	Summer	Hours
NSG 755		1 NSG 757		2 NSG 757	3
NSG 758		5 NSG 759		5	
		6		7	3

Total credit hours: 16

Progression Standards:

To progress in the graduate curriculum, a student must meet the following performance standards. Failure to meet the criteria below and to progress will result in dismissal from the program.

1. Grade Point Average (GPA) requirements:
   a. Graduate Practice Program students are required to maintain a 3.0 in all work attempted in the program. A student who falls below 3.0 after nine or more credit hours are completed in the program will be placed on academic probation and has only one semester to bring up the GPA to the 3.0 requirement. Failure to raise the cumulative GPA to 3.0 in one semester will result in dismissal from the program.
   b. Post-Graduate Certificate students are required to take fewer credits than those in the degree programs. Therefore, a GPA lower than 3.0 will not be grounds for probation or dismissal. However, students earning two C grades or an F will be dismissed from the Post-Graduate Certificate Program.
2. Earn a letter grade (A, B, C) on all required courses. A grade of F in any course results in dismissal from the program.
3. Carry forward only one C grade in a nursing course. A second C in a nursing course will result in dismissal from the program.
4. Repeat only one nursing course and only one time.
5. If a student needs to withdraw from all courses in a semester, the student must meet with his or her advisor to request a Leave of Absence if he/she plans to return to course work.
6. Students at all times are expected to demonstrate professionalism, and respect for faculty, staff, preceptors, and student colleagues. If a student is dismissed from his or her clinical placement site for lack of professionalism or if the student's behavior compromises the school's relationship with the agency, the student is subject to failure in the course and subject to dismissal from the program.

*The program will be personalized via gap analyses to determine the number of clinical practicum hours required of each student. Students will have the option to complete practicum hours over one, two, or three semesters, but must have completed at least 250 hours by the end of the third (summer) term. Throughout the program, students will be required to complete a minimum of 16 credit hours, of which 5 will be practicum credits (250 clinical hours).

Certificate Learning Outcomes

POST-MSN CERTIFICATE ADULT GERONTOLOGY ACUTE CARE NURSE PRACTITIONER

1. Conduct a comprehensive and systematic assessment of health and illness in complex situations, incorporating individualized and culturally sensitive approaches.
2. Design, implement, and evaluate therapeutic interventions based on nursing and other sciences.
3. Develop and sustain therapeutic relationships and partnerships with patients (individual, family, or population) and other professionals to facilitate optimal care and patient outcomes.

4. Demonstrate advanced levels of clinical judgement and accountability in designing, delivering, and evaluating evidence-based care to improve patient outcomes.

5. Guide, mentor, and support other nurses to achieve excellence in nursing practice.

6. Educate and guide individuals and groups through complex health and situational transitions.

Post Master's Family Nurse Practitioner

Graduate Certificate in Post Master's Family Nurse Practitioner

CERTIFICATE CODE - CG21

Minimum 3.0 GPA

Required Courses		
NSG 701	Advanced Pharmacotherapeutics	3
NSG 705	Advanced Lifespan Assessment: FNP Focus	3
NSG 706	Advanced Pathophysiology	3
NSG 712	Primary Care of Families 1	3
NSG 714	Primary Care of Families 2	3
NSG 720	Family Practicum 1	5
NSG 721	Family Practicum 2	5
Complete a minimum of 600 supervised clinical hours.		
Total Hours		25

Certificate Learning Outcomes

POST MASTER'S FAMILY NURSE PRACTITIONER

Upon completion of the certificate, students should be able to:

- Conduct a comprehensive and systematic assessment of health and illness in complex situations, incorporating individualized and culturally sensitive approaches.
- Design, implement, and evaluate therapeutic interventions based on nursing and other sciences.
- Develop and sustain therapeutic relationships and partnerships with patients (individual, family, or population) and other professionals to facilitate optimal care and patient outcomes.
- Demonstrate advanced levels of clinical judgement and accountability in designing, delivering, and evaluating evidence-based care to improve patient outcomes.
- Guide, mentor, and support other nurses to achieve excellence in nursing practice.
- Educate and guide individuals and groups through complex health and situational transitions.

Post Master's Pediatric Nurse Practitioner

Graduate Certificate in Post Master's Pediatric Nurse Practitioner

CERTIFICATE CODE - CG24

Minimum 3.0 GPA

Required Courses		
NSG 700	Advanced Pharmacology Pediatric Focus	3
NSG 706	Advanced Pathophysiology	3
NSG 767	Advanced Lifespan Assessment: PNP Focus	3
NSG 770	Pediatric Primary Care 1	3
NSG 771	Pediatric Primary Care 2	3
NSG 772	Pediatric Practicum 1	5
NSG 773	Pediatric Practicum 2	5
Complete a minimum of 600 supervised clinical hours.		
Total Hours		25

Certificate Learning Outcomes

POST MASTER'S PEDIATRIC NURSE PRACTITIONER

Upon completion of the certificate, students should be able to:

- Conduct a comprehensive and systematic assessment of health and illness in complex situations, incorporating individualized and culturally sensitive approaches.
- Design, implement, and evaluate therapeutic interventions based on nursing and other sciences.
- Develop and sustain therapeutic relationships and partnerships with patients (individual, family, or population) and other professionals to facilitate optimal care and patient outcomes.
- Demonstrate advanced levels of clinical judgement and accountability in designing, delivering, and evaluating evidence-based care to improve patient outcomes.
- Guide, mentor, and support other nurses to achieve excellence in nursing practice.
- Educate and guide individuals and groups through complex health and situational transitions.

Program Evaluation

Graduate Certificate in Program Evaluation

CERTIFICATE CODE - CG41

The Certificate in Program Evaluation (PE) meets the needs of academics and professionals looking to gain knowledge and skills in the practice of program evaluation. The program consists of four courses in Educational Psychology including a capstone project and provides participants real world experience in performing evaluation studies. All courses are available online to maximize flexibility for working professionals.

Students must maintain minimum GPA of 2.75 throughout program.

EDP 612	Introduction to Research	3
EDP 617	Program Evaluation	3
EDP 611	Measurement/Evaluation in Educational Psychology	3
EDP 680	Capstone Seminar in Program Evaluation	3
Total Hours		12

Prospective students. The Certificate in Program Evaluation is designed for individuals who (1) perform program evaluations as part of their job, (2) may desire evaluation knowledge and skills in their respective fields, and (3) are in or are preparing for program evaluation duties, but may lack formal training and/or certification. This certificate will provide foundational practitioner-oriented training in the theory and application of evaluation, assessment, and measurement. All evaluators or potential evaluators will be encouraged to apply to this program.

Non-degree program. Because credit hours taken under the certificate program frequently are not also used to satisfy the requirements of a degree program, the certificate program course of study is usually taken by non-degree graduate students. The academic records of these non-degree graduate students will be maintained in the college graduate records office as well as in the files of the department. Should any of these non-degree students later decide to pursue a graduate degree in the department awarding the certificate, they must formally apply to the degree program and their credentials must conform to the limits established for the transfer of credit obtained by non-degree students. Namely, a maximum of 12 credits obtained by a non-degree student can be applied toward any degree.

Admissions. Students can apply to the program online at http://admissions.wvu.edu/admissions (http://admissions.wvu.edu/admissions/) as a non-degree student (CEHS 4597 – Non-Degree Certificate). To be admitted as a non-degree student, a student must present evidence of a baccalaureate degree. The student must also maintain a 2.75 grade point average for the 12 credit hours of course work, a CEHS requirement. This average must be maintained as long as the student is enrolled.

Program features. The Certificate in Program Evaluation will consist of the following major features:

(1)   Online delivery: The program will be delivered in a 100% online format within the WVU eCampus environment.

(2)   Student Professional Development Plan: A plan will be developed to support students' Program Evaluation career interests and goals. This plan will document learning products developed out of each course and how each product meets the student's career goals.

(3)   Courses from CEHS: Educational Psychology: Four three-credit hour (total of 12 credits) will be utilized to address core content areas within the field of program evaluation.

(4)   Group evaluation experience: Within a group setting, students will locate and conduct a program evaluation in EDP 617: Program Evaluation.

(5)   Individual evaluation experience: To mimic how most evaluations are conducted, a student, with guidance from an instructor, will individually develop and implement a program evaluation to be performed by the conclusion of the capstone course.

Student Learning Objectives: students in the Program Evaluation Certificate will learn how to:

1.   Conduct program evaluations in both a group setting and as a sole evaluator. (EDP 617, EDP 680)

2.   Understand the criteria, standards and indicators used in evaluation and research. (EDP 611, EDP 617, EDP 680)

3.   Assess the efficiency, effectiveness, and appeal of program evaluations. (EDP 617, EDP 680)

4.   Design studies and develop tools utilizing modern research methods and current instruments. (EDP 611, EDP 612, EDP 617, EDP 680)

5.   Develop writing skills to be used in evaluation studies and reports. (EDP 611, EDP 612, EDP 617, EDP 680)

Public Relations Leadership

Graduate Certificate in Public Relations Leadership

CERTIFICATE CODE - CG53

The Public Relations Leadership Certificate is offered exclusively online with no on-campus classroom attendance required.

The Public Relations Leadership Certificate intends to prepare professional students for careers leading the public relations department for a company or running their own PR firm. Students will be exposed to course work focused in applied public relations, crisis communication, internal communications and C-suite leadership.

The program is taught by a diverse faculty who are recognized leaders in their fields.

Program Format

The program's academic year consists of five accelerated terms corresponding to the University's existing parts of term: Early Fall (August–October), Late Fall (October–December), Early Spring (January–March), Late Spring (March–May) and Summer (May–July).

Certificate Requirements

Minimum cumulative GPA of 2.75 required.

Minimum grade of C- required in all courses provided that a cumulative 2.75 GPA is maintained.		
IMC 628	Applied Public Relations	3
IMC 631	Crisis Communication	3
IMC 637	Internal Brand Communication	3
IMC 648	Executive Communication & Leadership	3
Total Hours		12

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
Early Fall Term		Early Spring Term	
IMC 637	3	IMC 648	3
Late Fall Term		Late Spring Term	
IMC 628	3	IMC 631	3
	6		6

Total credit hours: 12

Certificate Learning Outcomes

PUBLIC RELATIONS LEADERSHIP

1. Define the role of public relations in executive leadership, including methods to analyze an organization, identify and develop favorable messages to persuade a variety of internal and external publics, and disseminate messaging through available digital, social and traditional media.
2. Develop a comprehensive organizational public relations plan to support C-suite thought leadership and business objectives.
3. Utilize market research and data analysis to plan PR activities and improve PR effectiveness.

4. Plan and develop content, including research briefs, SWOT analyses, speech writing, account pitches, and media relations materials.
5. Learn to anticipate and differentiate among different types of crisis and how to communicate effectively about them to both internal and external stakeholders/audiences.
6. Incorporate crisis and internal communication planning into IMC campaign strategy.
7. Explain digital and social media effectiveness as it relates to reputation management and persuasion. Learn how to manage negative opinions and feedback online.
8. Evaluate and report ROI results of PR, crisis and other communication campaign efforts, including executive communications.

Public School Administration - Instructional Supervision Preparation

Graduate Certificate in Public School Administration - Instructional Supervision Preparation

CERTIFICATE CODE - CG19

Required Courses

C&I 687	Advanced Teaching Strategies	3
EDLS 625	Topics in Supervision	3
EDLS 701	Advanced Supervision	3
EDLS 703	Economics and Education Funding	3
EDLS 785	Education Administration Internship	6
Total Hours		18

Public School Administration - Principal Preparation

Graduate Certificate in Public School Administration - Principal Preparation

CERTIFICATE CODE - CG18

Required Courses

EDLS 602	Human Resources Dynamics	3
EDLS 603	Principles of Educational Leadership	3
EDLS 610	School Business Administration	3
EDLS 611	Principles of Supervision	3
EDLS 612	School: Policies, Politics and Laws	3
EDLS 785	Education Administration Internship	3
EDLS 793	Special Topics (Technology and Leaders)	3
Total Hours		21

Public School Administration - Superintendent Preparation

Graduate Certificate in Public School Administration - Superintendent Preparation

CERTIFICATE CODE - CG20

Required Courses

EDLS 702	Superintendency: Role and Responsibilities	3
EDLS 703	Economics and Education Funding	3
EDLS 704	Education Facilities: Planning and Evaluation	3
EDLS 705	Public Education:Ethics/Laws/Policies	3
EDLS 706	Learning Organizations: Culture, Technology and Change	3
EDLS 707	Politics and Education	3
EDLS 785	Education Administration Internship	6
Total Hours		24

Software Engineering

Graduate Certificate in Software Engineering

CERTIFICATE CODE - CG10

The certificate in software engineering program provides further education to individuals who are currently working in the computer and information technology industry. This program is offered online at evening times convenient for the working professional.

Students may apply for admission as non-degree students to complete the certificate requirements. These students may then optionally apply for transfer to the M.S.S.E. program. In addition, students already admitted to the M.S.S.E. may elect to receive the certificate after completing the necessary requirements.

ADMISSION REQUIREMENTS

Applicants for the certificate in software engineering must meet the following requirements:

- Hold a bachelor's degree in any field from an accredited University.
- Submit a resume documenting at least one year of software development experience.
- By the semester in which the certificate is to be awarded, students must meet the following additional requirements:
    a. Submit a resume documenting at least **three** years of software development experience.
    b. Submit three letters of reference from persons familiar with the student's professional work.

Students working toward the certificate in software engineering are not degree candidates and are admitted as non-degree students. However, they may apply for admission to the M.S.S.E. program (see below) after satisfactory completion of most of the certificate requirements.

Students initially admitted to the M.S.S.E. program may elect to receive the certificate after satisfactory completion of the five core courses and the certificate paper (see below). In this case the resume and letters of reference are not required.

PROGRAM REQUIREMENTS

The certificate program consists of completing five approved courses and a certificate term paper. Students who achieve a B- or higher in each of the first four courses of the certificate program may qualify to enter the M.S.S.E. program, as described below.

Certificate Learning Outcomes

SOFTWARE ENGINEERING

Upon completion of the certificate students should be able to:

- Achieve proficiency in the area of Software Project Management.
- Achieve proficiency in Software Analysis and Design.
- Understand the process of software Validation and Verification.
- Understand the process of Software Evolution.
- Achieve proficiency in Object-Oriented Design of software.

Spanish

Graduate Certificate in Spanish

CERTIFICATE CODE - CG61

Students must earn a minimum overall GPA of 3.00 in coursework applied to the Certificate

A minimum grade of C- is required in any course applied to the certificate.

Language		6
Choose two of the following courses:		
SPAN 521	Dialectology and Sociolinguistics	
LING 501	Structure of Spanish	
LING 620	Spanish Prosody	
LANG 621	Teaching Foreign Language in College	
Literature and Culture		**6**
Choose two of the following courses:		

SPAN 611	Literary Criticism
SPAN 630	Latin American Culture
SPAN 631	Latin American Short Story
SPAN 633	Latin American Novel Since 1960
SPAN 637	Early Spanish-American Literature
SPAN 638	Mexican Literature
SPAN 639	Gaucho Culture and Literature
SPAN 640	19th Century Latin American Literature
SPAN 641	20th- and 21st-Century Latin American Literature
SPAN 643	Contemporary Spanish Literature
SPAN 651	Medieval and Golden Age
SPAN 652	Cervantes
SPAN 653	Eighteenth and Nineteenth Century Literature
SPAN 654	Spanish Literature 1898-1936
SPAN 655	Spanish Literature 1936-1975
SPAN 656	Spanish Literature after 1975
SPAN 672	Spanish Women Writers
SPAN 673	Hispanic Literature and Film
SPAN 674	Afrohispanic Literature
Any other graduate level course approved by the advisor	
Total Hours	12

Note: Not more than one course at the 400-level can count towards the Certificate.

Certificate Learning Outcomes

SPANISH

Students completing this graduate certificate will be able to:

1. Explain basic concepts in phonology, morphology, syntax and dialectal variation of the Spanish language, and analyze the relevant data from Spanish using these tools.
2. Identify, describe, and evaluate major historical, literary, cultural and social contexts related to the Hispanic world.

Teaching English to Speakers of Other Languages

Graduate Certificate in Teaching English to Speakers of Other Languages

CERTIFICATE CODE - CG62

Students must earn a minimum overall GPA of 3.00 in coursework applied to the Certificate

A minimum grade of C- is required in any course applied to the certificate.		
Knowledge		**6**
LANG 521	English as a Second Language Methods	
LANG 622	English as a Second Language Theory	
Extensions		**6**
Choose two of the following:		
ESL 630	American Culture	
LANG 421	The Teaching of Foreign Languages	
LANG 422	Second Language Reading	
LANG 522	Computer Assisted Language Learning	
LANG 621	Teaching Foreign Language in College	
LANG 624	Second Language Writing	
LANG 625	Language Assessment	
LANG 626	Literacy in a Second Language	
LING 511	English as a Second Language Linguistics	

LING 512	Applied Linguistics
LING 514	Sociolinguistics
LING 516	Discourse Analysis
LING 613	English as a Second Language Phonetics
LING 620	Spanish Prosody
SPAN 521	Dialectology and Sociolinguistics
Any other graduate level course approved by the advisor.	
Total Hours	12

Note: Not more than one course at the 400-level can count towards the Certificate.

Certificate Learning Outcomes

TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES

Students completing this graduate certificate will be able to:

1. Identify, explain, and evaluate major theories of second language acquisition and apply them in pedagogical practices.
2. Identify and explain the relevance of topics in applied linguistics to English language teaching.

Therapeutic Art

Graduate Certificate in Therapeutic Art

CERTIFICATE CODE - CG57

The Graduate Certificate in Therapeutic Art program will help to provide additional training for art teachers that the Bachelor of Fine Arts and/or Masters of Arts in Art Education currently do not offer. As such, this field offers new professional opportunities to art educators who are trained, knowledgeable, and versed in therapeutic art concepts and technical skills within their teaching practice in the PreK-21 classroom.

To be considered for admission, the applicant must have a bachelors' degree in studio art or art education from a program accredited by NASAD with a minimum cumulative GPA of 3.0 or better. Students in the post bachelors' certificate program must maintain a 3.0 GPA to progress. Additionally, any student currently enrolled in a Graduate school at WVU may also take courses.

For those interested in a therapeutic art graduate certificate, students should apply to the Graduate School and the School of Art and Design Graduate School.

Note: Admission criteria are subject to change. Please see the School of Art and Design website for the most up-to-date criteria on how to apply.

The required courses for a graduate certificate in Therapeutic Art are as follows:

A minimum GPA of 3.0 is required.

Required Courses		
ART 610	Introduction to Visual Arts Therapy	3
ART 611	Theory of Art Education & Art Therapy	3
ART 612	Art Methods/Materials for Special Populations	3
ART 620	Advanced Problems in Art Making	3
Total Hours		12

Certificate Learning Outcomes

THERAPEUTIC ART

Upon completion of the certificate students will be able to:

- Provide an integrated, interdisciplinary approach to understanding and mastering Therapeutic Art systems, methods, and practices that place emphasis on the interdependence between teaching art and the whole being of the child;
- Integrate concepts and skills from Therapeutic Art to benefit all students, but especially those coming from special needs and at risk student populations;
- Help practicing art educators gain a foundational understanding of the current field of Therapeutic Art in order to understand how it complements the therapeutic value of art within art education;

- Widen practicing art teachers' perspectives of the visual arts to help improve student learning, interpersonal skills and behavior, and/or physical abilities within the education environment;
- Supplement practicing art educators with new skills that enhance positive student behaviors, increase self-esteem, augment cognitive abilities and improve social skills through visual arts therapy approaches, art activities, assessments and evaluation;
- Engage current practicing art educators in exercise and project level art-making that focuses on expression, while still considering technical skills and concepts.

University Teaching

Graduate Certificate in University Teaching
CERTIFICATE CODE - CG17

Overview

The Certificate in University Teaching is a fifteen credit hour program for graduate students. It includes

- mentored teaching experience
- syllabus development
- instructional design for a diverse set of students
- implementation of instructional theory and techniques
- development of a teaching portfolio

It helps to prepare graduate students for teaching at the college or university level. In this program, students learn to design and teach courses in their discipline while implementing effective instructional techniques, assessment, and self-reflection.

More Information

This program allows graduate students in good academic standing to earn extra credentials at no extra cost.

More information is available at https://tlcommons.wvu.edu/iteach/certificate-in-university-teaching (https://tlcommons.wvu.edu/iteach/certificate-in-university-teaching/)

To Apply

You must be enrolled in a graduate program and in good standing (meeting the minimum GPA for your graduate program). You may apply to enter the program at any time. To be considered for the Certificate, complete the following:

- Online application http://bit.ly/2AwlOej (http://bit.ly/2AwlOej/)
- A CV or resume
- An email from your advisor approving you to pursue the Certificate

Requirements

Your plan of study for this Certificate includes the following:

1. Pedagogy course
2. Diversity course
3. Instructional excellence course
4. Teaching practicum (student must arrange for a course to teach)
5. Teaching capstone course

However, the curriculum for the Certificate is flexible. You can choose from a large selection of courses. Potentially, a maximum of 6 credit hours from your Master's or PhD coursework can be counted towards this Certificate.

See the attached document for details about the Certificate's requirements. If you are interested in pursuing the Certificate in University Teaching, someone from the Teaching & Learning Commons will meet with you to explain the requirements and help you develop your plan of study.

Questions?

Contact WVU's Teaching & Learning Commons at 304-293-5824 or tlcommons@mail.wvu.edu

Pedagogy Course		3
C&I 789	Teaching in Higher Education	
ENGL 609	College Composition Pedagogy	
GRAD 710	Scholarly Teaching	
HIST 789	Teaching History Online	
LANG 521	English as a Second Language Methods	

LANG 621	Teaching Foreign Language in College	
MUSC 671	Music History Pedagogy	
MUSC 762	Pedagogy of Theory	
NSG 735	Principles: Nursing Education	
PHAR 743	Teach to Learn: Learn to Teach	
PSIO 790	Teaching Practicum	
PSYC 606	Seminar on Teaching Psychology	
SOCA 710	Teaching Sociology	
Diversity Course		**3**
C&I 689	Cultural Diversity in the Classroom	
COUN 634	Cultural Issues	
HIED 754	Women and Gender Issues in HIED	
HIED 750	Diversity Issues in Higher Education	
HIED 651	College Student Development	
HIED 763	International Higher Education	
Instructional Excellence		**3**
GRAD 680	Classroom Assessment Techniques	
GRAD 671	Accessible Teaching Online	
GRAD 670	Readability in the Online & Blended Course	
GRAD 593	Special Topics (Designing Scenarios to Engage Students (1 credit hour))	
GRAD 673	Careers in Higher Education	
GRAD 693	Special Topics (Teaching Different Cultures)	
C&I 687	Advanced Teaching Strategies	
C&I 789	Teaching in Higher Education	
EDP 600	Educational Psychology	
EDP 640	Instructional Design	
EDP 700	Psychological Foundations of Learning	
GRAD 710	Scholarly Teaching	
HIED 760	Curriculum Development and Reform in Higher Education	
IDT 655	Technology for Teachers	
IDT 675	Online Teaching and Learning	
Teaching Experience & Teaching Practicum		**3**
GRAD 690	Teaching Practicum	
AND Teach two different lab courses -or- teach one course as the primary instructor.		
Teaching Capstone		**3**
GRAD 685	Teaching Capstone	
Total Hours		15

Certificate Learning Outcomes

UNIVERSITY TEACHING

Upon completion of the certificate, students should be able to:

- Apply principles and theories of learning to your teaching.
- Explain diversity issues in higher education.
- Assess the needs of diverse learners and develop strategies to meet them.
- Design a course with appropriate learning outcomes, assessment methods, instructional strategies, and course materials.
- Integrate learning technologies effectively to meet learning goals.
- Develop and apply appropriate active-learning and assessment techniques to meet specific course objectives.
- Document effective teaching through a professional teaching portfolio.

Women's and Gender Studies

Graduate Certificate in Women's and Gender Studies

CERTIFICATE CODE - CG30

The Graduate Certificate in Women's and Gender Studies consists of 15 credit hours of course work that can complement any graduate degree program.

- No more that two 400-level course may be counted toward certificate.
- In lieu of an exam at the end of the graduate certificate program, students may also make a presentation in the seminar course at the end of the semester in which they take that course.

Required Courses

Choose one of the following:		3
WGST 694	Seminar	
WGST 530	Feminist Theory	
Choose one of the following:		3
WGST 491	Independent Study	
WGST 595	Independent Study	
WGST 795	Independent Study	
WGST Electives *		9
Total Hours		15

* WGST Electives from list of Approved Courses. Petitions for other courses possible

Certificate Learning Outcomes

WOMEN'S AND GENDER STUDIES

In completing a graduate certificate in Women's and Gender Studies, students will be able to:

- Use the lens of feminist and gender theory to analyze manifestations of human endeavor
- Integrate key terms and concepts related to women's and gender studies in an interdisciplinary approach to their primary discipline
- Engage in discourse addressing how gender, class, race, ethnicity, age, sexualities and sexual identities shape experience and reflect societal constructs
- Analyze, dissect, and criticize arguments to demonstrate an understanding of the scholarship and theoretical underpinning of the field of women's and gender studies

Programs, Courses & Credits

In this section:

Academic Definitions

The following definitions are applicable to West Virginia University, WVU Potomac State College, and WVU Institute of Technology.

DEGREE DESIGNATION

A degree, which is an award signifying a rank or level of educational attainment and which is conferred on students who have successfully completed a degree program. The degree is represented by the official degree designation, e.g. B.A. - Bachelor of Arts, B.S. - Bachelor of Science, A.A. - Associate of Arts, etc. The degree designation is noted on the student's diploma and transcript.

DEGREE PROGRAM

A degree program is defined by the combination of its degree designation (e.g., Bachelor of Science) and a program title that represents the overarching content areas the program's major or majors covers (e.g., Chemistry). Degree programs are approved by the institution and the Board of Governors (BOG) and listed on the official inventory of degree programs. An associate's degree program requires a minimum of 60 credits. A bachelor's degree

program requires a minimum of 120 credits. A master's degree program requires a minimum of 30 credits. For a doctoral degree, the minimum number of required graduate credits is set by the program. A degree program must include at least one major.

MAJOR

A major is a field of study within an approved degree program with its own curriculum. Typically, an undergraduate baccalaureate major requires a minimum of 30 credits with the majority of credits at the upper-division level. WVU includes major(s) on the students' diplomas and transcripts.

MINOR

Minors are only available at the undergraduate level. A baccalaureate minor is an area of study outside of the major that encourages students to pursue a secondary field. A minor comprises at least 15 credits, 9 of which must be upper-division level. Minors are noted on the transcript but not on students' diplomas.

AREA OF EMPHASIS

An area of emphasis (AoE) is a focused curriculum within an approved major. An area of emphasis adds a specialization within a major area of study. Undergraduate areas of emphasis comprise 12-18 credits, 9 of which must be upper-division level. Graduate areas of emphasis comprise 6-15 credits. Areas of emphasis associated with certification or licensure requirements may exceed the credit limit. Areas of emphasis are noted on the transcript but not on the students' diplomas.

TRACK

A track serves the purpose of allowing students to select among different pathways to complete their major. Tracks are not included on the transcript or on the students' diplomas.

UNDERGRADUATE CERTIFICATE PROGRAM

A baccalaureate certificate program (as distinguished from the one-year Certificate Degree Program offered by community and technical colleges) is a specialized curriculum designed for students seeking a specific body of knowledge for personal/career development. A certificate is awarded with the degree and comprises 12 to 18 credits, which may overlap with other degree requirements. The certificate appears on the student's transcript and the institution issues an official certificate of completion.

GRADUATE CERTIFICATE PROGRAM

A graduate certificate program is a specialized curriculum designed for students who have previously earned a baccalaureate degree or who are enrolled in a WVU graduate or professional program and who are seeking a specific body of knowledge for personal/career development. A graduate certificate program can be completed either independently or along with a degree program and comprises 12 to 21 credits. See the Academic Certificate Policies (http://catalog.wvu.edu/graduate/graduatecertificates/) page for credit limitations applicable to earning a certificate. The certificate appears on the student's transcript and the institution issues an official certificate of completion.

TEACHER SPECIALIZATION

Teacher specialization is a state-approved curriculum that prepares students to meet teaching certification standards in a specialized content area and at a specific programmatic level. Teacher specializations may be a major, minor or area of emphasis. Teacher specializations are added to a student's transcript only at the time of graduation.

ACCELERATED BACHELOR'S TO MASTER'S DEGREE

Accelerated Bachelor's/Master's degree programs (ABM programs) offer WVU students the opportunity to pursue both a bachelor's and a master's degree at WVU in the same discipline or in related disciplines in an accelerated time frame. Students in these approved programs can take required courses for the master's degree at the 400 or 500 levels prior to completion of the bachelor's degree.

Students admitted to an ABM program will have their bachelor's and master's degrees conferred simultaneously upon completion of all requirements for both degrees.

The bachelor's degree in an ABM program must require at least 120 credits and the master's degree must require at least 30 credits, including any courses (up to 14 credits) that are approved to count for both degrees. For additional information, see the section below on Attaining Multiple Curricula.

ADMISSIONS, ENROLLMENT, AND PROGRAM STANDARDS

All ABM students are expected to work closely with an academic adviser.

- Regular admission may not be any earlier than the semester in which an undergraduate student is expected to complete 60 credits or any later than the semester after which the student needs two additional semesters to complete the bachelor's degree.

- The minimum standard for regular admission is a cumulative undergraduate GPA of 3.0, with no provisional admissions allowed. Additional admissions criteria (such as completion of particular courses, entrance exam scores, letters of recommendation, or personal statements) are determined by individual programs.
    - 24 credits of which must have been taken in residence for transfer students. .
- Each ABM program will determine when students begin taking graduate-level courses; students should consult the WVU Catalog for the AMB plan of study. ABM students do not need to complete a Senior Petition to enroll in graduate-level courses.
    - Courses taken and credits earned while enrolled as an undergraduate student will be recorded on the undergraduate transcript even if used to fulfill graduate requirements.
- Undergraduate ABM students will have their academic status updated to graduate at the as prescribed by their ABM program.
    - Once students have been switched to graduate status, they must maintain academic standards set forth by the relevant academic unit.
    - Students must be switched to graduate status effective the semester after they have reached 120 credits and met all other undergraduate graduation requirements. The ABM program coordinator will request the change of status during the semester when the undergraduate requirements are expected to be completed, effective the following semester. If students fail to complete the undergraduate requirements, their status for the following semester will be reverted to undergraduate.
- Students admitted to an ABM program must maintain full-time continuous enrollment during fall and spring terms, unless given specific permission by the relevant dean. Enrollment requirements in summer term are determined by individual programs.
- Students who are admitted to an ABM program may not pursue a dual degree, double major, or certificate, unless approved by the appropriate dean(s). They may pursue minors and areas of emphasis, as approved by their advisor.
- Students in an ABM degree program must maintain a minimum overall cumulative GPA of 3.0 (or higher, if specified by the program) in both their undergraduate and graduate courses throughout their enrollment.
    - Grades in courses that will be counted toward both the bachelor's and master's degree requirements will be included in calculation of both the undergraduate and the graduate GPA for the purposes of determining satisfactory performance.
    - Students' eligibility to remain in the ABM program will be evaluated at the end of each semester. Students failing to meet academic standards of the university, college, school, or program will be placed on program probation for no more than one semester, after which they will be terminated from the ABM degree program. Terminated students as well as students who choose not to continue in the ABM degree program will be eligible to receive their bachelor's degree when they have completed the bachelor's degree requirements, including earning a minimum of 120 credit hours. The credits earned by such students in graduate-level courses will apply to the minimum credits required by the bachelor's degree program.

TUITION AND FINANCIAL AID

Students in an ABM degree program are charged undergraduate tuition and are eligible for undergraduate financial aid as defined by each individual program in the Catalog. Once the student's academic status has been updated to graduate level, students are charged graduate tuition and are eligible for graduate assistantships (with permission of their program) or other graduate student funding opportunities and financial aid.

Rules for Attaining Multiple Credentials

UNDERGRADUATE MULTIPLE CURRICULA

Multiple curricula refers to the completion of minors, areas of emphasis, or majors in addition to the primary major. If these areas of study are related, some of the credit hours must be unique to each major or minor.

Requirements for multiple curricula include:

- Each baccalaureate major must have a minimum of 50% unique credit hours. Students pursuing a second bachelor's degree after the conferral of a first bachelor's degree must complete a minimum of 30 additional credits.
- Each associate major must have 15 unique credit hours.
- A maximum of 6 credits may be shared between multiple areas of emphasis.
- Each minor must have a minimum of 9 unique credit hours distinct from any other academic credential.

GRADUATE MULTIPLE CURRICULA

Graduate and professional students may simultaneously or sequentially pursue more than one degree or major (although no more than one PhD degree), one or more certificates in addition to degrees or majors, or more than one area of emphasis within their major(s) according to rules specified below and elsewhere in the Graduate/Professional Catalog. Applicability of courses and credits to degree, major, certificate, or area of emphasis requirements is the decision of the program offering the curriculum. Individual course credits may be applied to no more than two degrees, majors, or certificates.

Students pursuing multiple curricula are urged to consult with their advisor(s) to ensure adherence to credit sharing limitations.

Credit Sharing Limitations for Graduate Degrees and Majors

No more than a total of 12 of the credits required for a graduate degree (other than PhD degrees, which are not dependent on credit accumulation) can be:

- earned prior to admission to the degree program,
- earned prior to graduation with another WVU degree,
- earned at another institute, OR
- simultaneously applied to other degree programs or certificates (e.g., while enrolled in the degree program).

Students who simultaneously earn credits toward two or more WVU degrees must, in most cases, graduate with all degrees in the same term to ensure that all credits, including up to 12 credits shared by the degrees, can be applied. Once a student is awarded a graduate degree, only 12 credits earned to that point in time can be applied to a subsequent degree or major.

Exceptions: Doctoral programs that require or allow students to earn a master's degree in the same discipline may count the courses earned in the master's degree program toward the doctoral program without credit limitations. In addition, some approved dual degree programs (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/#programstext) are allowed to share more than 12 credits.

Credit Sharing Limitations for Graduate Certificates

See Academic Certificate Polices (http://catalog.wvu.edu/graduate/graduatecertificates/) for credit limitations applicable to earning a certificate. See Credit Sharing Limitations for Graduate Degrees and Majors (p. 73) for limitations on applying credits earned as part of a completed certificate to a graduate degree or major.

Credit Sharing Limitations for Areas of Emphasis
Normally, students may share a maximum of 3 credits between areas of emphasis with the same major.

Modality Definitions

Contingent upon the needs of the unit, faculty/instructors must consult with their respective departmental chairs/college to select the most appropriate instructional delivery modality for their specific course section(s) as noted below. Distance Education Courses are credit-bearing courses in which 50% or more of the course is delivered through distance learning technologies.

COURSE DELIVERY OPTIONS

- **Correspondence-** Course content and exams are usually delivered via distance education technologies. Interaction between the instructor and the student is limited, is not regular, or substantive, or is primarily initiated by the student. Can be self-paced.
- **Entirely Online Asynchronous** – (100% online + asynchronous only) 100% of class sessions are delivered via distance education technologies. There are no campus visits or visits to designated sites. No synchronous events can be required. Cannot be self-paced. Substantive instructor-initiated interaction is present.
- **Entirely Online Synchronous/Mixed** – (100% online + synchronous events) 100% of class sessions are delivered via distance education technologies. There are no campus visits or visits to designated sites required. Synchronous learning events may be required throughout the course. May have *both* synchronous and asynchronous elements. Cannot be self-paced. Substantive instructor-initiated interaction is present.
- **Mostly Online** – (75-99% online*) At least 75% of class sessions are delivered via distance education technologies. This type of course requires students to travel to campus or other designated sites to attend an orientation, take exams, or participate in other on-site experiences. Substantive instructor-initiated interaction is present.
- **Hybrid** – (50-74% online*) At least 50% but less than 75% of class sessions are delivered via distance education technologies, but some visits to a classroom or designated instructional site are required.
- **Traditional/ On-Campus** – **(less than 50% online*)** The majority of instruction is provided in a face-to-face classroom setting and physical attendance is expected. However, students may be expected to regularly supplement their learning through the use of distance learning technology.
- **Hybrid-Flexible (HyFlex)** – All core class content is available both face-to-face and online, and there are variations in instructional delivery. Students may choose to attend on campus, online, or a combination of both based on preference. The course must meet the requirements listed in one of the "entirely online" sections above. May have both synchronous and asynchronous online elements. ***Special note for AY20-21:*** *Given the 50% seating capacity limitation in classrooms (to maintain social distancing), in-person seat availability will limit the element of choice in many cases.*

*Percentage is provided as a general guideline and is not intended to be a precise measurement.

DISTANCE AND EXTENDED EDUCATION PROGRAM DEFINITIONS

https://online.wvu.edu/

At WVU, Distance Programs are categorized in one of the following three ways:

• Fully Online – (100% distant) – No residency requirement - All required credit- bearing and any non-credit bearing courses and activities are conducted at a distance with NO required campus attendance and/or visits to designated locations. Optional campus visits and/or visits to designated locations are permissible.

• Low residency (75-99% distant) – Limited residency requirement - A majority of the credit-bearing and non-credit bearing courses and activities are either entirely online or mostly online. Some credit- or non-credit-bearing activities may require campus visits and/or visits to designated locations. Example activities could be program orientations or cohort-based site visits.

• Blended (50-74% distant) - Extensive residency requirement – At least 50% of the credit-bearing and non-credit bearing courses or activities are delivered entirely online. The remaining credit-bearing courses may be offered as face-to-face, partially at a distance, or as distance delivery courses.

IN THIS SECTION:

- Graduate Certificate Programs (p. 75)
- Approved Dual Degree Programs (p. 75)
- Accelerated Bachelor's/Master's Programs (p. 76)

GRADUATE CERTIFICATE PROGRAMS

For a complete list of certificates and information on WVU's graduate certificates, please see our Graduate Certificates Page (p. 39).

APPROVED DUAL DEGREE PROGRAMS

West Virginia University offers several approved dual degree programs. Approved dual degree programs are programs in which certain courses or credits are accepted for credit by each program.

Approved dual degree programs offer students the opportunity to concurrently pursue a specific combination of two WVU degrees following an established plan. The two degrees may include a master's degree with another graduate degree (master's, PhD, or a professional doctorate) or a PhD with a professional doctorate. Approved dual degree programs are listed below and their requirements are included in this Catalog.

The guidelines described in this section apply only to approved dual degree programs. Detailed procedures for program faculty to seek approval for a dual degree program are provided on the Graduate Education and Life (https://graduateeducation.wvu.edu/graduate-council/program-approvals-changes-terminations/) website. Students may also independently pursue or complete two or more graduate/professional degrees or certificates (except that students may only complete on PhD degree from WVU) with approval from both programs and following rules described in this catalog (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/#Limitations).

ADMISSION:

An approved dual degree program must specify when students may be admitted. Students admitted to a dual degree program must meet the admission standards for both degree programs and both programs must approve the student for the dual degree admission. Students may not be admitted provisionally for a dual degree program.

REQUIREMENTS:

Students in approved dual degree programs complete all requirements for both degrees and are subject to all relevant University and program rules in place for students in either degree program. Students are conferred both degrees simultaneously following completion of the requirements for both degrees.

An approved dual degree program may allow students to count some course or milestone activities toward the requirements of both degrees as described in the approved curriculum for the dual degree program. Individual course credits may not be shared by more than two programs, including graduate certificate programs.

ENROLLMENT:

Students accepted to an approved dual degree program will be enrolled in both degree programs. Unless given specific permission by the relevant deans, students admitted to an approved dual degree program must maintain full-time continuous enrollment during fall and spring terms. Individual programs determine enrollment requirements in summer term. Students pursuing a dual degree will not be approved for course overloads to accelerate the completion of the dual degree program.

CONTINUED ELIGIBILITY & TERMINATION:

Students in an approved dual degree program must maintain the cumulative GPA and specified criteria for good standing in each program. Grades in all courses taken will contribute to a student's cumulative GPA. However, students enrolled in a dual program that includes a professional program may have independently calculated GPAs for each program. Student eligibility for program continuation will be evaluated at the end of each semester.

Probation in one program may impact credit sharing agreements or a student's standing in the remaining program. Students who are terminated from one program remain in good standing in the other program unless the other program takes some action to change the student's standing. The remaining program will determine whether or not any courses taken in the terminated program can be counted toward degree requirements.

GRADUATION:

Students admitted to an approved dual degree program should plan to have their two degrees conferred simultaneously upon completion of all requirements for both degrees. If a student chooses to receive one degree before the other in the dual degree program, the rules for sequential degrees apply and no more than 12 previously earned credits can be applied to the subsequent degree (see Rules for Attaining Multiple Credentials (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/#Limitations)).

List of approved dual degree programs (http://catalog.wvu.edu/graduate/law/academic_policies_and_procedures/academic_programs/dual_degree_programs)

Approved Dual Degree Programs:

- Doctor of Dental Surgery/Master of Public Health
- Doctor of Dental Surgery/Master of Business Administration
- Doctor of Jurisprudence/Master of Business Administration
- Doctor of Jurisprudence/Master of Public Administration
- Doctor of Medicine/Master of Public Health
- Doctor of Medicine/Master of Business Administration
- Doctor of Medicine/Doctor of Philosophy
- Doctor of Pharmacy/Master of Business Administration
- Master of Public Administration/Master of Social Work
- Master of Business Administration/Master of Science in Finance
- Master of Business Administration/Master of Science in Industrial Relations
- Master of Business Administration/Master of Science in Nursing
- Master of Business Administration/Master of Science in Sports Management
- Master of Public Health/Doctor of Philosophy in Psychology
- Master of Public Health/Master of Business Administration

Accelerated Bachelor's/Master's Programs

Accelerated Bachelor's/Master's degree programs (ABM programs) offer WVU students the opportunity to pursue both a bachelor's and a master's degree in the same discipline or in related disciplines in an accelerated time frame. Students in these approved programs are able to begin taking courses for the master's degree prior to completion of the bachelor's degree.

Students in ABM programs complete all requirements for both degrees. Students are conferred both degrees simultaneously following completion of the requirements for both degrees.

Students enrolled in a master's degree program as part of an ABM program may enroll in 500-level courses approved for their program without completing a Senior Petition for Graduate Credit (http://catalog.wvu.edu/undergraduate/programs_courses__enrollment/#Graduate_Credit_via_Senior_Petition).

Unless given specific permission by the college's dean, students admitted to an ABM program must maintain full-time continuous enrollment during fall and spring terms. Enrollment requirements in summer term are determined by individual programs.

Students who are admitted to an ABM program may not pursue a dual degree, double major, or certificate unless approved by the appropriate dean(s). They may pursue minors and areas of emphasis, as approved by their advisor. In addition, students admitted to an ABM program will not normally be approved for course overloads (more than 17 credits in any term that includes more than three graduate-level credits, or more than 20 credits in any term that includes three or fewer graduate-level credits).

APPROVED ABM PROGRAMS:

- Bachelor of Science/Master of Science in Applied and Environmental Microbiology
- Bachelor of Science/Master of Science in Physical Education Teacher Education
- Bachelor of Science in Immunology and Medical Microbiology/Master of Science in Biomedical Sciences
- Bachelor of Science/Master of Science in Sport Management
- Bachelor of Science/Master of Science in Journalism

In this section:

Degree Program Credit Limitations

Credit toward a graduate degree may be obtained only for courses listed in the graduate catalog and numbered 400–799 (although some professional programs allow credit for lower-level courses). No more than forty percent of course credits counted toward any graduate degree may be at the 400-level. Graduate credit is obtained only for courses in which the grade earned is A, B, C, P or S. Courses taken as audits or courses in which the grade earned is D, F, or U do not count toward a graduate degree.

See Credit Sharing Limitations for Graduate Degrees (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/) on the Academic Definitions tab and the Graduate Certificates (http://catalog.wvu.edu/graduate/graduatecertificates/) page for more information on sharing credits between degrees and certificates.

Credit Hour Definition

West Virginia University courses offered for credit are based on semester hours. Semesters are fifteen weeks long plus one week for final exams. A single credit hour is equivalent to fifty minutes per week of guided instruction within the classroom. An hour of preparation, or related activity outside of the classroom, is equivalent to sixty minutes per week.

FACE-TO-FACE CLASSROOM LEARNING

One credit hour is equivalent to one hour of guided instruction (fifty minute class) and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester. The amount of work students engage in remains the same regardless of term duration (e.g., summer, 8 week). The equivalent amount of work may take place over a different amount of time. One credit hour in other academic activities, as established by the institution, such as laboratory work, internships, practicums, studio work, study abroad, experiential learning opportunities, and online learning, must include an equivalent amount of required work.

ONLINE LEARNING

One credit hour of online learning is equivalent to a total of fifteen hours of direct instruction and thirty hours of additional student work. Direct instruction can occur via computer-assisted (modules), multi-media interaction, discussions, and/or completion of exams/quizzes/assessments as documented in the course syllabus. Student work includes activities like readings and supplemental assignments. Students must fulfill these hours to complete the course requirements as set forth by the course instructor. Online courses developed from existing face-to-face instruction adhere to the defined learning outcomes and assessments of the original face-to-face format for the course. All WVU online programs are reviewed for nationally accepted standards for online learning.

EXPERIENTIAL LEARNING

Experiential learning, includes opportunities associated with laboratory/lecture courses, research (with or without laboratory), professional development internships, clinical experiences,and service learning. Three hours of experiential learning per week over a period of fifteen weeks receives one credit hour. Students are required to document progress during the course and completion of the stated learning objectives for each experience. Experiential learning courses are expected to adhere to and follow the institutional policy for reporting midterm and final grades. All credit-bearing courses require a syllabus.

STUDY ABROAD

Study Abroad programs include exchange programs (https://educationabroad.wvu.edu/why-study-abroad/wvu-exchange/), short-term programs (https://educationabroad.wvu.edu/why-study-abroad/short-term/), affiliate programs (https://educationabroad.wvu.edu/why-study-abroad/affiliates/) and other programs (https://educationabroad.wvu.edu/why-study-abroad/other/) that are outside of WVU's pre-approved programs requiring special approval. One credit hour is equivalent to fifteen hours of guided instruction and thirty hours of cultural, linguistic or other types of engagements as described by the syllabus and approved by the faculty, department Chair, Dean, and Associate Provost. Exceptions to this general rule would need to be justified and approved on an individual basis.

STUDIO/ENSEMBLE WORK

In studio courses in the arts, design, and theatre, one credit hour is equivalent to one and a half hours of guided instruction and three hours for studio class practice or projects each week for fifteen weeks as defined by the National Association of Schools of Art and Design (NASAD). In accordance with the National Association of Schools of Music standards, one credit hour of ensemble work in the music field represents three hours of practice each week, on average, for a period of fifteen weeks plus the necessary individual instruction as defined by the major subject.

VARIABLE CREDIT OFFERINGS

Variable credit courses often represent student experiences that range in credit hours based on the focus and discipline of the experience. Practicums (teaching and research), field experience, research and laboratory rotations and credit, and independent studies offer a range of contact. One credit hour is equivalent to 15 contact hours of guided instruction (e.g., student progress meetings, mentoring) and thirty hours of student work to complete the requirements set forth by the advisor or course instructor (e.g., team meetings, review sessions, thesis/dissertation preparation) over a 15-week period. Instructors/mentors and students should discuss the appropriate number of total credit hours for a given course based on the time needed to attain outcomes of the particular endeavor.

Prior Learning Experience

In certain cases, and at the discretion of an academic unit, currently enrolled students with documented but untranscripted prior learning experiences such as military training, licensure, software certification, and professional training may seek to receive major specific credit for those experiences.

Students should present documentation to their academic adviser to determine if any previous experiences, prior to enrollment at WVU, may receive transcripted credit in their program and to evaluate the potential benefits and financial aid implications of receiving prior learning credit.

Tuition, Fees & Residency

In this section:

Cost of an Academic Year's Work

Tuition and fee structures (http://revenueservices.wvu.edu/tuition-and-fees/) vary by residency classification and academic program at WVU locations. Students are charged for University tuition, college tuition, and University fees. Some programs may require additional charges. Students may also be charged an additional fee for WVU Online courses or programs. Senior citizens (https://admissions.wvu.edu/how-to-apply/senior-citizen-students/) of West Virginia (age 65 and older) may take courses at WVU for reduced tuition and fees.

Additional cost may include room and board, books and supplies, transportation, and personal expenses.

Identification Card

Registered students are eligible for an identification card and can find more information at Mountaineer Card Services (https://it.wvu.edu/services/mountaineer-card-services/). The Mountaineer Card gives access to certain activities and privileges on campus. For example, students are given access to the Student Recreation Center, the PRT, and athletic events, and may ride the local bus system, Mountain Line Transit Authority (http://www.busride.org/), by using their ID card.

WVU reserves the right to refuse issuance of an identification card. Misuse may result in confiscation of the card. Lost or broken cards can be replaced for a fee.

Residency Status

The Residency Policy is established by and can be found at the BOG Academics Rule 2.4, Residency Status for Admission, Tuition, and Fee Purposes webpage (https://policies.wvu.edu/finalized-bog-rules/bog-academics-rule-2-4-residency-status-for-admission-tuition-and-fee-purposes/). The WVU Office of Admissions assigns students a residency status for admission, tuition, and fee purposes. Students who are determined to be residents of West Virginia pay "resident" tuition and fees at WVU; students who are residents of other states and nations pay "non-resident" tuition and fees.

Academic Common Market

West Virginia University participates in the Academic Common Market (ACM) of the Southern Regional Education Board (SREB) for graduate programs. ACM eligible graduate programs are available at WVU for residents of SREB states. The ACM program is not competitive or merit-based, but applicants must meet state residency and college program requirements.

For more information about the ACM at WVU, visit the Graduate Academic Common Market webpage (https://graduateeducation.wvu.edu/funding-and-cost/graduate-acm/).

For further information regarding specific state requirements, students should contact the WVU ACM coordinator (shirley.robinson@mail.wvu.edu).

Tuition and Fee Regulations

Policies concerning late fees, financial holds, removal from classes, and collections can be found on the Student Accounts Financial Responsibilities (https://studentaccounts.wvu.edu/policies/) page. Students can review their charges, waivers (university tuition, housing, or dining), scholarships, and payments online through the STAR Information System, which can be accessed through the WVU Portal at portal.wvu.edu. Payments of tuition and fees

and other charges can be made through the WVU Portal. A processing fee is added to credit card payments. Excess payments or financial aid remaining in a student's account after all University charges are paid are returned to the student via a refund (https://studentaccounts.wvu.edu/refunds/).

WVU places restrictions on students who have outstanding debts to the University. Restrictions may include, but are not limited to, the withholding of a student's registration, diploma, or transcript. Transcripts will not be issued to any student before payment is made for all tuition, fees, and other indebtedness to any unit of the University.

Students who fail to drop courses prior to the end of the add/drop period are responsible for tuition and fees whether or not they attend those courses. Withdrawal Policies (https://registrar.wvu.edu/registration/withdrawal-policies/) are explained on the Office of the University Registrar website.

SECTION 103 INFORMATION FOR STUDENTS USING U.S. DEPARTMENT OF VETERAN AFFAIRS BENEFITS

On December 31, 2018, the President signed into law the Veterans Benefits and Transition Act of 2018. It contains a provision (Section 103) that takes effect on August 1, 2019. Therefore, despite any policy to the contrary, for any students using U.S. Department of Veterans Affairs (VA) Post 9/11 G.I. Bill® (Ch. 33) or Vocational Rehabilitation and Employment (Ch. 31) benefits, while payment to the institution is pending from the VA, WVU will not:

- Prevent their enrollment;
- Assess a late penalty fee to;
- Require they secure alternative or additional funding;
- Deny their access to any resources (access to classes, libraries, or other institutional facilities) available to other students who have satisfied their tuition and fee bills to the institution.

However, to qualify for this provision, such students may be required to:

- Produce the VA's Certificate of Eligibility by the first day of class;
- Provide written request to be certified;
- Provide additional information needed to properly certify the enrollment as described in other institutional policies (see our VA School Certifying Official for all requirements).

Agriculture, Natural Resources, and Design- Davis College of

As WVU's oldest academic unit, the Davis College is central to the University's mission to advance the people and places of West Virginia and beyond. The College offers a wide range of undergraduate and graduate degree programs that cover life sciences, applied and basic research, and economic and social relationships among people as they live and work in a wide variety of settings. With an extensive research portfolio in areas related to food, water quality, natural resource and landscape management, the College is a leader in making discoveries that change lives.

The Davis College is named for two Morgantown sisters, Gladys Gwendolyn Davis and Vivian Davis-Michael, in recognition of their $18.4 million gift. The College offers 22 undergraduate majors, as well as 18 masters programs and seven doctoral degree programs. It maintains thousands of acres of farmland and forests throughout the state which provide opportunities for learning beyond the classroom, research and facilitate valuable community service.

DEGREES OFFERED

- Master of Agriculture
- Master of Landscape Architecture
- Master of Science
- Master of Science in Forestry
- Doctor of Philosophy

SCHOOL OF AGRICULTURE AND FOOD

- Animal and Food Science
- Animal Physiology
- Applied and Environmental Microbiology
- Entomology
- Environmental, Soil and Water Sciences
- Genetics and Developmental Biology
- Horticulture
- Nutritional and Food Science
- Plant and Soil Sciences
- Plant Pathology
- Reproductive Physiology

SCHOOL OF DESIGN AND COMMUNITY DEVELOPMENT

- Agricultural and Extension Education
- Design and Merchandising
- Human and Community Development
- Landscape Architecture

SCHOOL OF NATURAL RESOURCES

- Forest Resources Science
- Forestry
- Natural Resource Economics
- Recreation, Parks, and Tourism Resources
- Resource Economics and Management
- Resource Management
- Wildlife and Fisheries Resources

COLLEGE WIDE DEGREES

- Agriculture, Natural Resources and Design
- Energy Environments

ADMINISTRATION

INTERIM DEAN

- Ken Blemings - Ph.D. (University of Wisconsin-Madison)
  Interim Director, West Virginia Agricultural and Forestry Experiment Station

ASSOCIATE DEAN FOR ACADEMIC AFFAIRS

- J. Todd Petty - Ph.D. (University of Georgia)
  Academic Affairs

ASSOCIATE DEAN FOR RESEARCH AND OUTREACH

- Matthew Wilson - Ph.D. (Iowa State University)
  Associate Director, West Virginia Agricultural and Forestry Experiment Station

SCHOOL/DIVISION DIRECTORS

- Robert Burns - Ph.D. (Pennsylvania State University)
  Division of Forestry and Natural Resources
- Peter Butler - MLA (Iowa State University)
  School of Design and Community Development
- Alan Collins - Ph.D. (Oregon State University)
  Division of Resource Economics and Management
- Peter Schaeffer - Ph.D. (University of Southern California)
  Division of Animal and Nutritional Science
- Sven Verlinden - Ph.D. (Purdue University)
  Division of Plant and Soil Science

Degree Designation Learning Outcomes

MASTER OF AGRICULTURE (MAGR)

The Master of Agriculture, Natural Resources and Design is an interdisciplinary degree that offers advanced study in all areas of agriculture, natural resources, and design. This program provides an opportunity for students to expand on the knowledge and skills they acquired during their undergraduate studies and enables students to tailor their education to fit individual career goals. The Master of Agriculture, Natural Resources and Design may benefit individuals who are seeking a higher paying position, wish to improve chances for admission to a professional school, want to make a career change, start an entrepreneurship, or improve their skills to enhance their current careers.

Students earning an MAGR degree will be able to:

- Communicate professional concepts orally and in writing.
- Explain the holistic nature of opportunities and problems pertaining to agriculture, natural resources, or design.
- Explain the role of inquiry and research in addressing opportunities and problems pertaining to agriculture, natural resources, or design.
- Construct a theoretical framework that addresses a particular opportunity or problem in agriculture, natural resources, or design and generalize that framework to aid in understanding similar opportunities or problems.
- Apply research skills to analyze agriculture, natural resources, or design opportunities or problems.

MASTER OF LANDSCAPE ARCHITECTURE (MLA)

The MLA program provides students with the knowledge necessary to develop the skills and abilities in design, planning, and management that are pivotal to effectiveness and success in the workforce, and that are responsive to the unique qualities of the state and the region. The program prepares students to become effective professionals and citizens by emphasizing a philosophy of responsibility and commitment to ethical standards regarding the natural environment, professional practice, and personal relationships.

Students earning an MLA degree will be able to:

- Demonstrate a solid professional educational foundation that encompasses knowledge and skills of design, construction, problem-solving, plant materials, landscape management, and professional practice and that is responsive to the needs of the environment, society, and the landscape architecture profession.
- Understand ethical standards regarding the environment, the profession, personal relationships, and social responsibility.
- Proficiently communicate professional concepts graphically, orally, and in writing.
- Incorporate professional information through the study of real-life problems in Morgantown, the state of West Virginia, and the region.

MASTER OF SCIENCE (MS)

The Davis College of Agriculture, Natural Resources, and Design offers numerous MS programs.

Students earning an MS degree will be able to:

- Communicate professional concepts orally and in writing.
- Explain the holistic nature of opportunities and problems pertaining to agriculture, natural resources, or design.
- Explain the role of inquiry and research in addressing opportunities and problems pertaining to agriculture, natural resources, or design.
- Construct a theoretical framework that addresses a particular opportunity or problem in agriculture, natural resources, or design and generalize that framework to aid in understanding similar opportunities or problems.
- Apply research skills to analyze agriculture, natural resources, or design opportunities or problems.
- Produce and defend original research in their major area of study.

MASTER OF SCIENCE IN FORESTRY (MSF)

This program prepares students for careers in professional forestry ranging from consulting for private woodland owners to managing vast tracts of public forestlands. Students are trained in life sciences—biology, ecology, tree identification, sustainable forestry—and specialized sciences such as forest biometrics, forest economics, geographic information systems (GIS), and remote sensing of forest resources.

Students earning an MSF degree will be able to:

- Understand taxonomy and identify forest and other tree species, their distribution, and associated vegetation and wildlife.
- Understand soil properties and processes, hydrology, water quality, and watershed functions.
- Understand ecological concepts and principles including the structure and function of ecosystems, plant and animal communities, competition, diversity, population dynamics, succession, disturbance, and nutrient cycling.
- Demonstrate the ability to make ecosystem, forest, and stand assessments.
- Understand tree physiology and the effects of climate, fire, pollutants, moisture, nutrients, genetics, insects and diseases on tree and forest health and productivity.
- Identify and measure land areas and conduct spatial analysis.
- Design and implement comprehensive inventories that meet specific objectives using appropriate sampling methods and units of measurement.
- Analyze inventory data and project future forest, stand, and tree conditions.
- Develop and apply silvicultural prescriptions appropriate to management objectives, including methods of establishing and influencing the composition, growth, and quality of forests, and understand the impacts of those prescriptions.
- Analyze the economic, environmental, and social consequences of forest resource management strategies and decisions.
- Develop management plans with specific multiple objectives and constraints.
- Understand valuation procedures, market forces, processing systems, transportation and harvesting activities that translate human demands for timber-based and other consumable forest products into the availability of those products.
- Understand valuation procedures, market, and non-market forces that avail humans the opportunities to enjoy non-consumptive products and services of forests.
- Understand administration, ownership, and organization of forest management enterprises.
- Understand forest policy and the processes by which it is developed.
- Understand how federal, state, and local laws and regulations govern the practice of forestry.
- Understand professional ethics, including the Society of American Foresters Code, and recognition of the responsibility to adhere to ethical standards in forestry decision making on behalf of clients and the public.
- Understand the integration of technical, financial, human resources, and legal aspects of public and private enterprises.
- Communicate professional concepts orally and in writing.
- Explain the holistic nature of forestry opportunities and problems.
- Explain the role of inquiry and research in addressing opportunities and problems pertaining to forestry.
- Construct a theoretical framework that addresses a particular opportunity or problem in forestry and generalize that framework to aid in understanding similar opportunities or problems.
- Apply research skills to analyze forestry opportunities or problems.
- Produce and defend original research in their major area of study within forestry.

DOCTOR OF PHILOSOPHY (PHD)

The Davis College of Agriculture, Natural Resources, and Design offers numerous doctoral programs.

Students earning a doctoral degree will be able to:

- Conduct independent and original research of publishable quality in agriculture or natural resources
- Effectively communicate, orally and in writing, the state of knowledge in the student's discipline, field, sub-field, and specific research area.
- Teach, at any undergraduate level or beyond, core courses in the student's discipline and field and specialized courses in the student's sub-field and research area.
- Write research manuscripts and technical reports that lead to refereed publications.

Admissions

REGULAR

A regular graduate student is a degree-seeking student who meets all of the criteria for regular admission to a program of his/her choice. The student must possess a baccalaureate degree from a college or university, have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours), meet all criteria established by the degree program, and be under no requirements to make up deficiencies.

The student must:

- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or the New Medical College Admissions Test (New MCAT).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree.
- International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.
- The specific graduate programs may have additional requirements for admission.

PROVISIONAL

A student may be admitted as a provisional graduate student when the student possesses a baccalaureate degree but does not meet the criteria for regular admission. The student may have incomplete credentials, deficiencies to make up, or may have an undergraduate scholastic record that does not meet grade point requirements for regular admission. After successful fulfillment of the deficiencies, the student will be granted regular graduate student status.

NON-DEGREE

A non-degree student is a student not admitted to a program. Admission as a non-degree student does not guarantee admission to any course or program.

A student must present evidence of a baccalaureate degree. A maximum of twelve credit hours of work as a non-degree student may be applied to a graduate degree if the student is later accepted into a graduate program.

Certificate Program

- GIS and Spatial Analysis (p. 53)

School of Agriculture and Food

Peter Schaeffer, Interim Director of the Division of Animal and Nutritional Sciences
e-mail: Peter.Schaeffer@mail.wvu.edu

Sven Verlinden, Interim Director of the Division of Plant and Soil Sciences
e-mail: sverlind@wvu.edu

Degrees Offered

- Master of Science
- Doctor of Philosophy

Nature of the Program

The master of science allows maximum flexibility in courses and research problems. Students may major in agronomy, animal and nutritional sciences, animal physiology, applied and environmental microbiology, entomology, genetics and developmental biology, horticulture, nutrition and food science, plant pathology, or reproductive physiology. A master of science degree is available as a thesis or coursework option. Research problems in plants and animals of agricultural importance, laboratory organisms, and human subjects form the basis for many studies, but a comparative approach is emphasized. The school offers the registered dietetic certification (RD) preparation internship program to qualified students as a component of the animal and nutritional sciences master of science program.

A student seeking admission to work toward the degree of doctor of philosophy in the School of Agriculture and Food may choose from one of the following *majors*: **animal and food science, genetics and developmental biology, plant and soil science,** or **reproductive physiology**. Within these major fields of study, specialization is limited only by the range of competencies in the graduate faculty.

A limited number of graduate research assistantships are available to highly qualified students on a competitive basis.

FACULTY

DIRECTOR

- Sven Verlinden - Ph.D. (Purdue University)
  Horticulture, Post Harvest Physiology, Molecular Biology
- Peter Schaeffer - Ph.D. University of Southern California
  Economics

PROFESSORS

- Kenneth P. Blemings - Ph.D. (University of Wisconsin)
  Nutritional Biochemistry
- Mirjana Butalovic-Danilovich - Ph.D. (University of Ljubljana, Slovenia)
  Extension Specialist, Consumer Horticulture, Master Gardener Program Coordinator
- Rakesh Chandran - Ph.D. (Virginia Tech)
  Weed management in horticultural systems, IPM, Innovative strategies for weed control
- Robert A. Dailey - Ph.D. (University of Wisconsin)
  Reproductive Physiology
- Cindy Fitch
  Dietetics
- Jason Hubbart - Ph.D. (University of Idaho-Moscow)
  Fresh water supply regimes, Biogeochemical cycling, and ecohydrology
- Jacek Jaczynski - Ph.D. (Oregon State University)
  Food science and technology
- P. Brett Kenney - Ph.D. (Kansas State University)
  Meat Science
- Hillar Klandorf - Ph.D. (British Council for National Academic Awards)
  Physiology
- William L. MacDonald - Ph.D. (Iowa State University)
  Plant Pathology, Forest and Shade Tree Diseases
- Kristen E. Matak - Ph.D. (Virginia Tech)
  Food science and human nutrition
- Louis M. McDonald - Ph.D. (University of Kentucky)
  Soil Science, Soil Chemistry
- Joseph S. Moritz - Ph.D. (Kansas State University)
  Nutrition and feed manufacture
- Joseph B. Morton - Ph.D. (Montana State University)
  Plant Pathology, Mycorrhizal Interactions, Field Crop Diseases
- Daniel Panaccione - Ph.D. (Purdue State University)
  Plant Pathology, Mycology, Mycotoxins, Molecular Biology
- Jeffrey Skousen - Ph.D. (Texas A&M University)
  Soil Science, Land Reclamation, Soil and Water Conservation, Watershed Restoration
- Robert L. Taylor - Ph.D. (Mississippi State University)
  Genetics
- James A. Thompson - Ph.D. (University of Minnesota)
  Soil science, Pedology, and Land use
- Janet C. L. Tou - Ph.D. (University of Toronto, Canada)
  Nutrition in bone health and chronic diseases
- Matthew E. Wilson - Ph.D. (Iowa State University)
  Reproductive Physiology

- Jianbo Yao - Ph.D. (McGill University)
  Functional genomics

ASSOCIATE PROFESSOR

- Vagner Benedito - Ph.D. (Wageningen University, The Netherlands)
  Genetics and developmental biology, Plant genomics, Functional genetics and plant physiology
- Scott A. Bowdridge - Ph.D. (Virginia Tech)
  Food animal production, parasite immunology
- Eugene E. Felton - Ph.D. (University of Missouri)
  Animal science and ruminant nutrition
- Thomas C. Griggs - Ph.D. (Texas Tech University)
  Agronomy, Field and forage crops
- Marlon Knights - Ph.D. (West Virginia University)
  Reproductive Physiology and Animal Production
- James B. Kotcon - Ph.D. (University of Wisconsin)
  Plant Pathology, Agroecology, Nematology, Organic Farming Practices
- K. Marie Krause - Ph.D. (University of Wisconsin-Madison)
  Ruminant nutrition
- Melissa D. Olfert - Dr.P.H., M.S., R.D. (Loma Linda University)
  Human Nutrition and Foods
- Yong-Lak Park - Ph.D. (Iowa State University)
  Entomology, Geospatial Ecology of Insects, Integrated Pest Management, Spatial Interaction between Insect and Plant Diseases
- Eugenia M. Pena-Yewtukhiw - Ph.D. (University of Kentucky)
  Soil Science

ASSISTANT PROFESSOR

- Daniel L. Frank - Ph.D. (Virginia Tech)
  Extension specialist, horticulture
- Zachary Freedman - Ph.D. (Rutgers University)
  Micro-organisms and environmental change
- Michael Gutensohn - Ph.D. (University of Cologne, Germany)
  Plant biochemistry and genetics, Metabolic engineering, Plant-insect interactions
- Matthew Kasson - Ph.D. (Pennsylvania State University)
  Forest pathology, fungal-insect interactions, Fungal phylogenetics
- Teiya Kijimoto - Ph.D. (Tokyo Institute of Technology)
  Evolutionary developmental biology of morphological diversification, Evolution of novel traits
- Nik Kovinich - Ph.D. (Carleton University)
  Metabolic engineering, Metabolite transport, Plant metabolic response to stress
- Kang Mo Ku - Ph.D. (University of Illinois Urbana-Champaign)
  Food crops physiology and quality, Plant metabolomics
- Melissa D. Ventura-Marra - Ph.D., R.D. (Florida International University)
  Diet related health disparities
- Daniel J. Mathew - Ph.D. (University of Missouri)
  Reproductive Physiology
- Ember Morrissey - Ph.D. (Virginia Commonwealth University)
  Environmental microbiology
- Kevin Shaffer - Ph.D. (West Virginia University)
  Livestock Production
- Cangliang Shen - Ph.D. (Colorado State University)
  Safety of meat and fresh produce
- Nicole Waterland - Ph.D. (Ohio State University)
  Horticulture, Flower Senescence
- Amy Welsh - Ph.D. (University of California-Davis)
  Conservation genetics of fish and wildlife populations, Wildlife forensics

RESEARCH ASSISTANT PROFESSOR

- David Belesky - Ph.D. (West Virginia University)
  Agronomy, Animal nutrition
- Domingo Jose Mata Padrino - Ph.D. (Universidad Central de Venezuela)
  Agronomy

TEACHING ASSOCIATE PROFESSOR

- Nettie Freshour - M.S. (West Virginia University)
  Dietetics (L.D.N)
- Megan Govindan - MPH, MS, RD, LD (West Virginia University)
  Human nutrition and foods
- Margaret A. Minch - D.V.M. (Ohio State University)
  Veterinary Medicine
- Youyoun Moon - Ph.D. (Ohio State University)
  Molecular plant science
- Crystal Smith - Ed.D. (West Virginia University)
  Equine management

TEACHING ASSISTANT PROFESSOR

- David Davis - Ph.D. (Virginia Tech)
  Landscape, turf, specialty crops
- Kelli George - Ph.D. (Florida State University)
  Dietetics
- Bremansu Osa-Andrews - Ph.D. (South Dakota State University)
  Biochemistry

VISITING ASSISTANT PROFESSOR

- John Hando - Ph.D. (West Virginia University)
  Environmental health and safety specialist, Genetics and developmental biology

FACULTY EMERITI

- Barton Baker
- Alan R. Biggs
- John A. Balasko
- John F. Baniecki
- Bradford C. Bearce
- Gary K. Bissonnette
- James L. Brooks
- William B. Bryan
- Linda Butler
- Robert L. Cochrane
- William E. Collins
- Leslie Dozsa
- Betty J. Forbes
- Mannon E. Gallegly, Jr.
- Henry W. Hogmire
- William H. Hoover
- E. Keith Inskeep
- Robert F. Keefer
- Paul E. Lewis
- M. Zafar Alam Nomani
- Phillip Osborne
- Ronald A. Peterson
- Edward C. Prigge
- John C. Sencindiver

- Alan Sexstone
- Rabindar N. Singh
- Paul M. Smith
- Charles B. Sperow, Jr.
- Willem Van Eck
- Wayne R. Wagner
- John Warren
- Richard K. Zimmerman

ADJUNCT FACULTY

- Jesse Fallon - Veterinary medicine
- Janet Fulton - Animal Genetics
- Michael Glenn - Soil Science
- Ann Hubbs - Veterinary medicine
- Cynthia Huebner - Invasive Plants and Ecology
- Lee Kass - Plant and Soil Sciences, History of Genetics
- Barbara Jean Meade - Veterinary sciences
- Stephen S. Miller - Horticulture
- Donald Nuss - Plant Pathology
- Tong-Man Ong - Genetics
- Dale W. Porter - Toxicology
- Caird E. Rexroad III - Genetics
- George R. Seiler - Veterinary sciences
- Alfred H. Stiller - Chemistry
- Richard Z. Woodworth - Agriculture
- Paul F. Ziemkiewicz - Land Reclamation
- Thomas van der Zwet - Plant Pathology

Animal and Food Science, Ph.D.

Peter Schaeffer, Interim Division Director of Animal and Nutritional Sciences
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Sven Verlinden, Interim Division Director of Plant and Soil Sciences
e-mail: sverlind@wvu.edu

Degree Offered

- Doctor of Philosophy

Nature of the Program

The Davis College of Agriculture, Natural Resources, and Design offers graduate studies leading to the degree of doctor of philosophy in agricultural sciences with a major in Animal and Food Science. The objective of the degree program is to provide doctoral students an opportunity to study and conduct research with faculty in areas of excellence within the college. Students entering this program may select research and classes in areas of emphases including: agricultural biochemistry, animal nutrition, animal physiology, and production management.

Admissions

Applicants must hold a master's or its equivalent to be eligible for admission into the program. The following admission and performance standards are normally required in the Ph.D. in Agriculture Sciences program:

- An applicant must possess a master's degree and hold a grade point average (GPA) of 3.0 or above (on a 4.0 scale) in postgraduate courses.
- The graduate record examination is required for the major in plant and soil sciences but not for the major in animal and food sciences.
- A student whose native language is not English must have obtained a minimum score of 79 on the TOEFL examination.
- An applicant must provide three letters of reference.
- A one or two-page letter of intent from the student describing his/her research and professional aspirations is required.

After a student is admitted into the doctoral program, the student will select a major professor who will provide and direct an appropriate research opportunity. Doctoral students will conduct research in support of projects approved by the West Virginia Agricultural and Forestry Experiment Station (WVAFES) or externally funded grants. The student in consultation with the major professor, will select a graduate committee within the first semester of study. The committee will consist of five or more members; the majority must be WVU faculty and at least one member representing a discipline outside the college. Each student and his or her committee will formulate a plan of study, which will be filed in the Office of the Associate Dean for Academic Affairs of the College. WVU regulations concerning committee membership will apply.

A candidate for the Ph.D. degree in Animal and Food Science must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate catalog.

Program Requirements

All Ph.D. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.

Course Requirements as determined by the Plan of Study
Research
Candidacy Exam
Dissertation
Dissertation Defense

Doctoral students must satisfactorily complete a set of core courses before they will be admitted to candidacy for the Ph.D. degree. Certain course requirements may be waived if the student has received equivalent training in prior coursework. Additional coursework pertaining to the student's area of specialization will be determined by the student's major professor and graduate committee. Although not required, presentation of research results at meetings of a professional society and submission of manuscripts for publication are encouraged.

Major Learning Outcomes

ANIMAL AND FOOD SCIENCE

The student demonstrates fundamental knowledge of plants, soils, natural sciences, microorganisms, macroorganisms, pathogens and associated fields such as biochemistry, chemistry, and biology.

The students demonstrates detailed knowledge of their particular subdiscipline or research area, including the scientific literature fundamental to their discipline and the ability to stay current on scientific literature.

The student demonstrates technical skills in the laboratory.

The student demonstrates the ability to communicate in writing and orally about scientific concepts and the results of their research.

Animal Physiology, M.S.

Peter Schaeffer, Interim Division Director of Animal and Nutritional Sciences
e-mail: Peter.Schaeffer@mail.wvu.edu

Degrees Offered

- Master of Science

Nature of the Program

The master of science in animal physiology in the Davis College of Agriculture, Natural Resources and Design allows maximum flexibility in courses and research problems. They may work with beef and dairy cattle; sheep, swine, poultry, or laboratory animals. Research problems in farm animals and laboratory animals form the basis for many studies, but a comparative approach is emphasized. A master of science degree is available as a thesis or coursework option. For additional information, contact Dr. Hillar Klandorf, at (304) 293-1897 or Hillar.Klandorf@mail.wvu.edu.

Admissions

Requirements are similar to those in other biological sciences. The student should have completed basic courses in the physical and biological sciences, including genetics, nutrition, and physiology. Deficiencies may prolong the time needed to complete degree programs.

A regular graduate student is a degree-seeking student who meets all the criteria for regular admission to a program of their choice and be under no requirements to make up deficiencies.

For regular admission, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree, and identify a potential faculty advisor.

*International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

**A standardized graduate examination score (GRE or MCAT) is not required for admission to this degree, however, it is strongly encouraged.

A candidate for the M.S. degree in Animal Physiology must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.S. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

Thesis option: The thesis option will require 30 credit hours, 24 hours of regular course work plus 6 hours credit for a thesis. A student must maintain a grade point average of 3.0 or better to remain in good standing. There will be a common core curriculum for the two majors. All additional course requirements will be determined by the student in consultation with the major advisor and graduate committee members.

Core Courses		
STAT 511	Statistical Methods 1	3
STAT 512	Statistical Methods 2	3
ANNU 696	Graduate Seminar	1
Additional Coursework Requirements		**17**
Research		
ANPH 697	Research	6
Total Hours		30

Non-Thesis option: The non-thesis option will require 36 hours of course work. A student must maintain a grade point average of 3.0 or better to remain in good standing. There will be a common core curriculum for the non-thesis masters. Additional courses to meet the degree requirements will be determined by the student in consultation with the major advisor and the graduate committee members and presented in the student's Plan of Study. No more than three hours of research/problem report credits can be applied to the Non-Thesis option.

Core Courses		
STAT 511	Statistical Methods 1	3
STAT 512	Statistical Methods 2	3
ANNU 696	Graduate Seminar	1
Additional Coursework Requirements		**29**
Total Hours		36

Students in the MS-Thesis Option will be required to complete a thesis. They may identify a problem for study on their own, with approval from their graduate committee or they may work on a faculty member's research study. The scope of the research problem must be approved by the student's graduate committee. Students are required to defend their thesis in an open seminar presentation. Students in either the thesis or the non-thesis option must pass an oral examination to be approved for graduation.

*   Students must complete a minimum of 30 total hours, of which at least 24 hours must be coursework other than research, thesis, project, internship, etc. credits.

Major Learning Outcomes

ANIMAL PHYSIOLOGY

Students who complete a Master of Science degree in Animal and Nutritional Sciences with a major in Animal Physiology will:

- Critically evaluate the literature in their field of study as new knowledge is accumulated.
- Identify research needs germane to providing answers to societal problems.
- Apply research findings to professional practice in their fields.
- Effectively use oral and written communication to share information and ideas.
- Be qualified to take advanced-level professional positions in their respective fields of study.
- Be qualified for doctoral studies in their fields.

Applied and Environmental Microbiology, M.S.

Sven Verlinden, Division Director of Plant and Soil Sciences
email: sverlind@wvu.edu

Daniel Panaccione, Assistant Director of Graduate Programs
email: danpan@mail.wvu.edu

Degree Offered

- Master of Science

*For Ph.D. option, see area of emphasis under Ph.D. in Plant and Soil Sciences

Nature of the Program

From plants to animals to air, microorganisms inhabit every facet of the world. Both beneficial and harmful, microorganisms play important roles in the areas of public health, plant disease, pollution and ecology. This program is ideal for students who want to have a career at the forefront of these industries. Gain professional development and research experience as you further your education in our graduate program.

Admissions

M.S. APPLIED AND ENVIRONMENTAL MICROBIOLOGY

In order for a student to be admitted to the program, the applicant normally must fulfill the following admission criteria to be considered:

- Possess a baccalaureate degree.
- Have a minimum undergraduate grade point average of 2.75 (3.0 for acceptance as a regular graduate student).
- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or other tests/evidence.
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of approximately 500 words indicating the applicant's goals and objectives relative to receiving a graduate degree.

International students have the additional requirement to submit a minimum score of 213 on the computer based TOEFL examination if their native language is not English. Interviews are encouraged but not required.

ACCELERATED B.S./M.S.APPLIED AND ENVIRONMENTAL MICROBIOLOGY

The ABM-AEM program will directly admit first year students (early admission) or admit students after the completion of at least 60 credit hours.

EARLY ADMISSION

For early admission, entering WVU first-year students must have a minimum high school GPA of 3.0 and SAT or ACT test scores at or above the 70th percentile. Early admitted students must meet the standards described below for regular admission to continue in the ABM-AEM program after the completion of 60 credits. Students must provide a personal statement of no less than 500 words identifying the applicant's goals and objectives in obtaining the ABM-AEM degree and three letters of reference, at least two of which are required from persons familiar with the applicant's academic performance including those serving in an advisory role such as teachers, school administrators, or a guidance counselor.

REGULAR ADMISSION

Only currently enrolled WVU students may be considered for regular admission to the program. Transfer students must complete at least 24 credit hours as degree-seeking students at WVU before applying to the program. ABM-AEM is not available to students seeking a second (or subsequent) bachelor's degree. Regular admission may not be any earlier than the semester in which an undergraduate student is expected to complete 60 credits or any later than the semester after which the student needs two additional semesters to complete the bachelor's degree. The minimum standard for

regular admission is a cumulative undergraduate GPA of 3.0, with no provisional admissions allowed. Students must provide a personal statement of no less than 500 words identifying the applicant's goals and objectives in obtaining the ABM-AEM degree and three letters of reference, at least two of which are required from persons familiar with the applicant's academic performance including those serving in an advisory role such as teachers, school administrators, or a guidance counselor.

A candidate for the M.S. degree in Applied and Environmental Microbiology must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.S. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

Thesis Option:

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.		
Select one of the following:		**3**
STAT 511	Statistical Methods 1	
BIOS 601	Applied Biostatistics 1	
Select one of the following:		**3**
STAT 512	Statistical Methods 2	
BIOS 603 & BIOS 604	Applied Biostatistics 2 and Applied Biostatistics 3	
Seminar		**3**
PPTH 796	Graduate Seminar	
Research		**6**
AEM 797	Research	
Discipline-Oriented Coursework		**15**
(AEM, PPTH, AGRN, ENTO, AGBI, BIOL, GEN, HORT, MICB, IMMB, PLSC)		
Total Hours		30

Non-Thesis Option:

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.		
Select one of the following:		**3**
STAT 511	Statistical Methods 1	
STAT 512	Statistical Methods 2	
BIOS 601	Applied Biostatistics 1	
BIOS 603 & BIOS 604	Applied Biostatistics 2 and Applied Biostatistics 3	
Graduate Chemistry/Biochemistry Course		**3**
AGBI 610	General Biochemistry	
AGBI 612	General Biochemistry	
AGRN 516	Soil Chemistry	
Seminar		**3**
PPTH 796	Graduate Seminar	
Teaching Practicum		**2**
AEM 790	Teaching Practicum	
Discipline-Oriented Coursework		**15**
(AEM, PPTH, AGRN, ENTO, AGBI, BIOL, GEN, HORT, MICB, IMMB, PLSC)		
Independent Study		**3**
AEM 795	Independent Study	
Electives		**7**
Total Hours		36

*   Students must complete a minimum of 30 total hours, of which at least 24 hours must be coursework other than research, thesis, project, internship, etc. credits.

Accelerated Program Requirements

A minimum GPA of 3.0 is required.

Choose from the following courses:		12
AEM 445	Food Microbiology	
or AEM 545	Food Microbiology	
AEM 593	Special Topics	
GEN 521	Basic Concepts of Modern Genetics	
PPTH 409	Nematology	
or PPTH 509	Nematology	
PPTH 503	Mycology	
STAT 511	Statistical Methods 1	
Electives		24
Oral Examination		
Total Hours		36

First Year

Fall	Hours	Spring	Hours
AGRL 111	1	CHEM 116 & 116L (GEF 8)	4
CHEM 115 & 115L (GEF 2)	4	PLSC 206	4
ENGL 101 (GEF 1)	3	STAT 211	3
MATH 150 (GEF 3)	3	Free Electives	4
Free Elective	3		
	14		15

Second Year

Fall	Hours	Spring	Hours
AGRN 202 & AGRN 203	4	AEM 341	4
CHEM 233 & CHEM 235	4	CHEM 234 & CHEM 236	4
ENGL 102 (GEF 1)	3	GEF 5	3
GEF 4	3	Free Electives	4
Free Elective	3		
	17		15

Third Year

Fall	Hours	Spring	Hours
PHYS 101 (GEF 8)	4	PHYS 102 (GEF 8)	4
PPTH 401	4	Restricted Electives	9
Restricted Elective	3	GEF 7	3
GEF 6	3		
	14		16

Fourth Year

Fall	Hours	Spring	Hours
AGBI 410	3	AEM 401	4
GEN 371	4	Graduate Course 3	3
Restricted Elective	3	Graduate Course 4	3
Graduate Course 1	3	Restricted Elective	3
Graduate Course 2	3		
	16		13

Fifth Year

Fall	Hours	Spring	Hours
Graduate Electives	12	Graduate Electives	12
	12		12

Total credit hours: 144

NOTE: See Undergraduate Catalog for Bachelor's degree requirements (B.S. in Applied Environmental Microbiology, Accelerated Program).

Major Learning Outcomes

APPLIED AND ENVIRONMENTAL MICROBIOLOGY

Students will acquire fundamental knowledge of applied and environmental microbiology and associated fields such as biochemistry, genetics, and biology.

Students will acquire detailed knowledge of their particular subdiscipline or research area, including the scientific literature fundamental to their discipline and the ability to stay current on scientific literature.

Students will acquire technical skills in the laboratory.

Students will develop the ability to communicate in writing and orally about scientific concepts and the results of their research.

Students will develop the ability to design, conduct, and interpret the results of experiments.

Entomology, M.S.

Sven Verlinden, Division Director of Plant and Soil Sciences
email: sverlind@wvu.edu

Daniel Panaccione, Assistant Director of Graduate Programs
email: danpan@mail.wvu.edu

Degree Offered

- Master of Science

*For Ph.D. option, see area of emphasis under Ph.D. in Plant and Soil Sciences

Nature of the Program

M.S. in Entomology provides students the opportunity to take courses and conduct original, master's-level research. The educational experience obtained through courses and research is expected to provide students with the background and expertise to excel. Entomology is critical to maintaining agriculture and forest productivity, solving environmental problems, and promoting economic development in the state.

Admissions

In order for a student to be admitted to the program, the applicant normally must fulfill the following admission criteria to be considered:

- Possess a baccalaureate degree.
- Have a minimum undergraduate grade point average of 2.75 (3.0 for acceptance as a regular graduate student).
- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or other tests/evidence.
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of approximately 500 words indicating the applicant's goals and objectives relative to receiving a graduate degree.

International students have the additional requirement to submit a minimum score of 213 on the computer based TOEFL examination if their native language is not English. Interviews are encouraged but not required.

A candidate for the M.S. degree in Entomology must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.S. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

Thesis Option:

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.		
Select one of the following:		**3**
STAT 511	Statistical Methods 1	
BIOS 601	Applied Biostatistics 1	
Select one of the following:		**3**
STAT 512	Statistical Methods 2	
BIOS 603 & BIOS 604	Applied Biostatistics 2 and Applied Biostatistics 3	
Seminar		**3**
ENTO 796	Graduate Seminar	
Research		**6**
ENTO 797	Research	
Discipline-Oriented Coursework		**15**
(ENTO, AEM, PPTH, AGRN, AGBI, BIOL, GEN, HORT, PLSC)		
Total Hours		30

Non-Thesis Option:

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.		
Select one of the following:		**3**
STAT 511	Statistical Methods 1	
STAT 512	Statistical Methods 2	
BIOS 601	Applied Biostatistics 1	
BIOS 603 & BIOS 604	Applied Biostatistics 2 and Applied Biostatistics 3	
Graduate Chemistry/Biochemistry Course		**3**
AGBI 610	General Biochemistry	
AGBI 612	General Biochemistry	
AGRN 516	Soil Chemistry	
Seminar		**3**
ENTO 796	Graduate Seminar	
Teaching Practicum		**2**
ENTO 790	Teaching Practicum	
Discipline-Oriented Coursework		**15**
(ENTO, AEM, PPTH, AGRN, AGBI, BIOL, GEN, HORT, PLSC)		
Independent Study		**3**
ENTO 795	Independent Study	
Electives		**7**
Total Hours		36

*   Students must complete a minimum of 30 total hours, of which at least 24 hours must be coursework other than research, thesis, project, internship, etc. credits.

Major Learning Outcomes

ENTOMOLOGY

Students will acquire fundamental knowledge of entomology and associated fields.

Students will acquire detailed knowledge of their particular subdiscipline or research area, including the scientific literature fundamental to their discipline and the ability to stay current on scientific literature.

Students will acquire technical skills in the field and laboratory.

Students will develop the ability to communicate in writing and orally about scientific concepts and the results of their research.

Students will develop the ability to design, conduct, and interpret the results of experiments.

Environmental, Soil and Water Sciences, M.S.

Degree Offered

- Master of Science

Nature of the Program

M.S. in Environmental, Soil, & Water Sciences provides students the opportunity to take courses and conduct original, master's-level research in their areas of specialization. The educational experience obtained through courses and research is expected to provide students with the background and expertise to enter doctoral programs or professional careers as agronomists, entomologists, microbiologists, horticulturists, and plant pathologists or soil scientists. These disciplines are critical to maintaining agriculture and forest productivity, solving environmental problems, and promoting economic development in the state.

Admissions

In order for a student to be admitted to the program, the following admission criteria will be considered. The applicant normally must:

- The student must possess a baccalaureate degree from a college or university, have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last 60 credit hours),
- The student must have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE).
- The student must provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- The student must submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree.
- International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

A candidate for the M.S. degree in Environmental, Soil, and Water Sciences must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.S. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

Thesis Option:

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.		
Select one of the following:		**3**
STAT 511	Statistical Methods 1	
BIOS 601 & BIOS 602	Applied Biostatistics 1 and	
Select one of the following:		**3**
STAT 512	Statistical Methods 2	
BIOS 603 & BIOS 604	Applied Biostatistics 2 and Applied Biostatistics 3	
Seminar		**3**
AGRN 796	Graduate Seminar	
Research		**6**
AGRN 797	Research	
Discipline-Oriented Coursework		**15**

(AGRN, AEM, BIOL, ENVP, GEOG, GEOL, PLSC, RESM, ENGR, CE, FHYD, FMAN, FOR, MINE, GEN)		
Total Hours		30

Non-Thesis Option:		
A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.		
Select one of the following:		**3**
STAT 511	Statistical Methods 1	
STAT 512	Statistical Methods 2	
BIOS 601 & BIOS 602	Applied Biostatistics 1 and	
BIOS 603 & BIOS 604	Applied Biostatistics 2 and Applied Biostatistics 3	
Graduate Chemistry/Biochemistry Course		**3**
AGBI 610	General Biochemistry	
AGBI 612	General Biochemistry	
AGRN 516	Soil Chemistry	
Seminar		**3**
AGRN 796	Graduate Seminar	
Teaching Practicum		**2**
AGRN 790	Teaching Practicum	
Discipline-Oriented Coursework		**15**
(AGRN, AEM, BIOL, ENVP, GEOG, GEOL, PLSC, RESM, ENGR, CE, FHYD, FMAN, FOR, MINE, GEN)		
Independent Study		**3**
AGRN 795	Independent Study	
Electives		**7**
Total Hours		36

*   Students must complete a minimum of 30 total hours, of which at least 24 hours must be coursework other than research, thesis, project, internship, etc. credits.

Major Learning Outcomes

ENVIRONMENTAL, SOIL AND WATER SCIENCES

Students will demonstrate detailed knowledge of their particular research area and fundamental knowledge of other areas relevant to environmental soil and water sciences.

Students will demonstrate the ability to read and understand, peer-reviewed scientific literature relevant to their work.

Students will employ technical skills in the laboratory, greenhouse, and/or field to acquire novel, high-quality data, and analytical skills to interpret the data to draw conclusions that are valid and meaningful.

Students will communicate effectively in writing and orally about scientific concepts and the results of their research.

Graduates of the program will gain skills that will help them be employed in a relevant professional position.

Genetics and Development Biology, M.S., Ph.D.

Sven Verlinden, Division Director of Plant and Soil Sciences
email: sverlind@wvu.edu

Daniel Panaccione, Assistant Director of Graduate Programs
email: danpan@mail.wvu.edu

Degrees Offered

- Master of Science
- Doctor of Philosophy

Nature of the Program

The objective of this program is an increased level of understanding of modern concepts and methodologies employed in genetic and developmental biological work and to prepare a student to pursue a career in teaching and/or research. Responsibility for a student's program is vested in a graduate committee charged with arranging the student's coursework, conducting examinations, and supervising the research.

Concentrations

The degree is offered in genetics and developmental biology, an interdisciplinary program involving the faculty and facilities of a number of departments in the various colleges and schools of the university. A student may concentrate in genetics or developmental biology. The areas in which emphases are offered are as follows:

GENETICS

Biochemical and molecular genetics, developmental genetics, plant genetics, and population and quantitative genetics.

DEVELOPMENTAL BIOLOGY

Molecular aspects of development.

The student may also minor in one or more other scientific fields.

Admissions

A regular graduate student is a degree-seeking student who meets all the criteria for regular admission to a program of their choice and be under no requirements to make up deficiencies.

For regular admission, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree, and identify a potential faculty advisor.
- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or the New Medical College Admissions Test (New MCAT).

* International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

A candidate for the M.S. degree in Genetics and Developmental Biology must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.S. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College. For a more complete statement of requirements, the student is referred to the program's Guidelines for Graduate Students in the Genetics and Developmental Biology Program.

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.

Select one of the following:		3
STAT 511	Statistical Methods 1	
BIOS 601	Applied Biostatistics 1	
Select one of the following:		3
STAT 512	Statistical Methods 2	
BIOS 603 & BIOS 604	Applied Biostatistics 2 and Applied Biostatistics 3	
Select three of the following: *		9
AGBI 514	Animal Biotechnology	
AGBI 612	General Biochemistry	
BIOL 611	Epigenetics	
BIOL 658	Systems Biology	

GEN 535	Population Genetics	
GEN 726	Advanced Biochemical Genetics	
WMAN 630	Conservation Genetics	
Seminar		**3**
GEN 796	Graduate Seminar	
Research		**6**
GEN 797	Research	
Required Coursework		
GEN 521	Basic Concepts of Modern Genetics	3
AGBI 610	General Biochemistry	4
Total Hours		31

*   Substitution of a course containing some genetics and of special interest to the student may be allowed when approved by the student's committee.

A candidate for the Ph.D. degree in Genetics and Developmental Biology must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate catalog.

Program Requirements

All Ph.D. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College. Students are expected to maintain at least a 3.0 (B) grade point average in all work offered in fulfillment of the degree program. For a more complete statement of requirements, the student is referred to the program's Guidelines for Graduate Students in the Genetics and Developmental Biology Program.

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.

Course Requirements as determined by the Plan of Study		
Seminar [*]		**5**
GEN 796	Graduate Seminar	
Research		**6**
GEN 797	Research	
Candidacy Exam		
Dissertation		
Dissertation Defense		
Total Hours		11

*   A student must be enrolled in Seminar all semesters in residence.

Major Learning Outcomes

GENETICS AND DEVELOPMENT BIOLOGY

Students will acquire fundamental knowledge of genetics and associated fields such as biochemistry, chemistry, and biology.

Students will acquire detailed knowledge of their particular subdiscipline or research area, including the scientific literature fundamental to their discipline and the ability to stay current on scientific literature.

Students will acquire technical skills in the laboratory.

Students will develop the ability to communicate in writing and orally about scientific concepts and the results of their research.

Student will develop the ability to design, conduct, and interpret the results of experiments.

Horticulture, M.S.

Sven Verlinden, Division Director of Plant and Soil Sciences
email: sverlind@wvu.edu (majenks@mail.wvu.edu)

Daniel Panaccione, Assistant Director of Graduate Programs

email: danpan@mail.wvu.edu

Degree Offered

- Master of Science

Nature of the Program

M.S. in Horticulture provides students the opportunity to take courses and conduct original, master's-level research in their areas of specialization. The educational experience obtained through courses and research is expected to provide students with the background and expertise to enter doctoral programs or professional careers as agronomists, entomologists, microbiologists, horticulturists, and plant pathologists or soil scientists. These disciplines are critical to maintaining agriculture and forest productivity, solving environmental problems, and promoting economic development in the state.

Admissions

In order for a student to be admitted to the program, the applicant normally must fulfill the following admission criteria to be considered:

- Possess a baccalaureate degree.
- Have a minimum undergraduate grade point average of 2.75 (3.0 for acceptance as a regular graduate student).
- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or other tests/evidence.
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of approximately 500 words indicating the applicant's goals and objectives relative to receiving a graduate degree.

International students have the additional requirement to submit a minimum score of 213 on the computer based TOEFL examination if their native language is not English. Interviews are encouraged but not required.

A candidate for the M.S. degree in Horticulture must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.S. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

Thesis Option:

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.		
Select one of the following:		**3**
STAT 511	Statistical Methods 1	
BIOS 601	Applied Biostatistics 1	
Select one of the following:		**3**
STAT 512	Statistical Methods 2	
BIOS 603 & BIOS 604	Applied Biostatistics 2 and Applied Biostatistics 3	
Seminar		**3**
HORT 796	Graduate Seminar	
Research		**6**
HORT 797	Research	
Discipline-Oriented Coursework		**15**
(HORT, PLSC, GEN, BIOL, AGRN, AGBI, ENTO, PPTH, AEM, RESM, AGEE, GEOG, HN&F)		
Total Hours		30

Non-Thesis Option:

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.		
Select one of the following:		**3**
STAT 511	Statistical Methods 1	
STAT 512	Statistical Methods 2	
BIOS 601	Applied Biostatistics 1	
BIOS 603 & BIOS 604	Applied Biostatistics 2 and Applied Biostatistics 3	

Graduate Chemistry/Biochemistry Course		3
AGBI 610	General Biochemistry	
AGBI 612	General Biochemistry	
AGRN 516	Soil Chemistry	
Seminar		**3**
HORT 796	Graduate Seminar	
Teaching Practicum		**2**
HORT 790	Teaching Practicum	
Discipline-Oriented Coursework		**15**
(HORT, PLSC, GEN, BIOL, AGRN, AGBI, ENTO, PPTH, AEM, RESM, AGEE, GEOG, HN&F)		
Independent Study		**3**
HORT 795	Independent Study	
Electives		**7**
Total Hours		36

*   Students must complete a minimum of 30 total hours, of which at least 24 hours must be coursework other than research, thesis, project, internship, etc. credits.

Major Learning Outcomes

HORTICULTURE

Students will acquire fundamental knowledge of horticulture and associated fields of plant and soil science.

Students will acquire detailed knowledge of their particular subdiscipline or research area, including the scientific literature fundamental to their discipline and the ability to stay current on scientific literature.

Students will acquire technical skills in the field, greenhouse, or laboratory.

Students will develop the ability to communicate in writing and orally about scientific concepts and the results of their research.

Students will develop the ability to design, conduct, and interpret the results of experiments.

Nutritional and Food Sciences, M.S.

Peter Schaeffer, Division Director of Animal and Nutritional Sciences
e-mail: Peter.Schaeffer@mail.wvu.edu

Degree Offered

- Master of Science

Nature of the Program

The master of science in nutritional and food science in the Davis College of Agriculture, Natural Resources and Design allows maximum flexibility in courses and research problems. They may work with with issues in human health and nutrition. Research problems in human nutrition issues form the basis for many studies, but a comparative approach is emphasized. A master of science degree is available as a thesis or coursework option. For additional information, contact Dr. Hillar Klandorf (Hillar.Klandorf@mail.wvu.edu), at (304) 293-1897.

The division offers the graduate dietetic internship program as a component of the masters of science degree program (see below). For additional information, contact Ms. Nettie Freshour (Nettie.Freshour@mail.wvu.edu) at (304) 293-2651.

Graduate Dietetic Internship

The Graduate Dietetic Internship is a two-year combined master's/internship program for individuals who have completed at least a bachelor's degree, as well as the Accreditation Council for Education in Nutrition and Dietetics (ACEND) coursework requirements from a Didactic Program in Dietetics (DPD). The dietetic internship provides the supervised practice experience that is required to be eligible to take the registration examination for dietitians. The combined program offers interns the opportunity to complete a Master of Science degree in addition to the required supervised practice component. There is a thesis as well as a non-thesis option for the master' degree. The program will provide interns with at least 1,200 hours of supervised practice experience. Students will be required to complete the necessary degree requirements for the college. Additionally, to receive a verification statement to sit for the registered dietitian examination, all students will need to complete the course work listed below. Substations of classes will need

the approval of the faculty adviser and the Dietetic Internship Director. For additional information contact the program director Ms. Nettie Freshour (Nettie.Freshour@mail.wvu.edu) at (304) 293-2651.

Admissions

Requirements are similar to those in other biological sciences. The student should have completed basic courses in the physical and biological sciences, including genetics, nutrition, and physiology. Deficiencies may prolong the time needed to complete degree programs.

A regular graduate student is a degree-seeking student who meets all the criteria for regular admission to a program of their choice and be under no requirements to make up deficiencies.

For regular admission, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree, and identify a potential faculty advisor.
- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or the New Medical College Admissions Test (New MCAT).

* International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

A candidate for the M.S. degree in Nutritional and Food Science must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.S. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

Thesis option: The thesis option will require 30 credit hours, 24 hours of regular course work plus 6 hours credit for a thesis. A student must maintain a grade point average of 3.0 or better to remain in good standing. There will be a common core curriculum for the two majors. All additional course requirements will be determined by the student in consultation with the major advisor and graduate committee members.

Core Courses		
STAT 511	Statistical Methods 1	3
STAT 512	Statistical Methods 2	3
ANNU 696	Graduate Seminar	1
Additional Coursework Requirements		**17**
Research		
HN&F 697	Research	6
Total Hours		30

Non-Thesis option: The non-thesis option will require 36 hours of course work. A student must maintain a grade point average of 3.0 or better to remain in good standing. There will be a common core curriculum for the non-thesis masters. Additional courses to meet the degree requirements will be determined by the student in consultation with the major advisor and the graduate committee members and presented in the student's Plan of Study.

Core Courses		
STAT 511	Statistical Methods 1	3
STAT 512	Statistical Methods 2	3
ANNU 696	Graduate Seminar	1
Additional Coursework Requirements		**29**
Total Hours		36

Students in the MS-Thesis Option will be required to complete a thesis. They may identify a problem for study on their own, with approval from their graduate committee or they may work on a faculty member's research study. The scope of the research problem must be approved by the student's graduate committee. Students are required to defend their thesis in an open seminar presentation. Students in either the thesis or the non-thesis option

must pass an oral examination to be approved for graduation. No more than three hours of research/problem report credits can be applied to the Non-Thesis option.

*   Students must complete a minimum of 30 total hours, of which at least 24 hours must be coursework other than research, thesis, project, internship, etc. credits.

Major Learning Outcomes

NUTRITIONAL AND FOOD SCIENCES

Students who complete a Master of Science degree in Animal and Nutritional Sciences with a major in Nutrition and Food Sciences will:

Critically evaluate the literature in their field of study as new knowledge is accumulated.

- Identify research needs relevant to providing answers to societal problems.
- Apply research findings to professional practice in their fields.
- Effectively use oral and written communication to share information and ideas.
- Be qualified to take advanced-level professional positions in their respective fields of study.
- Be qualified for doctoral studies in their fields.

Plant and Soil Science, Ph.D.

Sven Verlinden, Division Director of Plant and Soil Sciences
email: sverlind@wvu.edu

Daniel Panaccione, Assistant Director of Graduate Programs
email: danpan@mail.wvu.edu

Degree Offered

- Doctor of Philosophy with a major in Plant and Soil Science

Nature of the Program

The educational experience obtained through courses and research is expected to provide students with the background and expertise to enter professional careers as agronomists, entomologists, microbiologists, horticulturists, and plant pathologists or soil scientists. These disciplines are critical to maintaining agriculture and forest productivity, solving environmental problems, and promoting economic development in the state.

Areas of Emphasis

The doctor of philosophy in plant and soil sciences degree is offered to students who wish to study crops agronomy, entomology, applied and environmental microbiology, horticulture, plant pathology, or soil sciences.

Admissions

In order for a student to be admitted to the program, the applicant normally must fulfill the following admission criteria to be considered:

- Possess a baccalaureate degree.
- Have a minimum undergraduate grade point average of 2.75 (3.0 for acceptance as a regular graduate student).
- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or other tests/evidence.
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of approximately 500 words indicating the applicant's goals and objectives relative to receiving a graduate degree.

International students have the additional requirement to submit a minimum score of 213 on the computer based TOEFL examination if their native language is not English. Interviews are encouraged but not required.

A candidate for the Ph.D. degree in Plant and Soil Science must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate catalog.

Program Requirements

All Ph.D. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.

Course Requirements as determined by the Plan of Study	
Seminar (AEM, AGRN, ENTO, GEN, HORT, PPTH) [*]	5
Research (AEM, AGRN, ENTO, GEN, HORT, PPTH)	6
Candidacy Exam	
Dissertation	
Dissertation Defense	
Total Hours	11

[*]   A student must be enrolled in Seminar all semesters in residence.

Doctoral students must satisfactorily complete a set of core courses before they will be admitted to candidacy for the Ph.D. degree. All core courses will be at the 600 or 700 level, except where indicated below. Certain course requirements may be waived if the student has received equivalent training in prior coursework. Additional coursework pertaining to the student's area of specialization will be determined by the student's major professor and graduate committee.

Major Learning Outcomes

PLANT AND SOIL SCIENCE

1. Students will acquire fundamental knowledge of their area of emphasis and associated fields in plant and soil science.
2. Students will acquire detailed knowledge of their particular subdiscipline or research area, including the scientific literature fundamental to their discipline and the ability to stay current o n scientific literature.
3. Students will acquire technical skills in the field or laboratory.
4. Students will develop the ability to communicate in writing and orally about scientific concepts and the results of their research.
5. Students will develop the ability to design, conduct, and interpret the results of experiments.

Plant Pathology, M.S.

Sven Verlinden, Division Director of Plant and Soil Sciences
email: sverlind@wvu.edu

Daniel Panaccione, Assistant Director of Graduate Programs
email: danpan@mail.wvu.edu

Degree Offered

- Master of Science

*For Ph.D. option, see area of emphasis under Ph.D. in Plant and Soil Sciences

Admissions

In order for a student to be admitted to the program, the applicant normally must fulfill the following admission criteria to be considered:

- Possess a baccalaureate degree.
- Have a minimum undergraduate grade point average of 2.75 (3.0 for acceptance as a regular graduate student).
- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or other tests/evidence.
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of approximately 500 words indicating the applicant's goals and objectives relative to receiving a graduate degree.

International students have the additional requirement to submit a minimum score of 213 on the computer based TOEFL examination if their native language is not English. Interviews are encouraged but not required.

A candidate for the M.S. degree in Plant Pathology must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.S. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

Thesis Option:

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.		
Select one of the following:		**3**
STAT 511	Statistical Methods 1	
BIOS 601	Applied Biostatistics 1	
Select one of the following:		**3**
STAT 512	Statistical Methods 2	
BIOS 603 & BIOS 604	Applied Biostatistics 2 and Applied Biostatistics 3	
Seminar		**3**
PPTH 796	Graduate Seminar	
Research		**6**
PPTH 797	Research	
Discipline-Oriented Coursework		**15**
(AEM, PPTH, AGRN, ENTO, AGBI, BIOL, GEN, HORT, PLSC)		
Total Hours		30

Non-Thesis Option:

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.		
Select one of the following:		**3**
STAT 511	Statistical Methods 1	
STAT 512	Statistical Methods 2	
BIOS 601	Applied Biostatistics 1	
BIOS 603 & BIOS 604	Applied Biostatistics 2 and Applied Biostatistics 3	
Graduate Chemistry/Biochemistry Course		**3**
AGBI 610	General Biochemistry	
AGBI 612	General Biochemistry	
AGRN 516	Soil Chemistry	
Seminar		**3**
PPTH 796	Graduate Seminar	
Teaching Practicum		**2**
PPTH 790	Teaching Practicum	
Discipline-Oriented Coursework		**15**
(AEM, PPTH, AGRN, ENTO, AGBI, BIOL, GEN, HORT, PLSC)		
Independent Study		**3**
PPTH 795	Independent Study	
Electives		**7**
Total Hours		36

*   Students must complete a minimum of 30 total hours, of which at least 24 hours must be coursework other than research, thesis, project, internship, etc. credits.

Major Learning Outcomes

PLANT PATHOLOGY

1. Students will acquire fundamental knowledge of plant pathology.
2. Students will acquire detailed knowledge of their particular subdiscipline or research area, including the scientific literature fundamental to their discipline and the ability to stay current on scientific literature.
3. Students will acquire technical skills in the field or laboratory.
4. Students will develop the ability to communicate in writing and orally about scientific concepts and the results of their research.
5. Students will develop the ability to design, conduct, and interpret the results of experiments.

Reproductive Physiology, M.S., Ph.D.

Peter Schaeffer, Chair of the Interdisciplinary Faculty
e-mail: Peter.Schaeffer@mail.wvu.edu

Degrees Offered

- Master of Science
- Doctor of Philosophy

Nature of the Program

The graduate program in reproductive physiology is interdisciplinary with faculty located in the Division of Animal and Nutritional Sciences and the Departments of Obstetrics and Gynecology, Physiology and Pharmacology, and Internal Medicine.

Research topics include studies of control of fertility, function and regression of the corpus luteum, aging of the oocyte, seasonal and other environmental factors in reproduction, steroidogenesis, control of estrus and ovulation, artificial insemination, ovarian follicular development, novel ovarian genes, endocrine functions of polypeptides, embryonic and fetal mortality, neuroendocrine control of gonadotropic hormone secretion, neuroendocrine regulation of puberty and breeding seasons, effects of nutrition on reproductive function, and immunology of reproduction. The focus of research is both basic and applied and is almost entirely with farmed animals.

Admissions

Requirements are similar to those in other biological sciences. The student should have completed basic courses in the physical and biological sciences, including genetics, nutrition, and physiology. Deficiencies may prolong the time needed to complete degree programs.

A regular graduate student is a degree-seeking student who meets all the criteria for regular admission to a program of their choice and be under no requirements to make up deficiencies.

For regular admission, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree, and identify a potential faculty advisor.
- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or the New Medical College Admissions Test (New MCAT).

* International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

Requirements for admission include completion of the following prerequisites with a grade of C or better in each: calculus, genetics, organic chemistry, physics, and vertebrate embryology.

A candidate for the M.S. degree in Reproductive Physiology must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.S. and Ph.D. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

A minimum cumulative GPA of 3.0 is required in all courses

Course Requirements as determined by the Plan of Study [*]	30
Total Hours	30

[*] Students must complete a minimum of 30 total hours, of which at least 24 hours must be coursework other than research, thesis, project, internship, etc. credits.

COURSES

ANPH 424	Physiology of Reproduction	3
Select one of the following:		**3**
STAT 511	Statistical Methods 1	
BIOS 601	Applied Biostatistics 1	
Select one of the following:		**3**
STAT 512	Statistical Methods 2	
BIOS 603 & BIOS 604	Applied Biostatistics 2 and Applied Biostatistics 3	
ANPH 796	Graduate Seminar	1
A&VS 697	Research	1
Other graduate classes based on student emphasis and advisory committee recommendations.		**19**
BIOL, AGBI, ANPH, PHAR, IMMB, PSIO, GEN, AEM, A&VS, ANNU, VETS		
Total Hours		30

*   Students present seminars and participate in Graduate Colloquium (Journal Club) each semester, but only one hour can count toward the degree.
The following can count toward the 30 hour minimum: one (1) hour of Seminar, one (1) hour of Graduate Colloquium (Journal Club), and six (6) hours of Research.

The program draws on courses offered in various departments and includes courses in endocrinology, advanced reproductive physiology, biochemistry, physiology, statistics, and developmental embryology selected by the student in consultation with his or her graduate committee.

A candidate for the Ph.D. degree in Reproductive Physiology must meet all University, College, and Program requirements as outlined in the WVU Graduate catalog.

Program Requirements

All Ph.D. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.

Course Requirements as determined by the Plan of Study
Candidacy Exam
Dissertation
Dissertation Defense

COURSES

ANPH 726	Endocrinology of Reproduction	4
ANPH 796	Graduate Seminar	1
A&VS 697	Research	1
Other graduate classes dependent on student background, focus and advisory committee recommendations		
Total Hours		6

The program draws on courses offered in various departments and includes courses in endocrinology, advanced reproductive physiology, biochemistry, physiology, statistics, and developmental embryology. Students present seminars and participate in journal clubs each semester.

Major Learning Outcomes

REPRODUCTIVE PHYSIOLOGY

1. Knowledge of the reproductive system and its functions in animals and man.
2. Knowledge of the endocrine and neuroendocrine regulation of reproduction.
3. Knowledge of the effects of reproduction on the organism and the roles of endocrine secretions of reproductive organs on bodily functions.
4. Ability to think comprehensively in the field of reproductive biology, design, analyze, interpret and report results of experiments to increase knowledge of the field.
5. Ability to utilize knowledge of reproductive biology to teach the subject and some associated disciplines at multiple levels.

6. Ability to understand and critique current research publications relevant to the control of reproduction and relate these results to previous work in the field.

School of Design and Community Development

Peter Butler, Director of the School of Design and Community Development
email: Peter.Butler@mail.wvu.edu

Degrees Offered

- Master of Landscape Architecture
- Master of Science
- Doctor of Philosophy

The School of Design and Community Development's primary mission is to prepare leaders, who influence the economic, social, aesthetic, and functional development of communities, states, and nations, dedicated to the improvement of quality of life for all members of society in harmony with the natural environment.

The School offers curricula in agricultural and extension education, design and merchandising, and landscape architecture. The mission of the agricultural and extension education program is to empower their majors for the choices and challenges of the twenty-first century. The faculty members in this program bring their love of the profession to students in an educational setting.

The graduate program in landscape architecture at WVU provides study opportunities for students entering the program from disciplines other than landscape architecture as well as advanced study opportunities for students who already have a design background. Our students work closely with faculty members and practicing professionals in the field to develop the skills essential to their professions and to examine the underlying theories on which they will ground their practice. The landscape architecture graduate program provides students with real world experiences and research opportunities. Graduate students are also exposed to faculty who have doctoral or advanced degrees in their field and who work collaboratively with national, state, and community agencies or organizations. Our faculty members are engaged in extensive research and are considered experts in their field of study.

FACULTY

DIRECTOR

- Peter Butler - M.L.A. (Iowa State)
  Landscape Architecture - Cultural landscape planning and interpretation, Community design

PROFESSORS

- Cindy Beacham - Ph.D. (Virginia Tech)
  Design Studies-Design thinking, Design pedagogy, Design for children, Evidence based design
- Michael J. Dougherty - Ph.D. (Virginia Tech)
  Landscape Architecture-Environmental design and planning
- Judith Wasserman - M.L.A. and M.R.P. (Cornell University)
  Designing healthy places, Urban Design, Historic landscape architecture preservation planning, Modernist landscapes, Cultural meaning and place-making

ASSOCIATE PROFESSORS

- Ronald Dulaney Jr. - M. Arch. (Virginia Tech)
  Interior Design-Architectural design, Design and culture, Design media, Material and fabrication processes, Poetics of construction
- Hodjat Ghadimi - Ph.D. (Ohio State University)
  Design Studies-Intelligent build environment, Innovation economics, Energy-environment-economy interaction modeling, Sustainable development planning, GeoDesign
- Michael Hasenmyer - M.L.A. (North Carolina State University)
  Landscape Architecture-Virtual simulation and design education
- Colleen Moretz - M.F.A. (Marywood University)
  Fashion Design - Transformative and sustainable practices, Design process; experimental, couture, and market-oriented, Teachiing methods-traditional and digital approaches
- Kerry S. Odell - Ph.D. (Ohio State University)
  Agricultural & Extension Education-Research methodology, Microcomputer applications, Teaching methods
- Elisabeth Orr - M.L.A. (University of California, Berkeley)
  Landscape Architecture-Vernacular and cultural landscape analysis and theory, Landscape architectural graphics and representation

- Charles B. Yuill - M.L.A. (University of Massachusetts)
  Landscape Architecture-Computer applications, Site analysis

ASSISTANT PROFESSOR

- Jessica Blythe - Ph.D. (University of Florida)
  Agricultural & Extension Education-Agricultural education, STEM education, Teaching methods, Effective teacher professional development, Quantitative and qualitative research methods
- Debanjan Das - Ph.D. (University of Missouri)
  Omni Channel Retailing, Global Issues and Fashion, Sustainability Issues in Fashion, Fashion Promotion and Merchandise Planning and Control
- J. Chris Haddox - M.S. (West Virginia University)
  Design Studies-LEED AP, Green advantage certified, Sustainable design and construction, Green building theory and practice
- Vaike Haas - M.L.A. (University of Michigan)
  Landscape Architecture-Native species, Stormwater management, Regional greenspace
- Shan Jiang - Ph.D. (Clemson University)
  Landscape Architecutre-Planning and design of the build environment, Architecture and health, Therapeutic landscapes
- Katie Baker Jones - Ph.D. (University of Missouri)
  Fashion, Dress & Merchandising-Fashion media, Fashion studies, Sustainable fashion, Fashion as material culture
- Jason McKibben - MEd (Texas A&M)
  Agricultural & Extension Education - Teaching and learning in agricultural mechanics, Experiential learning, STEM in agriculture
- Lee Mullett - M.S. (West Virginia University)
  Interior Design - Teaching, Design
- Craig Nelson - M.I.D. (North Carolina State University)
  Design Studies-Designing consumer products, Industrial design, Prototyping, Brand identity
- Emily Perdue - Ph.D. (Texas A&M)
  Agricultural & Extension Education-Extension Education, Leadership Development, Community Engagement, P-20 Education
- William Plyler - Ph.D. (West Virginia University)
  Interior Design-Architectural design, Design technology
- Haley Rosson - Ph.D. (Oklahoma State University)
  Agricultural and Extension Education - Extension education, leadership, 4-H and youth development, ATV and shooting sports safety
- Stefania Staniscia - Ph.D. (IUAV University of Venezia, IT)
  Landscape Architecture-Landscape Design with focus on brownfields and energy landscape

VISITING ASSISTANT PROFESSORS

- Elijah Pollard - M.F.A. (SUNY)
  Fashion, Dress & Merchandising-Fine arts, Design
- Elizabeth Shorrock - M.A. (Rhode Island School of Design)
  Fashion, Dress & Merchandising-Sustainable Fashion, Textiles, Fashion Design, Farm to Fashion
- Angela Uriyo - Ph.D. (University of Missouri)
  Fashion, Dress and Merchandising

PROFESSORS EMERITI

- Donald R. Armstrong
- Deborah Boone
- Stacy Gartin
- William H. Hagerty
- Mary Rose Jones
- Harry Boone, Jr.
- Layle D. Lawrence
- Marian B. Liddell
- George W. Longenecker
- Nora MacDonald
- Janice Yeager

Admissions

The following admission and performance standards, in addition to university and college requirements, are normally required to qualify for acceptance as a regular student to the Ph.D. program in Resource Management and Sustainable Development, the Human and Community Development option:

- A master's degree and a grade point average (GPA) of 3.0 or higher (on a 4.0 scale) in graduate courses is normally required for the AGEE and HCD areas.
- A minimum combined score of 300 for the verbal and quantitative sections of the Graduate Record Examination (GRE).
- Three letters of reference from individuals who can attest to the applicant's potential for academic success and/or relevant career-related experiences should be sent directly to the graduate program coordinator.
- A current resume or curriculum vita.
- Four years of career-related experience for those seeking admittance into the AGEE area.
- Other supporting materials you wish to have considered with your application.

Applications are reviewed by the Graduate Admission Committee, the graduate program coordinator, and the School Director who jointly make the admission decision. Applicants who do not meet the requirements but have special qualifications or circumstances may be admitted as provisional graduate students.

Agricultural and Extension Education, M.S., Ph.D.

Elizabeth McConnell, Administrative Assistant
e-mail: agee@mail.wvu.edu

Degrees Offered

- Master of Science
- Doctor of Philosophy

Nature of the Program

There are two graduate options available in Agricultural and Extension Education. Individuals desiring advanced study in teaching agriculture either in school-based agriculture programs or in extension education may earn a master of science in agricultural and extension education. For individuals interested in the opportunity to study and conduct research with faculty in agricultural and extension education, a Ph.D. in resource management and sustainable development with an emphasis in agricultural and extension education is available.

Candidates for the master of science degree may be admitted on a regular or provisional basis. A student who does not have a B.S. in agriculture with a major in agricultural and extension education may be required to complete undergraduate courses in agriculture and professional education if they plan to obtain teacher certification. Students take graduate courses in both technical and professional education. Programs are planned to ensure that candidates develop competence in the following areas:

- The informed design of agricultural and extension education programs
- The effective operation of agricultural and extension education programs
- The evaluation of agricultural and extension programs
- The philosophy and execution of action research
- The active teaching and learning process

Admissions

A regular graduate student is a degree-seeking student who meets all the criteria for regular admission to a program of their choice and be under no requirements to make up deficiencies.

DOCTORAL

For regular admission, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree, and identify a potential faculty advisor.
- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or the New Medical College Admissions Test (New MCAT).

* International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

MASTERS

For regular admission, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree, and identify a potential faculty advisor.

*International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

**A standardized graduate examination score (GRE or MCAT) is not required for admission to this degree, however, it is strongly encouraged.

MASTERS - TEACHER CERTIFICATION OPTION

To be admitted to the teacher certification option, a prospective student must meet the following qualifications:

- Bachelor's Degree in an agricultural field from an Accredited College/University
- Undergraduate GPA of 2.75 or higher
- Achieved minimum scores established by the West Virginia Department of Education on the following:
- PRAXIS I : (Praxis® Core Academic Skills for Educators (CASE) Tests)
    - Core Academic Skills for Educators: Reading
    - Core Academic Skills for Educators: Writing
    - Core Academic Skills for Educators: Mathematics
- PRAXIS II: Agriculture

A candidate for the M.S. degree in Agricultural and Extension Education must meet all University, College, School, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.S. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with his/her graduate committee. The plan must be approved by the candidate's graduate committee, Director of the School for Design and Community Development and the Associate Dean for Academic Affairs of the Davis College.

All students will conduct a research study and submit the results in the form of a thesis to the WVU ETD Repository. Students with an Extension Education area of emphasis must complete AGEE 650 (Program Development in Community Education) and AGEE 651 (Program Evaluation in Comm Ed.).

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.

Course Requirements as determined by the Plan of Study [*]		24
AGEE 642	Agriculture Education Research Methods and Design	3
AGEE 644	Data Analysis/Interpretation	3
Total Hours		30

*	Students must complete a minimum of 30 total hours, of which at least 24 hours must be coursework other than research, thesis, project, internship, etc. credits.

A candidate for the Ph.D. degree in Agriculture and Extension Education must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate catalog.

Program Requirements

All Ph.D. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the candidate's graduate committee, Director of the School of Design and Community Development, and the Associate Dean for Academic Affairs of the Davis College.

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.

Course Requirements as determined by the plan of study. The plan of study must include:

AGEE 642	Agriculture Education Research Methods and Design	3
AGEE 644	Data Analysis/Interpretation	3
AGEE 650	Program Development in Community Education	3
AGEE 651	Program Evaluation in Comm Ed	3
Candidacy Exam		
Research		12
Dissertation		
Dissertation Defense		

Agriculture and Extension Education Area of Emphasis Requirements

A minimum of 6 and no more than 12 hours of coursework within an approved major but distinct from required major coursework will be completed as determined by the plan of study. The plan of study must include a minimum of 12 hours of research.

Beyond the core, AGEE majors take four courses covering research design, data analysis, program development, and program evaluation. Additional courses in teaching and learning theory, educational psychology, supervision, administration and leadership, and statistics are recommended. Students will have two fields of specialization consisting of a minimum of twelve to fifteen semester hours of coursework each, not counting research.

Beyond the core, HCD majors take four courses covering research design, data analysis, program development, and program evaluation. Additional courses related to qualitative research, policy, administration, and the philosophical, theoretical, and empirical foundations related to human community growth and sustainability are recommended. Students will have two fields or specialization consisting of a minimum of twelve to fifteen semester hours of coursework each.

Major Learning Outcomes

AGRICULTURAL AND EXTENSION EDUCATION

Upon completion of the Master of Science degree, all students will:

- Complete a minimum of 24 hours of coursework in an area of emphasis selected by the student and his/her adviser.
- Complete a minimum of 6 hours of coursework in research methods and data analysis.
- Conduct an "agricultural education" research study (maximum of 6 hours credit) on a topic of interest to the student.
- Present the findings from their research study in a professional manner including the completion of a thesis approved by West Virginia University's Electronic Thesis and Dissertation (ETD) system.

Students may be admitted to the Agricultural and Extension Education Master of Science program to complete hours/courses needed to maintain their teaching certification.

Design and Merchandising, M.S.

Degree Offered

- Master of Science in Design and Merchandising

Nature of the Program

The objective of this program is to raise each student's ability to apply fully developed design thinking, mastery of merchandising systems, and deep understanding of selected contexts to applications in targeted areas. These areas currently include cultural resource management/historic preservation, healthcare design, integrated marketing communications, and sustainable design practices. Areas of focus may be expanded, however, to meet student demands if resources and faculty expertise is available.

Admissions

A regular graduate student is a degree-seeking student who meets all the criteria for regular admission to a program of their choice and be under no requirements to make up deficiencies.

For regular admission, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree, and identify a potential faculty advisor.

- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or the New Medical College Admissions Test (New MCAT).

* International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

A candidate for the M.S. degree in Design and Merchandising must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.S. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the School of Design and Community Development and the Associate Dean for Academic Affairs of the Davis College.

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.

Course Requirements as determined by the Plan of Study *	30
Total Hours	30

*   Students must complete a minimum of 30 total hours, of which at least 24 hours must be coursework other than research, thesis, project, internship, etc. credits.

Major Learning Outcomes

DESIGN AND MERCHANDISING

Graduates will be able to:

- Conduct research appropriate to their cognate specialty and process (design & merchandising) focus.
- Teach at a post-secondary level within their discipline.
- Apply systemic design thinking to industry innovation at advanced levels.
- Apply iterative design process to solve real world problems.
- Analyze user wants and needs at both micro and macro levels.
- Utilize advanced technology where appropriate.
- Place the right product at the right price in the right place at the right time.
- Communicate effectively.

Human and Community Development, Ph.D.

Shan Jiang, Ph.D., Human and Community Development Program Coordinator, Assistant Professor, Landscape Architecture Shan.Jiang@mail.wvu.edu

Other contacts: Peter Butler, Associate Professor, Extension Specialist, Director, School of Design and Community Development Peter.Butler@mail.wvu.edu

Alan R. Collins, Ph.D., Professor, Resource Economics and Management Alan.Collins@mail.wvu.edu

Degree Offered

- Doctor of Philosophy

Nature of the Program

The Ph.D. in Human and Community Development (HCD) is intended for applicants with a professional background in community development and design, landscape architecture, interior architecture, fashion design, design and merchandising, or applicants who have significant prior experience improving the social, cultural, and/or economic conditions of communities by working with government or educational institutions. The program provides students with access to a variety of courses and faculty expertise to help candidates develop an interdisciplinary perspective of human and community development, through research in two or more fields. To this end, the program is flexible and relies on the intellectual maturity and curiosity of the student and the guidance of the student's graduate committee, to develop a student-centered curriculum.

The Ph.D.degree is the most advanced degree offered and prepares students for careers at the highest level of the profession as a faculty member, staff in a research organization or governmental and non-governmental agencies, or as a consultant. This program is currently administered by the School of Design and Community Development in partnership with the Resource Economics and Management Division within School of Natural Resources.

Admissions

A regular graduate student is a degree-seeking student who meets all the criteria for regular admission to a program of their choice and be under no requirements to make up deficiencies.

For regular admission, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree, and identify a potential faculty advisor.
- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or the New Medical College Admissions Test (New MCAT).
- A design portfolio (physical or digital) is encouraged for applicants who come with a design background, such as environmental planning and design, landscape architecture, interior architecture, fashion design, industrial design, and so on.
- Either a master degree in design discipline relevant to human and community development, or a master's degree in a social science or humanities discipline relevant to human and community development.
- At least two years equivalent of full-time relevant professional experience.

A candidate for the Ph.D. degree in Human and Community Development must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate catalog.

Program Requirements

All Ph.D. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.

Course Requirements as determined by the Plan of Study
Research
Candidacy Exam
Dissertation
Dissertation Defense

Major Learning Outcomes

HUMAN AND COMMUNITY DEVELOPMENT

Learning outcomes for this degree program include:

- Complete a core consisting of quantitative and qualitative research methods, graduate seminars, and teaching practicum;
- Demonstrate competency in their chosen field(s);
- Demonstrate the capacity to produce research that can be accepted for publication in interdisciplinary journals of the social sciences;
- Be proficient in oral and written communication skills in order to have research accepted by and presented at professional conferences; and
- Show the ability to organize and to assess a community engagement project.

Landscape Architecture, M.L.A.

Charles B. Yuill, Graduate Program Coordinator
email: charlie.yuill@mail.wvu.edu

Degree Offered

- Master of Landscape Architecture (MLA)

Nature of the Program

The MLA (Master of Landscape Architecture) is a professional master's level program offered by the Landscape Architecture Program in the School of Design and Community Development. The Program provides two tracks for students who wish to pursue graduate education in landscape architecture and environmental design. The program provides for a three-year course of study for students without a landscape architecture undergraduate degree

who wish to pursue graduate studies in landscape architecture. That track provides one year of leveling courses, so students may then pursue advanced studies in their remaining two years. Students pursuing the three-year MLA are then able to engage in the profession of landscape architecture as practicing professionals.

The program also provides a two-year course of study for students entering the program with an undergraduate degree in landscape architecture or a related field such as architecture. The program provides opportunities to engage in landscape architectural design as well as the potential to engage in specializations such as community planning and design, environmental restoration, and environmental informatics focusing on GIS-based planning and design methods. With both the two-year and three-year programs, the student concludes their studies by completing either an applied capstone project or a thesis.

The master of landscape architecture program provides opportunities for both foundation and advanced training in the core areas of landscape architecture, including site and environmental design, land use planning, construction methods and materials, landscape architecture history and theory, and plant materials and planting design. It is anticipated that many students, particularly those pursuing the post-professional degree, will take interdisciplinary approaches to their studies as well as use them in practice. There are twelve credit hours of electives in the curriculum. These allow the student to tailor a series of courses in areas of focus such as community planning and design, environmental restoration, or environmental and natural resource analysis methods including geographic information systems and remote sensing.

Graduates of the program will be prepared for competitive entry-level positions in private firms and public agencies. In the course of their graduate education, students may pursue one of four options, ranging from a general professional background to a focus on environmental restoration, community design, or environmental and natural resource analysis.

1. A comprehensive education in landscape architecture, environmental design and planning. Students pursue a program of study to provide a well-rounded design background suitable for entry into the landscape architecture profession. This option would be most appropriate for students in the first-professional-degree MLA program who do not possess design or technical science undergraduate degrees.

2. Environmental Restoration. Through elective course selection and thesis or professional project selection, students may pursue a course of study focusing on environmental restoration including soils and water restoration, brownfields, mined areas, and wetlands and watersheds. This option allows students to take advantage of the strengths of the Davis College for collaborative in-depth study in many aspects of environmental and community restoration.

3. Community Design and Planning. Building on the existing Community Engagement Lab (CEL) and a number of other allied programs, students will be able to pursue focused studies emphasizing comprehensive community design and planning. This option will provide students with in-depth knowledge in the theory and practice of community-based design, including outreach, public participation, and visioning. The general emphasis will be on small communities that are typical to the Appalachian Region, although studies will be applicable to urban and regional design as well.

4. Environmental and Natural Resource Analysis Methods. With a greater focus on the environmental aspects of landscape architectural practice, this option will permit students to focus on environmental analysis methods including geographic information systems (GIS), remote sensing, statistical and field survey methods, and the incorporation of these methods into landscape architectural and environmental design projects. This option recognizes the strengths and expertise found in the landscape architecture program as well as other programs in the College and University.

Mission

The mission of the Master of Landscape Architecture Program at West Virginia University is to provide students with the knowledge necessary to develop the skills and abilities in design, planning, and management that are pivotal to their effectiveness and success in the workforce, and that are responsive to the unique qualities of the state and the region. The program prepares students to become effective professionals and citizens by emphasizing a philosophy of responsibility and commitment to ethical standards regarding the natural environment, professional practice and personal relationships.

Admissions

The landscape architecture faculty offers the master of landscape architecture (MLA) as a professional degree leading to the practice of landscape architecture. Candidates for the MLA may enter the program with a BSLA or BLA, and pursue a thirty-eight credit hour course of study culminating in the preparation of either a master's thesis or terminal project. For these students, the MLA will serve as a post-professional degree providing the opportunity for advanced or specialized studies in particular areas of landscape architecture.

Students entering the program with a BS or BA in another design discipline or a non-design discipline are required to complete up to an additional twenty-eight credits of leveling courses prior to entering the second year of a three-year course of study with the thirty-eight credit hour course of study to be completed in years two and three. The number of leveling courses that any student may be required to take will be dependent on the student's academic background and will be determined in collaboration with the student's academic advisor. For these students, the MLA will serve as the first professional degree that is required for entry into the profession of landscape architecture. Studies for these students will also culminate in the preparation of a master's thesis or terminal project.

A regular graduate student is a degree-seeking student who meets all the criteria for regular admission to a program of their choice and be under no requirements to make up deficiencies.

For regular admission, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree, and identify a potential faculty advisor.
- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or the New Medical College Admissions Test (New MCAT).

* International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

A candidate for the M.L.A. degree in Landscape Architecture must meet all University, College, School, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.L.A. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the School and the Associate Dean for Academic Affairs of the Davis College.

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.

Course Requirements as determined by the Plan of Study [*]	30
Total Hours	30

[*]   Students must complete a minimum of 30 total hours, of which at least 24 hours must be coursework other than research, thesis, project, internship, etc. credits.

COURSEWORK

A total of thirty-eight credit hours are required for the post-professional M.L.A. program. The requirements for the first professional degree may include an additional twenty-eight undergraduate and graduate credits prior to commencing with subsequent graduate courses.

THESIS OR TERMINAL PROJECT

Students will be required to complete either a research thesis on a problem in environmental or community design or landscape architecture or to complete an applied comprehensive professional project. Each student selecting the thesis option will defend their thesis in a public forum before their committee. The comprehensive project option will result in a professional submission that includes a written report and appropriate professional drawings documenting the design project for a project subject to realistic conditions. It will also include a formal public presentation/defense before the student's committee.

The composition of graduate advisory committees will follow Davis College and WVU guidelines and must have at least two landscape architecture faculty members and one outside member. Two of the committee members must be full members of the graduate faculty, and the third may be an associate member.

Major Learning Outcomes

LANDSCAPE ARCHITECTURE

- To provide students with a solid professional educational foundation that encompasses knowledge and skills of design, construction, problem-solving, plant materials, landscape management, landscape history and theory, and professional practice and that is responsive to the needs of the environment, society, and the landscape architecture profession.
- To instill ethical standards in the students regarding the environment, the profession, personal relationships and social responsibility.
- To prepare students to be proficient in communicating professional concepts graphically, orally, and in writing.
- To provide students with cognitive opportunities to incorporate professional information through the study of real-life problems in Morgantown, the state of West Virginia, and the region.
- To enhance course offerings, collaborative faculty research opportunities, and avenues for scholarly activities by increasing and diversifying ties with other disciplines across campus.

- To strengthen the Landscape Architecture Program's role as an integral part of the Davis College of Agriculture, Natural Resources & Design's research and scholarly activities regarding landscape design, landscape ecology, landscape planning, cultural and sustainable environments, and geographic information systems.
- To provide design and planning expertise to West Virginians in the areas of community development, and improvement of the quality of life by offering the skills of the faculty and students of the Landscape Architecture Program.

School of Natural Resources

Robert Burns, Division Director of Forestry and Natural Resources
email: robert.burns@mail.wvu.edu

Alan Collins, Interim Division Director of Resource Management
email: alan.collins@mail.wvu.edu

Degrees Offered

The School of Natural Resources offers master of science degree programs in four areas: agricultural and resource economics; forestry; recreation, parks and tourism resources; and wildlife and fisheries resources. Students wishing to pursue a master of science emphasizing forest resources management or wood science and technology should apply for admission to the master of science in forestry.

A student seeking admission to work toward the degree of doctor of philosophy in natural resources science in the School of Natural Resources may choose from one of the following ***Areas of Emphasis*** as their major field of study: **forest resources management; recreation, parks, and tourism resources; wood science and technology;** or **wildlife and fisheries resources**. Within these major fields of study, specialization is limited only by the range of competencies in the graduate faculty.

A limited number of graduate research assistantships are available to highly qualified students on a competitive basis.

FACULTY
DIRECTOR

- Robert C. Burns - Ph.D. (Pennsylvania State University)
  Director, Division of Forestry and Natural Resources
- Alan R. Collins - Ph.D. (Oregon State University)
  Director, Division of Resource Economics and Management

PROFESSORS

- James T. Anderson - Ph.D. (Texas Tech University)
  Wildlife ecology and management
- Robert C. Burns - Ph.D. (The Pennsylvania University)
  Understanding recreational behavior, motivations, and satisfaction levels
- Alan R. Collins - Ph.D. (Oregon State University)
  Resource economics
- Benjamin E. Dawson-Andoh - Ph.D. (University of British Columbia)
  Wood chemistry and preservation
- John W. Edwards - Ph.D. (Clemson University)
  Endangered Species Ecology and Management, Forest Wildlife/Habitat Relationships
- Kyle J. Hartman - Ph.D. (University of Maryland)
  Fisheries and Aquatic Ecology, Fish Management, Trophic Ecology
- David W. McGill - Ph.D. (Pennsylvania State University)
  Extension Specialist, Forest Resources, Non-industrial Private Forestry
- Joseph F. McNeel - Ph.D. (Virginia Tech)
  Forest harvest and operations
- J. Todd Petty - Ph.D. (University of Georgia)
  Stream and Watershed Ecology
- Chad Pierskala - Ph.D. (University of Minnesota)
  Wildland recreation management and policy
- Peter V. Schaeffer - Ph.D. (University of Southern California)
  Regional science, Applied microeconomics
- Steven Selin - Ph.D. (University of Oregon)

Human dimensions and Natural resources management
- Michael P. Strager - Ph.D (West Virginia University)
  Spatial analysis, Decision support
- Jingxin Wang - Ph.D. (University of Georgia)
  Biomass logistics, utilization and bioenergy, forest BMPs

ASSOCIATE PROFESSORS

- Cheryl Brown - Ph.D. (University of California, Berkley)
  Agricultural and food policy and economics, Agribusiness
- Gregory A. Dahle - Ph.D. (Rutgers University)
  Arboriculture and urban forestry
- Jinyang Deng - Ph.D. (University of Alberta)
  Recreation, Parks, and Tourism; Recreation and Leisure Studies
- Levan Elbakidze - Ph.D. (Texas A&M University)
  Shale gas; water and energy economics
- Xiaoli Etienne - Ph.D. (University of Illinois)
  Economic methods in agriculture and energy
- Kathryn Gazal - Ph.D. (Mississippi State University)
  Forest Economics
- Jamie Schuler - Ph.D. (North Carolina State University)
  Forest regeneration and restoration
- Kaushlendra Singh - Ph.D. (University of Georgia)
  Thermo-chemical conversion and bioenergy
- Doolarie Singh-Knights - Ph.D. (University of Georgia)
  Thermo-chemical conversion and bioenergy
- Dave Smaldone - Ph.D. (University of Idaho)
  Environmental and Cultural Interpretation, Nature-based tourism
- Mark Sperow - Ph.D. (Colorado State University)
  Production and resource economics
- Ben D. Spong - Ph.D. (Oregon State University)
  Forest operations, roads, and harvesting
- Amy Welsh - Ph.D. (University of California-Davis)
  Conservation genetics and wildlife forensics
- Nicholas P. Zegre - Ph.D. (Oregon State University)
  Forest and watershed hydrology

ASSISTANT PROFESSORS

- Ana Claudia Sant' Anna - Ph.D. (Kansas State University)
  Agribusiness and Finance
- Donald Brown - Ph.D. (Texas State University)
  Herpetology, wildlife ecology
- Elizabeth Byrd - Ph.D. (Purdue University)
  Energy, Law, Agribusiness
- Sophan Chhin - Ph.D. (University of Alberta)
  Quantitative forest management
- Levan Elbakidze - Ph.D. (Texas A&M)
  Shale gas; water and energy economics
- Xiaoli Etienne - Ph.D. (University of Illinois)
  Econometric methods in agriculture and energy
- Shawn Grushecky - Ph.D. (West Virginia University)
  Energy land management
- Shawn Grushecky - Ph.D. (West Virginia University
  Energy land management
- Suhyun Jung - Ph.D. (University of Minnesota)
  Environmental and natural resource economics
- Christopher Lituma - Ph.D. (University of Tennessee)
  Ornithology and bird ecology

- Gloria S. Oporto - Ph.D. (University of Maine - Orono)
  Wood-based Composites and Bioproducts
- Christopher Rota - Ph.D. (University of Missouri)
  Applied vertebrate ecology
- Heather Stephens - Ph.D. (Ohio State University)
  Resource and energy economics; regional development

ADJUNCT PROFESSORS

- Patricia M. Mazik - – Ph.D. (Memphis State University)
  Aquatic toxicology, fish physiology
- Sheldon Owen - Ph.D. (West Virginia University)
  Extension wildlife specialist
- Stuart A. Welsh - Ph.D. (West Virginia University)
  Ichthyology
- Petra B. Wood - Ph.D. (University of Florida)
  Avian ecology

VISITING ASSISTANT PROFESSORS

- Charlene Kelly - Ph.D. (Virginia Tech)
  Watershed biogeochemistry
- Kirsten Stephan - Ph.D. (University of Idaho)
  Soil and vegetation management

Forestry, M.S.F.

Degree Offered

- Master of Science in Forestry

Areas of Emphasis Offered

- Forest Resources Management
- Wood Science and Technology

Nature of the Program

Students seeking admission for the degree of Master of Science in Forestry (M.S.F.) should have completed an undergraduate curriculum in forestry. A student whose undergraduate degree is in a field other than forestry will ordinarily be required to take supplemental undergraduate courses. Candidates for the degree may pursue an emphasis in forest resources management or wood science and technology. Within their selected area of emphasis, candidates may focus their studies on forest biometry, forest ecology, forest economics, forest business, forest management, forest hydrology, silviculture, wood science and technology, forest operations, wood composites, wood marketing, bio-energy, or bio-fuels.

Admissions

A regular graduate student is a degree-seeking student who meets all the criteria for regular admission to a program of their choice and be under no requirements to make up deficiencies.

For regular admission, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree, and identify a potential faculty advisor.
- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or the New Medical College Admissions Test (New MCAT).

* International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

Students seeking admission for the M.S. Forestry degree should have completed an undergraduate curriculum emphasizing Forestry or Wood Science. A student whose undergraduate degree is in a field other than these two areas of study will ordinarily be required to take supplemental undergraduate courses.

Candidates may emphasize study in arboriculture, biocomposites, forest biometry, forest ecology, forest economics, forest hydrology, forest management, forest operations, forest products marketing, silviculture, sustainable construction, or urban forestry.

A candidate for the M.S.F. degree in Forestry must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.S.F. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.

Course Requirements as determined by the Plan of Study [*]	30
Total Hours	30

[*]   Students must complete a minimum of 30 total hours, of which at least 24 hours must be coursework other than research, thesis, project, internship, etc. credits.

Candidates for the degree may emphasize in forest biometry, forest ecology, forest economics, forest business, forest management, forest hydrology, silviculture, wood science and technology, forest operations, wood composites, wood marketing, bio-energy, or bio-fuels. The candidate must complete thirty hours of approved study, six hours of which shall constitute a thesis. The program ordinarily requires two years of residence. The master of science in forestry has a non-thesis option. For this option, the candidate must complete thirty-six hours of approved study, eight hours of which shall consist of an applied problem as approved by the candidate's graduate committee. The Division of Forestry and Natural Resources in the Davis College of Agriculture, Natural Resources, and Design requires three letters of recommendation and a one-page goal statement which identifies the area of specialization the student desires to study.

Major Learning Goals

FORESTRY

- Demonstrate mastery in one of the areas of emphasis (Forest Resources Management or Wood Science and Technology)
- Engage in and conduct original research in Forest Resources Management or Wood Science and Technology

Natural Resource Economics, Ph.D.

Levan Elbakidze, Graduate Program Coordinator
e-mail: Levan.Elbakidze@mail.wvu.edu

Degree Offered

- Doctor of Philosophy in Natural Resource Economics

Nature of the Program

The Ph.D. degree is the most advanced degree offered and prepares candidates for work at the highest level of the profession as a faculty member, staff in a research organization or governmental and non-governmental agencies, or as a consultant.

Admissions

A regular graduate student is a degree-seeking student who meets all the criteria for regular admission to a program of their choice and be under no requirements to make up deficiencies.

For regular admission, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree, and identify a potential faculty advisor.

- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or the New Medical College Admissions Test (New MCAT).

* International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

A candidate for the Ph.D. degree in Natural Resource Economics must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate catalog.

Program Requirements

The requirements for obtaining a Ph.D. degree in Natural Resource Economics are outlined in the graduate handbook available on-line at http://resourcemanagement.wvu.edu/. All Ph.D. degree candidates are required to follow a planned program of study. The student develops this plan of study in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

Required Courses		
ARE 621	Quantitative Methods in Resource Economics	3
ECON 701	Advanced Micro-Economic Theory 1	4
ECON 711	Advanced Micro-Economic Theory 2	4
ECON 721	Mathematical Economics	3
ECON 725	Econometrics 1	3
ARE 703	Advanced Natural Resource Economic Theory	3
ARE 710	Advanced Environmental Economics	3
ECON 726	Econometrics 2	3
ECON 727	Econometrics 3	3
or ARE 729	Spatial Econometrics	
Required Field (select one of the following):		**6**
Economic Development and Regional Economics		
ARE 540	Rural and Regional Development	
ARE 542	International Agricultural Economic Development	
ECON 751	International Trade	
ECON 754	Comparative Economic Systems	
ECON 761	Advanced Regional Economics	
ECON 762	Advanced Urban Economics	
Spatial Economic Analysis		
ARE 729	Spatial Econometrics	
ECON 727	Econometrics 3	
ECON 761	Advanced Regional Economics	
RESM 575	Spatial Analysis for Resource Management	
Macroeconomics		
ECON 702	Advanced Macro-Economic Theory 1	
ECON 712	Advanced Macro-Economic Theory 2	
Seminar		**1**
ARE 796	Graduate Seminar	
Research		**1**
ARE 797	Research	
Teaching Practicum		**1**
ARE 690	Teaching Practicum	
Qualifying Exam		
Mentored Research Paper		
Dissertation Proposal Defense		
Dissertation		
Total Hours		38

Major Learning Outcomes

NATURAL RESOURCE ECONOMICS

Learning outcomes for this degree program are that each graduate:

- Demonstrate the capacity to produce economic research that can be accepted for publication in leading academic journals.
- Be proficient in oral and written communication.

Natural Resources Science, Ph.D.

Degree Offered

- Doctor of Philosophy

Areas of Emphasis Offered

- Forest Resource Management
- Recreation, Parks, and Tourism Resources
- Wildlife and Fisheries Resources
- Wood Science and Technology

Within these major fields of study, specialization is limited only by the range of competencies in the graduate faculty.

Nature of the Program

The Ph.D. in Natural Resources Science is an interdisciplinary program that allows doctoral students the opportunity to specialize in a range of competencies. As a graduate student in the School of Natural Resources, you'll advance your research knowledge and prepare to become a leader in your chosen field. With the guidance and support of faculty mentors, you'll develop an advanced understanding of and appreciation for the principles of economics, stewardship and sustainability of our natural resources.

Admissions

A regular graduate student is a degree-seeking student who meets all the criteria for regular admission to a program of their choice and be under no requirements to make up deficiencies.

For regular admission, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree, and identify a potential faculty advisor.
- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or the New Medical College Admissions Test (New MCAT).

* International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

A student seeking admission for a Ph.D Forest Resources Science degree may choose a major field of study in forest resources management; recreation, parks, and tourism resources; wood science and technology; or wildlife and fisheries resources. Within these major fields of study, specialization is limited only by the range of competencies in the graduate faculty.

A candidate for the Ph.D. degree in Natural Resources Science must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate catalog.

Program Requirements

All Ph.D. degree students are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.

Course Requirements as determined by the Plan of Study

Research
Candidacy Exam
Dissertation
Dissertation Defense

Curriculum requirements for all Ph.D. candidates include a block of graduate courses in the major field, which will constitute a comprehensive review of the significant knowledge in that field and a block of graduate courses in a minor field of study. A minimum of sixty semester hours beyond the bachelor's degree and exclusive of the dissertation is required.

DISSERTATION AND FINAL EXAMINATION

The research work for the doctoral dissertation must show a high degree of scholarship and must present an original contribution to the field of forest resources science. In addition to coursework and the dissertation, the candidate is required to pass a qualifying examination and a final examination.

Major Learning Outcomes

NATURAL RESOURCES SCIENCE

To train students to become leaders in sub-fields within the broad area of Natural Resources Science (in one of four program areas: Forest Resource Management; Recreation, Parks and Tourism Resources; Wildlife and Fisheries Resources; and Wood Science and Technology).

To prepare students for assuming positions in academia, industry, government, or nonprofit agencies. Within this framework the learning outcomes of the PhD in Natural Resources Science are to develop students that demonstrate the following abilities:

1. Conduct independent, novel research in their sub-discipline.
2. Interpret and critically evaluate the existing literature published within their field.
3. Demonstrate critical thinking skills for application of statistics.
4. Effectively communicate their research in oral and written formats.

Recreation, Parks, and Tourism Resources, M.S.

Degree Offered

- Master of Science

Nature of the Program

The Division of Forestry and Natural Resources offers program options leading to the master of science for students who wish to major in Recreation, Parks, and Tourism Resources. Students selecting this graduate program may focus on field-related specialties including (but not limited to) recreation management and policy, environmental interpretation, and natural resource-based tourism. All students are required to complete a total of thirty-five credit hours and complete a thesis.

Admissions

A regular graduate student is a degree-seeking student who meets all the criteria for regular admission to a program of their choice and be under no requirements to make up deficiencies.

For regular admission, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree, and identify a potential faculty advisor.
- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or the New Medical College Admissions Test (New MCAT).

* International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

Students seeking admission for the M.S. in Recreation, Parks, and Tourism Resources should have completed an undergraduate curriculum emphasizing natural resources recreation. A student whose undergraduate degree is in a field other than this discipline will ordinarily be required to take supplemental undergraduate courses as part of their degree work.

Students selecting this graduate program may emphasize recreation management and policy, environmental education and interpretation, or natural resource-based tourism.

A candidate for the M.S. degree in Recreation, Parks, and Tourism must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.S. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.

Research Methods and Statistics courses		8
FOR 470	Problems in Forestry, Wood Science, Wildlife, or Recreation	
STAT 511	Statistical Methods 1	
or EDP 613	Statistical Methods 1	
RPTR 796	Graduate Seminar (taken twice)	
Recreation, Parks, & Tourism Resources courses (take 4 classes from the following list)		**12**
FOR 670	Human Dimensions of Natural Resource Management	
RPTR 714	Outdoor Recreation Behavior	
RPTR 680	Non-Personal Interpretation	
RPTR 685	Personal Interpretation	
RPTR 738	Tourism Planning	
RPTR 752	Tourism and Natural Resources Marketing	
RPTR 693	Special Topics	
Cognate Area		**12**
Four courses in a chosen cognate area		
(AGEE, EDP, FOR, RPTR, RESM, FMAN at 400-level and above)		
FOR 698	Thesis or Dissertation	3
Total Hours		35

A thesis requires collecting a qualitative or quantitative data set for the purpose of conducting action-oriented research (e.g., program or needs assessments), cooperative research (e.g, cooperative problem solving), and/or theory development (e.g., hypothesis testing). The specific requirements for each student are determined by the thesis chair and committee members. This program ordinarily requires two years of residence.

Major Learning Outcomes
RECREATION, PARKS, AND TOURISM RESOURCES

1. Students will be able to apply a broad range of social science theories and methods to policy, planning, and management challenges and opportunities in the recreation, tourism, and natural resource fields.
2. Students will be able to design and conduct field relevant research to address natural resource based recreation and tourism questions and problems.
3. Students will be able to analyze and interpret research data that addresses natural resource based recreation and tourism questions and problems.
4. Students will communicate effectively in writing and oral presentations to professional and lay audiences about issues in the RPTR field.
5. Students will demonstrate the ability to remain current with contemporary issues within one's field and related areas.

Resource Economics and Management, M.S.

Levan Elbakidze, Graduate Program Coordinator
e-mail: Levan.Elbakidze@mail.wvu.edu (Alan.Collins@mail.wvu.edu)

Degree Offered

- Master of Science

Nature of the Program

The M.S. program in Resource Economics and Management (REM) provides advanced training in the areas of natural resource, environmental, agricultural, energy, agribusiness, and rural development economics. The primary objective of this program is to prepare students for further graduate study or a variety of careers in business and government. A candidate for the degree must comply with University, College, and Program requirements. The M.S. degree in Resource Economics and Management can be obtained under either course work or thesis options.

Admissions

A regular graduate student is a degree-seeking student who meets all the criteria for regular admission to a program of their choice and be under no requirements to make up deficiencies.

For regular admission, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree, and identify a potential faculty advisor.
- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or the New Medical College Admissions Test (New MCAT).

* International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

Candidates for the M.S. in Resource and Economics Management degree may be admitted on a regular or provisional basis. Prerequisites for admission include the following:

- Twelve or more semester credits in economics, agricultural and resource economics, statistics, or appropriate social science courses (should include a course in intermediate microeconomics)
- Three or more semester hours of credit in calculus

Students lacking these prerequisites have to complete coursework to acquire them.

A candidate for the M.S. degree in Resource Economics and Management must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.S. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

THESIS OPTION

A minimum of thirty credit hours of approved coursework can include not more than six hours of credit for the thesis. Proficiency in economics plus agricultural and resource economics is expected. Approved courses in closely related areas may be included. The student's graduate committee must approve the student's course of study and thesis topic.

Required Courses		
ARE 601	Applied Microeconomics	4
Quantitative Methods Requirements		
ARE 621	Quantitative Methods in Resource Economics	3
ARE 624	Econometric Methods in Resource Economics	3
Select one of the following:		3
ARE 643	Project Analysis and Evaluation	
ECON 721	Mathematical Economics	
RESM 540	Geospatial Modeling	
RESM 575	Spatial Analysis for Resource Management	
Seminar		1
ARE 696	Graduate Seminar	
Thesis Research		1

ARE 697	Research	
Advisor Approved Electives*		**15**
*Required number of electives may vary based on Seminar or Thesis. Please see your advisor for additional courses that may apply to this requirement		
AGEE 642	Agriculture Education Research Methods and Design	
ARE 440	Futures Markets and Commodity Prices	
ARE 445	Energy Economics	
ARE 540	Rural and Regional Development	
ARE 600	Research Methods	
ARE 632	Natural Resource and Environmental Economics	
ARE 633	Natural Resource Policy Analysis	
FOR 438	Human Dimensions Natural Resource Management	
Written and Oral Exam		
Total Hours		30

NON-THESIS/COURSEWORK OPTION

A minimum of thirty-six credit hours of approved coursework to provide proficiency in economics, resource, and agricultural and resource economics. Courses in closely related areas may be included if approved by the student's graduate committee. The student must satisfactorily complete a written and oral examination administered by the student's graduate committee.

Required Courses		
ARE 601	Applied Microeconomics	4
Quantitative Methods Requirements		
ARE 621	Quantitative Methods in Resource Economics	3
ARE 624	Econometric Methods in Resource Economics	3
Select one of the following:		3
ARE 643	Project Analysis and Evaluation	
ECON 721	Mathematical Economics	
RESM 540	Geospatial Modeling	
RESM 575	Spatial Analysis for Resource Management	
Seminar		**1**
ARE 696	Graduate Seminar	
Advisor Approved Electives*		**22**
*Required number of electives may vary based on Seminar or Thesis. Please see your advisor for additional courses that may apply to this requirement		
AGEE 642	Agriculture Education Research Methods and Design	
ARE 440	Futures Markets and Commodity Prices	
ARE 445	Energy Economics	
ARE 540	Rural and Regional Development	
ARE 600	Research Methods	
ARE 632	Natural Resource and Environmental Economics	
ARE 633	Natural Resource Policy Analysis	
FOR 438	Human Dimensions Natural Resource Management	
Written and Oral Exam		
Total Hours		36

*   Students must complete a minimum of 30 total hours, of which at least 24 hours must be coursework other than research, thesis, project, internship, etc. credits.

Graduate courses offered toward the degree must be approved by the student's graduate committee. Thesis and non-thesis options are available for the master's degree. Students should select one option by the time twelve hours of coursework are completed (usually by the end of the first semester in the program) and after consulting with their graduate advisor or committee. Candidates with graduate research assistantships must select the thesis option.

Major Learning Outcomes

RESOURCE ECONOMICS AND MANAGEMENT

The primary objective of this major is to prepare students for further graduate study or a variety of careers in business and government. Learning goals are that each graduate:

- Can apply microeconomic theories to analyze resource economics and management issues.
- Demonstrates the use of quantitative tools in the analysis of applied issues in resource economics and management.
- Is proficient in oral and written communication.

Resource Management, Ph.D.

Levan Elbakidze, Graduate Program Coordinator
e-mail: Levan.Elbakidze@mail.wvu.edu

Degree Offered

- Doctor of Philosophy in Resource Management

Nature of the Program

The Ph.D. degree is the most advanced degree offered and prepares candidates for work at the highest level of the profession as a faculty member, staff in a research organization or governmental and non-governmental agencies, or as a consultant.

Admissions

For regular admission, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to recieving a graduate degree, and identify a potential faculty advisor.

*International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

**A standardized graduate examination score (GRE or MCAT) is not required for admission to this degree, however, it is strongly encouraged.

A candidate for the Ph.D. degree in Resource Management must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate catalog.

Program Requirements

All Ph.D. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.

Course Requirements as determined by the Plan of Study
Research
Candidacy Exam
Dissertation
Dissertation Defense

Major Learning Outcomes

RESOURCE MANAGEMENT

Learning goals for this degree program include:

- Demonstrate the capacity to produce research that can be accepted for publication in leading inter-disciplinary journals that combine ecological or physical sciences with social science disciplines.
- Be proficient in oral and written communication skills in order to have research accepted by and presented at professional conferences.

Wildlife and Fisheries Resources, M.S.

Degree Offered

- Master of Science

Nature of the Program

The Wildlife and Fisheries Resources Program at WVU is dedicated to developing the next generation of young fisheries and wildlife professionals. This program offers two levels of advanced degree with a master of science in wildlife and fisheries resources and a Ph.D. in forest resources available. At the M.S. or Ph.D. level, students work closely with their faculty advisor and mentor to develop a unique research program that will prepare them for a career in this field. Students typically focus on either wildlife or fisheries for these advanced degrees. Coursework for these degrees varies depending upon the career goals of the student, past course history, and educational needs for the intended research project. Since 2011, we have required that all graduates complete necessary coursework to obtain professional certification as a biologist by The Wildlife Society or The American Fisheries Society by the time of graduation. Typically all students take two semesters of statistics (STAT 511 and 512) and an advanced GIS class. Students interested in graduate study in our program can apply online through the graduate admissions office but are encouraged to contact faculty members who may share their research interests.

Admissions

A regular graduate student is a degree-seeking student who meets all the criteria for regular admission to a program of their choice and be under no requirements to make up deficiencies.

For regular admission, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of 500 words or more indicating the applicant's goals and objectives relative to receiving a graduate degree, and identify a potential faculty advisor.
- Have an adequate academic aptitude at the graduate level as measured by the Graduate Record Examination (GRE) or the New Medical College Admissions Test (New MCAT).

* International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

Students seeking admission for the M.S. in Wildlife and Fisheries Resources should have completed an undergraduate curriculum emphasizing wildlife and/or fisheries sciences. A student whose undergraduate degree is in a field other than this discipline will ordinarily be required to take supplemental undergraduate courses as part of their degree work.

Students selecting this graduate program may emphasize in either wildlife or fisheries resources in their studies.

A candidate for the M.S. degree in Wildlife and Fisheries Resources must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

Program Requirements

All M.S. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements.

WMAN 693	Special Topics (Seminar)	1
Wildlife Seminar		**2**
WMAN 770	Wildlife Seminar	
FOR 797	Research	6
Additional Coursework		**21**
500, 600, or 700 level in BIOL, ENVP, ENTO, FMAN, FOR, GEN, GEOG, GEOL, RESM, STAT, WMAN		
Thesis Proposal		
Oral Examination		
Thesis		

Thesis Defense	
Total Hours	30

*   Students must complete a minimum of 30 total hours, of which at least 24 hours must be coursework other than research, thesis, project, internship, etc. credits.

Major Learning Outcomes

WILDLIFE AND FISHERIES RESOURCES

Upon the successful completion of a Wildlife and Fisheries Resources degree students will be able to:

- Demonstrate mastery of historic and contemporary wildlife or fisheries topics.
- Critique and assess peer-reviewed literature and apply research findings to the conservation and management of wildlife and fisheries resources.
- Conduct and defend original research focused on wildlife or fisheries that includes project design, collecting, analyzing and interpreting data, publishing results in scientific journals, and presenting results to scientific audiences.

College Wide Degrees

Degrees Offered

- Master of Agriculture, Natural Resources and Design
- Master of Science

Nature of the Program

As a graduate student in the WVU Davis College, you'll have the opportunity to conduct research on topics important to you (and our world) and work alongside internationally recognized faculty. Be part of a supportive community. Find or fine tune your passion. Further prepare for your future career.

Our Master of Agriculture, Natural Resources, & Design is an interdisciplinary degree that offers advanced study in all areas of agriculture, natural resources, and design. The M.A. in Energy Environments, a new program in the Davis College, will prepare to go further faster with advanced coursework, practical work and research experience that will equip you for success in professions that are rapidly developing at the intersections of energy and environment.

Agriculture, Natural Resources and Design, M.Agr.

Degree Offered

- Master of Agriculture, Natural Resources and Design

Nature of the Program

The Master of Agriculture, Natural Resources and Design is an interdisciplinary degree that offers advanced study in all areas of agriculture, natural resources, and design. This program provides an opportunity for students to expand on the knowledge and skills they acquired during their undergraduate studies.

Coursework options are varied with a program that enables students to tailor their education to fit individual career goals. This is a non-thesis program, which requires 36 hours of graduate level coursework. A minimum of 18 hours must be selected from graduate courses within two divisions of the Davis College, with no fewer than six hours in either division. A three-hour problem report approved by the graduate committee members is required.

The Master of Agriculture, Natural Resources and Design may benefit individuals who want to expand their skills and increase their competitiveness in the job market, wish to improve their chances for admission to a professional school, want to make a career change, or want to start a business.

Career Opportunities

Positions for employment are available in numerous settings including private industry, education, and federal and state government agencies. Graduates may find employment as educators, researchers, agriculturalists, extension agents, conservationists, or may start their own business. Many graduates also enter professional schools and doctoral programs.

Admissions

REGULAR

A regular graduate student is a degree-seeking student who meets all the criteria for regular admission to a program of his/her choice and be under no requirements to make up deficiencies. To meet minimum requirements for regular admission to a Davis College graduate degree program, a student must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or average a 3.0 or higher in the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of approximately 500 words indicating the applicant's goals and objectives relative to receiving a graduate degree.

*International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

PROVISIONAL

A student may be admitted as a provisional graduate student when the student possesses a baccalaureate degree but does not meet the criteria for regular admission. The student must have incomplete credentials, deficiencies to make up, or may have an undergraduate scholastic record that does not meet grade point requirements for regular admission. After successful fulfillment of the deficiencies, the student will be granted regular graduate student status.

A candidate for the M.S. degree of Agriculture, Natural Resources and Design must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate Catalog.

Degree Requirements

Must maintain an overall grade-point average of 2.75 in all courses completed as a graduate student.	
A minimum GPA of 3.0 must be attained in all graduate courses approved by a graduate advisory committee for degree completion.	
Course Requirements as determined by the Plan of Study *	30
Total Hours	30

Learning Outcomes

Students earning a Masters of Agriculture, Natural Resources & Design degree will be able to:

- Communicate professional concepts orally and in writing.
- Explain the holistic nature of opportunities and problems pertaining to agriculture, natural resources, or design.
- Explain the role of inquiry and research in addressing opportunities and problems pertaining to agriculture, natural resources, or design.
- Construct a theoretical framework that addresses a particular opportunity or problem in agriculture, natural resources, or design and generalize that framework to aid in understanding similar opportunities or problems.
- Apply research skills to analyze agriculture, natural resources, or design opportunities or problems.

Energy Environments, M.S.

Degree Offered

- Master of Science

Nature of the Program

The Davis College of Agriculture, Natural Resources & Design at West Virginia University will be launching a Master's of Science in Energy Environments to complement two popular BS degrees in the College (Energy Land Management and Energy & Environmental Resource Management). The mission of the MS in Energy – Environments is to prepare students with the advanced coursework and practical work and research experience needed to succeed in professions that are rapidly developing at the intersection of energy and the environment. The program will meet this mission by offering students a mix of foundational coursework in science, ethics, project management, and natural resource economics with specialized coursework tailored to the students' interests, including tracks in water resources management, energy and environmental policy, and GIS and spatial analysis.

Admissions

Students admitted to the Davis College and the MS in Energy Environments degree program must:

- Possess a baccalaureate degree from a college or university and have at least a grade point average of 2.75 on a 4.0 scale (or an average of 3.0 or higher for the last sixty credit hours).
- Provide three letters of reference from persons acquainted with the applicant's professional work, experience, or academic background.
- Submit a written statement of approximately 500 words indicating the applicant's goals and objectives relative to receiving a graduate degree.

*International students have the additional requirement to submit a minimum score of 550 on the paper TOEFL examination or 213 on the electronic TOEFL examination if their native language is not English.

Degree Requirements

Minimum GPA of 3.0 is required in major coursework.

Required Coursework		
DSM 650	The Creative Economies	3
ENLM 500	Advanced Negotiations and Ethics for Energy Land Managers	3
ENVP 525	Principles of Water Resources	3
RESM 560	Advanced Energy Project and Program Management	3
Capstone Experience *		
Select one of the following:		3
ANRD 491	Professional Field Experience	
ANRD 595	Independent Study	
ANRD 695	Independent Study	
Elective Requirements (in consultation with Academic Advisory Committee) **		**15**
Total Hours		30

*	Students that register for three credit hours of professional internship must complete at least 180 hours of paid or voluntary work in a supervised work setting related to their field of study. Students must also submit a synthesis paper to the graduate committee and defend their work in a public forum to complete the capstone requirement.
	Students that register for three credit hours of research or independent study must complete a research project. Students must also submit a problem paper to the graduate committee and defend their work in a public forum to complete the capstone requirement. The research experience may lead to completion of a thesis, but a formal thesis is not required for this degree. Completion of a formal thesis would be expected to prolong the time it takes to complete the degree.
**	Students will select additional restricted electives across a range of topics in consultation with the student's Graduate Advisory Committee. Research, Seminar, Professional Field Experience, and Independent Study credits are limited to 12 total credits combined, and only three credits of each may be included on the graduate plan of study.

Learning Outcomes

Upon graduation, graduates of the MS in Energy Environments will:

- Possess in-depth, advanced knowledge in their discipline.
- Possess broad knowledge of related STEM disciplines.
- Understand and be able to articulate the relationships between energy extraction and use, environmental quality, and public policy within the broad context of sustainable development.
- Be able to develop technical solutions to energy and environmental problems that include the impact of law and public policy.
- Assess the economic realities of technical solutions, addressing such economic factors as market externalities, cost-benefit analysis, and the micro- and macroeconomic implications of the solutions produced.
- Exhibit professional communication skills and the ability to communicate effectively to technical audiences, the general public, the media, and policy makers.
- Adhere to codes of responsible conduct of research and behavior.

Arts and Sciences- Eberly College of

The Eberly College of Arts and Sciences, West Virginia University's largest college, has approximately 460 faculty in academic departments and program areas in the following: literature and the humanities, social and behavioral sciences, and mathematics and natural sciences. These departments occupy twelve buildings on the Downtown campus and include programs that lead to master's degrees in twenty fields and doctoral degrees in twelve fields. Many of the faculty have earned distinguished national and international reputations and have been honored for excellence in teaching, research, and service. Their awards not only acknowledge extreme dedication but also accentuate the relationship between the faculty and students. Graduate students often collaborate with faculty on specialized research projects which lead to publications in national and international journals.

Degrees Offered

- Master of Science, Doctor of Philosophy in Biology
- Master of Science, Doctor of Philosophy in Chemistry
- Master of Arts, Doctor of Philosophy in Communication Studies
- Master of Arts in English, Professional Writing and Editing; Master of Fine Arts; Doctor of Philosophy in English
- Master of Arts in Linguistics, Spanish, Teaching English to Speakers of Other Languages
- Master of Science, Doctor of Philosophy in Forensic Science
- Master of Arts, Doctor of Philosophy in Geography
- Master of Science, Doctor of Philosophy in Geology
- Master of Arts in History, Public History; Doctor of Philosophy in History
- Master of Legal Studies
- Master of Science, Doctor of Philosophy in Mathematics
- Master of Science, Doctor of Philosophy in Physics
- Master of Arts, Doctor of Philosophy in Political Science
- Master of Science in Psychology; Doctor of Philosophy in Behavior Analysis, Behavioral Neuroscience, Clinical Psychology, Clinical Child Psychology, Developmental Psychology
- Master of Public Administration
- Master of Social Work
- Master of Arts, Doctor of Philosophy in Sociology

The Eberly College of Arts and Sciences offers research or teaching concentrations as follows:

- Biology—ecology and evolutionary biology, forensic biology, genetics and genome biology, and neurobiology and endocrinology
- Chemistry—analytical, biological, inorganic, organic, and physical
- Communication studies—instructional, interpersonal, and organizational
- English—literature
- Geography—human geography, environmental geography, geographic information science
- Geology—energy geology, geophysics, hydrogeology, environmental geology
- History—United States (Appalachia), Europe, Africa, science, and technology
- Mathematics—selected areas of pure, applied, discrete mathematics, and research and undergraduate mathematics education
- Physics—condensed matter, applied physics, plasma physics, astrophysics, electro-optics, elementary particle physics, and radio astronomy
- Political science—public policy analysis (domestic and international)
- Psychology—behavior analysis, behavioral neuroscience, clinical psychology, clinical child psychology, and developmental psychology
- Sociology—crime, community, and culture

EBERLY COLLEGE GRADUATE NON-DEGREE SEEKING STUDENTS:

Applicants who wish to pursue graduate level work in Eberly College unrelated to pursuing a degree may apply to be a graduate non-degree student (http://catalog.wvu.edu/graduate/graduateeducationatwestvirginiauniversity/#applytext). In addition to meeting the university requirements (http://catalog.wvu.edu/graduate/graduateeducationatwestvirginiauniversity/#Non-Degree_Graduate_Students) for a graduate non-degree student, applicants should submit brief a statement indicating why they would like to enroll in graduate coursework in the Eberly College. Applicants should also demonstrate that they have approval to enroll in specific courses.

ADMINISTRATION

DEAN

- R. Gregory Dunaway - Ph.D. (University of Cincinnati)

ASSOCIATE DEANS

- Valérie Lastinger - Ph.D. (University of Georgia)
  Associate Dean for Academic Affairs
- Asuntina S. Levelle - J.D. (West Virginia University)
  Associate Dean for Financial Planning and Management
- Duncan Lorimer - Ph.D. (University of Manchester)
  Associate Dean for Research
- Michael Perone - Ph.D. (University of Wisconsin)
  Associate Dean for Faculty

DIRECTOR

- Jessica Queener - Ph.D. (West Virginia University)
  Director of Graduate Studies

Degree Designation Learning Outcomes

MASTER OF ARTS (M.A.)

The Eberly College of Arts and Sciences offers numerous M.A. programs.

Students earning an M.A. degree will be able to:

- Describe the student's discipline, field, sub-field, area, and subject.
- Proficiently communicate area and subject matter specific concepts orally and in writing.
- Explain the role of inquiry, research, and/or creativity in addressing questions, issues, problems, and/or opportunities pertaining to the student's subject area.
- Construct a theoretical and/or creative framework that addresses a particular question, issue, problem, and/or opportunity pertaining to the students' subject area and generalize that framework to aid in understanding similar questions, issues, problems, and/or opportunities.
- Apply research skills and/or creative abilities to analyze and/or explore the student's subject area.
- Produce and defend original research and/or creative work in the student's area of study.
- Discuss future research and/or creative work that might follow from the student's project.
- Articulate the student's contribution to his or her research and/or creative community.

MASTER OF LEGAL STUDIES (M.L.S.)

The M.L.S. program is designed for professionals practicing in areas such as human relations, criminal and juvenile justice, court administration (including probation officers), healthcare administration, social work, regulatory agencies, county and municipal government, law enforcement, national security, journalism, business – and for other professionals who work with, although not necessarily in, the legal system.

Students earning an M.L.S. degree will be able to:

- Demonstrate an understanding of the United States legal system.
- Demonstrate an understanding of legal research practices.
- Demonstrate an understanding of the relationships between law and society.
- Demonstrate an understanding of the administrative legal process.
- Demonstrate an understanding of the legislative process at the local, state, and national levels.
- Demonstrate an understanding of alternative dispute resolution processes
- Demonstrate basic familiarity with family law, employment law, commerce law, criminal law and procedure, healthcare law, constitutional law, media and the law, and/or administrative ethics (depending on the student's specific coursework).
- Produce a major research paper as part of the student's capstone course.
- Apply program knowledge and skills to perform the student's job more effectively, advance in the student's current career field, and/or venture into other professional endeavors.
- Provide private and public organizations the benefit of enhanced knowledge about the United States legal system.

MASTER OF SCIENCE (M.S.)

The Eberly College of Arts and Sciences offers numerous M.S. programs.

Students earning an M.S. degree will be able to:

- Describe the student's discipline, field, sub-field, area, and subject.
- Proficiently communicate area and subject matter specific concepts orally and in writing.
- Specify a focused research question based on description, explanation, interpretation, and/or prediction.
- Explain why the student's research question, area, and/or topic is important and worthy of investigation.
- Synthesize a literature review discussing what is already known from other scholars about the student's research question, area, or topic.
- Describe the gaps in existing knowledge and discuss the specific gap(s) the student's research addresses.
- State the student's theory or perspective and the hypothesis(es) or interpretation(s) that follow(s) from that theory or perspective.
- Specify the student's research design including how hypotheses will be tested and how the usefulness of the theory or perspective will be assessed.
- Describe the units of analysis and data used – including all sources and data collection/compilation procedures.
- Describe the methodology(ies) used – and the appropriateness of those methods.
- Discuss the student's findings – statistically (if appropriate for the methodology employed) and substantively (for all methodologies employed).
- Summarize primary conclusions and the student's contribution to his or her research area, program, and community.

Discuss future research that might follow from the student's project and findings.

MASTER OF SOCIAL WORK (M.S.W.)

Students earning an M.S.W. degree will be able to:

- Identify as a professional social worker
- Apply ethical principals
- Apply critical thinking
- Engage diversity in practice
- Advance human rights and social and economic justice
- Engage in research-informed practiced and practice-informed research
- Apply human behavior knowledge
- Engage in policy practice to advance well-being and deliver services
- Respond to practice contexts
- Demonstrate competency in practice engagement
- Demonstrate competency in practice assessment
- Demonstrate competency in practice intervention
- Demonstrate competency in practice evaluation

DOCTOR OF PHILOSOPHY (PH.D.)

The Eberly College of Arts and Sciences offers numerous doctoral programs.

Students earning a doctoral degree will be able to:

- Achieve all learning goals listed above under the M.A. or M.S. degree (depending on the student's research or creative area)
- Effectively communicate, orally and in writing, the state of knowledge in the student's discipline, field, sub-field, and specific research or creative area.
- Conduct independent and original research or creative work of publishable quality
- Teach, at any undergraduate level or beyond, core courses in the student's discipline and field and specialized courses in the student's sub-field and research or creative area.
- Write research manuscripts or creative work leading to refereed or juried publications.

Accreditation

Forensic & Investigative Science within the Eberly College of Arts and Sciences has specialized accreditation through the Forensic Science Education Programs Accreditation Commission of the American Academy of Forensic Science.

Psychology within the Eberly College of Arts and Sciences has specialized accreditation through the American Psychological Association and Association for Behavior Analysis.

Public Administration within the Eberly College of Arts and Sciences has specialized accreditation through the Commission on Peer Review & Accreditation, National Association of Schools of Public Affairs and Administration (NASPAA).

Social Work within the Eberly College of Arts and Sciences has specialized accreditation through the Council on Social Work Education.

Certificate Programs

- Applied Statistics (p. 41)
- Community Development Policy and Practice (p. 47)
  - Candidates must have a bachelor's degree from an accredited institution and a minimum grade point average of 2.75 on a 4.0 scale. The deadline to apply is June 15 for Fall admission only. To apply for the CDPP Certificate, you will need to submit the following material:
    - *Ap*plication for admission and transcripts. When applying, select Certificate Code CG42. **Apply here**
    - ***Statement of Purpose.*** Indicate career interests and experience in community development.
- Cultural Resource Management (p. 50)
- Healthcare Administration (p. 55)
  - Candidates must meet the WVU general admission requirements for a bachelor's degree from an accredited college. Applications will be reviewed on a rolling basis. To apply for the Healthcare Administration Certificate, you will need to submit the following material:
    - *Ap*plication for admission and transcripts. When applying, select Certificate Code CG01. **Apply here**
    - ***Resume****.*
- Leadership (p. 59)
- Linguistics (p. 59)
- Spanish (p. 66)
- Teaching English to Speakers of Other Languages (p. 67)
- Women's and Gender Studies (p. 71)

Biology, M.S., Ph.D.

Degrees Offered

- Master of Science
- Doctor of Philosophy

Nature of the Program

The Department of Biology's graduate program is dedicated to scholarship in academics and research. The objectives of the program are to empower students through the following:

1. Recognize important biological problems
2. Design, execute, and analyze experiments aimed at solving important problems
3. Communicate their findings in oral and written form
4. Foster an awareness of the social and political issues of the day related to biology
5. Create a desire to continue independent study after graduation

The Department of Biology offers graduate courses and research that lead to M.S. and Ph.D. degrees in biology. The focal areas of research in the graduate program are: plant sciences, biochemistry and molecular biology, bioinformatics, genetics, genomics and evolutionary biology, cell and developmental biology, ecology, forensic biology, neuroanatomy and neurophysiology and behavioral neurobiology.

FACULTY

CHAIRPERSON

- Richard B. Thomas - Ph.D. (Clemson University)

ASSOCIATE CHAIR

- Jennifer S. Hawkins - Ph.D. (Iowa State University)
  Associate Chair for Graduate Studies
- John Navaratnam - Ph.D. (West Virginia University)
  Associate Chair for Undergraduate Advising, Recruitment, and Retention
- Stephanie Young - Ph.D. (West Virginia University)
  Associate Chair for Undergraduate Studies

PROFESSORS

- Ashok Bidwai - Ph.D. (Utah State University)
  Biochemical and Molecular Genetic Analysis of Protein Kinases
- Jonathan R. Cumming - Ph.D. (Cornell University)
  Plant Physiology, Rhizosphere Ecology
- Kevin C. Daly - Ph.D. (University of Arizona)
  Sensory motor integration and behavior
- Stephen DiFazio - Ph.D. (Oregon State University)
  Plant Genomics, Ecological Genetics
- William Peterjohn - Ph.D. (Duke University)
  Biogeochemistry, Ecosystem Ecology
- Rita V.M. Rio - Ph.D. (Yale University)
  Symbioses
- Richard B. Thomas - Ph.D. (Clemson University)
  Physiological Plant Ecology, Global Environmental Change

ASSOCIATE PROFESSOR

- Clifton P. Bishop - Ph.D. (University of Virginia)
  Developmental and Molecular Biology of Drosophila
- Andrew M. Dacks - Ph.D. (University of Arizona)
  Neural Basis of Behavior States, Nervous System Evolution
- Sarah M. Farris - Ph.D. (University of Illinois)
  Nervous System Evolution and Development, Entomology
- Jennifer Gallagher - Ph.D. (Yale University)
  yeast genetics, stress response, systems biology
- Jennifer S. Hawkins - Ph.D. (Iowa State University)
  Plant comparative genomics, Molecular evolution.

ASSISTANT PROFESSOR

- Craig Barrett - PhD The Ohio State University
  Plant evolutionary Biology
- Sadie Bergeron - Ph.D. (University of Massachusetts - Amherst)
  Developmental Neuroscience
- Edward Brzostek - Ph.D. (Boston University)
  Forest ecology, ecosystem modeling
- Timothy Driscoll - Ph.D. (Virginia Tech)
  Bioinformatics, microbial metagenomics
- Eric Horstick - Ph.D. (University of Michigan)
  developmental genetics, neuroscience, behavioral genetics
- Gary Marsat - Ph.D. (McGill University)
  Sensory Processing of Communication Signals; Systems Neuroscience and Computational Neuroscience

CLINICAL ASSOCIATE PROFESSOR

- Donna Ford-Werntz - Ph.D. (Washington University, St. Louis)
  Plant Systematics

CLINICAL ASSISTANT PROFESSOR

- Zachariah Fowler - Ph.D (West Virginia University)
  Forest ecology

Admissions

MASTER OF SCIENCE

Applicants for the MS in Biology should have earned a bachelor's degree with a cumulative GPA of 3.0 or higher, and should possess an adequate background in science and mathematics. GRE scores are not required for the application or admission to the WVU Biology graduate programs, but will be considered if they are provided. Applicants should submit a thoughtful essay that demonstrates their strong interest in scientific research, and addresses the match between their research interests and those of the faculty. Application materials should include three supportive letters of

recommendation from people (typically faculty) who are familiar with the applicant's abilities. International students should have a TOEFL score greater than 250 for the computer-based exam, greater than 600-603 on the paper-based test or greater than 100 for the internet-based test.

DOCTOR OF PHILOSOPHY

The program for the degree of doctor of philosophy reflects a flexible, research-oriented approach geared to develop the interests, capabilities, and potentials of mature students. Applicants must have met all the entrance requirements listed above for the master of science program. GRE scores are not required for the application or admission to the WVU Biology graduate programs, but will be considered if they are provided.

Acceptance into the Ph.D. or the M.S. program is by vote of the Graduate Committee of the Department of Biology. This committee ensures that all entrance requirements are met or that provisions have been made to remedy the deficiencies, and that facilities and personnel are adequate to support the program to a successful conclusion. If after reviewing all the application materials there is no faculty member willing to serve as the applicant's academic advisor, then the potential student will not be accepted into the program.

Certain application requirements may be waived based on a preliminary review of an application by the program.

Master of Science

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum of 33 graduate credit hours in Biology at the 400 level or above. Only 12 credit of coursework at the 400 level may be used.
- **Grade Point Average:** Students must earn a minimum overall GPA of a 2.75, and a minimum GPA of 3.00 in coursework applied to their graduate program.
- **Program of Study:** The Program of Study is a written document consisting of two parts: 1) an outline of past, present, and future course work for a student's graduate career; and 2) a written plan of a student's proposed research project. A written Program of Study must be approved by the student's Masters Advisory Committee**.**
- **Graduation Requirement:** Students must write and defend a Master's Thesis. A final oral defense is administered after an original, written thesis has been submitted to and approved by the Advisory Committee. For complete guidelines, please see the graduate student handbook at http://biology.wvu.edu/students/graduate-students/forms-and-policies (http://biology.wvu.edu/students/graduate-students/forms-and-policies/).
- **Progress toward completion:** Year 1: Formation of an Advisory Committee and complete the Program of Study. Year 2: submit written Thesis and perform an oral defense. At the beginning of each academic year, students are evaluated by the department to insure timely progress in their degree programs.
- **Additional Requirements:** Students must have a program of study formulated and approved by an Advisory Committee at the end of the second semester of entering the M.S. program. The program of study outlines the coursework to be taken in support of the proposed research. The advisory committee ensures that all of the Department of Biology, Eberly College of Arts and Sciences, and University requirements are met during the course of the student's program of study.

Curriculum Requirements

Minimum GPA of 3.0 is required.

Biology Coursework at the 400 level or above. [*]		18
Research		6
BIOL 797	Research (Repeated)	
Graduate Professional Development Seminars		6
BIOL 796	Graduate Seminar (Repeated each Fall)	
BMS 700	Scientific Integrity	
Professional development courses (2 cr. min) selected with the graduate adviser.		
Departmental Seminars		3
BIOL 794	Seminar	
Total Hours		33

[*]   Excludes BIOL 486, BIOL 490, BIOL 794, BIOL 796, BIOL 797

Doctor of Philosophy

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum of 37 graduate credit hours in Biology and/or related areas at the 400 level or above.
- **Grade Point Average:** Students must earn a minimum cumulative GPA of 2.75 , and a GPA of 3.00 in all coursework applied to their graduate program.
- **Program of Study:** The Program of Study is a written document consisting of two parts: 1) an outline of past, present, and future course work for a student's graduate career; and 2) a written plan of a student's proposed research project. A written Program of Study must be approved by a Ph.D. student's Advisory Committee**.**
- **Comprehensive Examination:** The Comprehensive or Preliminary Exam has two parts, the written and an oral. The Written Examination determines whether students understand various biological processes and abstractions covered in the readings provided by the student's committee members, and is able to solve problems based on these concepts. The Oral Qualifying Examination tests students' understanding of classic papers and fundamental concepts in their area of research emphasis. Mastery of this basic knowledge indicates a readiness to proceed with original research.
- **Proposal Exam:** The Proposal Exam has a written and oral component and is used to determine whether students can formulate a coherent, convincing research plan.
- **Dissertation:** The dissertation must demonstrate an ability to carry out independent research. Chapters of the dissertation should meet the standards required for publications in a reputable biological journal. Ph.D. Candidates must present a formal Departmental seminar on their research topic as part of their graduation requirements.
- **Progress toward completion:** At the beginning of each academic year, students are evaluated by the department to insure timely progress in their degree programs. Students must adhere to the following timeline:
  - Year 1: Form a committee and present the program of study.
  - Year 2: Complete the Comprehensive and Proposal exams.
  - Year 3: Conduct dissertation research.
  - Year 4: Submit Written Dissertation and present Oral Dissertation Defense.
- **Additional Requirements:**
  - A minimum of 2 semesters of Teaching Practicum
  - All Ph.D. students must register for, and attend, the graduate seminar (BIOL 796) every Fall semester while they are in residence. A maximum of 3 hours of BIOL 796 can be counted towards the 37-hour coursework requirement.
  - All Ph.D. students are required to register for and attend BMS 700 Scientific Integrity (1 credit hour) or like course and a minimum of 2 additional credit hours of professional development
  - Graduate students are expected to attend Departmental Seminars (BIOL 794 Seminar) in order to become acquainted with research being conducted within and outside the department. All Ph.D. students are required to register for and attend the Departmental Seminars given during at least five (5) semesters of their degree program.

For complete guidelines, please see the graduate student handbook at https://biology.wvu.edu/students/graduate-students/forms-and-policies (https://biology.wvu.edu/students/graduate-students/forms-and-policies/).

Curriculum Requirements

Minimum GPA of 3.0 is required.

Biology Coursework at the 400 level or above [*]		18
Research		6
BIOL 797	Research (Repeated)	
Graduate Professional Development Seminars		6
BIOL 796	Graduate Seminar (Repeated each Fall)	
BMS 700	Scientific Integrity	
Professional development courses (2 cr. min) selected with the graduate advisor		
Departmental Seminars		5
BIOL 794	Seminar	
Teaching Practicum		2
BIOL 790	Teaching Practicum	
Total Hours		37

[*]   Excludes BIOL 481, BIOL 486, BIOL 490, BIOL 794, BIOL 796, BIOL 797

Degree Progress

MASTER'S BENCHMARKS

- **Progress toward completion:** Year 1: Formation of an Advisory Committee and complete the Program of Study. Year 2: submit written Thesis and perform an oral defense. At the beginning of each academic year, students are evaluated by the department to insure timely progress in their degree programs.

- **Additional Requirements:** Students must have a program of study formulated and approved by an Advisory Committee at the end of the second semester of entering the M.S. program. The program of study outlines the coursework to be taken in support of the proposed research. The advisory committee ensures that all of the Department of Biology, Eberly College of Arts and Sciences, and University requirements are met during the course of the student's program of study.

DOCTORAL BENCHMARKS

 At the beginning of each academic year, students are evaluated by the department to insure timely progress in their degree programs. Students must adhere to the following timeline:

- Year 1: Form a committee and present the program of study.
- Year 2: Complete the Comprehensive and Proposal exams.
- Year 3: Conduct dissertation research.
- Year 4: Submit Written Dissertation and present Oral Dissertation Defense.

Major Learning Outcomes

BIOLOGY

The graduate programs in the Department of Biology provide rigorous training in several fields of biology. The central mission of our graduate program is to train the next generation of Biologists for careers in the field, laboratory and several other professional settings that rely on deep expertise in the biological sciences.

Students earning a M.S. in Biology will be able to:

- Explain general biological principles as well as those specific to their research sub-discipline
- Demonstrate familiarity with the literature published within their field
- Independently perform experiments and provide quality data, analysis and interpretation, critical to progress in their research area
- Effectively communicate their research in oral and written formats, including the ability to co-author manuscripts suitable for publication in peer reviewed scientific journals
- Learn and apply the role of ethics in personal and professional behavior
- Learn and apply best laboratory practices (i.e. proper laboratory safety procedures and experimental protocols)

Chemistry, M.S., Ph.D.

Degrees Offered

- Master of Science
- Doctor of Philosophy

Nature of the Program

The Department of Chemistry offers graduate studies leading to the degrees of master of science and doctor of philosophy with research concentration in the areas of analytical, inorganic, organic, and physical chemistry. The master of science and doctor of philosophy degrees require completion of a research project which represents the principal component of the graduate program. The M.S. program is limited in scope and involves advanced coursework and a study of a problem in chemical research culminating in the preparation and oral defense of a M.S. thesis.

The Ph.D. program has a much wider scope than the M.S. program. Ph.D. students are expected to take a broad range of advanced coursework, both within and outside of the major area of interest. The major emphasis of the Ph.D. program is on research. A typical research problem may take several years to complete and involves many advanced techniques and concepts at the frontiers of chemical knowledge. The Ph.D. program culminates in the preparation and defense of the Ph.D. dissertation.

The program for the degree of doctor of philosophy reflects a flexible, research-oriented approach geared to develop the interests, capability, and potential of students. A program of courses is recommended to suit individual needs based on background and ability. These courses are classified as basic graduate courses, which present the essentials of a given discipline on an advanced level, and specialized graduate courses, which take one to the frontiers in a specific area of research. The course offerings are designed to provide guidelines from which students can launch their independent

studies in preparation for candidacy examinations. Students are required to enroll in the departmental seminar program and attend special lectures and seminars offered by visiting scientists. Graduate students in the Ph.D. program are required to satisfactorily complete a minimum of three courses (three credits each) at the 500 to 700-level offered by the Department of Chemistry and distributed in at least two areas outside their major area of research. In addition, each major area in chemistry requires students in that area to enroll in basic graduate courses presenting the essentials of that discipline on an advanced level.

FACULTY

CHAIR

- Gregory Dudley - Ph.D. (Massachusetts Institute of Technology)
  Eberly Family Distinguished Professor, Chemical Synthesis, Organic Reaction Methodology, Medicinal Chemistry

ASSOCIATE CHAIR

- Justin Legeleiter - Ph.D. (Carnegie-Mellon University)
  Biophysical Chemistry, Scanning Probe, Microscopy

PROFESSORS

- Terry Gullion - Ph.D. (William and Mary)
  Physical Chemistry, Solid State NMR, Biological Materials, Polymers
- Lisa Holland - Ph.D. (University of North Carolina-Chapel Hill)
  Micro-separations, High Throughput Drug Screening
- Fred L. King - Ph.D. (University of Virginia)
  Analytical Chemistry, Mass Spectrometry, Trace Elements, Gas-phase Chemistry
- Michelle Richards-Babb - Ph.D. (Lehigh University)
  Chemical Education
- Kenneth Showalter - Ph.D. (University of Colorado)
  Bennett Distinguished Professor, Physical Chemistry, Chemical Kinetics, Multistability and Oscillating Systems
- Bjorn C. Soderberg - Ph.D. (Royal Institute of Technology, Sweden)
  Organic Synthesis Using Transition Metals
- Kung K. Wang - Ph.D. (Purdue University)
  Eberly Distinguished Professor of Chemistry, Organic Chemistry, Stereoselective Synthesis, Natural Products

ASSOCIATE PROFESSOR

- Fabien Goulay - Ph.D. (University of Rennes, France)
  Physical Chemistry, Laser Spectroscopy
- Jessica Hoover - Ph.D. (University of Washington)
  Organometallic Chemistry, Catalysis
- Justin Legleiter - Ph.D. (Carnegie Mellon University)
  Biophysical Chemistry, Scanning Probe Microscopy
- Stephen Valentine - Ph.D. (Indiana University)
  Mass Spectrometric Analysis of Biomolecules

ASSISTANT PROFESSOR

- Peng Li - Ph.D. (Texas Tech University)
  Bioanalytical Chemistry
- Blake Mertz - Ph.D. (Iowa State University)
  Computational Biophysics and Chemistry
- Carsten Milsmann - Ph.D. (Max-Planck-Institute for Bioinorganic Chemistry)
  Inorganic and Organometallic Chemistry
- Brian Popp - Ph.D. (University of Wisconsin-Madison)
  Organic and Organometallic Chemistry, Catalysis

Admissions

In addition to WVU's general admission requirements (http://catalog.wvu.edu/graduate/graduateeducationatwestvirginiauniversity/#classificationstext), applicants for graduate studies in chemistry must have a bachelor's degree with an overall GPA of 3.0 as a minimum requirement. Applicants must have a major or concentration in chemistry and an appropriate background in physics and mathematics. The Chemistry program admits students directly to

the doctoral degree. Admitted students may transition to the MS in Chemistry during their studies. Admission into the Chemistry program is competitive with decisions based on the following material:

- **Application for admission and transcripts**. **Apply here**
- **Recommendation Letters.** A minimum of one letter of recommendation from a professional or academic reference should be requested through the online Graduate Application portal. While one letter is required for application review, three (or more) recommendations are preferred
- **Current Curriculum Vitae or Resume.** Please list work experience, volunteer activities, internships, academic degrees and honors, and other accomplishments you feel the admissions committee should take into account in reviewing your application.
- **Statement of Purpose.** Provide a letter indicating your interest in a career in chemistry, what you hope to gain from the Chemistry PhD program, and why WVU offers you the best opportunity for achieving your future professional goals by highlighting specific faculty members and/or areas of research you wish to pursue. Information regarding faculty and their research interests can be found here (https://www.chemistry.wvu.edu/directory/). Please note in your statement of purpose if you are applying for a graduate record exam (GRE) waiver request in the application based on one of the exceptions noted below.
- **Graduate Exam Scores (view below for Exemptions).** Submission of standardized test scores from the general Graduate Record Exam is required. Submission of standardized test scores from the Chemistry Subject GRE is not required.
- *TOEFL Scores* **(International Students only).** The department requires a TOEFL score of 80 or an IELTS score of 6.5.

EXEMPTIONS TO THE GRADUATE RECORD EXAM REQUIREMENT

Applicants are advised to contact the Director of Graduate Studies at Chemistry.DGS@mail.wvu.edu if they wish to be considered for a GRE waiver prior to submitting their completed application. A request for GRE waiver does not guarantee waiver approval. The requirement that applicants submit general GRE scores will be waived under the following circumstances:

- **Admission based on Undergraduate GPA**: The applicant who earned, or will earn, a bachelor's degree from an accredited college or university and achieved a cumulative GPA of 3.2 or higher may request a waiver of the GRE requirement to apply to the program. Please provide a letter that describes your verbal/written and quantitative competencies. The letter should provide specific examples of your ability to write effectively, analyze complex situations, and complete quantitative analysis.
- **Evidence of Graduate Level Competence**: Applicants who already hold a graduate degree or have successfully completed at least 18 semester hours in another accredited graduate program, may request a waiver of the GRE requirement. Please provide a letter that describes your verbal/written and quantitative competencies. The letter should provide specific examples of your ability to write effectively, analyze complex situations, and complete quantitative analysis.
- **Significant Post-Baccalaureate Experience**: Applicants with at least 3 years of post-baccalaureate experience in a STEM field within government, academic or industrial sectors may request a waiver of the GRE requirement. Please provide a letter that describes your verbal/written and quantitative competencies. The letter should provide specific examples of your ability to write effectively, analyze complex situations, and complete quantitative analysis.

APPLICATION DEADLINE

The Chemistry PhD program accepts students for Fall admission only. The priority review deadline for all application materials for Fall admission is January 15th. Applicants will be notified of the committee's decision on or before February 1st. Applications for admission may be considered after the January 15th priority deadline on a space-available basis. Certain application requirements may be waived based on a preliminary review of an application by the program.

For further information, please contact:

Director of Graduate Studies

C. Eugene Bennett Department of Chemistry
P.O. Box 6045
Morgantown, WV 26506
Chemistry.DGS@mail.wvu.edu
(304) 293-0773
or chemistry.wvu.edu (http://publicadmin.wvu.edu/)

Master of Science

Degree Requirements

- **Completed Plan of Study indicating either Thesis or Coursework Degree Track**
- **Credit Hours:** Students are required to complete a minimum of 30 graduate credit hours in Chemistry at the 500, 600, and 700 level.
- **Grade Point Average:** Students must earn a minimum cumulative GPA of 2.75 and a 2.75 GPA in coursework applied to their graduate program.
- **Graduation Requirements**

- Thesis Track:
    - Complete a plan of study.
    - Complete at least 21 formal (graded) course credit-hours; up to 6 hours of research credit; up to 3 hours of seminar credit.
        - A final grade of B- or better is required to have the course count towards satisfying this requirement.
        - Up to 10 formal (graded) course credit-hours may come from outside of CHEM to be approved by the Graduate Advising Committee prior to the beginning of the semester in which they are offered.
    - Complete and defend a Master's thesis.

- **Coursework Track:**
    - Complete a plan of study.
    - Complete at least 24 formal (graded) course credit-hours; up to 3 hours of research credit; up to 3 hours of seminar credit.
        - A final grade of B- or better is required to have the course count towards satisfying this requirement.
        - Up to 10 formal (graded) course credit-hours may come from outside of CHEM to be approved by the Graduate Advising Committee prior to the beginning of the semester in which they are offered.

- **Benchmarks:**
    - **Guidance Examinations:** By the end of the second semester in residence, students are required to pass 3 out of 4 guidance exams. The guidance exams are in the areas of analytical, inorganic, organic, and physical chemistry. Students have 3 total attempts to pass each exam. The initial attempt occurs prior to the student's first semester, during orientation, in the form of written exams. Subsequent attempts occur by either re-taking the written exam or earning a grade of B or better in a designated graduate course.
    - **Master's Thesis:** Graduate students in the thesis track in chemistry are required to submit a research thesis. A research project is chosen in the area of the student's interest and in consultation with the faculty. The thesis defense shows the ability of the student to defend scientific conclusions based on their research project. A final oral examination is administered after completion and submission of the thesis.
    - **Seminars:** All students in the thesis track must register for both graduate seminar (CHEM 796) and research seminar (CHEM 789) every semester. Students in the coursework track may register in a graduate seminar and must register for research seminar every semester.

Curriculum Requirements

CORE REQUIREMENTS		21
Any CHEM courses at the 500, 600, or 700 level [*]		
DEGREE TRACK		**9**
Select one track:		
Thesis Track:		
CHEM 797	Research (repeated; up to 6 credit hours)	
CHEM 796	Graduate Seminar (repeated; up to 3 credit hours)	
CHEM 789	Research Seminar (repeated; up to 3 credit hours)	
Coursework Track:		
Select a combination of options below:		
Any CHEM course(s) at the 500, 600, 700 level (at least 3-9 credit hours) [*]		
CHEM 797	Research (repeated; up to 3 credit hours)	
CHEM 796	Graduate Seminar (repeated; up to 3 credit hours)	
CHEM 789	Research Seminar (repeated; up to 3 credit hours)	
Total Hours		30

[*]	A final grade of B- or better is required to have the course count towards satisfying this requirement. Courses from outside the Department of Chemistry may be applied toward this requirement with approval from the departmental Graduate Studies Committee.

Doctor of Philosophy

Students are required to enroll in the departmental seminar program and attend special lectures and seminars offered by visiting scientists. In addition, each major area in chemistry requires students in that area to enroll in basic graduate courses presenting the essentials of that discipline on an advanced level.

MAJOR REQUIREMENTS

Minimum GPA of 3.0 is required.		
Chemistry Coursework (500, 600, 700-level) [*]		18
Graduate Research		24
CHEM 797	Research (Repeated)	

Research Seminar	4
CHEM 789	Research Seminar (Repeated)
Graduate Seminar	4
CHEM 796	Graduate Seminar (Repeated)
Comprehensive Examination	
Dissertation	
Dissertation Defense	
Total Hours	50

Research

Research, which is the major theme of graduate studies, may be initiated as early as the student and faculty feel appropriate for the individual. Normally, a student will begin laboratory work no later than the beginning of the second semester. Upon successful completion of an original piece of research, the candidate will present results in a Ph.D. dissertation and, at the appropriate time, defend the work in a final oral examination.

Candidacy

Candidacy examinations contain written and oral portions. The written portion is a research progress report that will contain a comprehensive review of the pertinent literature and applicable scientific concepts, a discussion of current results, a description of studies needed to finish the project, a discussion of expected results and alternative approaches, and a timeline for completing the work. After notification of successful completion of the written portion, the student will present and defend an oral progress report. This oral report must demonstrate fundamental chemical knowledge and independence on the part of the student. Both the written and oral portions of the candidacy examination will be evaluated by the student's research committee and any other interested faculty members.

Degree Progress

MASTER'S BENCHMARKS

By the end of the second semester in residence, students are required to pass 3 out of 4 guidance exams. The guidance exams are in the areas of analytical, inorganic, organic, and physical chemistry. Students have 3 total attempts to pass each exam. The initial attempts occurs prior to the student's first semester in the form of written exams. Subsequent attempts can be either re-taking the written exam or earning a grade of B or better in a designated graduate course.

- **Master's Thesis:** Graduate students in the M.S. program in chemistry are required to submit a research thesis. A research project is chosen in the area of the student's interest and in consultation with the faculty. The thesis defense shows the ability of the student to defend scientific conclusions based on their research project. A final oral examination is administered after completion and submission of the thesis.
- **Credit Hour Requirement:** Students may apply up to 6 hours of research credit and 3 hours of seminars toward the 30-hour requirement. The remaining 21 hours of credit must be earned in the basic graduate courses which reflect a diversified exposure to chemistry, and no more than 10 hours may be elected outside the department. Students are required to enroll in the departmental seminar program and are required to attend special lectures and seminars offered by visiting scientists.

DOCTORAL BENCHMARKS

Research

Research, which is the major theme of graduate studies, may be initiated as early as the student and faculty feel appropriate for the individual. Normally, a student will begin laboratory work no later than the beginning of the second semester. Upon successful completion of an original piece of research, the candidate will present results in a Ph.D. dissertation and, at the appropriate time, defend the work in a final oral examination.

Candidacy

Candidacy examinations contain written and oral portions. The written portion is a research progress report that will contain a comprehensive review of the pertinent literature and applicable scientific concepts, a discussion of current results, a description of studies needed to finish the project, a discussion of expected results and alternative approaches, and a timeline for completing the work. After notification of successful completion of the written portion, the student will present and defend an oral progress report. This oral report must demonstrate fundamental chemical knowledge and independence on the part of the student. Both the written and oral portions of the candidacy examination will be evaluated by the student's research committee and any other interested faculty members.

Major Learning Outcomes

CHEMISTRY

The graduate programs in the C. Eugene Bennett Department of Chemistry provide rigorous training in chemistry. The central mission of the Graduate Program is to train the next generation of Chemists for productive careers in the global economy.

Students earning a M.S. in Chemistry (Thesis Track) will be able to:

- Communicate chemical concepts orally and in writing.
- Explain chemical principles as they pertain to their specific field of research.
- Demonstrate the ability to understand and critically evaluate the existing literature published within their field of research.
- Generate quality data using a variety of experimental and/or computational techniques.
- Effectively communicate their research in oral and written formats.
- Inquire about and prepare for various career opportunities with their advanced degree.
- Learn and adopt best safety practices (chemical hygiene, personal protective wear, proper handling of chemical waste streams, etc.) in chemical research.
- Learn and apply the ethical impact of personal and professional behavior.
- Understand and apply good laboratory practices (chemical hygiene, personal protective wear, etc.) and the proper handling of chemical waste streams.
- Generate quality data using a variety of experimental and/or computational techniques.
- Interpret the meaning and implication of their data.
- Effectively communicate their research in oral and written formats, including the ability to author manuscripts suitable for publication in peer reviewed scientific journals.
- Understand the ethical impact of personal and professional behavior.

Students earning a M.S. in Chemistry (Coursework Track) will be able to:

- Communicate chemical concepts orally and in writing.
- Demonstrate the ability to understand and critically evaluate contemporary chemical literature.
- Inquire about and prepare for various career opportunities with their advanced degree.
- Learn and adopt best safety practices (chemical hygiene, personal protective wear, proper handling of chemical waste streams, etc.) in the chemical enterprise.
- Learn and apply the ethical impact of personal and professional behavior.

Communication Studies, M.A., Ph.D

Degrees Offered

- Master of Arts
- Doctor of Philosophy

Nature of the Program

The Department of Communication Studies offers the M.A. and the Ph.D. degrees in Communication Studies. Communication scholars seek to discover the mechanisms and rules that govern the wide range of communication activities using a battery of social scientific techniques. We try to develop theories that will account for why we act the way we do. The graduate faculty in the Department of Communication Studies is well-known at the regional, national, and international level for accomplishments in research, teaching, and service.

The Department of Communication Studies offers work leading to the degree of master of arts. Persons who possess a bachelor's degree from an accredited college or university may be admitted to the program. Qualified graduate students from a variety of disciplines are admitted to the program. The master of arts degree program is intended to qualify the student to do the following:

- Assume a variety of professional roles in educational, organizational, health, governmental, or media institutions
- Teach the subject matter in high school and/or college
- Undertake advanced training toward a doctorate in the behavioral/social sciences

The M.A. in Communication Studies offers areas of emphasis:

COMMUNICATION THEORY & RESEARCH AREA OF EMPHASIS

All students planning to continue graduate study past the M.A. level are encouraged to enter this program.

CORPORATE & ORGANIZATIONAL COMMUNICATION AREA OF EMPHASIS

All students planning a professional career in a field other than education are encouraged to enter this program. This is normally a terminal degree program in communication studies. Students may complete this program through off-campus study, on-campus study, or a combination.

FACULTY

CHAIR

- Scott A. Myers - Ph.D. (Kent State University)
  Group, Instructional, Interpersonal

PROFESSORS

- Alan Goodboy - Ph.D. (West Virginia University)
  Instructional, Interpersonal, Quantitative Methods
- Matthew M. Martin - Ph.D. (Kent State University)
  Interpersonal, Instructional, Communication Traits
- Scott A. Myers - Ph.D. (Kent State University)
  Group, Instructional, Interpersonal

ASSOCIATE PROFESSORS

- Elizabeth Cohen - Ph.D. (Georgia State University)
  Media Psychology, Entertainment Education, New Media, Health and Risk Communication
- Megan Dillow - Ph.D. (Pennsylvania State University)
  Interpersonal, Communication Theory, Relational Communication
- Brian R. Patterson - Ph.D. (University of Oklahoma)
  Developmental Communication, Communication Theory
- Christy Rittenour - Ph.D. (University of Nebraska)
  Family, Life-span, Interpersonal

ASSISTANT PROFESSORS

- Katie Kang - Ph.D. (Rutgers University)
  Organizational Communication; Group Communication
- Carrie D. Kennedy-Lightsey - Ph.D. (West Virginia University)
  Communication Theory; Interpersonal Communications
- Liesel Sharabi - Ph.D. (University of Illinois)
  Interpersonal, Relational Communication, Computer-Mediated Communication, Quantitative Methods
- Daniel Totzkay - Ph.D. (Michigan State University)
  Health Communications; Mass Communication

PROFESSOR EMERITA

- Melanie Booth-Butterfield - Ph.D. (University of Missouri)
- Joan Gorham - Ph.D. (Northern Illinois University)
- Virginia P. Richmond - Ph.D. (University of Nebraska)

Admissions

MASTER OF ARTS

Applicants must meet the university requirements for admission (http://catalog.wvu.edu/graduate/graduateeducationatwestvirginiauniversity/#classificationstext). Information about admission to the online program can be found here (https://online.wvu.edu/programs/communication-studies-m-a/). To qualify for admission to the M.A. in Communication Studies with an emphasis in Theory & Research, students will need to meet the minimum GRE and TOEFL scores, minimum cumulative undergraduate GPA, statement of interest, current curriculum vitae and 3 letters of reference. Additional information can be found here (https://communicationstudies.wvu.edu/students/graduate-students/m-a-in-theory-and-research/m-a-in-theory-and-research-application-process/).

DOCTOR OF PHILOSOPHY

To apply for admission to the Ph.D. program, applicants must submit the following materials:

1. The application for admission to graduate school at West Virginia University.
2. Scores on the Graduate Record Examination (GRE). Applicants should have a minimum combined score in the 290-310 range on the verbal and quantitative components of the GRE and a minimum score of 4.0 on the analytical component of the GRE. Scores should not be older than five years at the time of application.

3. Scores on the Test of English as a Foreign Language Examination (TOEFL) (for international students only whose native language is not English). Scores will be accepted from any of three versions (i.e., internet-based test, computer-based test, paper-based test). Applicants should score in the ninetieth percentile of the test version taken.
4. All official undergraduate and graduate transcripts. Transcripts must be mailed directly from the registrar of the college and/or university attended. Applicants should have a minimum undergraduate GPA of 3.00 and a minimum graduate GPA of 3.30.
5. A vita. The vita should include all formal education, any teaching or professional work experience, and any research projects conducted to date.
6. A statement of interest. The statement of interest is a three to four-page, typed document in which applicants identify the following:
   - their reasons for pursuing a Ph.D. in communication studies
   - their reasons for wanting to attain their Ph.D. degree in communication studies at West Virginia University
   - their research interests and how these interests correspond with the research conducted by the department faculty
   - the faculty members whose research interests are most closely aligned with their own educational and career goals
   - why attaining the Ph.D. degree in communication studies specifically from West Virginia University is vital to the achievement of their career goals
7. Three letters of recommendation from individuals familiar with the applicant's academic progress and potential. These letters of recommendation should address whether the applicant has the ability to succeed in the Ph.D. program in communication studies at West Virginia University as both a Ph.D. student and as a graduate teaching assistant.
8. A sole-authored sample of scholarly writing completed in the applicant's M.A. program. This sample can be a course paper, a convention paper, a thesis or major project, or a journal article.
9. Any additional supporting evidence. This evidence can include, but is not limited to, awards received for outstanding research, teaching, or academic endeavors; a convention paper or journal article of which the applicant is a co-author; a newspaper or magazine article, or teaching evaluations.

Applications completed by the deadline will receive full consideration. Certain application requirements may be waived based on a preliminary review of an application by the program.

Master of Arts

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum of 36 graduate credit hours in Communication Studies at the 400 level or above.

- **Grade Point Average:** Students must earn a minimum overall GPA of 2.75, and of 3.00 in coursework applied to their graduate program, with a minimum grade of B- in each course.

- **Area of Emphasis:** Students must select one of three area of emphasis: Communication in Instruction, Corporate and Organizational Communication, Communication Theory and Research.

- **Graduation Requirement:** Students must take a comprehensive written and oral examination, unless they select the Theory and Research area of emphasis. In this case, they have the option to either take the comprehensive exams or to write a Master's Thesis.

Curriculum Requirements

COURSEWORK:	**24**
Select any COMM courses 400 level or above. *	
AREA OF EMPHASIS:	**12**
Select one:	
Communication in Instruction	
Corporate and Organizational Communication	
Theory and Research	
Total Hours	36

*   Excluding courses applied to the Area of Emphasis, COMM 697, COMM 797

COMMUNICATION THEORY & RESEARCH AREA OF EMPHASIS

CORE COURSES:		**6**
COMM 700	Survey of Human Communication Theory	
COMM 701	Graduate Research Methods	
COMPLETION REQUIREMENT:		**6**
Thesis Option:		
COMM 697	Research	

Non-Thesis Option:

Any COMM course at the 400 level or above. [*]	
Total Hours	12

[*]   Excluding COMM 697, COMM 797, or any course applied to other parts of the Master's program.

COMMUNICATION IN INSTRUCTION AREA OF EMPHASIS

Communication Studies coursework (400, 500, 600, 700-level)	36
Written Comprehensive Examination	
Oral Comprehensive Examination [*]	

[*]   The oral examination may be waived with the approval of the student's examination committee and the Departmental Coordinator of Graduate Studies.

CORPORATE & ORGANIZATIONAL COMMUNICATION AREA OF EMPHASIS

CORE COURSES:		**6**
COMM 650	Applied Communication Theory	
COMM 660	Communication in the Organization	
ELECTIVES:		**6**
Any COMM courses at the 400 level or above [*]		
Total Hours		12

[*]   Excluding COMM 697, COMM 797, or any course applied to other parts of the Master's program.

Doctor of Philosophy

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum number of 57 graduate credit hours in Communication Studies at the 500 level or above.

- **Grade Point Average:** Students must earn a minimum overall GPA of 2.75, and 3.25 in coursework applied to their graduate program. Students also must earn a minimum grade of B- is required in all courses applied toward degree. Students who receive more than three grades of C, C+, or C- will not be permitted to continue in the program.

- **Comprehensive Examination:** Upon completion of a minimum of thirty-nine hours of coursework approved in a plan of study (excluding COMM 797), students take a comprehensive examination. The comprehensive examination consists of three sections on which students will be tested on the primary and secondary areas of communication emphasis and research methods. The written examination will be followed by an oral examination approximately two weeks later.

- **Dissertation:** Once the written and oral comprehensive examinations have been successfully defended (as determined by the committee), students write a dissertation prospectus and submit it to their committee. Once the prospectus has been approved, students write and defend their dissertation. The dissertation defense is open to the public.

CURRICULUM REQUIREMENTS

CORE COURSES:		**8**
COMM 700	Survey of Human Communication Theory	
COMM 701	Graduate Research Methods	
COMM 790	Teaching Practicum	
AREA COURSES:		**30**
Select 10 COMM courses at the 600 or 700 level		
SEMINAR AND RESEARCH:		**19**
COMM 796	Graduate Seminar	
COMM 797	Research	
Total Hours		57

Degree Progress

All Students will have a plan of study and will receive, at minimum, a yearly letter of evaluation.

MASTER OF ARTS

Students in the online program complete two courses a semester (Spring, Summer, and Fall) for a total of 36 credit hours. Typically, students complete the program in two years.

Students completing the Master of Arts on campus typically complete their requirements in one academic year. Full-time students enroll in 15 hours of coursework during the Fall and Spring semesters and complete the remaining 6 hours of coursework during the summer term.

DOCTOR OF PHILOSOPHY

Upon admission to the program, students are advised by the Ph.D. Coordinator. Working with the Coordinator, students devise their course schedules for their first year.

By the start of the Fall semester of their second year, students should select their dissertation advisor, who must hold Regular Graduate Faculty status.

In addition to making satisfactory progress toward the completion of the degree, students will submit a teaching and research portfolio (i.e., one document) at the end of Year 1 Spring semester and at the end of Year 2 Spring semester. The portfolios will be evaluated by the Ph.D. Graduate Studies Committee.

Upon completion of coursework (typically at the conclusion of Year 2 Spring or Summer term), students take a comprehensive examination. Before the comprehensive examination can be taken, students must have completed 39 hours of coursework with a grade of B- or higher, have a minimum grade point average of 3.25, and have completed any courses for which they received a grade of "Incomplete."

Once the comprehensive examination has been successfully passed, the student writes a dissertation prospectus and submits a typed copy of the prospectus to each memberof the student's dissertation committee.

Additional details can be found in the program's graduate student handbook (https://communicationstudies.wvu.edu/files/d/a5d0fb25-0144-4b34-8a78-c454f0e0c761/2018-2019-graduate-handbook.pdf).

Major Learning Outcomes

COMMUNICATION STUDIES

Students earning a Ph.D. in Communication Studies will be able to:

1. explain, synthesize, and critique the primary Communication theories, perspectives, principles, and concepts associated with the Communication Studies discipline
2. convey expert knowledge of the Communication theories, perspectives, principles, and concepts that comprise their primary and secondary areas of study
3. independently design, conduct, and interpret original Communication-based research using quantitative research methods suitable for conference presentations and professional publication
4. create a programmatic line of research to guide future Communication-based research endeavors and projects
5. select and use effective instructional communicative behaviors across a variety of teaching and training situations
6. develop their writing, analytical, and research skills needed for success as a professional in the field of Communication Studies
7. commit to the profession through activity in professional associations and service to the department, university, and community

English, M.A., M.F.A., Ph.D.

Degrees Offered

- Master of Arts
- Master of Arts in Professional Writing and Editing
- Master of Fine Arts
- Doctor of Philosophy

Nature of the Program

MASTER OF ARTS

The Master of Arts (M.A.) in English is a two-year program designed for students who have shown an aptitude for sustained literary study and who desire to pursue a more intensive and extensive academic training. The M.A. program has five primary goals: (1) to extend the student's knowledge

of the cultural, linguistic, and literary heritage of Great Britain, America, and other English-speaking lands, (2) to introduce students to the critical and professional discourses of academics in literary and linguistic studies, (3) to develop the student's research, writing, and analytical skills, which are necessary for professional success, (4) to provide professional training to prepare students to teach English at the post-secondary level, and (5) to counsel students to craft their program of study to meet their professional and personal needs.

The M.A. program meets these goals by providing a rotation of courses in literature, linguistics, theory, and pedagogy that require extensive reading, writing, research, and oral presentations. With small classes, students receive individual attention from the faculty, which facilitates student progress. M.A. students are eligible for teaching assistantships within the English Department, which provides training in pedagogy.

The knowledge and skills that students acquire in the M.A. program provide the requisite foundation to pursue doctoral work in English, with the ultimate goal of becoming a professional scholar and academic at a post-secondary institution. The academic training provided by the M.A. also is applicable for careers in secondary education, professional writing, and editing.

MASTER OF ARTS IN PROFESSIONAL WRITING AND EDITING

The M.A. in Professional Writing and Editing is a thirty-hour degree that combines theories of writing with practice in real-world writing situations. Students will study professional writing theory, the history of rhetoric, editing, rhetorical analysis, new modes of digital composition, and writing ethics. This degree prepares students for a variety of career options, including technical writing and editing, project management, writing consulting, writing instruction, and advanced graduate study in rhetoric and composition. The degree is designed for both newly-graduated undergraduates and working adults who want more training in writing and editing.

MASTER OF FINE ARTS

The Master of Fine Arts in creative writing is a three-year academic/studio program that combines an apprenticeship to the craft with more traditionally academic elements. This approach seeks to train students in ways that reflect the realities of the writer/artist's evolving role in the academy. Because writers, when hired to teach, are often asked to handle a variety of courses beyond the creative writing workshop, the academic/studio format requires students to take literature and pedagogy courses in addition to writing workshops.

Thus, the M.F.A. is both an academic and a professional degree. As part of WVU's comprehensive Center for Writing Excellence, this degree allows students to prepare for careers in teaching or professional writing/editing. Our objective is to nurture and mentor the many writers in the region seeking professional training. We also intend to attract student writers from all over the country to West Virginia for the opportunity to live and write in this culturally-rich state and to work with our faculty. The ultimate goal is to produce writers who will publish literature and contribute to the culture. A secondary goal is to offer practical skills and opportunities to writers interested in pursuing writing-related professions.

DOCTOR OF PHILOSOPHY

The doctoral program in English offers opportunities for specialization in literary studies, cultural studies, or composition and rhetoric. The program has five goals: (1) to build upon the broad foundations of the M.A. degree's focus on the cultural, linguistic, and literary heritage of Britain, America, and other English-speaking lands, (2) to help students to develop fluency in the critical discourses of the profession, (3) to help students to develop professional competency in three fields of research, as dictated by the Examination for Formal Admission to Candidacy, (4) to help students to develop the research, writing, and analytical skills necessary for professional success, and (5) to provide professional training and counseling to prepare graduates to teach English professionally on the post-secondary level.

These goals are met by the various features of our program, which include coursework, examinations, and both formal and informal instruction and advising regarding professional teaching and research responsibilities. Doctoral study culminates in the writing of the dissertation, which is designed to contribute to the critical and/or theoretical discussion in its field and to prepare the doctoral candidate for further research and publication as a professional scholar and teacher.

Publications

Calliope, a publication of WVU student writing, is sponsored by the Department of English and the English Honorary and Club.

Cheat River Review *(*http://cheatriverreview.com/*)*, is a literary magazine edited by MFA students and the Council of Writers of the West Virginia University MFA program.

Resilience is a digital, peer-reviewed journal of the Environmental Humanities. It provides a forum for scholars from across the humanities disciplines to speak to one another about their shared interest in environmental issues, and to plot out an evolving conversation about what the humanities contributes to living and thinking sustainably in a world of dwindling resources.

Victorian Poetry, a critical journal of Victorian literature, is edited by the Department of English. The journal was established at WVU in 1963 and has become internationally known, with subscribers in 27 countries.

FACULTY

CHAIR

- Brian Ballentine - Ph.D. (Case Western Reserve University)

ASSISTANT CHAIR

- Christine Hoffman - Ph.D. (University of Arkansas)

M.A. & PH.D. PROGRAM SUPERVISOR

- Lara Farina - Ph.D. (Fordham University)

M.F.A. PROGRAM SUPERVISOR

- Glenn Taylor - M.F.A. (Texas State University)

M.A. P.W.E. PROGRAM SUPERVISOR

- Brian Ballentine - Ph.D. (Case Western Reserve University)

PROFESSORS

- Brian Ballentine - Ph.D. (Case Western Reserve University)
  Technical and professional communication, Rhetoric
- Laura Brady - Ph.D. (University of Minnesota)
  Eberly Family Distinguished Professor of Outstanding Teaching, Composition and Rhetorical Theory, Writing Program Administration, Women's Studies
- Mark Brazaitis - M.F.A. (Bowling Green State University)
  Creative Writing: Fiction
- Cari Carpenter - Ph.D. (University of Michigan)
  19th-century American Literature, Native American Literature
- Lara Farina - Ph.D. (Fordham University)
  Medieval Literature and Culture, Gender Studies
- Stephanie Foote - Ph.D. (University of Buffalo)
  Jackson and Nichols Professor of English, Gender and women's studies, Critical theory
- Marilyn Francus - Ph.D. (Columbia University)
  Restoration and 18th-century Literature and Culture, Women's Studies
- Michael Germana - Ph.D. (University of Iowa)
  American Studies, 19th and 20th-century American Literature, Popular Culture
- Catherine Gouge - Ph.D. (West Virginia University)
  Professional writing, Medical rhetoric
- Kirk Hazen - Ph.D. (University of North Carolina-Chapel Hill)
  Linguistics, Sociolinguistics
- John Lamb - Ph.D. (New York University)
  Victorian Literature, 19th-century historiography
- Kathleen O'Hearn Ryan - Ph.D. (University of Massachusetts-Amherst)
  20th-century American Literature
- Mary Ann Samyn - M.F.A. (University of Virginia)
  Creative Writing: Poetry
- Timothy Sweet - Ph.D. (University of Minnesota)
  Eberly Family Distinguished Professor of American Literature, American Studies (17th-19th Century), Literature and Environment, Native American Literature

ASSOCIATE PROFESSORS

- Gwen Bergner - Ph.D. (Princeton University)
  African-American and Multi-ethnic Literatures, Post-colonial Studies
- Anna Shannon Elfenbein - Ph.D. (University of Nebraska)
  American Literature, Women's Studies, Film
- Rosemary Hathaway - Ph.D. (Ohio State University)
  Folklore, English Education, 20th-century American Literature
- Adam Komisaruk - Ph.D. (University of California, Los Angeles)

Romanticism and 18th-century British Literature
- Thomas Sura - Ph.D. (Purdue University)
  Composition and Rhetoric, Writing Program Administration
- Glenn Taylor - M.F.A. (Texas State University)
  Creative Writing: Fiction
- Lisa Weihman - Ph.D. (New York University)
  19th and 20th-century British and Irish Literature and Culture

ASSISTANT PROFESSORS

- Erin Brock Carlson - Ph.D. (Purdue University)
  Professional and Technical Communication, Rhetoric
- Rose Casey - Ph.D. (Cornell University)
  Modern British Literature
- Christine Hoffmann - Ph.D. (University of Arkansas)
  Early Modern British Studies
- Ikejiowhor (Jowhor) Ile - M.F.A (Boston University)
  Creative Writing: Fiction and Non-Fiction
- Jenny Johnson - M.F.A. (Warren Wilson College)
  Creative Writing: Poetry
- Christa Parravani - M.F.A. (Rutgers University)
  Creative Writing: Non-fiction
- Johanna Winant - Ph.D. (University of Chicago)
  Modern American poetry and poetics

SERVICE PROFESSORS

- Nathalie Singh-Corcoran - Ph.D. (University of Arizona)
  Writing Center Theory and Practice, Writing Assessment

TEACHING ASSISTANT PROFESSORS

- Amy Alvarez - M.F.A. (University of Southern Maine)
  Poetry
- Nancy Caronia - Ph.D. (University of Rhode Island)
  Contemporary British and American literature
- Sarah Morris - Ph.D. (University of Maryland)
  human science phenomenology, embodiment, writing process, and student-centered teaching
- Douglas Phillips - Ph.D. (Carnegie Mellon University)
  Professional and technical writing

INSTRUCTORS

- Jill Woods - M.A. (Eastern Michigan University)
  Business and technical writing

VISITING ASSISTANT PROFESSOR

- Geoffrey Hilsabeck - M.F.A. (University of Iowa)
  Creative Writing: Poetry

PROFESSORS EMERITI

- Gail Galloway Adams
- Dennis Allen
- Rudolph Almasy
- Patrick Conner
- Ellesa High
- Elizabeth Juckett
- Byron Nelson
- Carolyn Nelson

- Kevin Oderman
- Ethel Morgan Smith

Admissions

MA IN ENGLISH

In addition to the university admission requirements (http://catalog.wvu.edu/graduate/graduateeducationatwestvirginiauniversity/#classificationstext), prospective candidates for the degree of master of arts are expected to have completed work comparable to the department's undergraduate requirement for English majors (but with records distinctly above the average), and to present as part of their applications their scores on the verbal and analytic sections of the Graduate Record Examination General Aptitude Test and, if non-native speakers of English, their TOEFL scores. Past experience has shown that successful graduate students usually score at least the sixtieth percentile on the verbal section of the GRE. Students also must provide three letters of reference and a sample of their academic writing.

PROFESSIONAL WRITING AND EDITING

In addition to the university admission requirements (http://catalog.wvu.edu/graduate/graduateeducationatwestvirginiauniversity/#classificationstext), prospective candidates for admission are expected to have completed an undergraduate degree in English or an allied field with a record distinctly above average or to have at least two years' work experience in writing and editing. Applications must be supported by a portfolio of written work and three letters of recommendation. The GRE analytical writing test, taken within the last five years, is recommended; successful candidates will typically present a score of five or above. The program recognizes, however, that not all potentially excellent graduate students fit this profile and welcomes applications from individuals who can make a strong case that they will succeed. Non-native English speakers must present TOEFL scores of at least 600 for the written exam or equivalent scores for the online version.

CREATIVE WRITING

In addition to the university admission requirements (http://catalog.wvu.edu/graduate/graduateeducationatwestvirginiauniversity/#classificationstext), prospective candidates for the degree of master of fine arts are normally expected to have completed a bachelor's degree in English. Admission to the program is based primarily on the excellence of a substantial writing sample in fiction, nonfiction, or poetry (ten to twenty pages of poetry; twenty to thirty pages of prose). Also required are three letters of recommendation and a personal statement. Non-native speakers of English must present TOEFL scores. The GRE is not required for admission to the M.F.A. program.

PHD IN ENGLISH

In addition to the university admission requirements (http://catalog.wvu.edu/graduate/graduateeducationatwestvirginiauniversity/#classificationstext), applicants for admission to the program will be judged on the bases of academic record, three recommendations from former teachers, a statement of purpose outlining their academic and professional goals, a sample of their academic writing, and Graduate Record Examination General Aptitude Test scores. Non-native speakers of English must also present their TOEFL scores.

Certain application requirements may be waived based on a preliminary review of an application by the program.

Master of Arts

ENGLISH

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum of 30 graduate credit hours in English (ENGL) at the 500 level or above.

- **Grade Point Average:** Students must earn a minimum of 2.75 overall GPA and a minimum grade of B in any course that is applied to the required 30 graduate credit hours.

- **Graduation Requirements:** Students have the option of completing the M.A. through either (1) 30 credits of coursework, or (2) M.A. thesis. The M.A. thesis must be defended satisfactorily before the student's thesis committee.

- **Progress toward Completion:** Students should complete the M.A. within two academic years, including summer semesters.

- **Additional Requirements:**
  - Breadth Requirement: At least one course must be taken in each of the following areas: American Literature, British Literature, pre-1800 literature, post-1800 literature. Some overlap is permitted at the discretion of the program supervisor.
    - Foreign-Language Requirement: Students must demonstrate proficiency in a foreign language in one of the following ways:
      (1) successfully completing f the fourth semester of a foreign language at the university level, with a minimum grade of B. The course must have been completed within the past five years.
      (2) passing a graduate translation examination administered by the WVU Department of World Languages.

Curriculum Requirements

Core Courses:		6
ENGL 609	College Composition Pedagogy [*]	
and:		
ENGL 680	Introduction to Literary Research	
or ENGL 682	Recent Literary Criticism	
Seminars:		**6**
ENGL 701	Seminar in Rhetoric	
ENGL 741	Seminar in American Studies	
ENGL 764	Seminar in Renaissance Studies, 1550-1660	
ENGL 766	Seminar in Restoration and Eighteenth-Century Studies	
ENGL 768	Seminar in British Romanticism	
ENGL 771	Seminar in Twentieth-Century British Studies	
ENGL 782	Current Directions in Literary Study	
Electives: [**]		**12**
Any ENGL course at the 500 level or above		
Breadth Requirement: [***]		
AMERICAN LITERATURE:		
ENGL 646	American Literature to 1865	
ENGL 647	American Literature, 1865-1915	
ENGL 648	American Literature, 1915-Present	
ENGL 741	Seminar in American Studies	
BRITISH LITERATURE:		
ENGL 661	Medieval Literature	
ENGL 663	Shakespeare	
ENGL 664	Renaissance Literature	
ENGL 666	Restoration and Eighteenth-Century Literature	
ENGL 668	Romantic Literature	
ENGL 669	Victorian Literature	
ENGL 671	Twentieth-Century British Literature	
ENGL 764	Seminar in Renaissance Studies, 1550-1660	
ENGL 766	Seminar in Restoration and Eighteenth-Century Studies	
ENGL 768	Seminar in British Romanticism	
ENGL 771	Seminar in Twentieth-Century British Studies	
PRE-1800-LITERATURE:		
ENGL 663	Shakespeare	
ENGL 661	Medieval Literature	
ENGL 664	Renaissance Literature	
ENGL 666	Restoration and Eighteenth-Century Literature	
ENGL 764	Seminar in Renaissance Studies, 1550-1660	
ENGL 766	Seminar in Restoration and Eighteenth-Century Studies	
POST-1800 LITERATURE:		
ENGL 647	American Literature, 1865-1915	
ENGL 648	American Literature, 1915-Present	
ENGL 669	Victorian Literature	
ENGL 671	Twentieth-Century British Literature	
ENGL 771	Seminar in Twentieth-Century British Studies	
COMPLETION REQUIREMENT:		**6**
Select one option		
Thesis option:		
ENGL 698	Thesis or Dissertation	
Coursework option:		

2 additional ENGL courses at the 500 level or above

Total Hours	30

*   Students must take ENGL 609 in their first semester of teaching.

**   ENGL 790 may not be used as Electives or for any other requirement.

***   Each of the four parts of the Breadth Requirement must be satisfied. Courses used for the Elective and Seminar requirements may also be used for the Breadth Requirement. A single course may be used for more than one part of the Breadth Requirement, but cannot receive credit more than once. With the permission of the program director, certain courses other than those listed may be used for the Breadth Requirement.

Master of Arts

PROFESSIONAL WRITING AND EDITING

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum of 30 credit hours in English at the graduate level.

- **Grade Point Average:** Students must earn a minimum overall GPA of 2.75, and a 3.0 GPA in coursework applied to their graduate program.

- **Graduation Requirement:** Students must complete coursework and practical experience.
    - **Professional Writing and Editing Electives:** In consultation with the advisor, students will individualize their plan of study by choosing two 500 or 600-level courses that develop a specific focus within the general field of professional writing and editing. Students must work with an advisor to file an approved plan of study by the end of their first semester.
    - **General Distribution English Coursework:** In addition to specific required English courses, students must complete a minimum of nine credits in general English studies. Courses may include literature, writing, and/or linguistics courses offered by the Department of English and are chosen in consultation with the advisor. General distribution hours may often include requirements dictated by graduate teaching status, prior coursework, and departmental guidelines. Students may not use the same course(s) to fulfill the general distribution and the professional writing electives requirements.
    - **Practical Experience:** Students typically complete a workplace internship while enrolling in ENGL 610 (http://catalog.wvu.edu/search/?P=ENGL%20610) (three hours). With approval from the program a thesis option can substitute for the internship.

- **Benchmarks:** PWE students typically complete an internship in their final semester of the program. At a minimum, students must first complete at least 12 credit hours of coursework before pursuing the internship option. Students pursuing the thesis option should work with their advisor to approve a research topic. To complete the thesis option, students typically register for a section of English 698 in their last two semesters in the program.

- **Additional Requirements:** A student should state in the plan of study the means by which he or she plans to satisfy the language requirement. The M.A. in PWE requires that students demonstrate proficiency in foreign language, statistics, or computer programming, in one of following ways:
    - Earning a B or above in the second-year level of foreign language study at an accredited college or university (or its international equivalent) within the last five years
    - Passing the Graduate Student Foreign Language Exam administered by the Department of World Languages, Literatures, and Linguistics
    - Participating in a University-approved study abroad program of four or more weeks in a non-English-speaking host country will also fulfill the language requirement if, as part of the experience, students are required to study the language and culture of the host country. As part of the study abroad program, students must enroll in at least one three-credit-hour course and earn a grade of B or above
    - Completing STAT 111 or STAT 211 with a grade of B or above
    - Completing CS 110 (http://catalog.wvu.edu/search/?P=CS%20110) Introduction to Computer Science and its accompanying one credit hour lab with a grade of B or above

Curriculum Requirements

Professional Writing and Editing Courses:

ENGL 601	Studies in Composition and Rhetoric	3
ENGL 602	Editing	3
ENGL 605	Professional Writing Theory	3
ENGL 609	College Composition Pedagogy [*]	3
Internship: [**]		**3**
ENGL 610	Professional Writing Internship	
Professional Writing and Editing 500 or 600-level electives and General Distribution English Coursework		**15**
Select two PWE 500 or 600 level electives and three graduate level English courses in consultation with advisor [***]		
Total Hours		30

*   Students who do not hold an assistantship will substitute three additional hours of electives.

**   With program approval, a thesis option can be substituted for the internship.

***   Excludes 698, 790, 798, and 799.

Master of Fine Arts

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum of 45 graduate credit hours in English at the 500 or 600 or 700 level.

- **Grade Point Average:** students must earn a 2.75 overall GPA and a 3.0 in all coursework counted toward the MFA requirements. Students must also earn a minimum grade of B- is required in all courses applied toward degree.

- **Graduation Requirement:** Students have the option of either taking a comprehensive examination or completing a thesis
    - **Master's Thesis:** A book-length manuscript (ideally 48 pages in poetry, 150 pages in fiction or nonfiction) suitable for publication on its own.

- **Benchmarks:** Students will work with faculty to develop a progress-toward-degree plan. In the third year, students must follow submission timelines for application for graduation and Thesis Defense Declaration form. In addition, they must be aware of ETD guidelines and generally work with their thesis advisor and committee members to insure ample time for reading the manuscript before defense date.

Curriculum Requirements

Creative Writing Workshops [*]		**15**
ENGL 618	Graduate Writing Workshop: Poetry	
ENGL 618A	Graduate Writing Workshop: Fiction	
ENGL 618B	Graduate Writing Workshop: Non-Fiction	
Pedagogy Requirement		**3**
ENGL 609	College Composition Pedagogy	
ENGL 688	Creative Writing Mentoring	
Non Creative Writing English Courses [**]		**12**
Any ENGL course at the 500, 600, or 700 level		
Thesis		**9**
ENGL 698	Thesis or Dissertation	
Electives [***]		**6**
Any ENGL course at the 500, 600, or 700 level		
Total Hours		45

*   Students must complete fifteen hours of creative writing workshops with three hours outside of the student's primary genre.

**   Except ENGL 611, ENGL 618, or ENGL 618A, or ENGL 618B, or ENGL 688, or ENGL 689, or ENGL 698, or ENGL 790.

***   Except ENGL 689, or ENGL 698, or ENGL 790.

Doctor of Philosophy

- **Credit Hours**: Students are required to complete a minimum of 72 graduate credit hours in English at the 500 level or above. A student entering the Ph.D. program with an M.A. degree already in hand may request that up to 30 hours of coursework be applied toward the doctoral coursework. The final decision is at the discretion of the program director.
- **Grade Point Average**: Students must earn a minimum GPA of 2.75 overall and 3.00 in all ENGL courses applied to the major. A minimum grade of B- is required in any course that is to be applied to major requirements.
- **Graduation Requirements**: Students earn the Ph.D. by satisfactorily completing all of the following:
    - required coursework;
    - a portfolio of academic work;
    - the foreign-language requirement;
    - the Examination for Formal Admission to Candidacy; and
    - the prospectus, full text and defense of the doctoral dissertation.
- **Foreign-Language Requirement**: Students must demonstrate proficiency in a foreign language in one of the following ways:
    - successfully completing (no more than five years prior to matriculation) the fourth semester of a foreign language at the university level, with a minimum grade of B-; or
    - passing a graduate translation examination administered by the WVU Department of World Languages.

- **Examination**: The Examination for Formal Admission to Candidacy ("Booklist Exam") is administered by the student's Ph.D. committee at the conclusion of regular coursework.
- **Dissertation**: Passage of the Booklist Exam is followed by the dissertation phase, all portions of which require approval by the student's Ph.D. committee. It consists of:
  - a prospectus (approx.10 pp.) for the dissertation, with a provisional bibliography;
  - the dissertation itself, designed to be an original contribution to the scholarship in its field; and
  - a two-hour oral defense of the completed dissertation. For the student to pass the dissertation defense, no more than one member of the committee may dissent.

Curriculum Requirements

Core Courses		12
ENGL 609	College Composition Pedagogy [*]	
ENGL 680	Introduction to Literary Research [**]	
ENGL 682	Recent Literary Criticism [**]	
ENGL 782	Current Directions in Literary Study [***]	
Seminars		**12**
Select from the following:		
ENGL 701	Seminar in Rhetoric	
ENGL 741	Seminar in American Studies	
ENGL 764	Seminar in Renaissance Studies, 1550-1660	
ENGL 766	Seminar in Restoration and Eighteenth-Century Studies	
ENGL 768	Seminar in British Romanticism	
ENGL 771	Seminar in Twentieth-Century British Studies	
ENGL 782	Current Directions in Literary Study	
Electives:		**30**
Any ENGL course at the 500 level or above not used for Core or Seminar requirements [****]		
Teaching Practicum:		**6**
ENGL 790	Teaching Practicum	
Thesis:		**12**
ENGL 798	Thesis or Dissertation	
Total Hours		72

[*]	ENGL 609 should be taken in the student's first semester of teaching. At the discretion of the program director, a student who has completed the equivalent of ENGL 609 elsewhere may substitute a different 3-credit ENGL course at the 500 level or above.
[**]	At the discretion of the program director, a student who has completed the equivalent of ENGL 680 and/or ENGL 682 elsewhere may substitute different 3-credit ENGL courses at the 500 level or above.
[***]	ENGL 782 is a required core course, but it may be repeated in a subsequent semester toward the seminar requirement.
[****]	Excluding ENGL 790

Degree Progress

M.A.

Graduation Requirements: Students have the option of completing the M.A. through either (1) 30 credits of coursework, or (2) 24 credits of coursework plus M.A. thesis. The optional M.A. thesis is a work of scholarship in the form of an extended research paper (usually 50-75 pages). The thesis is directed by a regular member of the graduate faculty and two additional committee members. It is recommended that one member be from outside of the Department of English. Students must satisfactorily defend their completed projects before their committees and anyone else who wishes to attend. All theses must be filed electronically.

M.A. students must also demonstrate proficiency in a foreign language in one of the following ways:

- successfully completing the fourth semester of a foreign language at the university level, with a minimum grade of B, within the past five years; or

- passing a graduate translation examination administered by the WVU Department of World Languages.

M.A. IN PWE

Graduation Requirement: Students have the option of completing the M.A. in Professional Writing and Editing through either (1) completing a graduate level internship, or (2) researching, writing, and defending a thesis.

Internship (3 hours): Students who choose the internship option will work for a local or regional company, program, or organization for 8-10 hours a week for 12-15 weeks. Students will engage in a variety of supervised writing tasks, including research, editing, proofreading, project management, and content development. At the end of the internship period, students will submit a portfolio to the Professional Writing Coordinator that documents and reflects on their internship experience.

Critical Thesis (3-6 hours): The M.A. thesis is a work of scholarship in the form of an extended research paper (usually 50-75 pages) on a topic in the field. The thesis is directed by a regular member of the graduate faculty and two additional committee members. Students must satisfactorily defend their completed projects before their committees and anyone else who wishes to attend. All theses must be filed electronically.

M.F.A.

Students will work with faculty to develop a progress-toward-degree plan. In the third year, students must follow submission timelines for application for graduation and Thesis Defense Declaration form. In addition, they must be aware of ETD guidelines and generally work with their thesis advisor and committee members to insure ample time for reading the manuscript before the defense date.

PH.D.

Graduation Requirements: Students earn the Ph.D. by satisfactorily completing all of the following:

1. required coursework;
2. a portfolio of academic work;
3. the foreign-language requirement;
4. the Examination for Formal Admission to Candidacy; and
5. a prospectus, full text and defense of the doctoral dissertation.

Coursework: For students who enter the program with an M.A. already in hand, up to 30 hours may be waived at the discretion of the M.A./Ph.D. Program Supervisor.

Portfolio: By September 1 of the second year past the completion of 30 credit hours, each student will submit a portfolio consisting of:

- a research paper (approximately 20 pages) of his/her choosing, most likely stemming from a first-year course;

- a self-evaluation of his/her coursework, research, writing, teaching, and department participation; and

- a plan of study, including possible dissertation field and list of primary courses.

A three-member committee, constituted in advance from the English graduate faculty, will evaluate all portfolios. A portfolio deemed unsatisfactory must be resubmitted in January of the same academic year.

Foreign-Language Requirement: Students must demonstrate proficiency in a foreign language in one of the following ways:

- successfully completing the fourth semester of a foreign language at the university level, with a minimum grade of B, within the past five years; or

- passing a graduate translation examination administered by the WVU Department of World Languages.

Examination: At the beginning of preparations for the Examination for Formal Admission to Candidacy ("Booklist Exam"), the student must constitute a Ph.D. committee. The committee is consists of a chair (a regular member of the Department of English graduate faculty), two additional members from the English faculty, and one member external to the English faculty. The examination is designed to have the student gain more detailed familiarity with his/her field and to refine an original topic for the dissertation. The student compiles a list of 75-100 core texts, writes a brief preface, then sits for a two-hour oral examination with the committee.

Dissertation: Passage of the Booklist Exam is followed by the writing and committee approval of the dissertation prospectus, then the writing of the dissertation. The dissertation is intended to be an original contribution to the scholarship in its field. A two-hour oral defense of the completed dissertation is required. For the student to pass the dissertation defense, no more than one member of the committee may dissent. All dissertations must be filed electronically.

Summary: The portfolio of academic work must be submitted in September of the second year past completion of 30 hours of coursework; and resubmitted, if applicable, in January of the same academic year. Preparations for the Booklist Exam may begin once all but three credits of coursework are complete. All degree requirements, including the dissertation defense, must be completed within five years of the student's passing the Booklist Exam. For more details, please consult the Graduate Handbook on the English Department website.

Major Learning Outcomes

ENGLISH

Upon completion of the M.A. program, students will be able to:

1. Demonstrate advanced knowledge of the literary and linguistic histories of English-speaking communities
2. Apply the critical and professional discourses of literary and cultural study
3. Compose persuasive analytical arguments about cultural and literary topics
4. Teach writing in English at the post-secondary level

Major Learning Outcomes

CREATIVE WRITING

The Master of Fine Arts in Creative Writing emphasizes the following as goals and outcomes for students graduating from the program:

1. The mastery of a specific literary tradition relevant to the student's genre and craft;
2. The mastery of the revision process;
3. The clear articulation of aesthetic principles;
4. A solid familiarity with genres other than the student's principal genre;
5. A firm understanding of the writing profession.

Major Learning Outcomes

PROFESSIONAL WRITING AND EDITING

The learning outcomes for the M.A. in PWE reflect the program's mixture of theory and practice:

1. Recognize and evaluate a variety of ethical, social, legal, and political values intertwined in the production and consumption of technical communications.
2. Analyze the uses and applications of new communication technologies.
3. Acquire historical and critical understanding of rhetorical theories and practices.
4. Master a variety of research and analytical methods, especially as these apply to the study and practical application of oral, written, and visual communication in professional contexts.
5. Acquire a practical and theoretical understanding of workplace dynamics including client relations and project management skills.

Major Learning Outcomes

ENGLISH

Upon completion of the PhD program, graduates will be able to:

1. Conceptualize the cultural, linguistic, and literary texts of the English-speaking world as categories of study
2. Converse in the critical and professional discourses of literary and cultural study
3. Conduct research on literature and culture at the level of professional competency
4. Write a substantial (book-length) analysis of a literary or cultural topic
5. Teach courses in the study of language and culture at the post-secondary level

Forensic and Investigative Science, M.S., Forensic Science Ph.D.

Degrees Offered

- Master of Science
- Doctor of Philosophy

Nature of the Program

M.S. FORENSIC AND INVESTIGATIVE SCIENCE

The objective of the M.S. degree is to prepare students for employment in local, state, and federal forensic science laboratories in several forensic disciplines. The M.S. degree is a rigorous, quantitative, research oriented degree accredited by the Forensic Science Education Programs Accreditation Commission (FEPAC).

The coursework comprises a core of advanced chemistry, biology and pattern evidence courses, including laboratory-based instruction in microscopy, trace evidence, analytical chemistry, DNA, statistics and laboratory management. Further specialization occurs though the student's research. The learning and research environments are supported by state-of-the-art instrumentation and laboratory facilities.

PH.D. FORENSIC SCIENCE

The objective of the Ph.D. program is to prepare students to work as professionals in academia, government laboratories, and private industry as laboratory specialists. Students will learn to critically assess the current state of knowledge within the field, and to solve complex problems at the frontier of the discipline. The major component of the program is research. The coursework comprises a core of advanced chemistry, biology and pattern evidence courses, including laboratory-based instruction in microscopy, trace evidence, analytical chemistry, DNA, statistics and laboratory management.

FACULTY

INTERIM CHAIR

- Casper Venter - M.Sc. (Northwest University)

GRADUATE STUDIES COORDINATOR

- Tina Moroose - M.S. (Marshall University)

PROFESSORS

- Glen Jackson - Ph.D. (West Virginia University)
  Ming Hsieh Distinguished Professor, Forensic Chemistry and Mass Spectrometry
- Keith Morris - Ph.D. (University of Port Elizabeth)
  Ming Hsieh Distinguished Professor, Impression Evidence, Evidence Interpretation

ASSOCIATE PROFESSORS

- Jaqueline Speir - Ph.D. (Rochester Institute of Technology)
  Informatics, Pattern Analysis, Image Analysis
- Casper Venter - M.Sc. (Northwest University)
  Director, Undergraduate Coordinator, Seized Drugs, Latent Fingerprint Development and Comparison

ASSISTANT PROFESSORS

- Luis Arroyo - Ph.D. (Florida International University)
  Toxicology, Environmental Forensics
- Robin Bowen - Ed.D. (West Virginia University)
  Ethics, Bloodstain Pattern Analysis
- Roger Jeffreys - M.S. (West Virginia University)
- Rachel Mohr - Ph.D. (Texas A&M University)
  Forensic Entomology
- Tina Moroose - M.S. (Marshall University)
  Forensic Biology, Quality Assurance
- Robert O'Brien - M.S. (St. Joseph's University)
  Crime Scene Analysis
- Tatiana Trejos - Ph.D. (Florida International University)
  Trace Evidence, Elemental Analysis

Admissions

The M.S. and the Ph.D. are separate degree programs and students should carefully consider which is the most appropriate for their career goals. The M.S. degree is ideal preparation for work in local, state, and federal forensic laboratory systems. The Ph.D. is geared toward preparing students for research-intensive positions, academic appointments, and laboratory management.

Students with a B.S. degree can be directly admitted to the Ph.D. program through the usual admission process. Current students in the FIS M.S. program who decide to pursue a Ph.D. must submit a completed application by the deadline to be considered for admission. Current enrollment in the FIS M.S. program ***does not*** guarantee acceptance into the Ph.D. program.

Placement in a specific research group or with a specific faculty member is not guaranteed. Students, particularly those applying to the Ph.D. program, are strongly encouraged to contact faculty ahead of time to discuss research interests and space availability in their research group. At least two potential research advisors must be identified as part of the admission process.

Applications are considered starting in January for admission for the following fall semester. Incomplete application packages are not considered. Priority is given to completed applications received by January 15th. Admissions for spring semester may be considered on a case-by-base basis; contact the Graduate Studies Coordinator before submitting.

Upon receipt and evaluation of the complete application package, suitable candidates will be invited for a final interview with the graduate committee.

SPECIFIC REQUIREMENTS: MASTER OF SCIENCE PROGRAM

- A bachelor's degree in natural science, Forensic Science, or equivalent which includes at least one year of the following courses:

    1. Fundamentals of Chemistry (inclusive of laboratories),
    2. Organic Chemistry (inclusive of laboratories),
    3. Biology (inclusive of laboratories),
    4. Physics (inclusive of laboratories), and
    5. Calculus

- On-line graduate application
- Official transcripts from all institutions of higher education attended
- GRE taken within the last five years with a score of 300 or better (on combined verbal and quantitative reasoning)
- GPA of 3.0 or better on a 4.0 scale
- An original writing sample by the applicant of at least 1,500 words. The writing sample may be one or more of the following: a peer-reviewed publication where the applicant was the lead author an honors thesis, research report or capstone report in which the applicant is the sole author an essay (1.5 line spacing, Times New Roman, 12 point font) discussing one of the following statements:
    - "DNA will eventually replace trace evidence as a technique in forensic science"
    - "Forensic Science will survive criticism about its reliability"
- Two letters of recommendation from persons who can address potential for success in graduate study and research

SPECIFIC REQUIREMENTS: DOCTOR OF PHILOSOPHY PROGRAM

- B.S. or M.S. degree from accredited college or university (research-based) to include prerequisite coursework for the M.S. Program.
- On-line graduate application
- GPA of 3.0 or better on a 4.0 scale
- Official transcripts from all institutions of higher education attended
- GRE taken within the last five years with a score of 300 or better (on combined verbal and quantitative reasoning)
- Eight M.S. Program courses or equivalent with a grade of C or better
- Research writing example: (1) peer-reviewed publication where the student is the lead author, (2) thesis research converted to a publication-ready document - note that this document must conform to a pre-print to be submitted to a peer reviewed journal (such as JFS or FSI), including appropriate subsections and reasonable length, or (3) thesis research proposal converted to a white paper (maximum length of 6 pages, single-spaced)
- Three letters of recommendation (all three references must be able to comment on the applicant's academic and/or research skills)

Certain application requirements may be waived based on a preliminary review of an application by the program.

Master of Science

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum of 41 graduate credit hours in Forensic and Investigative Science at the 500 and 600 level.

- **Grade Point Average:** Students must earn a minimum cumulative GPA of 3.0, and a GPA of 3.0 in coursework applied to the graduate program. A minimum grade of C- must be earned in coursework applied to their graduate program.

- **Graduation Requirement:** Students are required to complete a thesis. Details, requirements, and timelines are provided in the department's Graduate Student Handbook.
- **Benchmarks:** Ideally, the Plan of Study Form should be completed and submitted to the Coordinator of Graduate Studies before the end of the first semester. Failure to complete the Plan of Study by the end of the second semester will result in the student being placed on probation.

Curriculum Requirements

Core Courses 21

FIS 501	Foundations of Criminalistics

FIS 502	Forensic Laboratory Management	
FIS 602	Forensic Informatics	
FIS 614	Trace Evidence Examination	
FIS 620	Forensic Casework Practicum	
FIS 632	Advanced Forensic Biology	
STAT 512	Statistical Methods 2 [*]	
Forensic Chemistry Requirement		**4**
Please select one of the following lecture and lab pairs:		
FIS 451 & FIS 452	Arson and Explosives Analysis and Arson and Explosives Analysis Lab	
FIS 460 & FIS 461	Analysis of Seized Drugs and Analysis of Seized Drugs Laboratory	
FIS 470 & FIS 471	Analytical Forensic Toxicology and Analytical Forensic Toxicology Laboratory	
Seminar		**4**
FIS 696	Graduate Seminar [**]	
Research		**6**
FIS 697	Research	
Electives [*]		**6**
Any FIS course at the 400 level or above		
Total Hours		41

[*]   Or equivalent graduate class as approved by Graduate Studies Committee

[**]   Each attempt at FIS 696 is worth one credit hour; students must successfully complete one credit per semester over four semesters.

Doctor of Philosophy

Degree Requirements

- **Credit Hours:**Graduate students in the Ph.D. program must successfully complete a minimum of 71 credit hours. Each student may apply a maximum of 31 credit hours of research toward the 71-hour requirement; the remaining 40 credit hours must be earned in graduate-level courses in Forensic Science.
- **Grade Point Average:** Students must earn a minimum cumulative GPA of 3.0, and a GPA of 3.0 in coursework applied to the graduate program. A minimum grad of C- must be earned in coursework applied to the graduate program.
- **Program of Study:** The program also includes an oral qualifying examination, a dissertation proposal presentation, and an oral defense of the dissertation.

- **Comprehensive Examination:** Doctoral students must pass a comprehensive oral examination in the field of criminalistics to demonstrate their competency in the discipline and successfully defend the topic of their dissertation research.

- **Dissertation:** Students are required to complete a dissertation. Additional information, expectations, requirements, and timeline information is found in the Department's Graduate Student Handbook.

Curriculum Requirements

CORE COURSES		**24**
FIS 501	Foundations of Criminalistics	
FIS 502	Forensic Laboratory Management	
FIS 602	Forensic Informatics	
FIS 614	Trace Evidence Examination	
FIS 620	Forensic Casework Practicum	
FIS 632	Advanced Forensic Biology	
FIS 703	Research Design in Forensic Science	
STAT 512	Statistical Methods 2 [*]	
Forensic Chemistry Requirement		**4**
Select one of the following lecture and lab pairs:		

FIS 451	Arson and Explosives Analysis	
& FIS 452	and Arson and Explosives Analysis Lab	
FIS 460	Analysis of Seized Drugs	
& FIS 461	and Analysis of Seized Drugs Laboratory	
FIS 470	Analytical Forensic Toxicology	
& FIS 471	and Analytical Forensic Toxicology Laboratory	
ELECTIVES		**6**
Select two from the following:		
FIS 610	Firearms Examination	
FIS 405	Latent Fingerprint	
Any FIS course at the 400 or above [*]		
Any BIOL, CHEM, or PHARM course at the 400 level or above [*]		
FORENSIC SEMINAR		**6**
FIS 796	Graduate Seminar [**]	
RESEARCH		**31**
FIS 797	Research	
Total Hours		71

[*]   Or equivalent graduate course approved by Graduate Studies Committee

[**]   Each attempt at FIS 796 is worth one credit hour; students must successfully complete one credit per semester over six semesters.

Degree Progress

All students should identify a faculty mentor and research topic as soon as possible. The faculty mentor will work with the student to develop a Plan of Study, constitute an advisory committee, and formulate research plans. Details on the composition and establishment of an advisory committee, timelines, and expectations are provided in the Department's Graduate Student Handbook.

MASTER'S BENCHMARKS

The proposal must be successfully defended on or before the last day of class of the second semester of study in the program. For typical fall semester admits, this is the end of the spring semester (all others, please consult with the Coordinator of Graduate Studies regarding proposal defense deadlines). At the latest, the student must defend before the first day of the summer term, typically on or about May 15th. Failure to do so will result in academic probation, and the student will be ineligible for Departmental financial support. The student will be required to defend by the end of the summer. If this is not accomplished, steps will be initiated to dismiss the student from the program.

Once completed, the proposal defense is valid for a maximum of 4 academic semesters. If the student has not defended the research described by the proposal within 4 academic semesters of the successful proposal defense date, he or she must repeat the proposal defense process, unless given written permission to continue by his or her Chair and the Graduate Committee

DOCTORAL BENCHMARKS

Doctoral students are allowed a maximum of 5 years from admission to doctoral candidacy to complete all requirements of the Ph.D. degree. Students become doctoral candidates once they have successfully completed their proposal defense and their oral qualifying examination.

The proposal defense should be conducted before the start of the second year of study, assuming completion of the core M.S. coursework. If the research proposal is not successfully defended, the student must reschedule the defense within one semester. Failure to successfully defend or schedule the second defense within one semester is grounds for dismissal from the program. Once completed, the proposal is valid for a maximum of 6 academic semesters. If the student has not defended the research described by the proposal within 6 academic semesters of the successful proposal defense date, he or she must repeat the proposal defense process, unless given written permission to continue by his or her Chair and the Graduate Committee.

Students should schedule their oral qualifying examination by the end of the fall of the second year (3 academic semesters, assuming successful completion of all core M.S. coursework). If unsuccessful in the first attempt of their oral examination, this examination must be repeated within one semester. Failure to successfully qualify or schedule the second oral examination within one semester is grounds for dismissal from the program..

Please refer to the Forensic and Investigative Science Graduate Handbook for more information.

Major Learning Outcomes

FORENSIC AND INVESTIGATIVE SCIENCE

As a result of completing the MS in Forensic and Investigative Science, students will be able to:

·Assess the value of evidence in different circumstances, describe best practices for its examination and demonstrate competency in performing a variety of different examinations of evidence

·Identify the limitations in the knowledge and capabilities of forensic science, describe creative solutions and conduct scientifically sound experiments to overcome the identified limitations

·Execute persuasive communications, in written and oral formats, of his/her test results and research discoveries

Major Learning Outcomes

FORENSIC SCIENCE

As a result of completing the PhD in Forensic Science, students will be able to:

- Assess the value of evidence in different circumstances, propose best practices for its examination and demonstrate mastery in performing a variety of different examinations of evidence
- Identify the limitations in the knowledge and capabilities of forensic science, formulate creative solutions and design and conduct scientifically sound experiments to overcome the identified limitations.
- Execute persuasive communications, in written and oral formats, of his/her test results and research discoveries

Geography, M.A., Ph.D.

Degrees Offered

- Master of Arts
- Doctor of Philosophy

Nature of the Program

Geography is a diverse and innovative field of study that bridges humanities, social sciences and natural sciences. Geographers engage with the most pressing issues of our time, including global environmental change, social inequality and transformations of our economy, politics, ecology and culture in the shifting terrain of the 21st century. Our geographers are trained in cutting-edge approaches to understand and make a difference in our rapidly changing world.

West Virginia University offers master's and doctoral degrees in geography. Our graduate program has a large faculty with expertise in the sub-disciplines of **human geography**, **environmental geography** and **geographic information science**. Using qualitative and quantitative research methods, our faculty research in south Asia, Latin America, sub- Saharan Africa, the Middle East, east Asia and the U.S., including Appalachia.

Our interdisciplinary learning environment featuring state-of-the-art computing and spatial analysis facilities offers students the chance to develop innovative research projects and learn valuable skills to help solve some of the major challenges facing our world today.

The Graduate Program in Geography was designated a program of excellence by the West Virginia University Board of Governors in 1998, 2003, 2008, and 2018. This award is given to superlative degree programs in recognition of their contribution to higher education in West Virginia and national recognition.

Research

Students who are interested in pursuing research in an area other than these may do so provided the research area matches the interest of a faculty member in the department who agrees to supervise the student's program. Students who wish to focus their research on a particular region are encouraged to do so. The Graduate Program in Geography at WVU has strong links with the University's Regional Research Institute, the State GIS Technical Center, the Geology Program, the Water Research Institute, the International Studies Program, the West Virginia Geological and Economic Survey, the Center for Women's and Gender Studies, and the Center for Resilient Communities.

Computing Facilities

The Geography program has extensive computing facilities housed in Brooks Hall, a modern 98,000 square foot building dedicated exclusively to geography and geology. Brooks Hall has five computer laboratories dedicated to teaching and research. The department has ESRI ArcGIS, ERDAS Imagine, and ENVI site licenses. In addition, the faculty teach several programming languages for GIS and data science including R, Python, and Bash. Faculty engaged in qualitative data analysis teach using tools including Nvivo and Atlas.ti. The department's geovisualization research group operates an immersive four-wall 3-D display environment or CAVE. The remote sensing program operates an ASD full-range portable spectroradiometer.

FACULTY

CHAIR

- Brent McCusker - Ph.D. (Michigan State University)
  Social theory, development

ASSOCIATE CHAIR FOR GEOGRAPHY

- Karen Culcasi - Ph.D. (Syracuse University)

PROFESSORS

- Amy Hessl - Ph.D. (University of Arizona)
  Past climate, dendrochronology
- Randall Jackson - Ph.D. (University of Illinois at Urbana-Champaign)
  Regional Research Institute, regional economic development
- Brent McCusker - Ph.D.
  (Michigan State University) Social theory, development

ASSOCIATE PROFESSORS

- Jamison Conley - Ph.D. (Penn State University)
  GIScience, health
- Karen Culcasi - Ph.D. (Syracuse University)
  Political Geography, Middle East
- Brenden McNeil - Ph.D. (Syracuse University)
  Forest ecosystems, GIScience
- Bradley Wilson - Ph.D. (Rutgers University)
  Social theory, political ecology

ASSISTANT PROFESSORS

- Martina Caretta - Ph.D (Stockholm University)
  Feminist Geography, Human Dimensions of Water
- Cynthia Gorman - Ph.D. (Rutgers)
  Gender, Migration, Human Rights, Refugee Communities
- Jonathan Hall - Ph.D. (Ohio State University)
  Desert Ecology, Biogeography
- Insu Hong - Ph.D. (Arizona State University)
  GIScience, Virtual Reality and Spatial Optimization
- Aaron Maxwell - Ph.D. (West Virginia University)
  Remote Sensing, GISc, Physical Geography
- Maria Alejandra Perez - Ph.D. (University of Michigan)
  Human Geography, Science & Society, Speleology, Latin America
- Jamie Shinn - Ph.D. (Penn State University)
  Environmental Governance, Political Ecology, Adaptation to Climate Change

CLINICAL ASSISTANT PROFESSORS

- Megan Govindan - MA
  (WVU) Center for Resillant Communities
- Rick Landenberger - Ph.D. (West Virginia University)
  Forest ecology, land management
- Mehmet Oztan - Ph.D. (Michigan State University)
  seed preservation, sustainable farming

PROFESSOR EMERITUS

- Greg Elmes - Ph.D. (Penn State University)
  Geographic Information Science
- Trevor Harris - Ph.D. (University of Hull)
  Geographic Information Science
- Steve Kite - Ph.D. (University of Wisconsin)
  Geomorphology, floods, landslides

- Ken Martis - Ph.D. (University of Michigan)
  Political, Electoral and Historical Geography
- Timothy Warner - Ph.D. (Purdue University)
  Remote Sensing

ASSOCIATE PROFESSOR EMERITUS

- Robert Hanham - Ph.D. (Ohio State University)
  Regional Development

Admissions

APPLICATION

M.A. applicants must submit a personal two-page statement defining the applicant's interest in geography and career intentions, and two letters of recommendation from people who are familiar with the student's undergraduate training. G.R.E. scores are not required.

Ph.D. applicants must send three letters of recommendation and a two-page research statement. Applicants are strongly encouraged to contact potential doctoral advisors among the faculty prior to application. G.R.E. scores are not required.

To receive full consideration, including consideration for funding opportunities, all applications for Fall admission must be submitted by January 15. In exceptional circumstances, we will review applications received after the January 15 deadline.

Prospective M.A. students must have an overall cumulative undergraduate G.P.A. of 3.0.

Prospective Ph.D. students must hold an M.A./M.S. degree and a cumulative G.P.A. of at least 3.0 in their previous graduate work. Students with degrees in other non-geography disciplines are encouraged to apply although they may be asked to make up deficiencies in geography during the first year in the program.

International students are encouraged to submit their materials at least three months in advance of all deadlines. International graduate school applicants who **did not** complete their bachelor's degree at a US, UK, Australian, Canadian, or New Zealand institution must submit an English proficiency test score. WVU's minimum score requirements for English proficiency for graduate students are: an academic IELTS (https://www.ielts.org/) overall band score of at least 6.5 **OR** A TOEFL (https://www.ets.org/toefl/) iBT total score of at least 79. Please check the Admissions (https://graduateadmissions.wvu.edu/how-to-apply/apply-for-2020-2021/international-graduate-applicant/) page for requirements for international students.

Certain application requirements may be waived based on a preliminary review of an application by the program.

TEACHING ASSISTANTSHIPS

A small number of graduate teaching assistantships are competitively awarded by the Geography program on an annual basis. Teaching assistants are employed to work in support of undergraduate courses. Applicants who wish to be considered for a teaching assistant position should make that request known in their application.

RESEARCH ASSISTANTSHIPS

Research assistantships must be applied for through the faculty member whose research is providing the funding. The geography faculty are engaged in numerous funded research projects, many of which provide graduate students with opportunities for obtaining research skills and experience as well as employment and tuition aid. Furthermore, the professional contacts made in the course of faculty research frequently provide graduate students with opportunities for career development.

Master of Arts

The Master's Program in Geography at West Virginia University provides students with cutting edge training in the history and theory of geography, experience with advanced geographic research methodologies and specialized mentoring from faculty experts across three sub-disciplinary fields (Human Geography; Environmental Geography; Geographic Information Science). To earn a M.A. in Geography at WVU students must complete 30 credit hours of graduate courses (based upon the curriculum described below), form a committee of graduate faculty to supervise their study, write and defend a thesis or project proposal, and finally, write and defend a thesis or project.

Degree Requirements

The M.A. thesis option is designed to enable full-time students to satisfy all program requirements and complete an examinable thesis within two years. Students are required to be well grounded in one or more of the program's three areas of specialization (Geographic Information Science; Human Geography; and Environmental Geography).

- **Credit Hours:** Students are required to complete a minimum of 30 graduate credit hours in Geography at the 400 level or above. WVU requires that no more than 40% of the graduate degree credits be at the 400-level.

- **Grade Point Average:** Students must earn a minimum GPA of 3.0 overall and in coursework applied to their graduate program.

- **Graduation Requirement:** Students have the option of pursuing a Professional Master's Project or completing a Master's Thesis. The M.A. thesis is an independent research project undertaken by the student. The thesis research should adhere to the following: 1) Demonstrate knowledge of the literature in the student's chosen field, 2) Use data and methods appropriate to the research, 3) Draw conclusions from the research endeavor. The Professional Master's Project is designed for students interested in a more focused project than the traditional research thesis option. It is not recommended for students considering entering a Ph.D. program. The project has strict deadlines and must be completed in one semester and after the completion of GEOG 601 and either GEOG 603 or GEOG 701.

- **Additional Requirements:** The academic progress of every master's student is reviewed each year. Students must submit a self-evaluation signed by their advisor by January 15. The Graduate Committee will conduct its annual review of students in February and communicate with students in March. Waivers to the M.A. deadlines, timing requirements, and other rules may be requested from the Graduate Coordinator. Waivers are only given under extraordinary circumstances.

- **Thesis Defense:** The thesis defense occurs when the advisor and the committee agree that a defendable copy of the thesis is complete. The defense date must be advertised to the department at least three weeks in advance. Thesis defenses are not normally scheduled between June 15 and August 15. In accordance with College requirements, original signatures are required on the shuttle sheet form specifying the outcome of the defense.

- **Required Deadlines:**
  - Thesis option
    - First year
      - Fall semester: File plan of study
      - Spring semester: Form committee
    - Second year
      - Fall semester: Written proposal by Oct. 1st and Oral proposal by Oct. 31st
      - Spring semester: Defend thesis by the end of semester
  - Professional option

    - First year
      - Fall semester: File plan of study
      - Spring semester: Form committee
    - Second year
      - Fall semester: Choose professional option by Oct. 1st. Get approval of written plan from the thesis committee and request permission to graduate committee by the end of semester.
      - Spring semester: Defend project by the end of semester

Curriculum Requirements

CORE COURSES:		10
GEOG 600	Geography Research Colloquium (repeated every semester)	
GEOG 601	Geographic Traditions	
GEOG 603	Qualitative Research in Geography	
or GEOG 701	Quantitative Spatial Analysis	
GEOGRAPHY ELECTIVES: [*]		**14**
Geography Courses at the 400 level or above		
GRADUATION TRACK:		**6**
Select the Thesis or the Professional Track:		
1- Professional Track		
GEOG 780	Non-Thesis Project (Professional option)	
Any GEOG course at the 400 level or above		
2- Thesis Track		
GEOG 797	Research (Thesis option)	
Total Hours		30

[*]   Excluding GEOG 600, GEOG 601, GEOG 697, GEOG 698, GEOG 699, GEOG 780, GEOG 797.

Doctor of Philosophy

The Doctoral Program in Geography at West Virginia University provides students with cutting edge training in the history and theory of geography, experience with advanced geographic research methodologies and specialized mentoring from faculty experts across three sub-disciplinary fields (Human Geography; Environmental Geography; Geographic Information Science). To earn a Ph.D. in Geography at WVU students must complete 28 credit hours of graduate courses (based upon the curriculum described below), form a committee of graduate faculty to supervise their study, pass a comprehensive exam, write and defend a dissertation research proposal, and finally, write and defend a dissertation.

Doctor of Philosophy

The Doctoral Program in Geography at West Virginia University provides students with cutting edge training in the history and theory of geography, experience with advanced geographic research methodologies and specialized mentoring from faculty experts across three sub-disciplinary fields (Human Geography; Environmental Geography; Geographic Information Science). To earn a Ph.D. in Geography at WVU students must complete their graduate courses, form a committee of graduate faculty to supervise their study, pass a comprehensive exam, write and defend a dissertation research proposal, and finally, write and defend a dissertation.

Degree Requirements

- **Credit Hours:** Coursework will be selected based on the research area of each student, providing an individualized plan of study appropriate to the field of Human Geography, Environmental Geography, or Geographic Information Science. Students are required to complete a minimum number of 28 graduate credit hours in Geography at the 400 level or above. Coursework substitutions may be approved as appropriate by a student's graduate committee. No more than 6 credit hours of 400-level courses may be counted towards the degree. Students may petition their committee to transfer up to 9 credit hours from another program, including other graduate programs at WVU.
- **Grade Point Average:** Students must earn a minimum GPA of 3.0 overall, and 3.0 in coursework applied to their graduate program.
- **Comprehensive Examinations:** The student is required to pass an oral and three written comprehensive examinations no later than the fourth semester. The student will be examined on two specialty areas and a third area closely related to the proposed dissertation research topic.
- **Dissertation Proposal/Defense:** Upon successful completion of the comprehensive examination and no later than the end of the fifth semester, the student will be expected to defend a dissertation research proposal. The award of the Ph.D. is granted upon the successful defense of the dissertation itself.

Curriculum Requirements

CORE COURSES:		**10**
GEOG 600	Geography Research Colloquium (4 credits minimum)	
GEOG 601	Geographic Traditions	
GEOG 603	Qualitative Research in Geography	
or GEOG 701	Quantitative Spatial Analysis	
Electives in Geography*		**6**
Two GEOG courses at the 500 level or above		
Methods Course		**3**
Select one course from the following list:		
GEOG 517	Climatological Analysis	
GEOG 550	Geographic Information Science	
GEOG 602	Geographic Research-Design	
GEOG 651	Geographic Information Science: Technical Issues	
GEOG 654	Environmental Geographic Information Systems Modeling	
GEOG 655	Remote Sensing Principles	
GEOG 753	Exploratory Spatial Data Analysis	
GEOG 755	Advanced Remote Sensing	
Seminar Course		**3**
Select one course from the following list:		
GEOG 525	Problems in Geomorphology	
GEOG 591	Advanced Topics	
GEOG 594	Seminar	
GEOG 612	Gender, Society and Space	
GEOG 621	Advanced Fluvial Geomorphology	
GEOG 640	Geopolitical Perspectives	
GEOG 691	Advanced Topics	

GEOG 696	Graduate Seminar	
GEOG 791	Advanced Topics	
GEOG 794	Seminar	
GEOG 796	Graduate Seminar	
Additional Coursework		**6**
In consultation with graduate committee, select an additional 6 credit hours of graduate level coursework**		
Total Hours		28

*   Excluding GEOG 600, GEOG 601, GEOG 697, GEOG 780, GEOG 797.

**   Additional coursework may include Geography courses at the graduate level or, with approval from the student's graduate committee, may include graduate level coursework from related disciplines. Additional disciplines may include, but are not limited to, graduate level coursework in Biology, Forestry, Geology, History, Natural Resource Economics, Political Science, Sociology, Statistics, Women's and Gender Studies. Additional coursework should also exclude GEOG 600 (http://catalog.wvu.eduabout://search/?P=GEOG%20600), GEOG 601 (http://catalog.wvu.eduabout://search/?P=GEOG%20601), GEOG 697 (http://catalog.wvu.eduabout://search/?P=GEOG%20697), GEOG 780 (http://catalog.wvu.eduabout://search/?P=GEOG%20780), GEOG 797 (http://catalog.wvu.eduabout://search/?P=GEOG%20797).

Degree Progress

MASTERS DEGREE:

- **Thesis/Project Defense:** The thesis/project defense occurs when the advisor and the committee agree that a defendable copy of the thesis/project is completed. The defense date must be advertised to the department at least two weeks in advance. Thesis/Project defenses are not normally scheduled between June 15 and August 15. In accordance with College requirements, original signatures are required on the shuttle sheet form specifying the outcome of the defense. Students should work with closely with their advisors to establish expectations for length and structure of the thesis/project.
- **Annual Evaluation:** The academic progress of every master's student is reviewed each year. Students must submit a self-evaluation signed by their advisor by January 15. The Graduate Committee will conduct its annual review of students in February and communicate with students in March. Waivers to the M.A. deadlines, timing requirements, and other rules may be requested from the Graduate Coordinator. Waivers are only given under extraordinary circumstances.
- **Required Deadlines:**

  Thesis option

  First year

  - Fall semester: File plan of study
  - Spring semester: Form committee

  Second year

  - Fall semester: Written proposal given to committee by Oct. 1st and complete oral proposal by Oct. 31st
  - Spring semester: Defend thesis by the end of semester

  Professional option

  First year

  - Fall semester: File plan of study
  - Spring semester: Form committee

  Second year

  - Fall semester: Professional option must be chosen by Oct. 1st. Get approval of written plan from the thesis committee and request permission from the graduate committee by the end of semester.
  - Spring semester: Defend project by the end of semester

DOCTORAL DEGREE:

- **Comprehensive Examinations:** The student is required to pass an oral and three written comprehensive examinations no later than the fourth semester. The student will be examined in two specialty areas and a third area closely related to the proposed dissertation research topic.
- **Dissertation Proposal/Defense:** Upon successful completion of the comprehensive examination and no later than the end of the fifth semester, the student will be expected to defend a dissertation research proposal. Dissertation Proposal defenses are not normally scheduled between June 15 and August 15. The award of the Ph.D. is granted upon the successful defense of the dissertation itself.

- **Annual Evaluation:** The academic progress of every doctoral student is reviewed each year. Students must submit a self-evaluation signed by their advisor by January 15. The Graduate Committee will conduct its annual review of students in February and communicate with students in March. Waivers to the PhD deadlines, timing requirements, and other rules may be requested from the Graduate Coordinator. Waivers are only given under extraordinary circumstances. A limited number of the required courses may be waived up to 9 credit hours if the student has already completed an equivalent course and can demonstrate proficiency with the material. They should work with their advisor and the Graduate Committee to request a waiver. Students requesting course waivers must make their request prior to submitting their formal Plan of Study in their first semester.
- **Required Deadlines:**

    First year: Course work

    - Fall semester: File plan of study
    - Spring semester: Form committee

    Second year: Course work

    - Fall semester: Form committee, if not yet completed
    - Spring semester: Oral and Written comprehensive exams

    Third year: Defend proposal/Field work/Data collection

    - Fall semester: Defend dissertation proposal by the end of semester
    - Fall and Spring semesters: Collect data/conduct fieldwork as necessary

    Fourth year: Dissertation writing

Graduate Certificate in GIS and Spatial Analysis
CERTIFICATE CODE - CG37

Required Courses

Select four of the following courses:		12
ARE 729	Spatial Econometrics	
or ECON 729	Spatial Econometrics	
RESM 540	Geospatial Modeling	
RESM 575	Spatial Analysis for Resource Management	
RESM 545	Spatial Hydrology and Watershed Analysis	
GEOG 550	Geographic Information Science	
GEOG 651	Geographic Information Science: Technical Issues	
GEOG 654	Environmental Geographic Information Systems Modeling	
GEOG 655	Remote Sensing Principles	
GEOG 753	Exploratory Spatial Data Analysis	
GEOG 755	Advanced Remote Sensing	
Independent Study Requirement		3
RESM 585	GIS and Spatial Analysis Project	
Total Hours		15

Major Learning Outcomes
GEOGRAPHY

The Graduate Program in Geography at West Virginia University trains students at the highest level to assume leadership roles in research, teaching, and applied work in Human Geography, Environmental Geography, and Geographic Information Science.

GEOGRAPHY

The graduate program in Geography at West Virginia University trains students at the highest level to assume leadership roles in research, teaching, and applied work in Human Geography, Environmental Geography, and Geographic Information Science.

The Geography Graduate Committee regularly reviews the structure and content of the M.A. and Ph.D. programs to provide the best possible education to students in order to meet the needs for highly trained individuals in Human Geography, Environmental Geography, and Geographic Information Science.

M.A. PROGRAM

Student's obtaining a Master's in Geography with a Research Track will be able to:

- Communicate geographic concepts orally and in writing
- Apply research skills to analyze geographic questions
- Propose, produce and defend original research in their field of study
- Explain geographic principles as they relate to their area of research

Student's obtaining a Master's in Geography with a Professional Studies Track will be able to:

- Communicate geographic concepts orally and in writing
- Demonstrate knowledge in their field of geography
- Apply geographical knowledge and methods to at least one of the following:
  - human geography
  - physical geography
  - GIScience

Ph.D. Program

- Master the existing scholarship in the study of Geography with the goal of using this scholarship in the pursuit of their own research.
- Engage in and conduct original research in their area of specialization.
- Prepare to be professionals in careers that require training at the highest level in Geography.

The Geography Graduate Committee regularly reviews the structure and content of the M.A. and Ph.D. programs to provide the best possible education to students in order to meet the needs for highly trained individuals in Human Geography, Environment Geography, and Geographic Information Science.

Geology, M.S., Ph.D.

Degrees Offered

- Master of Science
- Doctor of Philosophy

Nature of the Program

The graduate program in geology provides study opportunities in the following areas:

- Hydrogeology and environmental geology with strengths in ground water flow and modeling; aqueous, contaminant and isotope geochemistry; mine reclamation; and floods and debris flows
- Basin analysis and sedimentary geology with strengths in seismic modeling, basin structures, deposition analysis, sequence stratigraphy, biostratigraphy, diagenesis, and plate tectonics
- Energy geology and geophysics with strengths in the exploration and development of oil, gas, and coal; and environmental impacts of fossil fuel usages
- Paleobiology and paleontology with strengths in macroevolution, paleoecology, and phylogenetics, particularly in relation to arthropods and mass extinctions
- Igneous petrology and volcanology with strengths in arc magmatism and the emplacement of lava flows and pyroclastic deposits
- Geochemistry. In particular aqueous geochemistry, stable isotope geochemistry and organic geochemistry
- Surficial processes and landscape evolution
- Tectonic evolution of the Appalachian, Cordilleran and Himalayan orogens

Tracks within the Masters Degree

- The Research Track requires students to complete independent scholarly research culminating in a thesis. This track is intended for students interested in a research-based graduate degree.
- The Professional Studies Track requires students to complete Professional Development credits/tasks in place of thesis-based research. This track is intended for students looking to obtain additional knowledge and skills for their professional careers in Energy, Geology, or Environmental Geology.

FACULTY

CHAIR

- Brent McCusker - Ph.D. (Michigan State University)
  Social theory, Development

ASSOCIATE CHAIR FOR GEOLOGY

- Jaime Toro - Ph.D. (Stanford Univ.)
  Structure and Tectonics

PROFESSORS

- Timothy Carr - Ph.D. (Univ. of Wisconsin-Madison)
  Sedimentology, Petroleum Geology
- Kathleen Benison - Ph.D. (Univ. of Kansas)
  Sedimentology, Stratigraphy, Evaporites
- Dengliang Gao - Ph.D. (Duke Univ.)
  Geophysics, Petroleum
- Jaime Toro - Ph.D. (Stanford Univ.)
  Structural Geology, Tectonics, Energy
- Dorothy Vesper - Ph.D. (Penn State Univ.)
  Geochemistry, karst, hydrogeology

ASSOCIATE PROFESSORS

- Shikha Sharma - Ph.D. (Univ. of Lucknow, India)
  Isotope Geochemistry, Biogeochemistry, Energy
- Amy Weislogel - Ph.D. (Stanford Univ.)
  Stratigraphy, Sedimentology, Energy

ASSISTANT PROFESSORS

- Graham Andrews - Ph.D. (Univ. of Leicester)
  Igneous Petrology
- James Lamsdell - Ph.D. (Univ. of Kansas)
  Paleobiology, Paleoecology, Macroevolution
- Aaron Maxwell - Ph.D. (WVU)
  Remote Sensing, GIS, Geomorphology
- Chris Russinello - Ph.D. (Univ. of Delaware)
  Hydrogeology, coastal processes

TEACHING ASSOCIATE PROFESSOR

- Joseph Lebold - Ph.D. (West Virginia Univ.)
  Earth Science Education, Stratigraphy, Paleoecology

PROFESSORS EMERITI

- Robert Behling - Ph.D. (Ohio State Univ.)
- Alan Donaldson - Ph.D. (Penn State Univ.)
- Joe Donovan - Ph.D. (Penn State Univ.)
- Thomas Kammer - Ph.D. (Indiana Univ.)
- J Steven Kite - Ph.D. (Univ. of Wisconsin-Madison)
- Henry Rauch - Ph.D. (Penn State Univ.)
- Robert Shumaker - Ph.D. (Cornell Univ.)
- Richard Smosna - Ph.D. (Univ. of Illinois)
- Timothy Warner - PH.D. (Purdue University)
- Thomas Wilson - Ph.D. (West Virginia Univ.)

Admissions

PROCEDURES AND PREREQUISITES

Applicants seeking admission and financial support for the fall semester should apply by January 15th. For spring semester, apply by October 1st.

GRADUATE ADMISSION REQUIREMENTS FOR ALL GRADUATE PROGRAMS

- Transcripts from all universities attended
- PhD applicants should hold a Master's of Science
- An undergraduate GPA of 3.0 or higher; a GPA of 3.0 or higher in any graduate coursework
- A minimum of two letters of reference (3 preferred)
- Statement of goals: M.S. applicants must identify their intended Track (Research or Professional Studies). All applicants must identify their preferred faculty advisor.
- International students must fulfill the English Language Proficiency requirements of WVU (https://graduateadmissions.wvu.edu/information-for/international-students (https://graduateadmissions.wvu.edu/information-for/international-students/)).

  Note: The Geology Graduate Program does not require GRE scores from applicants, and so submission of GRE scores is optional. Some faculty advisors still prefer to see GRE scores from students applying to work in their labs. Applicants should talk to their prospective faculty advisors to check whether the advisor recommends submitting GRE scores as part of the application.

ADDITIONAL ADMISSION REQUIREMENTS FOR THE MASTER'S PROGRAM WITH A PROFESSIONAL STUDIES TRACK

- B.A. or B.S. degree in a STEM or relevant field that includes course work in general physics, chemistry, and calculus. Completed coursework in geology is preferred.

ADDITIONAL ADMISSION REQUIREMENTS FOR THE MASTER'S PROGRAM WITH A RESEARCH TRACK

- Students seeking admission to the M.S. program with a Research Track must complete the equivalents of the geology and allied science and mathematics courses required for the B.S. in Geology at WVU:

GEOL 286	Introduction to Minerals & Rocks
GEOL 311	Stratigraphy and Sedimentation
GEOL 341	Structural Geology
GEOL 404	Geology Field Camp
MATH 155	Calculus 1
MATH 156	Calculus 2
At least 4 courses for the following 3 subject areas:	
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory
PHYS 101	Introductory Physics
PHYS 102	Introductory Physics
BIOL 101	General Biology
BIOL 102	General Biology

Similar courses from other universities or relevant experiences may be substituted if approved during admission review. A course requirement may be waived by the committee if the student can demonstrate competence in that subject area. Certain application requirements may be waived based on a preliminary review of an application by the program.

Master of Science

Degree Requirements

- **Completed Plan of Study**
- **Credit Hours:** Students are required to complete a minimum of 32 graduate credit hours at the 400, 500 or 600 level
- **Grade Point Average:** Students must earn minimum overall GPA of a 3.0 and a minimum GPA of 3.0 in coursework applied to their graduate program.
- **Degree Requirements:**

- Complete a plan of study
- Complete 24 formal (graded) course credit-hours
- At least 15 of the 24-required formal course credits taken from GEOL and GEOG
- Courses outside of GEOL and GEOG to be approved by the student's advisor unless they are on the approved list of outside courses
- **Completion Requirements:** students must select a completion track for a total of 8 credits. Available tracks are the
  - Research track: students must complete a Master's thesis including:
    - Thesis Proposal Defense
    - Thesis Defense
  - Professional studies track: students have the option of completing an internship, completing a project with a faculty member, taking the ASBOG Fundamental exam (first step in professional licensure), additional coursework, or a combination of these options.

Curriculum Requirements

Core Requirements		15
Any GEOL courses at the 400, 500 or 600 level*		
Electives		**9**
Select three courses from the list below:		
Any additional GEOL courses at the 400, 500 or 600 level**		
AEM 401	Environmental Microbiology	
AGRN 417	Soil Genesis and Classification	
AGRN 455	Reclamation of Disturbed Soils	
AGRN 552	Pedology	
ENVP 460	Environmental Impact Assessment	
ENVP 515	Hazardous Waste Training	
ENVP 555	Environmental Sampling and Analysis	
FHYD 444	Watershed Management	
FHYD 655	Watershed Hydrology	
PNGE 632	Reservoir Simulation and Modeling	
PNGE 735	Advanced Formation Evaluation	
RESM 444	Advanced GIS for Natural Resource Management	
RESM 480	Environmental Regulation	
RESM 540	Geospatial Modeling	
RESM 545	Spatial Hydrology and Watershed Analysis	
STAT 511	Statistical Methods 1	
STAT 512	Statistical Methods 2	
WMAN 446	Freshwater Ecology	
WMAN 547	Applied Wetlands Ecology and Management	
GRADUATION TRACK		**8**
Select one track:		
Research Track:		
GEOL 697	Research	
GEOL 699	Graduate Colloquium	
Professional Studies Track:		
Core Courses:		
Select one option or a combination of options below:		
GEOL 682	Masters: Professional Studies Track Cohort Seminar (taken first semester in program)	
GEOL 699	Graduate Colloquium	
Internship:		
GEOL 681	Grad Internship in Geology	
Project:		
GEOL 680	Masters Project Research	
Professional Licensure:		

Any GEOL course(s) at the 400, 500 or 600 level	
Total Hours	32

* no more than 40% of courses may be at the 400 level (WVU requirement)

** Except GEOL 680, 681, 697, 699.

Doctor of Philosophy

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum number of nine credit hours of formal coursework at the 400, 500, 600 or 700 level. Additionally, students will complete a minimum of 10 additional credits in research, colloquium, and seminar.

- **Grade Point Average:** Students must maintain a minimum GPA of 3.0 overall and in the major.

Curriculum Requirements

Core Courses:

GEOL 699	Graduate Colloquium (1 credit, taken twice)	2
GEOL 697	Research (at least 6 credits)	6
GEOL 799	Graduate Colloquium (1 credit, taken twice)	2
Formal Coursework		
Graduate coursework at the 400, 500, 600 or 700 level*		9
Total Hours		19

* Excludes GEOL 600, 697, 700, and 797. Courses will be selected in consultation with an advisor.

Degree Progress - Masters

- Students whose GPA falls below 3.0 will be put on probation for one semester. If they remain below 3.0 for a second semester, they are dismissed from the program.
- Students are discouraged with withdrawing from courses, and should only do so after a discussion with their advisor or the Graduate Program Committee.
- Students must complete annual progress reports (see graduate handbook for details)
- For students completing the Research track, milestone deadlines are below:
  - Target Date -Indicates excellent progress.
  - Deadline - Indicates reasonable progress. Students who do not meet this deadline will be placed on probation.
  - Funding termination date - Students not meeting this deadline will no longer receive department funding and support.

Progress Schedule and Deadlines for MS Research Students

Milestone	Start Semester	Target	Deadline	Funding termination date
Proposal Defense	Fall	May 1, Year 1	Aug 1, Year 1	Dec 1, Year 2
Spring	Aug 1, Year 1	Dec 1, Year 1	May 1, Year 2	
Thesis defense and submission	Fall	May, Year 2	Support typically not available after 2 years	
Spring	Aug, Year 2			

Degree Progress - Ph.D.

- Students whose GPA falls below 3.0 will be put on probation for one semester. If they remain below 3.0 for a second semester, they are dismissed from the program.
- Withdrawing from classes is only permitted with the permission of the student's advisor or the Geology Graduate Program Committee.
- Students must complete annual progress reports (see graduate handbook for details).
- Milestone deadlines are below:
  - Target Date - Indicates excellent progress.
  - Deadline - Indicates reasonable progress. Students who do not meet this deadline will be placed on probation.
  - Funding termination date - Students not meeting this deadline will no longer receive department funding and support.

Ph.D. Milestone Targets and Deadlines

Milestone	Start Semester	Target date	Deadline	Funding termination date
Preliminary Exam	Fall	May 1, Year 1		Aug 1, Year 1 (for retakes only)
	Spring	Dec 1, Year 1	May 1, Year 2 (for retakes only)	
Proposal/ Comprehensive (Candidacy) Exam	Fall	May 1, Year 2	Dec 1, Year 3	May 1, Year 3
	Spring	Dec 1, Year 2	May 1, Year 3	Dec 1, Year 3
Dissertation defense	Fall	May, Year 4	Support typically not available after 4 years	

Major Learning Outcomes

GEOLOGY

Students obtaining a masters in Geology with a Research Track will be able to:

- Communicate geologic concepts orally and in writing
- Apply research skills to analyze geologic questions
- Propose, produce and defend original research in their field of study
- Explain geologic principles as they relate to their area of research

Students obtaining a masters in Geology with a Professional Studies Track will be able to:

- Communicate geologic concepts orally and in writing
- Demonstrate knowledge in either energy geology or environmental geology
- Apply geological knowledge and methods to (1) find, develop and produce energy resources particularly natural gas, natural gas liquids and oil; OR, (2) to assess environmental issues

Students obtaining a doctorate in geology degree will be able to:

- Communicate geologic concepts orally and in writing
- Apply research skills to analyze geologic questions
- Propose, produce and defend original research of publishable quality
- Explain geologic principles as they relate to their area of research
- Effectively communicate the state of knowledge in their research area
- Identify research questions in geology
- Critique and assess peer-reviewed literature

History, M.A., Ph.D.

Degrees Offered

- Master of Arts
- Doctor of Philosophy

Nature of the Program

The Department of History offers graduate work in the history of Africa, Asia, Europe, Latin America, public history, the United States including Appalachia/regional, and world history. In addition to our core areas of strength, the department encourages research that is comparative and transnational in perspective and scope. Faculty research and teaching interests are clustered thematically around four areas: Gender and Kinship, Imperial and Postcolonial Societies, Labor and Political Economy, and War and Society. Our program is designed to give students flexibility to create a plan of study that matches their interests, while at the same time provide a breadth of training in different fields that will prepare students in historiography, research methods, and teaching approaches. Students can select concentrations leading to preparation for careers in teaching and scholarship and as specialists for various branches of government, business, and public service. Students in the program are normally expected to pursue the degrees of master of arts or doctor of philosophy.

TRANSATLANTIC OPTION FOR THE MASTER OF ARTS

The Department of History has launched a new transatlantic program in international history and security studies in partnership with Collegium Civitas, located in Warsaw, Poland, beginning fall 2018. The program is designed as a two-year plan of study consisting of 60 U.S. credit hours, or 120 European Credit Transfer and Accumulation System credits. Students completing the program earn half of these credits at WVU and the other half at

Collegium Civitas. Following a successful completion of all requirements, including the thesis defense, two master's degrees will be conferred—one in history from WVU, and the other in international relations from Collegium Civitas.

WVU students will normally spend their first year of studies at WVU and their second year at CC. Students from Collegium Civitas will spend their first year in Warsaw and their second year in Morgantown. Defense of the joint MA thesis will be held on the premises of both institutions, physically and virtually, with participation by both WVU and CC faculty.

All requirements of the program must be met and credits transferred between the institutions before either the U.S. degree from WVU, or the European degree from Collegium Civitas can be issued. As a result, the two degrees, though coming from separate institutions, are awarded simultaneously.

FACULTY

CHAIR

- Kate Staples - Ph.D. (University of Minnesota)
  Medieval, Gender, England, Material Culture

ASSOCIATE CHAIR

- Joshua Arthurs - Ph.D. (University of Chicago)
  Modern Europe, Fascism, Italy, cultural

PROFESSORS

- Katherine Aaslestad - Ph.D. (University of Illinois)
  Modern Europe, Germany
- Robert E. Blobaum - Ph.D. (University of Nebraska)
  Eberly Family Professor of History, modern Central and Eastern Europe
- William I. Brustein - Ph.D. (University of Washington)
  European fascism, European political and religious extremism, comparative anti-Semitism
- Jason Phillips - Ph.D. (Rice University)
  Eberly Professor of Civil War Studies, civil war, reconstruction, southern history, 19th-century U.S.
- Matthew A. Vester - Ph.D. - (University of California)
  Early modern Europe, Italy

ASSOCIATE PROFESSOR

- Joshua Arthurs - Ph.D. (University of Chicago)
  Modern Europe, Italy, cultural
- Melissa Bingmann - Ph.D. (Arizona State University)
  Public history, 20th-century U.S.
- Joseph Hodge - Ph.D. (Queen's University at Kingston)
  Modern Britain, British Empire, decolonization, international development, Africa
- Brian Luskey - Ph.D. (Emory University)
  19th-century U.S, social and cultural
- Tamba E. M'bayo - Ph.D. (Michigan State University)
  West Africa, colonial and postcolonial, African diaspora and Pan-Africanism
- James Siekmeier - Ph.D. (Cornell University)
  U.S. diplomatic, Latin America
- Kathryn Staples - Ph.D. (University of Minnesota)
  Medieval, gender, England, material culture
- Michele Stephens - Ph.D. (University of Oklahoma)
  Latin America, indigenous peoples, race and gender
- Mark B. Tauger - Ph.D. (UCLA)
  20th-century Russia/USSR, world/comparative, historiography

ASSISTANT PROFESSOR

- Max Flomen - Ph.D. (U.C.L.A.)
  early America, Native American history
- William Gorby - Ph.D. - (West Virginia University)
  West Virginia, Appalachia
- Devin Smart - Ph.D. (University of Illinois-Urbana Champaign)

Africa, World/Global, environmental
- Jennifer Thornton - Ph.D. (University of California, Riverside)
  Public History

EMERITI FACULTY

- William S. Arnett
  Associate Professor
- Elizabeth Fones-Wolf
  Professor
- Kenneth Fones-Wolf
  Professor
- Jack Hammersmith
  Professor
- Barbara J. Howe
  Associate Professor
- Elizabeth K. Hudson
  Associate Professor
- Ronald L. Lewis
  Eberly Chair and Professor
- Robert M. Maxon
  Professor
- Stephen C. McCluskey
  Professor
- A. Michal McMahon
  Associate Professor
- John C. Super
  Professor

Admissions

GRE scores are not required for the application or admission to WVU History graduate programs, but will be considered if they are provided.

M.A. IN HISTORY

Students seeking admission to the regular master of arts program should have the equivalent of a bachelor's degree in history. Applicants lacking this degree may be required to make up deficiencies. Application requirements include transcripts (a minimum of a 3.0 average in history courses is expected), three letters of recommendation, a statement of purpose, writing sample, and résumé.

TRANSATLANTIC OPTION

Students who wish to pursue the transatlantic program in international history and security studies should apply as they would for the regular M.A. in history. The statement of purpose should highlight relevant background and reasons for interest in the international history and security studies program. Prospective students must meet the same criteria for admission as applicants to the regular M.A. program.

M.A. IN PUBLIC HISTORY ADMISSION

Students apply for admission to the public history program as they would for the regular M.A. in history. The statement of purpose should highlight relevant background and reasons for interest in public history. Students in public history should have an undergraduate degree in history. Applicants lacking this degree may be required to make up deficiencies.

PH.D. ADMISSION

Students seeking admission to the doctor of philosophy program should have the equivalent of an M.A. in history. Application requirements include a transcript (a minimum of a 3.0 average in graduate history courses is required) and three letters of recommendation. Students should also include a statement of purpose, an example of their written work, and a résumé as a part of the application.

DIRECT ADMISSION TRACK TO PH.D. PROGRAM

Students who have compiled an outstanding record in an undergraduate history major may apply for direct admission to the doctor of philosophy program. They are not required to obtain a master's degree. Admission directly to the Ph.D. program is highly selective and limited to exceptionally qualified students with superior standing in their bachelor's degree. Students of this caliber are generally expected to have a cumulative Grade Point Average (GPA) of 3.9 or higher. In addition, students must provide evidence that they have experience conducting a substantial piece of original historical research, such as a senior honors thesis or major capstone paper.

Certain application requirements may be waived based on a preliminary review of an application by the program.

Doctor of Philosophy
Degree Requirements

- **Credit Hours:** Students are required to complete a minimum number of 34 credit hours in History at the 400 level and above.

- **Grade Point Average:** Students must earn a minimum GPA of 2.75 overall, and of 3.00 in coursework applied to their graduate program in History to remain in good standing.

- **Program of Study:** A candidate must complete a program of study in four fields (a major field and three minor fields) developed in consultation with faculty field examiners.
    - Students may be required to take additional coursework depending upon their preparation in exam fields. Decisions about required coursework will be made in consultation with field examiners and the director of graduate studies.
    - At least three fields must be in History while the fourth may be in a related field with the approval of the director of graduate studies.
    - At least one of the four fields must be in a geographic area outside the student's main area of concentration for dissertation research.

- **Comprehensive Examination:** For each of the four fields of study, students take a comprehensive examination (written and oral) based on knowledge derived from coursework and readings from a book-list prepared in consultation with the faculty field adviser.
- **Dissertation:** Dissertation work should normally be in the history of the United States, Europe, or modern Africa.

- **Additional Requirements:** Depending on their area of study or dissertation projects, graduates may be required to master one or more languages or to demonstrate proficiency in particular research methods (quantitative analysis, paleography, GIS, etc.).

- **Progress toward completion:** Students will be evaluated on a yearly basis. If adequate progress is not made, students may be placed on probation or suspended from the program. Students should complete a plan of study by the end of their second semester. Students typically complete comprehensive exams at the end of their fourth semester or beginning of their fifth semester, defend their dissertation prospectus during their fifth or sixth semester, and defend and submit their dissertation within five years of completing their comprehensive exams.

Curriculum Requirements

Historiography Requirement		**3**
HIST 700	Historiography	
Primary Field: [*]		**9**
Select at least one Reading/Seminar sequence		
HIST 701 & HIST 702	Readings in Medieval History and Seminar in Medieval History	
HIST 705 & HIST 706	Readings in Early Modern History 3 Hr and Seminar in Early Modern History	
HIST 717 & HIST 718	Readings In Modern European History and Seminar in Modern European History	
HIST 725 & HIST 726	Readings in African History and Seminar in African History	
HIST 731 & HIST 732	Readings In American History: 1585-1763 and Seminar in American History: 1585-1763	
HIST 757 & HIST 758	Readings in United States History: 1787-1850 and Seminar in United States History: 1787-1850	
HIST 759 & HIST 760	Readings in United States History: 1840-1898 and Seminar in United States History: 1850-1898	
HIST 763 & HIST 764	Readings in United States History: 1898-Present and Seminar in United States History: 1898-Present	
HIST 765 & HIST 766	Readings in United States Diplomatic History and Seminar in United States Diplomatic History	
HIST 773 & HIST 774	Readings in Appalachian Regional History and Seminar in Appalachian Regional History	
Select at least one additional related course: [**]		
HIST at the 400, 500, 600, or 700 level		
Minor Field 1: [*]		**6**

Select an additional Reading/Seminar pair		
HIST 701 & HIST 702	Readings in Medieval History and Seminar in Medieval History	
HIST 705 & HIST 706	Readings in Early Modern History 3 Hr and Seminar in Early Modern History	
HIST 717 & HIST 718	Readings In Modern European History and Seminar in Modern European History	
HIST 725 & HIST 726	Readings in African History and Seminar in African History	
HIST 731 & HIST 732	Readings In American History: 1585-1763 and Seminar in American History: 1585-1763	
HIST 757 & HIST 758	Readings in United States History: 1787-1850 and Seminar in United States History: 1787-1850	
HIST 759 & HIST 760	Readings in United States History: 1840-1898 and Seminar in United States History: 1850-1898	
HIST 763 & HIST 764	Readings in United States History: 1898-Present and Seminar in United States History: 1898-Present	
HIST 765 & HIST 766	Readings in United States Diplomatic History and Seminar in United States Diplomatic History	
HIST 773 & HIST 774	Readings in Appalachian Regional History and Seminar in Appalachian Regional History	
Minor Fields 2 & 3: [*]		**12**
Select at least 4 courses: [**]		
Any HIST at the 400 level		
Any HIST course at the 500 level		
Any HIST course at the 600 level		
Any HIST course at the 700 level		
Research Requirement		**4**
HIST 797	Research	
Total Hours		34

[*]   Courses selected for this section should not be used for another field.

[**]   Excluding HIST 490, HIST 697 HIST 700, HIST 789, HIST 790, and HIST 797

Degree Progress

M.A. IN HISTORY

Students will be evaluated annually. If adequate progress is not made, students may be placed on probation or suspended from the program. All students should complete a plan of study by the end of their second semester. Students who choose the thesis option should defend their thesis proposal prior to the beginning of the semester in which they intend to graduate, and submit and defend their thesis during the semester in which they intend to graduate. Students who choose the examination option should take HIST 795 and complete written and oral examinations during the semester in which they intend to graduate.

M.A. IN PUBLIC HISTORY

Student will be evaluated annually by the program coordinator. If adequate progress is not made, students may be placed on probation or dismissed from the program. All students should complete a plan of study by the end of their second semester. HIST 614 should be completed by the end of the student's third semester in the program.

PH.D.

Students will be evaluated on a yearly basis. If adequate progress is not made, students may be placed on probation or dismissed from the program. Students should complete a plan of study by the end of their second semester. Students typically complete comprehensive exams at the end of their fourth semester or beginning of their fifth semester, defend their dissertation prospectus during their fifth or sixth semester, and defend and submit their dissertation within five years of completing their comprehensive exams.

Major Learning Outcomes

HISTORY

Students earning a M.A. in History will be able to:

- Examine and evaluate primary and secondary sources, historiographical methods, and debates among historians.
- Compose a research question and agenda that identifies the state of their field, potential weaknesses of our current historiographical understanding, or the limits of current debates.
- Use their understanding of the historical and historiographical literature to conduct research and produce and defend an original argument that makes a contribution to their field of study.

History, M.A.

M.A. in History

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum of 30 credit hours in History at the graduate level. Up to 12 credits can be at the 400 or 500 level.
- **Grade Point Average:** Students must earn a minimum overall GPA of 2.75, and a GPA of 3.00 in coursework applied to their graduate program.
- **Graduation Requirement:** Students have the option of either taking a comprehensive examination or completing a thesis.
    - **Master's Thesis:** The thesis must be based on original research that demonstrates a critical engagement with primary sources and the secondary literature and is developed in multiple chapters. Students must first prepare a thesis prospectus, which must be approved by their thesis committee, before writing and successfully defending the thesis in an oral examination. A maximum of six hours of credit for HIST 697 (http://catalog.wvu.edu/search/?P=HIST%20697) can be taken for writing the thesis.
    - **Comprehensive Examination:** Students who choose this option must register for HIST 795 while preparing for their exam. In their final semester, they complete comprehensive exams in their major and minor fields, based on their coursework and in consultation with a faculty adviser for each field. The comprehensive exams include a written component and an oral defense.
- **Progress toward completion:** Students will be evaluated annually. If adequate progress is not made, students may be placed on probation or suspended from the program. All students should complete a plan of study by the end of their second semester. Students who choose the thesis option should defend their thesis proposal prior to the beginning of the semester in which they intend to graduate, and submit and defend their thesis during the semester in which they intend to graduate. Students who choose the examination option should take HIST 795 and complete written and oral examinations during the semester in which they intend to graduate.
- **Additional Requirements:** Individual faculty may require their students to master one or more languages or to demonstrate proficiency in particular research methods (quantitative analysis, paleography, GIS, etc.) or to develop other skills as necessary for their areas of study and thesis projects.

Curriculum Requirements

CORE COURSE:		3
HIST 700	Historiography	
PRIMARY FIELD		**12**
Select one of the following sequences:		
HIST 701 & HIST 702	Readings in Medieval History and Seminar in Medieval History	
HIST 705 & HIST 706	Readings in Early Modern History 3 Hr and Seminar in Early Modern History	
HIST 717 & HIST 718	Readings In Modern European History and Seminar in Modern European History	
HIST 725 & HIST 726	Readings in African History and Seminar in African History	
HIST 731 & HIST 732	Readings In American History: 1585-1763 and Seminar in American History: 1585-1763	
HIST 757 & HIST 758	Readings in United States History: 1787-1850 and Seminar in United States History: 1787-1850	

HIST 759 & HIST 760	Readings in United States History: 1840-1898 and Seminar in United States History: 1850-1898
HIST 763 & HIST 764	Readings in United States History: 1898-Present and Seminar in United States History: 1898-Present
HIST 765 & HIST 766	Readings in United States Diplomatic History and Seminar in United States Diplomatic History
HIST 773 & HIST 774	Readings in Appalachian Regional History and Seminar in Appalachian Regional History
Any 2 HIST courses related to the field at the 400 level or above. [*]	
SECONDARY FIELD AND ELECTIVE:	**9**
Select any 3 HIST courses 400 level or above [*]	
COMPLETION OPTION	**6**
Select one option:	
Thesis	
HIST 697	Research
Examination:	
HIST 795	Independent Study
Total Hours	30

[*]   Except HIST 697, HIST 700, HIST 790, HIST 789, HIST 797.

Public History, M.A.

M.A. in Public History

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum of 33 graduate credit hours in History. Up to 12 credits can be at the 400 or 500 level. Six of the 33 credits can be from outside history, with permission from adviser.

- **Grade Point Average:** Students must earn a minimum overall GPA of 2.75, and a GPA of 3.00 in coursework applied to their graduate program.

- **Progress toward graduation:** Student will be evaluated annually by the program coordinator. If adequate progress is not made, students may be placed on probation or suspended from the program. All students should complete a plan of study by the end of their second semester.   HIST 614 should be completed by the end of the student's third semester in the program.

- **Additional Requirements:** Students will develop a professional portfolio while taking their core courses; the portfolio will include an applied research project completed as part of several courses.

Core Courses		**12**
HIST 613	Local History Research Methodology	
HIST 750	Public History Methods	
Select one set of courses:		
HIST 701 & HIST 702	Readings in Medieval History and Seminar in Medieval History	
HIST 705 & HIST 706	Readings in Early Modern History 3 Hr and Seminar in Early Modern History	
HIST 717 & HIST 718	Readings In Modern European History and Seminar in Modern European History	
HIST 725 & HIST 726	Readings in African History and Seminar in African History	
HIST 731 & HIST 732	Readings In American History: 1585-1763 and Seminar in American History: 1585-1763	
HIST 757 & HIST 758	Readings in United States History: 1787-1850 and Seminar in United States History: 1787-1850	
HIST 759 & HIST 760	Readings in United States History: 1840-1898 and Seminar in United States History: 1850-1898	

HIST 763 & HIST 764	Readings in United States History: 1898-Present and Seminar in United States History: 1898-Present	
HIST 765 & HIST 766	Readings in United States Diplomatic History and Seminar in United States Diplomatic History	
HIST 773 & HIST 774	Readings in Appalachian Regional History and Seminar in Appalachian Regional History	
HIST 785 & HIST 786	Readings in Environmental History and Seminar in Environmental History	
Professional Experience		**6**
HIST 614	Internship in Public History	
Electives*		**15**
Any HIST Reading course at the 700 level or above		
Any HIST course at the 400 level or above		
Courses at the 400 level or above in another subject, as approved by adviser		
Total Hours		33

*   Excluding HIST 750, 797

Leadership

Certificate Offered

- Leadership

Nature of the Program

Effective leadership may be the most critical component of a fruitful and sustained human society or organization. Though related to effective management and administration, effective leadership requires a different and more strategically applied skill set and a larger, longer term perspective and sense of context.

WVU's Graduate Certificate in Leadership is the first of its kind in the state of West Virginia. It offers working professionals innovative, research-driven courses with practical applications that will prepare you for the next stage of your career. If you entered the workforce before having the opportunity to take courses in leadership, our graduate certificate will meet your needs. Offered entirely online, our program provides a flexible curriculum that can be completed in as little as one year.

Students in the WVU Leadership Program are part of a community that is committed to helping them develop through hands-on experiences and academic opportunities. The faculty, staff, and partners extend beyond the traditional boundaries of the classroom and academic departments. The faculty who teach reflect this mix of scholarship in the field and real-world experience as leaders. In addition to passion and discipline, our program cultivates competent, confident and conscientious citizens.

Our courses will equip you to enhance leadership capacity at work and in your daily life, manage conflict and change, analyze organizational ethics and leadership practices, assess a variety of leadership types and approaches, and critique the role of leadership in shaping organizational culture and climate.

Students will study, practice, and understand leadership in a global context. Graduates will demonstrate knowledge of leadership theories and approaches, apply leadership approaches to analyze and evaluate ethical leadership practices, and exercise the skills essential to effective leadership in the classroom and through real-world cases. They will also explore how identity and culture impact leadership in the United States and abroad.

FACULTY

PROGRAM DIRECTOR

- Lisa DeFrank-Cole - Ed.D. (University of Pittsburgh)

ASSISTANT PROFESSOR

- Cheyenne Luzynski - Ph.D. (Eastern Michigan University)

FACULTY AFFILIATES

- Amena Anderson - Ph.D. (West Virginia University)
- Karen Kunz - D.P.A. (University of Illinois at Springfield)

Admissions

APPLICATION REQUIREMENTS

Applicants must:

- Apply with the online Graduate Application (https://graduateadmissions.wvu.edu/)
- Pay graduate application fee
- Write and submite a one-page (250 words) personal statement on why you wish to pursue this certificate
- Request official transcripts from all institutions attended (other than WVU) and sent to:

WVU Office of Graduate Admissions
One Waterfront Place
PO Box 6510
Morgantown, WV26506-6510

Transcripts can be sent electronically to GraduateAdmissions@mail.wvu.edu

For questions, please contact:

Lisa DeFrank-Cole, Ed.D.
Director and Professor, Leadership Studies
304-293-8781
LeadershipStudies@mail.wvu.edu

Graduate Certificate in Leadership

CERTIFICATE CODE - CG43

Core Coursework

LDR 501	Advanced Leadership Theory and Practice	3
LDR 551	Advanced Problems in Leadership	3
LDR 601	Applied Leadership in the Workplace	3
Electives		**6**
LDR 435	Women and Leadership	
LDR 445	Intersections in Leadership	
LDR 545	Leading Social Change	
LDR 610	Operationalizing Leadership	
LDR 615	Leadership in Contemporary Organizations	
Total Hours		15

Certificate Learning Outcomes

LEADERSHIP

Students completing this graduate certificate will have proven competencies in the following:

1. Examining a variety of leadership theories and approaches.
2. Analyzing ethical considerations in leadership practices.
3. Critiquing environments (based on race, class, gender, etc.) and how leaders and followers interact.
4. Synthesizing applicable leadership skills that can be used in professional, political and civic settings.
5. Applying outcomes/simulations where leaders, followers and context are all incorporated to manage conflict and change.

Legal Studies, M.L.S.

Degree Offered

- Master of Legal Studies

Nature of the Program

West Virginia University's Master of Legal Studies (MLS) program is part of the Department of Public Administration. The M.L.S. is a degree program designed to build greater public understanding of the law and the United States legal system, to provide graduates with the ability to apply knowledge

and skills gained to performing their jobs more effectively and to provide private and public organizations the benefit of enhanced experience. It is designed for professionals practicing in human relations, criminal and juvenile justice, the court system, journalism, social work, regulatory agencies, county and municipal government, military, business and other professionals who work with, though not necessarily in, the legal system. It is neither a "pre-law" program nor a paralegal program. It does not prepare graduates to practice law.

The M.L.S. is a 30-credit hour program offered entirely online. Courses are offered each term, including summers. Students following the prescribed course of study should be able to finish the degree in 18 months.

The M.L.S. degree offers Areas of Emphasis in:

- Healthcare
- Homeland Security
- Justice Systems

Prospective and current students should frequently check the program's website (https://publicadmin.wvu.edu/students/master-of-legal-studies/) for up-to-date program information, forms, and other guidelines.

FACULTY
CHAIR
- Maja Husar Holmes - Ph.D. (Syracuse University)

GRADUATE PROGRAM COORDINATOR
- Cheryl Dennis - JD (West Virginia University)

COORDINATOR
- Carla J. See - M.A., M.S. (West Virginia University)

ASSOCIATE PROFESSORS
- Valarie Blake - JD (University of Pittsburgh)
- John C. Kilwein - Ph.D. (Ohio State University)

TEACHING ASSISTANT PROFESSOR
- Cheryl Dennis - JD (West Virginia University)

LECTURERS
- Irving Condon - JD (University of South Carolina School of Law)
- Michelle Mensore Condon - JD (Washington & Lee University)
- Cara Davis - JD (Duquesne University School of Law)
- Julie Hawkinberry - JD (West Virginia University)
- Ulysses N. Jaen - JD (West Virginia University)
- Patricia A. Keller - JD (West Virginia University)
- Gregory Noone - JD, Ph.D. (Suffolk University Law School, West Virginia University)
- Ted Nordstrom - JD (West Virginia University)
- Thomas O. Patrick - JD (West Virginia University)
- Lucinda Potter - M.A. (West Virginia University)
- Roger A. Wolfe - JD (West Virginia University)

PROFESSOR EMERITUS
- Nancy L. Adams - Ph.D. (Fielding Institute)

Admissions

The Master of Legal Studies program admits new students for the summer, fall and spring semesters on a rolling basis. Priority application deadlines are April 15 for the summer semester, May 15 for the fall semester or November 15 for the spring semester. Applications will be considered after these deadlines.

CRITERIA

- Bachelor's degree
- Cumulative undergraduate GPA of 2.75 or higher
- Work experience broadly related to legal studies preferred

Application for admission and transcripts: Apply here (https://graduateadmissions.wvu.edu/how-to-apply/apply-for-2020-2021/)

APPLICATION CHECKLIST

- Transcripts
- Standardized graduate-level test scores (GRE, GMAT, LSAT) or request exemption of test scores in the Personal Statement. See exceptions to test scores below.
- Statement of Purpose. One to two pages about how and why the MLS program will further your career.
- Resume or C.V.
- Two letters of recommendation.
- TOEFL scores (international students only)

The requirement that applicants submit GRE, GMAT or LSAT scores can be waived under the following circumstances.

- **Admission based on Undergraduate GPA**: The applicant who earned a bachelor's degree from a U.S. accredited college or university and achieved a cumulative GPA of 3.4 or higher are eligible to waive the GRE/GMAT/LSAT requirement to apply for the program.

- **Evidence of graduate level competence:** Applicants who already hold a graduate degree or have successfully completed at least 18 semester hours in another accredited graduate program may request a waiver of the graduate exam score requirement.
- **Significant experience related to legal studies:** Applicants with at least five years of broadly related experience after completing their undergraduate degree may request a waiver of the graduate exam score requirement. If you are active military or a veteran, please include military experience. Include a description of your professional experience and how it relates to legal studies and your career goals in your statement of purpose.

Additional information and forms may be found on the program's website or by calling the program at (304) 293-7977.

Certain application requirements may be waived based on a preliminary review of an application by the program.

Master of Legal Studies

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum of 30 credit hours in graduate coursework.

- **Grade Point Average:** Students must earn a minimum cumulative GPA of 3.00 in coursework applied to the graduate program. Students must also earn a minimum grade of C in all required MLS courses. Students must earn a B or better in non-LEGS courses that contribute to the MLS degree program of study.

- **Area of Emphasis:** The MLS program offers three areas of emphasis 1) Healthcare, 2) Justice Systems, and 3) Homeland Security. Students may either complete an Area of Emphasis or 9 credits of electives.

- **Graduation Requirement:** Students must complete the curricular program of study and earn a cumulative GPA of 3.0 or better.

- **Benchmarks:** Students are expected consult with their faculty advisor at least once a semester with to review their progress in the program of study. More information is provided in the MLS Student Handbook.

- **Degree Completion**: Full-time students usually complete the MLS degree in fours semester.

Curriculum Requirements

Minimum GPA of 3.0 is required.

Required Courses		
LEGS 610	Law and the Legal System	3
LEGS 620	Researching the Law	3
Select two of the following:		**6**
LEGS 640	Administrative Legal Process	

LEGS 645	Judicial Legal Process	
LEGS 650	The Legislative Process	
LEGS 660	Dispute Resolution	3
LEGS 700	Research Capstone	3
LEGS 760	Administrative Ethics	3
Elective Courses		
Select three of the following:		**9**
LEGS 691	Advanced Topics	
LEGS 710	Family Law	
LEGS 720	Media and the Law	
LEGS 730	Employment Law	
LEGS 750	Criminal Law and Procedure	
LEGS 751	Punishment and Corrections	
LEGS 752	Homeland Security	
LEGS 753	Immigration and Border Security	
LEGS 754	Military Justice	
LEGS 770	Healthcare Law	
LEGS 771	Long Term Care Regulation	
LEGS 780	Constitutional Law	
Total Hours		30

Healthcare Area of Emphasis

Required Course

LEGS 770	Healthcare Law	3
Select two of the following:		**6**
LEGS 710	Family Law	
LEGS 720	Media and the Law	
LEGS 730	Employment Law	
LEGS 771	Long Term Care Regulation	
LEGS 780	Constitutional Law	
Others approved by Master of Legal Studies Advisor		
Total Hours		9

Homeland Security Area of Emphasis

Required Course

LEGS 752	Homeland Security	3
Select two of the following:		**6**
LEGS 720	Media and the Law	
LEGS 730	Employment Law	
LEGS 750	Criminal Law and Procedure	
LEGS 751	Punishment and Corrections	
LEGS 753	Immigration and Border Security	
LEGS 754	Military Justice	
LEGS 780	Constitutional Law	
Others approved by Master of Legal Studies Advisor		
Total Hours		9

Justice System Area of Emphasis

Required Course

| LEGS 750 | Criminal Law and Procedure | 3 |
| **Select two of the following:** | | **6** |

LEGS 720	Media and the Law
LEGS 730	Employment Law
LEGS 751	Punishment and Corrections
LEGS 752	Homeland Security
LEGS 753	Immigration and Border Security
LEGS 754	Military Justice
LEGS 780	Constitutional Law
Others approved by Master of Legal Studies Advisor	
Total Hours	9

Degree Progress

Benchmarks: Students are expected consult with their faculty advisor at least once a semester to review their progress in the program of study.

Plan of Study: The Plan of Study should be discussed with the faculty advisor to ensure appropriate sequencing of courses to meet graduation requirements.

Evaluation Procedures: The Legal Studies faculty are committed to support all admitted students in their timely completion of the program. Students will receive a "good standing" letter from the Chair of the Department annually. They will also be provided feedback through academic assignments and individual meetings as needed. The academic advisor is available to discuss areas in which students may be experiencing challenges and/or need additional support. If the academic advisor is not available, students should feel free to contact the Chair of the Department of Public Administration.

Timeline: Master's degree students are permitted to continue in a program for a maximum of eight years following their term of admission to the program. Students who have been inactive for two or more years or who exceed eight years following their term of admission are required to apply for readmission to the University and their graduate program.

Professional Behavior: The Master of Legal Studies program is a professional program preparing people for careers in public service. Adherence to professional standards and ethics are expected of students.

More information is provided in the M.L.S. Student Handbook.

Major Learning Outcomes
MASTER OF LEGAL STUDIES

Students will be:

- Prepared to articulate and differentiate between the law, the courts, other legal institutions and legal actors and to define their impact on society;
- Identify sources of law;
- Develop research plans and conduct legal research;
- Prepare for and assist with civil and criminal litigation;
- Understand policymaking and rulemaking, develop and implement strategies and plans to affect policy making and rulemaking.

Linguistics, M.A.

Degree Offered

- Master of Arts

Nature of the Program

The M.A. program in Linguistics includes 30 hours of core and elective courses and is designed to provide students with a well rounded perspective on the field. Students also have the opportunity to engage in research projects that reflect their interests within a given subject and that serve to complement and augment the information imparted through in-class activities. The program may be completed either by taking comprehensive exams, or by writing and defending a Master's thesis.The program is intended both for students seeking preparation for doctoral studies in linguistics or a related field, as well as for those seeking a professional degree with a goal of pursuing careers in language related fields.

Available Financial Aid

Graduate teaching assistantships are available to students admitted to any of our three M.A. programs for teaching different languages, including Arabic, Chinese, French, German, English as a Second Language, Italian, Japanese, Russian, and Spanish. The assistantships carry full tuition remission and a nine-month stipend (August–May); there are also limited opportunities to teach during the university's summer session.

In addition to the graduate teaching assistantships, a limited number of meritorious tuition waiver awards are sometimes available from the Eberly College of Arts and Sciences through the department. These awards are based on academic performance and financial need.

Graduate Teaching Assistants

The department values the contributions made by our graduate assistants and strives to help them become effective teachers. Graduate assistants normally teach two courses (six class-hours per week). They work under the direct supervision of the course coordinator in the language area, but they are fully responsible for their courses (including evaluating their students' work). The coordinator will conduct orientations and organizational meetings with graduate assistants and provide course materials (such as syllabi). In addition, the coordinator will periodically observe individual classes in order to assess the graduate assistants' performance and to provide encouragement and assistance.

All graduate teaching assistants must register for one of our language teaching methods classes (LANG 421, LANG 521, or LANG 621, depending on the language they are teaching). In addition, graduate assistants must register for LANG 690 each semester of employment. Students who have already received an M.A. in World Languages, Literatures, and Linguistics from West Virginia University may be ineligible for an assistantship in this department.

Additional Points of Information

ADVISING

All graduate students will have a primary advisor (to be assigned by the chairperson). Students should consult with their advisor when they register for courses or add and/or drop courses. In addition, the Associate Chair of Graduate Studies is available to answer questions regarding the degree program, requirements, comprehensive examinations, graduation, etc. Students may consult with the chairperson regarding departmental matters.

STUDY ABROAD OPPORTUNITIES FOR GRADUATE STUDENTS

Qualified teaching assistants in French may compete for the Marguerite Eynard McBride Award, which funds an academic year in France. Year-long exchange programs for graduate students are also in place for France and Spain. The department also sponsors study abroad during the summers in Canada, China, France, Germany, Italy, Japan, Jordan, Mexico, Spain, and Taiwan that graduate students may participate in if they meet the program's requirements. Grants are available on a competitive basis through the department, the Eberly College of Arts and Sciences, and through the Office of International Programs to assist students who wish to study abroad.

FACULTY

CHAIR

- Amy S. Thompson - Ph.D. (Michigan State University)
  Applied Linguistics

ASSOCIATE CHAIRS

- Sandra Stjepanovi# - Ph.D. (University of Connecticut)
  Graduate Studies, Linguistics, Syntax, Psycholinguistics, Semantics
- Pablo Garcia Loaeza - Ph.D. (Indiana University Bloomington)
  Undergraduate Studies, Spanish Language, Latin American Colonial Literature

PROFESSORS

- Daniel Ferreras - Ph.D. (Michigan State University)
  French and Spanish, Comparative Romance Literature, French/Spanish 19th and 20th Century Novel, Theory of the Fantastic
- Valérie Lastinger - Ph.D. (University of Georgia)
  French, 18th-century French Literature, French Women Writers
- Janice Spleth - Ph.D. (Rice University)
  French and Francophone Literature and Culture
- Amy S. Thompson - Ph.D. (Michigan State University)
  Applied Linguistics
- Ángel Tuninetti - Ph.D. (Washington University)
  Latin American Literature and Culture

ASSOCIATE PROFESSORS

- Manal AlNatour - Ph.D. (University of Arkansas)
  Arabic Studies, Comparative Literature and Cultural Studies
- Susan Braidi - Ph.D. (University of Delaware)
  ESL/Linguistics, Applied Linguistics, Second Language Acquisition, Syntax
- Cynthia Chalupa - Ph.D. (Ohio State University)

Fin de Siècle German and Austrian Literature, Poetry, Foreign Language Pedagogy

- Tania de Miguel Magro - Ph.D. (The State University of New York, Stony Brook)
  Spanish Literature and Culture, Spanish Language, Spanish Golden Age Literature
- Pablo Garcia Loaeza - Ph.D. (Indiana University Bloomington)
  Spanish Language, Latin American Colonial Literature
- Deborah Janson - Ph.D. (University of California)
  German, 18th-21st-century German Literature, Enlightenment, Romanticism, GDR and Post-Wende Literature, Ecofeminism
- Xiangying Jiang - Ph.D. (Northern Arizona University)
  ESL/Linguistics, Second Language Acquisition
- Twyla Meding - Ph.D. (University of Virginia)
  French, 16th and 17th-century French Literature, The Pastoral Novel
- Sandra Stjepanovi# - Ph.D. (University of Connecticut)
  Linguistics, Syntax, Psycholinguistics, Semantics
- Ching-Hsuan Wu - Ph.D. (The Ohio State University)
  Chinese, Applied Linguistics

ASSISTANT PROFESSORS

- Sandra Dixon - Ph.D. (Brown University)
  Spanish, Spanish American Literature, Brazilian Literature
- Jonah Katz - Ph.D. (Massachusetts Institute of Technology)
  Phonetics, Phonology, Theoretocal and Experimental Linguistics, Music Cognition
- William Justin Morgan - Ph.D. (University of Alabama)
  Spanish, Applied Linguistics
- Sergio Robles-Puente - Ph.D. (University of Southern California)
  Spanish Phonetics, Phonology, and Sociolinguistics
- Nicole Tracy-Ventura - Ph.D. (Northern Arizona University)
  Applied Linguistics
- Sonia Zarco-Real - Ph.D. (University of Connecticut)
  Peninsular literature and Hispanic transatlantic studies

TEACHING PROFESSORS

- Lisa Di Bartolomeo - Ph.D. (University of North Carolina, Chapel Hill)
  Russian and Polish Language and Literature, Slavic Folklore, Culture and Cinema, Science Fiction, the Holocaust

TEACHING ASSOCIATE PROFESSORS

- Annastella Vester - Ph.D. (University of California, Los Angeles)
  Italian, Contemporary Italian Literature, 18th and 19th-century Italian

TEACHING ASSISTANT PROFESSORS

- Heiko ter Haseborg - Ph.D. (West Virginia University)
  Education, Applied Linguistics
- Rafael Osuna Montanez - Ph.D. (University of Connecticut)
  Spanish

VISITING ASSISTANT PROFESSORS

- Ramona Kreis - Ph.D. (University of South Florida)
  Applied Linguistics
- Yilin Liao-Carlson - Ph.D. (Purdue University)
  Chinese Studies

PROFESSORS EMERITI

- Michael Lastinger - Ph.D. (University of Georgia)
  French, 19th Century French Literature, Critical Theory
- María Amores - Ph.D. (Penn State University)
  Spanish, Foreign Language Acquisition
- Ahmed Fakhri - Ph.D. (University of Michigan)
  ESL/Linguistics, Second Language Acquisition, Applied Linguistics, Discourse Analysis
- Pablo González - Ph.D. (University Complutense de Madrid)

Spanish American Literature and Culture
- Kathleen McNerney - Ph.D. (Universidad Nacional Autonoma de Mexico)
  Spanish, Catalan Language and Literature, Spanish Literature and Culture, Women Writers

VISITING INSTRUCTOR

- Hilary Woodrum - M.A. (West Virginia University)
  French

INSTRUCTORS

- Yumiko Adachi - M.A. (University of Wisconsin-Madison)
  Japanese Linguistics
- Tracy Dingess - M.A. (West Virginia University)
  ESL
- Livia Cascao - M.A. (West Virginia University)
  ESL
- Beatrice Malvisi - M.A. (University of Pittsburgh)
  Italian
- Lindsei Pereira da Silva - M.A. (West Virginia University)
  ESL
- Kristen Williams - M.A. (West Virginia University)
  ESL

LECTURERS

- Lisa Dunn - M.A. (West Virginia University)
  Spanish
- Veronica Evans - M.A. (West Virginia University)
  Classics, Italian
- Irina Manukova - M.S. (Georgian Politechnial University)
  Russian

Admissions

The following are admission requirements for M.A. in Linguistics:

- An undergraduate degree in linguistics (or an acceptable related area)
- A minimum undergraduate GPA of 3.0 (overall as well as within the major)
- A minimum TOEFL or IELTS score for international applicants:
  - TOEFL: 79 for applicants in Linguistics
  - IELTS: 6.5 for all applicants
- **Application Deadlines**
  - Fall Admission: February 1
  - Spring Admission: October 1

Application Process

1. Fill out Graduate Application

In order to be considered for admission to one of our M.A. programs, please fill out and submit the Graduate Application (https://graduateadmissions.wvu.edu/how-to-apply/).

2. Complete Supplemental Documents to be Uploaded to Your Graduate Application

- A 300-word personal statement, in which you discuss your academic background, past accomplishments, why you want to study in our program and your future goals.
- An academic writing sample in English. This can be a paper that you have prepared for an academic course.
- Your resume
- Request three letters of recommendation from professors who know your academic work

3. TOEFL or IELTS Score

If you are an international applicant who did not complete your bachelor's degree at a US, UK, Australian, Canadian, or New Zealand institution, you must submit an acceptable TOEFL or IELTS score.

4. Submit Official Undergraduate Transcript

It is preferred that official transcripts be sent via an online, secure service such as eScrip-Safe, National Student Clearinghouse, or Parchment to graduateadmissions@mail.wvu.edu. Alternatively, sealed, untampered, physical official transcripts can be mailed to the Office of Admissions.

5. Application for a Teaching Assistantship

To be considered for a teaching assistantship, please fill out the WLLL TA Application (https://worldlanguages.wvu.edu/files/d/fff42445-0e06-43d1-9c73-b479347025ad/wlll-ta-application-with-personal-statement.pdf) and upload it with your personal statement to your graduate application. Please also submit the supporting documents indicated in this application. You will first be considered for admission to the program. If admitted, you will be considered for an assistantship.

Admission to our M.A. program is competitive. The graduate admissions committee will examine your file and will make a decision based on your academic performance in undergraduate studies, letters of recommendation from your professors who know your academic work, your personal statement and your writing sample.

Certain application requirements may be waived based on a preliminary review of an application by the program.

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum of 30 credit hours at the graduate level. No more than 12 hours of coursework done at the 400 level will be counted toward the degree.
- **Grade Point Average:** Students must earn a minimum overall GPA of 2.75, and a GPA of 3.00 in coursework applied to their graduate program.
- **Graduation Requirement**: In addition to completing 30 hours of coursework, students must pass comprehensive examinations or successfully defend a thesis.
  - **Comprehensive Examinations**: The comprehensive examinations are intended to evaluate students' knowledge, including the ability to synthesize and evaluate ideas in their area of emphasis. The examinations are based on standardized reading lists and coursework.
  - **Thesis**: A student may request to write a thesis and prepare an oral defense. For more information about this option, see the document "Thesis Guidelines (https://worldlanguages.wvu.edu/files/d/433511fa-1ec2-448a-8e79-2980e865ed8a/thesis_guidelines-rev10-17.pdf)."
- **Benchmarks:**
  - All students should complete a plan of study by the end of their first semester.
  - Students will be evaluated in writing at the end of the Spring term on a yearly basis. If adequate progress is not made, students may be placed on probation or dismissed from the program.
  - Students who choose the thesis option should typically defend their thesis topic by the midterm of their second semester, have their thesis proposal approved by the end of the second semester, and submit and defend their thesis during the semester in which they intend to graduate. The student's thesis committee may revise these deadlines.
  - Students who choose the examination option should complete the examinations during the semester in which they intend to graduate.
- **Additional Requirements:**
  - No more than three hours of independent study will apply to the degree (unless approved by the departmental chairperson).
  - Students must satisfy the foreign language requirement by the time they graduate:
    - Students in the major in Linguistics who are native speakers of English must demonstrate proficiency in a second language prior to graduation by completing one language course of level 204 or above, with a grade of B or better, or by taking the departmental placement examination in one language and placing above the 204-level.
    - International students whose native language is not English are considered to have satisfied this requirement by virtue of their TOEFL or IELTS score.
- **Learning Outcomes:**
  - Demonstrate an understanding of cognitive foundations of language.
  - Explain the concepts of syntactic and phonological theory.
  - Analyze relevant linguistic data by using the tools of syntactic theory and argue for the appropriateness of the analyses.
  - Provide informed descriptions of phonetic and phonological data.
  - Apply phonetic, phonological, and syntactic knowledge to the study of language in use.
  - Describe languages in terms of their structural characteristics.
  - Communicate the results of research in the field in oral and written formats.

M.A. Major in Linguistics Curriculum

CORE COURSES:		24
BIBY 615	Methods of Research	

LING 411	Phonology
LING 412	Syntax
LING 611	Advanced Phonology
LING 612	Advanced Syntax

Select 3 courses from the following list:

LING 402	Structure of Modern French
LING 501	Structure of Spanish
LING 513	History of Linguistics
LING 514	Sociolinguistics
LING 516	Discourse Analysis
LING 616	Language Typology
LING 614	Psycholinguistics
LING 620	Spanish Prosody

ELECTIVES:		**6**

Select 2 courses from the following list:

ESL 630	American Culture
LANG 421	The Teaching of Foreign Languages
LANG 422	Second Language Reading
LANG 521	English as a Second Language Methods
LANG 621	Teaching Foreign Language in College
LANG 622	English as a Second Language Theory
LANG 624	Second Language Writing
LANG 625	Language Assessment
LANG 626	Literacy in a Second Language
LING 511	English as a Second Language Linguistics
LING 512	Applied Linguistics
LING 613	English as a Second Language Phonetics
LING 697	Research (up to 6 credits) [*]

Total Hours	30

[*]   No more than six hours of thesis credits (697/698) can be applied to the degree.

Degree Progress
M.A. IN LINGUISTICS

- All students should complete a plan of study by the end of their first semester.
- Students will be evaluated in writing at the end of the Spring term on a yearly basis. If adequate progress is not made, students may be placed on probation or dismissed from the program.
- Students who choose the thesis option should typically defend their thesis topic by the midterm of their second semester, have their thesis proposal approved by the end of the second semester, and submit and defend their thesis during the semester in which they intend to graduate. The student's thesis committee may revise these deadlines.
- Students who choose the examination option should complete the examinations during the semester in which they intend to graduate.

Major Learning Outcomes
LINGUISTICS

Upon completion of the M.A. in Linguistics, students will be able to:

- Demonstrate an understanding of cognitive foundations of language.
- Explain the concepts of syntactic and phonological theory.
- Analyze relevant linguistic data by using the tools of syntactic theory and argue for the appropriateness of the analyses.
- Provide informed descriptions of phonetic and phonological data.
- Apply phonetic, phonological, and syntactic knowledge to the study of language in use.

- Describe languages in terms of their structural characteristics.
- Communicate the results of research in the field in oral and written formats.

Mathematics, M.S., Ph.D.

Degrees Offered

- Master of Science
- Doctor of Philosophy

Nature of the Program

The Department of Mathematics offers graduate programs leading to the Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees. The master's degree program offers specializations in pure and applied mathematics. The Ph.D. program provides for a common core of fundamental mathematics followed by specialized studies culminating in an original research dissertation directed by a faculty advisor. Depending on the student's program and interests, there are diverse career opportunities available in education, government, and industry.

Financial Support

Many graduate students receive financial support in the form of a graduate teaching assistantship, which provides a stipend and a full waiver of university tuition. These are awarded taking into account primarily the student's academic record along with the letters of recommendation and any supplementary information reflecting on the student's potential for success in the program. In some cases, teaching experience and/or the potential for outstanding teaching can be a consideration. Teaching assistants have the opportunity to work with the faculty in the Department's Institute for Mathematics Learning (IML). A small number of research assistantships are also available, usually through external funding.

Applications to the graduate program received by the February 15 deadline will receive full consideration for financial support for the subsequent fall semester. Late applications are accepted, but students are advised to check with the graduate director as to the availability of assistantships. Other financial aid includes partial university tuition waivers and part-time positions such as grading assisting in the instructional computer labs. TOEFL/IELTS scores are required for international students whose native language is not English, and passing the university SPEAK test is required for international students to be awarded teaching assistantships.

FACULTY

INTERIM CHAIR

- Marjorie Darrah - Ph.D. (West Virginia University)
  Educational Technology, Algorithms

PROFESSORS

- Ian Christie - Ph.D. (University of Dundee)
  Emeritus, Numerical Partial Differential Equations
- Krzysztof Ciesielski - Ph.D. (Warsaw University)
  Analysis, Topology, Set Theory
- Marjorie Darrah - Ph.D. (West Virginia University)
  Educational technology, algorithms
- Harvey Diamond - Ph.D. (MIT)
  Approximation Theory, Applied Mathematics
- Harry Gingold - D.Sc. (Israel Institute of Technology)
  Differential Equations, Asymptotic Methods
- John Goldwasser - Ph.D. (University of Wisconsin-Madison)
  Combinatorics, Graph Theory
- Henry W. Gould - M.A. (University of Virginia)
  Emeritus, Combinatorics, Number Theory, Special Functions
- Harumi Hattori - Ph.D. (Rensselaer Polytechnic Institute)
  Differential Equations, Continuum Mechanics
- Hong-Jian Lai - Ph.D. (Wayne State University)
  Associate Chair, Graph Theory, Matroid Theory
- Dening Li - Ph.D. (Fudan University)
  Partial Differential Equations
- Rong Luo - Ph.D. (West Virginia University)
  Discrete Mathematics

- David Miller - Ph.D. (Oklahoma State University)
  Undergraduate mathematics education
- Robert Mnatsakanov - Ph.D. (Moscow Inst. of Electronics and Mathematics)
  Statistics
- Laura Pyzdrowski - Ed.D. (West Virginia University)
  Mathematics Education, Instructional Technology
- Michael E. Mays - Ph.D. (Penn. State University)
  Emeritus, Number Theory
- Sherman D. Riemenschneider - Ph.D. (Syracuse University)
  Emeritus, Approximation Theory, Wavelet Theory
- Jerzy Wojciechowski - Ph.D. (University of Cambridge)
  Combinatorics, Graph Theory
- Cun-Quan Zhang - Ph.D. (Simon Fraser University)
  Graph Theory, Combinatorics

ASSOCIATE PROFESSORS

- Jessica Deshler - Ph.D. (University of New Mexico)
  Undergraduate Mathematics Education
- Nicole Engelke-Infante - Ph.D. (Arizona State University)
  Undergraduate Mathematics Educaiton
- Gary H. Ganser
  Emeritus, Applied Mathematics, Fluid Mechanics, Numerical Analysis
- Adam Halasz - Ph.D. (State University of New York at Stony Brook)
  Mathematical Biology, Swarm Robotics
- Kevin Milans - Ph.D. (University of Illinois)
  Combinatorics, Graph Theory
- James E. Moseley - Ph.D. (Purdue University)
  Emeritus, Partial Differential Equations, Modeling
- Vicki Sealey - Ph.D. (Arizona State University)
  Mathematics Education
- Charis Tsikkou - Ph.D. (Brown University)
  Nonlinear PDE
- Adrian Tudorascu - Ph.D. (Carnegie Mellon University)
  Partial Differential Equations

ASSISTANT PROFESSORS

- Olgur Celikbas - Ph.D. (University of Nebraska)
  Commutative Algebra
- Ela Celikbas - Ph.D. (University of Nebraska)
  Commutative Algebra, Representation Theory
- Qingtian Zhang - Ph.D. (Pennsylvania State University)
  Analysis of PDEs

Admissions

Applications to the graduate program should be submitted by February 15th. All applications for admission submitted by the deadline will also be considered for available teaching assistantships. Applications for admission (alone) can also be considered at other times, but for best consideration, particularly for the Ph.D. program, students should adhere to the February 15 deadline.

MASTER'S ADMISSION INFORMATION

Admission to the M.S. program requires a WVU admission application and submission of applicable transcripts. Applicants should submit a personal statement. International students must supply a passing TOEFL score or other acceptable evidence of English proficiency. Students seeking financial aid should also supply an assistantship application and three letters of recommendation. GRE scores are not required.

Programs are available for students to study pure and applied mathematics. For regular admission (http://catalog.wvu.edu/graduate/graduateeducationatwestvirginiauniversity/#classificationstext) to the M.S. program, students should have the equivalent of an undergraduate major in mathematics, including at least one semester of advanced calculus (Math 451 or equivalent) and courses in linear algebra and modern algebra. Students with deficiencies may be admitted provisionally; deficiencies are expected to be made up in the first year of study. A minimum of three

semesters of calculus is normally required for provisional admission, but students can often complete their remaining calculus courses during the summer prior to full-time enrollment.

PH.D. ADMISSION REQUIREMENTS

For regular admission (http://catalog.wvu.edu/graduate/graduateeducationatwestvirginiauniversity/#classificationstext), applicants for the Ph.D. program must have completed a graduate degree similar to the M.S. in mathematics. Students with an exceptionally strong undergraduate background may sometimes be admitted provisionally, with twelve–eighteen credit hours of additional coursework required.

The following materials should be submitted:

- A WVU admission application
- Official undergraduate and graduate transcripts
- Three letters of recommendation from individuals having experience with the applicant's mathematical ability
- A personal statement
- TOEFL or IELTS scores for students whose native language is not English

Certain application requirements may be waived based on a preliminary review of an application by the program.

Master of Science

Degree Requirements

- **Credit Hours**: Students are required to complete a minimum of 31 credit hours in Mathematics at the 400, 500 or 600 levels. While some courses may fulfill several degree requirements, the same course cannot be used to fulfill more than one requirement.
- **Grade Point Average:** Students must earn a minimum overall GPA of 2.75, a minimum grade of B- in all courses applied to the degree with the exception of elective courses, and a minimum GPA of 3.0 in all coursework applied to the degree.
- **Area of Emphasis:** Students must select between a Pure Mathematics or an Applied Mathematics area of emphasis by the end of their first year of study.
- **Master's Thesis:** all students who have earned an overall GPA of 3.25 or higher may decide to write a thesis.
- **Completion Requirements:**
    - Pure Mathematics AoE: In addition to completion of required coursework, students must pass the M. S. Advanced Exam by passing two subject areas from among Real Analysis, Algebra, Topology, and Differential Equations. Any exam can only be attempted three times.
    - Applied Mathematics AoE: In addition to completion of required coursework, students must present a project under the supervision of a faculty member, complete an internship and present an internship report, or complete a thesis.

Curriculum Requirements

Foundation Courses		7
Real Analysis Requirement		
Select one of the following:		
MATH 452	Introduction to Real Analysis 2	
MATH 551	Real Variables 1	
Linear Algebra Requirement		
MATH 543	Linear Algebra	
MATH 694	Seminar	
Area of Emphasis		**12**
Select one option:		
Pure Mathematics		
Applied Mathematics		
Electives		**12**
Select four courses in consultation with adviser:		
MATH 521	Numerical Analysis	
MATH 522	Numerical Solution of PDE	
MATH 535	Foundations of Geometry	
MATH 541	Modern Algebra	
MATH 545	Number Theory 1	
MATH 551	Real Variables 1	
MATH 555	Complex Variables 1	

MATH 563	Mathematics Modeling
MATH 564	Intermediate Differential Equations
MATH 567	Advanced Calculus
MATH 568	Advanced Calculus
MATH 571	Combinatorial Analysis 1
MATH 573	Graph Theory
MATH 578	Applied Discrete Mathematics
MATH 631	RUME 1: Introduction to Undergraduate Mathematics Education Research
MATH 641	Modern Algebra 2
MATH 645	Number Theory 2
MATH 651	Real Variables 2
MATH 681	Topology 2
MATH 683	Set Theory and Applications
MATH 697	Research [*]
STAT 512	Statistical Methods 2 (or above,)
STAT 513	Design of Experiments
STAT 516	Forensic Statistics
STAT 521	Statistical Analysis System Programming
STAT 522	Advanced Statistical Analysis System Programming
STAT 531	Sampling Theory and Methods
STAT 545	Applied Regression Analysis
STAT 555	Categorical Data Analysis
STAT 561	Theory of Statistics 1
STAT 562	Theory of Statistics 2
CS 510	Formal Specification of Language
CS 520	Advanced Analysis of Algorithms
CS 525	Computational Complexity
CS 572	Advanced Artificial Intelligence Techniques
CS 573	Advanced Data Mining
Total Hours	31

[*] 3 credits maximum of MATH 697 may be used for students writing a thesis

APPLIED MATHEMATICS AREA OF EMPHASIS

CORE COURSES:		**9**
MATH 521	Numerical Analysis	
MATH 563	Mathematics Modeling	
MATH 564	Intermediate Differential Equations	
COMPLEX VARIABLES ELECTIVE:		**3**
Select one course:		
MATH 456	Complex Variables	
MATH 555	Complex Variables 1	
MATH 568	Advanced Calculus	
Total Hours		12

PURE MATHEMATICS AREA OF EMPHASIS

CORE COURSES:		**9**
Select one sequence: [*]		
MATH 541 & MATH 641	Modern Algebra and Modern Algebra 2	
MATH 551 & MATH 651	Real Variables 1 and Real Variables 2	

MATH 581	Topology 1	
& MATH 681	and Topology 2	
Select one course from the following: *		
MATH 541	Modern Algebra	
MATH 551	Real Variables 1	
MATH 581	Topology 1	
ELECTIVES: *		**3**
MATH 541	Modern Algebra	
MATH 545	Number Theory 1	
MATH 551	Real Variables 1	
MATH 555	Complex Variables 1	
MATH 564	Intermediate Differential Equations	
MATH 571	Combinatorial Analysis 1	
MATH 573	Graph Theory	
MATH 581	Topology 1	
Total Hours		12

*   May not use a course used for another requirement.

Doctor of Philosophy

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum number of 54 graduate credit hours in Mathematics at the 500 level or above, with a minimum of 18 credits at the 700 level (excluding seminar and MATH 797), with at least 12 from discrete mathematics, algebra, foundations, applied mathematics, and topology.
- **Grade Point Average:** Students must earn a minimum overall GPA of 2.75, and of 3.00 in coursework applied to their graduate program.
- **Program of Study:** The Ph.D. program assumes an M.S.-level background in graduate mathematics for admission. The program provides for a common core of fundamental mathematics followed by specialized studies culminating in an original research dissertation directed by a faculty advisor.
- **Comprehensive Examination:** The comprehensive examination consists of two parts. For students with research areas in discrete mathematics, algebra, foundations, analysis, applied mathematics, or topology, a written exam is given in the students research area, based on the corresponding course work and other specialized knowledge needed for the dissertation. Paired with the written exam is an oral exam, to be given within one week of the written exam and covering similar material. These exams are led by the dissertation supervisor in consultation with the student's committee. Students whose research area is in research in undergraduate mathematics education are assigned a written research project, whose results are examined at an oral presentation. The second part of the comprehensive examination is the public presentation of the dissertation prospectus, followed by questioning by the student's committee. The purpose of this is to demonstrate that the student has mastered the relevant literature in his or her field, and has developed a clear, realizable and program-suitable research topic, along with a research plan to achieve the desired results. The comprehensive exam is considered to have been passed when both parts have been successfully completed. In case a student fails to achieve a 3.5 GPA overall in one or both of their elective sequences, a written examination will be prepared in the corresponding elective courses, which the student must pass in the judgement of the committee.
- **Dissertation:** The research upon which the dissertation is based must conform to scholastic standards and constitute an original and publishable contribution to mathematics.
- **Benchmarks:** Students must demonstrate that they have mastered basic graduate mathematics by passing the Department's Ph.D. Entrance Examination by no later than the spring of their second full academic year in the program. The examination is over two subjects selected by the student from the four areas of algebra, real analysis, differential equations, and topology. The exams are given twice a year, in August and April. The student's dissertation committee is appointed after the Ph.D. Entrance Examination has been passed, and upon selection of an advisor, typically by the end of the second year. The Comprehensive Examination is normally taken at the end of the third year of study, or in the first semester of the fourth year. The dissertation defense should occur by the end of the fifth year in the program.

Curriculum Requirements

RESEARCH AREA CONCENTRATION		**12**
Discrete Mathematics, Algebra and Foundations *		
MATH 573	Graph Theory	
& MATH 773	and Advanced Topics in Graph Theory	
MATH 683	Set Theory and Applications	
& MATH 783	and Set Theory and Applications	

MATH 745 & MATH 746	Analytic Number Theory 1 and Analytic Number Theory 2	
MATH 747 & 747	Advanced Topics in Modern Algebra and Advanced Topics in Modern Algebra	
MATH 771 & MATH 772	Matroid Theory 1 and Matroid Theory 2	
Analysis, Applied Mathematics, and Topology [*]		
MATH 751 & MATH 752	Functional Analysis 1 and Functional Analysis 2	
MATH 757 & MATH 758	Theory of Partial Differential Equations 1 and Theory of Partial Differential Equations 2	
MATH 780	Seminar in Topology	
Research in Undergraduate Mathematic Education		
MATH 631	RUME 1: Introduction to Undergraduate Mathematics Education Research	
MATH 732	RUME 2: Learning Theories	
MATH 733	RUME 3: Advanced Learning Theories	
MATH 734	RUME 4: Research and Professional Preparation	
SEMINARS AND RESEARCH:		
Seminar		**1**
MATH 694	Seminar	
Graduate Seminar		**5**
MATH 696	Graduate Seminar	
Research		**24**
MATH 797	Research	
ELECTIVE COURSES [**]		**12**
Discrete Mathematics, Algebra and Foundations		
MATH 573 & MATH 773	Graph Theory and Advanced Topics in Graph Theory	
MATH 683 & MATH 783	Set Theory and Applications and Set Theory and Applications	
MATH 745 & MATH 746	Analytic Number Theory 1 and Analytic Number Theory 2	
MATH 747 & 747	Advanced Topics in Modern Algebra and Advanced Topics in Modern Algebra	
MATH 771 & MATH 772	Matroid Theory 1 and Matroid Theory 2	
Analysis, Applied Mathematics, and Topology		
MATH 751 & MATH 752	Functional Analysis 1 and Functional Analysis 2	
MATH 757 & MATH 758	Theory of Partial Differential Equations 1 and Theory of Partial Differential Equations 2	
Total Hours		54

[*]   Select two pairs rather than four individual courses to satisfy the requirement.

[**]   Choose at least one pair outside of Research Area Concentration. May not select courses already chosen to satisfy a Research Area Concentration requirement. Students who choose RUME as their research area must select at least two courses from the Discrete Mathematics, Algebra, and Foundation group, and two courses from the Analysis, Applied Mathematics, and Topology group.

Degree Progress

All Students will have a plan of study and will receive, at minimum, a yearly letter of evaluation.

MASTER OF SCIENCE

The M.S. program usually requires two years of full-time study. In their first year, students will normally complete the Linear Algebra and the Real Analysis requirements. Ideally, students in the Pure Mathematics Area of Emphasis take at least one of the subject areas of the M.S. Advanced Exam

by no later than August at the beginning of their second year. To be in good standing, a student is expected to maintain at least a 3.0 average (B) in mathematics courses and to present at least a 3.0 average in all work offered in fulfillment of the degree program.

ADVISORY COMMITTEE

Each student will be assigned an advisory committee consisting of at least three members of the graduate faculty. This committee will assist the student in designing a written plan of study that takes into account the student's interests and needs as well as the aims of the department's graduate programs. Later changes in the plan are possible only through mutual agreement of the student and the committee.

PROGRAMS

The student's plan of study is developed in one of these areas of emphasis: pure mathematics or applied mathematics. The programs are designed either for students who intend to pursue a doctor of philosophy in mathematics or the mathematical sciences or for those planning to seek employment in education, government, or industry. Depending upon the program selected, thirty to thirty-three semester hours of approved coursework are required.

Note: MATH 590/690/696/697/790/797 may not be counted for credit to satisfy graduate course requirements.

EXAMINATIONS/THESES/PROJECTS

Upon beginning graduate study, all M.S. students are given a basic exam in advanced calculus and linear algebra for purposes of course placement. Depending on the program chosen, students must complete examinations, a thesis, or a project as a graduation requirement.

DOCTOR OF PHILOSOPHY

The doctor of philosophy is a research program in which the final product is an original, publishable research thesis. For students entering with regular admission status, the program requires a minimum of twenty-four hours of approved coursework along with research and graduate seminar requirements. As reflected in the interests and expertise of the faculty, students may specialize in a variety of areas of pure, applied, and discrete mathematics as well as research in undergraduate mathematics education. Beyond any coursework taken to remove deficiencies while a provisional student, a minimum of twenty-four hours of approved coursework (not including research or one-credit seminar courses) is required of all doctoral students, which must include a major area of four courses and two minor areas of two courses each. Certain level and distribution requirements apply to a student's program. Six credits of seminar (Five credits of Math 696 and one credit of Math 694) are required.

DISSERTATION COMMITTEE

Students normally select a dissertation advisor at the end of their first year in the program, though this can also be done in the second year. Upon selecting a dissertation advisor, a student must request that the Director of Graduate Studies select a dissertation committee of at least five members (with a dissertation advisor as chairperson and one member from outside the department) for them.

EXAMINATIONS AND DISSERTATION

All doctoral students must demonstrate that they are prepared to undertake doctoral work and research by passing an entrance examination, given each year in April and August, within two years after enrolling. Specifically, students entering the program in a given calendar year must pass the entrance examination by the end of the spring semester in the calendar year two years after. Students must pass examinations in two areas from among the four areas of algebra, real analysis, topology, and differential equations. Within three years of enrolling, the student is expected to pass a qualifying oral and written examination and present an approved dissertation prospectus. Any minor area in which the student has not achieved a GPA of at least 3.5 also requires a written examination. If the qualifying examination results are unsatisfactory, the dissertation committee may reexamine the student once. After the Qualifying Examination is successfully completed the student is considered a Candidate for the Ph.D. The dissertation typically requires from one to two years of research and writing, with the defense completed by the end of the fifth year.

Major Learning Outcomes

MATHEMATICS

M.S. students are expected to:

- Solve problems showing a conceptual and operational understanding of real analysis and linear algebra as evidenced by success in required coursework in these fields.
- Read, analyze, and write logical arguments to prove mathematical concepts in advanced mathematics courses.
- Communicate mathematical ideas with precision and clarity on written advanced exams or a research thesis.
- Illustrate an understanding of professional tools used in the mathematical sciences by participation in the professional tools seminar.

Major Learning Outcomes

MATHEMATICS

Ph.D. students are expected to:

- Conduct independent, original research in mathematics under the supervision of a faculty advisor.
- Produce and defend an original contribution to knowledge, as evidenced by the writing and defense of a dissertation involving significant original research leading to a significant contribution in their field of study.
- Demonstrate mastery of subject material, as evidenced by quality of performance in coursework, and on written and oral examinations in mathematics
- Become familiar with a breadth of modern mathematics, by successful completion of a range of advanced courses in various fields as required by the degree program
- Communicate mathematics clearly and coherently through multiple research presentations at department colloquium and at research conferences.

Physics, M.S., Ph.D.

Degrees Offered

- Master of Science (M.S.)
- Doctor of Philosophy (Ph.D.)

Nature of the Program

The graduate program is designed to provide a solid background in classical and modern physics, a broad understanding of major research fields, and concentrated research experience in one area. Applicants normally enter with a Bachelor of Science degree in physics, astronomy, or a related field. A student whose background is weak in a particular area is encouraged to register for the appropriate undergraduate course. The normal first-year courses include PHYS 611, PHYS 651, PHYS 631, and PHYS 633 plus possible electives. In the courses, no distinction is made between those students who intend a terminal M.S. degree and those who intend a Ph.D. degree. The minimum grade for credit in graduate courses is C, and a grade point average (GPA) of 2.75 must be maintained. A GPA of 3.0 is required for graduation with either a M.S. or Ph.D. degree. Progess of all graduate students is reviewed annually by the graduate advisor or their Ph.D. committee.

Financial Aid

With rare exceptions, all students who are admitted receive financial support. Beginning students usually receive teaching assistantships; more advanced students receive research assistantships. Several fellowships are available for outstanding students, allowing full-time concentration on coursework and research and a more rapid progress toward the degree. Students on visas must comply with the conditions of their visa for financial support.

FACULTY

CHAIR

- D.J. Pisano - Ph.D. (University of Wisconsin - Madison)
  Astronomy/Astrophysics

ASSOCIATE CHAIR

- Alan Bristow - Ph.D. (University of Sheffield)
  Condensed Matter Physics

PROFESSORS

- Wathiq Abdul-Razzaq - Ph.D. (University of Illinois - Chicago)
  Physics Education
- Paul Cassak - Ph.D. (University of Maryland)
  Plasma Physics
- Leonardo Golubovic - Ph.D. (University of Belgrade)
  Condensed Matter Physics and Statistical Physics
- Matthew B. Johnson - Ph.D. (California Institute of Technology)
  Condensed Matter Physics
- Mark E. Koepke - Ph.D. (University of Maryland)
  Plasma Physics
- Lian Li - PhD (University of Arizona)
  Carroll Professor, Condensed Mater Physics
- Duncan Lorimer - Ph.D. (University of Manchester)
  Astrophysics/Astronomy
- Maura McLaughlin - Ph.D. (Cornell University)

Eberly Family Professor, Astrophysics/Astronomy

- Aldo Humberto Romero - Ph.D. (University of California - San Diego)
Condensed Matter Physics
- Earl E. Scime - Ph.D. (University of Wisconsin - Madison)
Oleg D. Jefimenko Professor, Plasma Physics
- Gay Stewart - Ph.D. (University of Illinois-Urbana Champaign)
Eberly Professor of STEM Education

ASSOCIATE PROFESSORS

- Loren Anderson - Ph.D. (Boston University)
Astrophysics/Astronomy
- Alan Bristow - Ph.D. (University of Sheffield)
Condensed Matter Physics; Associate Chair
- Cheng Cen - Ph.D. (University of Pittsburgh)
Condensed Matter Physics
- Edward Flagg - Ph.D. (University of Texas - Austin)
Condensed Matter Physics
- Mikel Holcomb - Ph.D. (University of California - Berkeley)
Condensed Matter Physics
- Paul Miller - Ph.D. (West Virginia University)
Physics Education Research
- D.J. Pisano - Ph.D. (University of Wisconsin - Madison)
Astrophysics/Astronomy
- Tudor Stanescu - Ph.D. (University of Illinois)
Theoretical Condensed
- John Stewart - Ph.D. (University of Illinois-Urbana Champaign)
Physics Education Research

ASSISTANT PROFESSORS

- Adam Kobelski - Ph.D. (University of Montana)
Solar Physics, Physics Education Research
- Joonhee Lee - Ph.D. (Seoul National University)
Biophysics
- Sarah Burke Spolaor - Ph.D. (Swinburne Institute of Technology)
Astrophysics/Astronomy
- Sean McWilliams - Ph.D. (University of Maryland)
Astrophysics/Astronomy
- Weichao Tu - Ph.D. (University of Colorado-Boulder)
Space Plasma Physics
- Kathryn Williamson - Ph.D. (Montana State University)
Astronomy Education Research

RESEARCH ASSISTANT PROFESSOR

- Yanjun Ma - Ph.D. (University of Pittsburgh)
Condensed Matter Physics
- Qiang Wang - Ph.D. (University of Colorado - Boulder)
Condensed Matter Physics

PROFESSORS EMERITI

- Larry Halliburton - Ph.D. (University of Missouri - Columbia)
Condensed Matter Physics
- Arthur S. Pavlovic - Ph.D. (Columbia University)
Condensed Matter Physics
- Mohindar S. Seehra - Ph.D. (University of Rochester)
Condensed Matter Physics
- Richard Treat - Ph.D. (University of California - Riverside)
General Realtivity

- H. Arthur Weldon - Ph.D. (Massachusetts Institute of Technology)
  Particle Physics

Admissions

Applicants are expected to have a bachelor's degree in physics, astronomy, or related fields with upper-division courses in electricity and magnetism, mechanics, quantum mechanics, thermodynamics, and mathematical methods with a GPA of at least 3.0. Students lacking some of these courses may be admitted provisionally and will be allowed to remedy the deficiencies by taking the appropriate undergraduate courses.

Graduate Record Exam (GRE) scores for the general test (verbal, quantitative, and analytical) are required. A GRE score for the physics subject test is not required, but may be submitted for consideration. It is encouraged for students with undergraduate degrees not in physics or astronomy, or who believe that their undergraduate GPA does not reflect their physics knowledge. If English is not the student's native language, TOEFL or IELTS scores are also required. The application deadline is January 15. There is no distinction made between admission to the Ph.D. and M.S. programs. A short list of prospective students may expect a brief phone interview. Certain application requirements may be waived based on a preliminary review of an application by the program. Contact the department for additional information.

Master of Science

- **Credit Hours:** Students are required to complete a minimum number of 30 graduate-level credit hours in Physics or Astronomy.
- **Grade Point Average:** Students must earn a minimum cumulative and major GPA of 2.75, and a minimum grade of C- in all classes applied to the degree.

Major Requirements

CORE COURSES		15
PHYS 611	Introduction to Mathematical Physics	
PHYS 631	Advanced Classical Mechanics 1	
PHYS 633	Electromagnetism 1	
PHYS 651	Quantum Mechanics 1	
PHYS 761	Statistical Mechanics	
COMPLETION OPTION:		15
Select one completion option		
Non-Thesis Option:		
5 courses in PHYS or ASTR at the 600 or 700 level [*]		
Thesis Option:		
1 course in PHYS or ASTR at the 600 or 700 level [*]		
PHYS 797	Research	
Total Hours		30

[*]   Except ASTR 697, ASTR 797, PHYS 697, or PHYS 797 Graduate courses from other departments may be substituted with approvals from the graduate studies committee.

Degree Requirements

- **Course Requirements**: Students must complete a minimum of 37 credit hours in physics or astronomy at the 600 or 700 level (or approved courses from other departments relevant to the program of study).
- **Calculation of the GPA**: Students must maintain a minimum overall GPA of 2.75, and 3.0 or better in graduate physics or astronomy courses taken at WVU.
- **Research Requirement**: Research is the central focus of the degree and is directed by a faculty adviser over a period of several years. When the research is completed, the student must write a dissertation and defend it before the doctoral committee of four faculty. The average completion time for the Ph.D. is five years beyond the B.S. Research specialties within the department include astrophysics/astronomy, biophysics, condensed matter physics, physics education research, and plasma physics.
- **Candidacy Examinations**: To be admitted to candidacy for the Ph.D., a student must pass both a written and an oral candidacy examination. The written examination consists of three parts: quantum mechanics, electromagnetism, and classical mechanics.
- **Oral Exam**: the student needs to pass an oral exam no later than 3.5 years after admission. This Oral presentation is typically 45 minutes in length and it is a presentation of a research paper selected by the advisor and the student. The exam is open to the public. Following the presentation and questions from the general public, the advisor and the Ph.D. committee ask questions to the student related to his/her paper understanding and the background required. Next, the student is excused and the Committee makes an overall decision on the Exam.

- **Progress Toward Completion**: Students must maintain a GPA of 3.0 or better in graduate physics and astronomy courses taken at WVU. Students must pass all three graduate qualifying exams by the end of their fourth semester. All students are evaluated annually before the end of September by their Ph.D. committee or the Graduate Studies committee.

Curriculum Requirements

CORE COURSES:		15
PHYS 611	Introduction to Mathematical Physics	
PHYS 631	Advanced Classical Mechanics 1	
PHYS 633	Electromagnetism 1	
PHYS 651	Quantum Mechanics 1	
PHYS 761	Statistical Mechanics	
ADVANCED COURSE:		**3**
Select one of the following:		
PHYS 634	Electromagnetism 2	
PHYS 652	Quantum Mechanics 2	
ELECTIVES: *		**15**
Select five ASTR or PHYS courses at the 600 or 700 level. **		
RESEARCH ***		**4**
PHYS 797	Research	
Total Hours		37

*   Except ASTR 797 and PHYS 797

**   Graduate courses from other departments may be substituted with approval from the Graduate Studies committee.

***   These requirements can be fulfilled through alternate means through discussion with an advisor.

Degree Progress

Typical plans of study for M.S. and Ph.D. students are available in the Graduate Student Handbook. Students are evaluated each year by either the Graduate Advisor or their Ph.D. committee (after passing their oral exam).

To remain in good standing in the program, each student must maintain a 3.0 GPA or better. Ph.D. students have a total of four attempts to pass all three written qualifier exams and seven semesters after admission to pass the oral qualifier exam. The committee that gives the oral exam must consist of at least four members, with one of these members being external to the department. This committee also forms the Ph.D. advisory committee and the defense exam committee, with the chair of this committee being the student's research advisor.

After the oral exam, Ph.D. student has 5 years to defend (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/degree_regulations/#timelimitstext) their Ph.D.dissertation. Each year, Ph.D. students must give a presentation and submit a report to the Ph.D. advisory committee for the evaluation of progress towards completion of the Ph.D. degree is reviewed and discussed. The report has to be signed by all members of the committee, along with any comments and recommendations, before being submitted to the Departmental graduate advisor. More information is available in the Physics and Astronomy Graduate Student Handbook.

Major Learning Outcomes

PHYSICS AND ASTRONOMY

The central missions of the Graduate Program in Physics are to train the next generation of Physicists and Astronomers for productive careers in the global economy, to teach them how to apply methods and physics principles to understand and explain the world around us and to expand the scientific boundaries of physics and astronomy.

Students earning a M.S. in Physics will be able to:

- Explain physics and astronomy principles as they pertain to their specific field of research.
- Demonstrate the ability to understand and critically evaluate the existing literature published within their field.
- Understand the ethical impact of personal and professional behavior.

Major Learning Outcomes

PHYSICS

The central missions of the Graduate Program in Physics are to train the next generation of Physicists and Astronomers for productive careers in the global economy, to provide the ability to students that will allow them to master the fundamental knowledge of physics, to provide the experience to conduct independent research, and to expand the scientific boundaries of physics and astronomy.

Students earning a Ph.D. in Physics will be able to:

- Explain physics and astronomy principles as they pertain to their specific field of research.
- Demonstrate the ability to understand and critically evaluate the existing literature published within their field.
- Understand the ethical impact of personal and professional behavior.
- Independently design and execute new experimental, theoretical, or computational studies that can address important scientific questions in physics and astronomy.
- Effectively communicate their research in oral and written formats, including the ability to author manuscripts suitable for publication in peer reviewed scientific journals.

Academic Standards

To be a graduate student in good standing requires the following:

- Maintain a GPA of 2.75 or better in graduate physics courses taken at WVU, excluding PHYS 797.
- A GPA of 3.0 or better is required for graduation.
- All entering Ph.D. students are required to take all three written graduate exams at the beginning of, or immediately prior to, their first semester.
- Following the initial exam, as needed, Ph.D. students can retake exams up to three times, but no later than the beginning of their fourth semester of graduate studies.
- Ph.D. students must select a Ph.D. committee of four faculty after passing the written exams.
- Ph.D. students must complete the oral candidacy examination within three semesters (after completing the third section of the written candidacy examination).
- Students admitted as M.S. degree candidates are not expected to take the graduate qualifying exams but must maintain at GPA of 2.75 and complete their M.S. degree within three years.

Political Science, M.A., Ph.D.

Degrees Offered

- Master of Arts
- Doctor of Philosophy

Nature of the Program

The graduate program is designed to provide advanced training to students who desire to enter research or teaching fields relating to American politics, public policy (either U.S. domestic or international), comparative politics, and/or international politics, and to those seeking careers as policy analysts in government or the private sector.

The Master of Arts program is designed to provide students with a broad knowledge of political science and the policy-making process. This includes the study of many over-arching factors shaping political thought, analysis, decision-making, and an examination of specific influences that shape public policies at the international, national, state, and local levels of government. Students choose from classes offered in the fields of American politics, comparative politics, international relations, and public policy in addition to taking three classes in political methodology designed to ensure students possess expertise in how to conduct systematic quantitative research. Most graduates will take jobs in government or with private firms needing specialists in policy analysis; however, this degree also leaves students well-placed for further study of these issues in Ph.D. programs.

The Doctor of Philosophy program is designed for people planning careers as researchers and teachers in institutions of higher education or as policy analysts in government or the private sector. All students are expected to complete coursework that leads to mastery of two of the four available areas of emphasis -- American politics, comparative politics, international politics, and public policy -- and to pass general exams in two of them. The student's coursework will provide them with a firm grounding in relevant literatures and prepare them to make their own contributions to the fields in which they specialize. Coursework is also available to train students as expert analysts who will leave the program with a comprehensive knowledge of policy formulation, implementation, and evaluation, as well as a thorough understanding of the dynamics of political institutions. The design of the program will ensure that our graduates are trained in research methodology and statistical techniques.

FACULTY

CHAIR

- John Kilwein - Ph.D. (Ohio State University)
  Associate Professor, Public Law, Judicial Politics, Public Policy, Public Administration

PROFESSORS

- Joe D. Hagan - Ph.D. (University of Kentucky)
  Barnette Professor, International Relations and World Politics, Comparative Foreign Policy Analysis
- Erik Herron - Ph.D. (Michigan State University)
  Eberly Family Professor, Political Institutions, Elections, Post-Communist Europe and Eurasia

ASSOCIATE PROFESSORS

- R. Scott Crichlow - Ph.D. (Louisiana State University)
  International Relations, Foreign Policy Decision-making, Middle East Politics
- Christina Fattore - Ph.D. (Florida State University)
  International Political Economy, International Organization, European Union Politics
- Matthew Jacobsmeier - Ph.D. (University of Rochester)
  American Politics, Political Behavior, Public Opinion, Research Methods
- Jason MacDonald - Ph.D. (The George Washington University)
  American Politics, Congress, Research Methods
- Philip Michelbach - Ph.D. (University of California)
  Political Theory, American Political Thought, German Political Thought, Comparative Democratic Theory
- Trisha Phillips - Ph.D. (Rice University)
  Social and Political Philosophy, Moral Philosophy, Research Ethics

ASSISTANT PROFESSORS

- Shauna Fisher - Ph.D. (University of Washington)
  Judicial Politics, Law and Courts, Judicial Policy-Making
- William Franko - Ph.D. (University of Iowa)
  American Politics, State and Local Politics, Public Policy
- Jay Krehbiel - Ph.D. (Washington University)
  Comparative Politics, Judicial Politics, Comparative Political Institutions
- Mason Moseley - Ph.D. (Vanderbilt University)
  Comparative Politics, Latin American Politics, Comparative Political Institutions
- Herschel Thomas - Ph.D. (University of Texas)
  Public Policy, Interest Groups

TEACHING ASSOCIATE PROFESSORS

- Boris Barkanov - Ph.D. (University of California, Berkeley)
  Comparative Politics, International Relations
- Clarissa Estep - Ph.D. (West Virginia University)
  International Relations
- David Hauser - Ph.D. (University of Pittsburgh)
  International Conflict, National Security Analysis

SERVICE ASSISTANT PROFESSORS

- Samantha Godbey - Ph.D. (West Virginia University)
  Director of Debate, Comparative Poltics, International Relations, Public Policy

Admissions

M.A. ADMISSION INFORMATION

Most applicants to the Master of Arts program will have completed a B.A. in Political Science. However, students from other fields and disciplines are also encouraged to apply. To be admitted as a regular M.A. student, an applicant must have an overall grade point average of 3.0 or better.

Applicants to the M.A. program must secure letters of recommendation from three academic or professional references and must submit a CV or resume and a statement of purpose. Transcripts from all institutions that an applicant has attended or is attending must also be submitted.

All students wishing to be considered for departmental financial support during their first year in the program must submit the results of the Graduate Record Examination (GRE). Upon request, the GRE requirement will be waived for M.A. applicants not seeking departmental financial support who have an undergraduate or graduate GPA of at least 3.5 at the time of application. International applicants who did not complete their bachelor's degree at a US, UK, Australian, Canadian, or New Zealand institution must submit an English proficiency test score.

Admissions decisions are based on an overall assessment of an applicant's record.

PH.D. ADMISSION INFORMATION

Admission to the Ph.D. program is open to applicants with either a bachelor's or master's degree. Most applicants to the Ph.D. program will have completed a degree in Political Science. However, students from other fields and disciplines are also encouraged to apply. To be admitted as a regular Ph.D. student, an applicant must have an overall grade point average of 3.0 or better. Applicants to the Ph.D. program will ideally have a grade point average of 3.5 or better. Some training in statistics and a strong background in written communication is desired.

All applicants to the Ph.D. program must submit the results of the Graduate Record Examination (GRE). Applicants must also submit a CV or resume, a statement of purpose, and transcripts from all institutions that an applicant has attended or is attending. International applicants who did not complete their bachelor's degree at a US, UK, Australian, Canadian, or New Zealand institution must submit an English proficiency test score.

Admissions decisions are based on an overall assessment of an applicant's record. Certain application requirements may be waived based on a preliminary review of an application by the program.

Master of Arts

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum of 38 credit hours in POLS at the graduate level. Up to 12 credits can be at the 400 level.
- **Grade Point Average:** Students must earn a minimum overall GPA of 2.75, and a GPA of 3.00 in coursework applied to their graduate program.

CORE COURSES:		11
POLS 600	Introduction to Political Research	
POLS 601	Quantitative Political Analysis	
POLS 602	Advanced Quantitative Methods	
POLS 794	Seminar	
POLITICAL SCIENCE ELECTIVES: **		**27**
Any POLS courses at the 400-, 500-, 600-, or 700-level		
Total Hours		38

*   Number of credit hours may vary depending on number of semesters in residence.

**   Excluding POLS 790, POLS 794 and POLS 797 .

Doctor of Philosophy

Major Requirements

- **Credit Hours:** Students are required to complete a minimum of 68 credit hours in POLS at the 500, 600, or 700 level. With permission of the Graduate Director, students may also count up to 12 credits of coursework at the 400 level. Number of credit hours may vary depending on number of semesters in residence and number of research hours.
- **Grade Point Average**: Students must earn a minimum overall GPA of 2.75 and a minimum GPA of 3.00 in coursework applied to their graduate program.
- **Areas of Emphasis:** The PhD Program offers four areas of emphasis: American Politics, Comparative Politics, International Politics, and Public Policy. Students must complete two areas of emphasis. Students may not choose both Comparative Politics and International Politics as areas of emphasis.

CORE COURSES:		14
POLS 600	Introduction to Political Research	
POLS 601	Quantitative Political Analysis	
POLS 602	Advanced Quantitative Methods	
POLS 603	Advanced Quantitative Analysis	
POLS 794	Seminar	
AREAS OF EMPHASIS: **		**24**

Complete two areas of emphasis. Students may not choose both Comparative Politics and International Politics as areas of emphasis. [***]		
POLITICAL SCIENCE ELECTIVES:		**6**
Any POLS courses at 500-, 600-, and 700-level [****]		
RESEARCH:		**24**
POLS 797	Research	
Total Hours		68

[*]   Students must register for one credit of POLS 794 for each semester they are in residence. Total number of POLS 794 hours may vary.

[**]   Total number of credit hours required to fulfill the areas of emphasis requirement may vary.

[***]   Credit hours from a single course may not be counted toward the credit hour requirements for more than one area of emphasis.

[****]   POLS courses excluding coursework used to satisfy another requirement, POLS 703, POLS 790, POLS 794 and POLS 797.

AMERICAN POLITICS AREA OF EMPHASIS

American Politics Electives		**12**
Select four of the following courses (others approved by Director of Graduate Studies):		
POLS 522	Racial & Ethnic Politics	
POLS 630	Seminar: American Politics and Policy	
POLS 710	Judicial Politics, Policy and Law	
POLS 712	American Construction and Political Development	
POLS 715	The American Presidency	
POLS 728	Congress	
Total Hours		12

COMPARATIVE POLITICS AREA OF EMPHASIS

Comparative Politics Electives		**12**
Select four of the following courses (others approved by Director of Graduate Studies):		
POLS 550	Comparative Politics	
POLS 551	Comparative Political Institutions	
POLS 555	Comparative Public Policy	
POLS 559	Contentious Politics	
Total Hours		12

INTERNATIONAL POLITICS AREA OF EMPHASIS

Required Course		
POLS 560	International Theory and Policy	3
International Relations Electives		**3**
Select one of the following courses (others approved by Director of Graduate Studies):		
POLS 660	International Political Economy	
POLS 665	Comparative Foreign Policy	
POLS 666	National Security Policy	
POLS 667	Foreign Policy Decision Making	
Comparative Politics Electives		**9**
Select three of the following courses (others approved by Director of Graduate Studies):		
POLS 550	Comparative Politics	
POLS 551	Comparative Political Institutions	
POLS 555	Comparative Public Policy	
POLS 559	Contentious Politics	
Total Hours		15

PUBLIC POLICY AREA OF EMPHASIS

Public Policy Electives		**12**
Select four of the following courses (others approved by Director of Graduate Studies):		

POLS 530	Policy Analysis
POLS 536	Politics of Agenda Setting
POLS 555	Comparative Public Policy
POLS 638	Seminar: Policy Implementation
POLS 710	Judicial Politics, Policy and Law

| Total Hours | 12 |

Degree Progress

The Director of Graduate studies serves as the advisor for all incoming graduate students. Each student will have a plan of study by the conclusion of the first semester of residence. At least once each academic year, all students will receive an evaluation reviewed by the graduate faculty.

M.A. PROGRAM

Regular graduate students should be able to complete the MA in four semesters, provided they enter the program in the fall semester and have sufficient background in statistics and political science. See the section of the catalog on time limits (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/degree_regulations/#timelimitstext) for additional information.

PH.D. PROGRAM

After the first year in residence, each PhD student should select a permanent faculty advisor.

In addition to the required coursework, Ph.D. students must successfully complete the following tasks prior to graduation:

- Comprehensive Exam in Field 1
- Comprehensive Exam in Field 2
- Dissertation Prospectus Defense
- Dissertation Defense
- Submission of Approved Dissertation to ETD

More information can be found in the Political Science Department Graduate Student Handbook (https://politicalscience.wvu.edu/files/d/75e2c90a-944c-4b45-b75f-926c395928e3/graduate-handbook-ay-2018-2019.pdf).

Major Learning Outcomes

M.A. IN POLITICAL SCIENCE

Students earning an M.A. in Political Science will be able to:

1. Demonstrate basic substantive knowledge of the institutions, political actors, and relevant processes in state, national, and international political systems.

2. Effectively communicate knowledge of major policy issues in state, national, and international affairs and convey the importance of the uncertainties, trade-offs, and institutional/bureaucratic contexts of problems confronting governments.

3. Evaluate potential explanations of political phenomena in a way that considers alternative explanatory perspectives across the major theoretical schools of thought in the political science literature.

4. Carry out systematic empirical research in political science, including articulating a theoretical question, constructing a rigorous research design, and analyzing data or cases using appropriate methodological approaches.

5. Clearly articulate the potential policy implications of research findings in political science and how those findings relate to larger practical, political, and ethical questions faced by West Virginia, the nation, and communities worldwide.

Psychology, M.S., Ph.D.

Degrees Offered

- Master of Science
- Doctor of Philosophy

Doctoral Program Majors

The doctoral degree major areas of study in Behavior Analysis, Behavioral Neuroscience, Clinical & Clinical Child Psychology, and Life-Span Developmental Psychology prepare students for careers in research, teaching, and/or practice.

Program Accreditation

The Clinical Program at West Virginia University is comprised of two major areas of study: Clinical Psychology and Clinical Child Psychology. The Clinical Program has been accredited continuously by the American Psychological Association since 1966. In 2012, the Program was re-accredited for a full 7 years, with the next site visit scheduled to occur in 2020. For any questions regarding accreditation of this or any other program, contact the Office of Program Consultation and Accreditation of the American Psychological Association, 750 First Street, NE, Washington, DC 20002. Phone number: (202) 336-5979. Website: http://www.accreditation.apa.org (http://www.accreditation.apa.org/).

The Behavior Analysis Program at West Virginia University is accredited by the Association for Behavior Analysis International. In 2019, the Program was re-accredited from 2019-2025.

FACULTY
CHAIR
- Kevin Larkin - Ph.D. (University of Pittsburgh)
  Clinical Health Psychology, Applied Psychophysiology, Cardiovascular Behavioral Medicine

PROFESSORS
- Christina Duncan - Ph.D. (Louisiana State University)
  Behavioral Pediatrics, Chronic Illness, Adherence
- Barry A. Edelstein - Ph.D. (University of Memphis)
  Eberly Family Distinguished Professor of Clinical Psychology. Clinical Gero-psychology, Anxiety and Decision-making in Older Adults
- Katherine Karraker - Ph.D. (Michigan State University)
  Associate Provost for Graduate Academic Affairs. Adults' Perceptions of Infants, Infant Social Development
- Kennon A. Lattal - Ph.D. (University of Alabama)
  Centennial Professor. Experimental Analysis of Behavior, History and Philosophy of Psychology, Human-Pet Interactions
- Cheryl B. McNeil - Ph.D. (University of Florida)
  Disruptive Behavior Disorders of Children, Child Behavior Therapy, Parent-Child Interactions
- Daniel W. McNeil - Ph.D. (University of Alabama)
  Eberly Family Professor for Outstanding Public Service. Experimental Psychopathology, Behavioral Dentistry and Behavioral Medicine, Pain and Anxiety
- Tracy L. Morris - Ph.D. (University of Mississippi)
  Eberly Distinguished Professor of Outstanding Teaching and Associate Dean for Research, Graduate Studies, and Outreach. Developmental Psychopathology, Social Anxiety, Peer Relationships
- Melanie C. Page - Ph.D. (Arizona State University)
  Quantitative/Developmental Psychology
- Julie Hicks Patrick - Ph.D. (University of Akron)
  Decision Making, Family Processes in Mid- and Late-Life
- Michael Perone - Ph.D. (University of Wisconsin-Milwaukee)
  Associate Dean for Faculty. Positive and Negative Reinforcement, Animal and Human Operant Behavior, Research Methodology
- Claire St. Peter - Ph.D. (University of Florida)
  Applied Behavior Analysis, Assessment and Treatment of Problem Behavior, School-Based Interventions
- JoNell Strough - Ph.D. (University of Utah)
  Life-Span Development, Decision Making, Everyday Problem Solving, Gender Development

ASSOCIATE PROFESSORS
- Karen G. Anderson - Ph.D. (University of Florida)
  Behavioral Pharmacology, Self-Control and Impulsivity
- Amy Fiske - Ph.D. (University of Southern California)
  Late Life Depression and Suicide
- Amy Gentzler - Ph.D. (Kent State University)
  Emotion Regulation and Coping in Childhood, Positive Psychology
- Elisa Krackow - Ph.D. (Binghamton University-SUNY)
  Adult and Child Testimony, Developmental Psychopathology

- Aaron Metzger - Ph.D. (University of Rochester)
  Adolescent Social-Cognitive Development, Civic Engagement, Adolescent-Parent Communication

ASSISTANT PROFESSORS

- Melissa Blank - Ph.D. (Virginia Commonwealth University)
  Behavioral Neuroscience, Tobacco Use, Tobacco-Related Health Risks, Genetics of Substance Use
- Kathryn Kestner - Ph.D. (Western Michigan University)
  Applied Behavior Analysis, Assessment and Treatment of Challenging Behaviors
- Shari Steinman - Ph.D. (University of Virginia)
  Cognitive Bias in Anxiety Disorders, Treatment of Anxiety and Obsessive Compulsive Disorders
- Nicholas Turiano - Ph.D. (Purdue University)
  Personality, Health, and Aging
- Cole Vonder Haar - Ph.D. (University of Southern Illinois – Carbondale)
  Behavioral Dysfunction and Traumatic Brain Injury, Behavioral Neuroscience

TEACHING ASSOCIATE PROFESSOR

- Elizabeth Levelle - Ph.D. (West Virginia University)
  Teaching of Psychology, Academic Advising
- Connie Toffle - Ph.D. (West Virginia University)
  Teaching of Psychology

TEACHING ASSISTANT PROFESSORS

- Kris Martens - Ph.D. (Southern Illinois University – Carbondale)
  Behavioral Neuroscience, Recovery from Traumatic Brain Injury
- Sharon Tenenholz - Ph.D. (University of California, Los Angeles)
  Teaching of Psychology, Curriculum Design, Academic Advising

CLINICAL INSTRUCTOR

- Stephanie McWilliams - Ph.D. (West Virginia University)
  Youth Mentorship; Sport and Exercise Psychology, Health Psychology, Behavior Change and Weight Management

PROFESSORS EMERITI

- Edward Caldwell - Ph.D.
- Stanley Cohen - Ph.D.
- Philip Comer - Ph.D.
- William J. Fremouw - Ph.D.
- Robert Hawkins - Ph.D.
- Kent Parker - Ph.D.
- Hayne Reese - Ph.D.

ADJUNCT PROFESSOR

- Barbara Cubic - Ph.D. (Louisiana State University)

ADJUNCT ASSOCIATE PROFESSORS

- Martin L. Boone - Ph.D. (Oklahoma State University)
- Marissa E. Carey - Ph.D. (Drexel University)
- Amy Herschell - Ph.D. (West Virginia University)
- Steven Kinsey - Ph.D. (Ohio State University)
- Neal A. Newfield - Ph.D. (Texas Tech University)
- Amy K. Root - Ph.D. (University of Maryland)
- Natalie Shook - Ph.D. (Ohio State University)

ADJUNCT ASSISTANT PROFESSORS

- Laura C. Capage - Ph.D. (West Virginia University)
- Jason A. Chong - Psy.D. (Pacific University)
- Molly Fechter-Leggett - Psy.D. (Antioch New England Graduate School)

- Matthew E. Iwaniec - Psy.D. (Indiana University of Pennsylvania)
- Jennifer G. Myers - Ph.D. (West Virginia University)
- Kimberly A. Pedersen - Ph.D. (University of Missouri)
- Merideth Smith - Ph.D. (West Virginia University)
- Jenna E. Wallace - Psy.D. (Marshall University)

Admissions

Students are admitted only at the beginning of the fall semester. The Psychology program admits students directly to the doctoral degree. The requirements for the Master's of Science are completed as part of the doctoral degree requirements. Applications must be completed by the preceding December 1. Applications received after the deadline may be reviewed at the discretion of the admissions committee.

Acceptance is based on the following:

- Adequate academic aptitude at the graduate level as measured by the Graduate Record Examination
- Achievement in undergraduate coursework with a minimum grade point average of 3.0
- Personal qualities that predict success in graduate study and as a professional after graduation
- Adequate preparation in psychology and related fields
- Fit between the applicant's interests and the offerings of a department graduate program major area of study

Certain application requirements may be waived based on a preliminary review of an application by the program.

Non-Degree Students

Graduate courses in psychology are designed for regularly admitted degree-seeking psychology students as part of an extensive program of preparing those students for professional careers. Thus, students not admitted into one of the psychology graduate program areas are discouraged from taking graduate courses in psychology. Non-psychology graduate students must obtain the instructor's permission to enroll in any psychology graduate course.

Master of Science

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum of 48 graduate-level credit hours in Psychology or other related disciplines approved by the student's advising committee.

- **Grade Point Average:** After admission to a doctoral program major, students must earn a minimum cumulative and major GPA of 2.75.

- **Graduation Requirement:** Students must complete required coursework and a master's thesis.
    - **Master's Thesis:** An empirical research project in an area of psychology approved by the student's master's thesis committee.

- **Benchmarks:** Thesis proposal approval not later than May 15, Year 2. Thesis defense and ETD submission not later than May 15, Year 3.

- **Additional Requirements:** None.

Curriculum Requirements

Research Courses		9
PSYC 511	Research Design and Data Analysis 1	
PSYC 797	Research [*]	
Research Methods		**3**
Select one course from the list below:		
PSYC 512	Research Design and Data Analysis 2	
PSYC 611	Single-Subject Research Methods	
PSYC 612	Multivariate Analysis	
PSYC 614	Program Evaluation and Intervention	
PSYC 711	Seminar in Methodology	
Psychology Coursework:		**36**
Select any PSYC courses at the 500 level or above		
Total Hours		48

[*]   **PSYC 797**- A minimum of 6 credits is required

Doctor of Philosophy

PSYCHOLOGY: BEHAVIOR ANALYSIS

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum number of 42 graduate-level credit hours in Psychology or other related disciplines approved by the student's advising committee.

- **Grade Point Average:** After admission to a doctoral program major, students must earn a minimum cumulative and major GPA of 2.75.

- **Comprehensive Examination:** Students must successfully complete a preliminary examination prior to advancement to doctoral candidacy.

- **Dissertation:** Students must complete an empirical research project in an area of psychology approved by the student's dissertation committee.

- **Progress toward Completion:** Dissertation proposal approved not later than May 15, Year 4. For students who entered with an approved master's thesis, May 15, Year 3.

Curriculum Requirements

Principles of Behavior		**3**
PSYC 531	Experimental Analysis of Behavior	
Research Methods		**9**
PSYC 511	Research Design and Data Analysis 1 (fulfills dept methods requirement)	
PSYC 512	Research Design and Data Analysis 2 (fulfills dept methods requirement)	
PSYC 611	Single-Subject Research Methods	
Conceptual Analysis		**6**
PSYC 732	Behavior Theory and Philosophy	
PSYC 721	History and Systems	
or PSYC 739	Verbal Behavior	
Basic Behavior Analysis		**6**
Select two from the following:		
PSYC 532	Human Behavior	
PSYC 733	Stimulus Control and Memory	
PSYC 734	Reinforcement and Punishment	
PSYC 736	Advanced Experimental Analysis of Behavior	
Applied Behavior Analysis		**6**
PSYC 533	Applied Behavior Analysis	
Select one from the following:		
PSYC 630	Behavior Analysis Practicum	
PSYC 730	Advanced Behavior Analysis Practicum	
PSYC 735	Assessment and Intervention for Severe Behavior	
PSYC 737	Advanced Applied Behavior Analysis	
Ethics		**3**
PSYC 609	Ethics in Behavior Analysis	
Specialized Elective [*]		**3**
PSYC 615	Software Design in Psychology	
PSYC 722	Biological Aspects of Behavior	
PSYC 754	Clinical Psychopharmacology	
Research [**]		**6**
PSYC 797	Research	
Total Hours		42

[*]   Or another course approved by the Behavior Analysis Training Committee.

[**]   Students are expected to be involved in research throughout their graduate career, and enrollment in PSYC 797, should reflect this activity. Students must complete at least six hours.

Psychology: Behavioral Neuroscience

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum number of 39 graduate-level credit hours in Psychology or other-related disciplines approved by the student's advising committee.

- **Grade Point Average:** After admission to a doctoral program major, students must earn a minimum cumulative and major GPA of 2.75.

- **Comprehensive Examination:** Students must successfully complete a preliminary examination prior to advancement to doctoral candidacy.

- **Dissertation:** Students must complete an empirical research project in an area of psychology approved by the student's dissertation committee.

- **Benchmarks:** Dissertation proposal approved not later than May 15, Year 4. For students who entered with an approved master's thesis, May 15, Year 3.

Curriculum Requirements

CORE COURSES:		15
PSYC 608	Professional Issues - Behavioral Neuroscience	
PSYC 650	Behavioral Neuroscience Methods	
PSYC 694	Seminar *	
PSYC 701	Advanced Professional Issues in Psychology	
PSYC 722	Biological Aspects of Behavior	
PSYC 724	Advanced Neuroscience	
METHODOLOGY:		**9**
PSYC 511	Research Design and Data Analysis 1	
PSYC 512	Research Design and Data Analysis 2	
Select one advanced methodology course:		
BIOL 576	Computational Neuroscience	
PSYC 611	Single-Subject Research Methods	
PSYC 612	Multivariate Analysis	
PSYC 614	Program Evaluation and Intervention	
PSYC 711	Seminar in Methodology	
RESEARCH: **		**6**
PSYC 797	Research	
ELECTIVES:		**9**
Any courses approved by the Behavioral Neuroscience Training Committee		
Total Hours		39

*   Must be taken every semester the course is offered.

**   A minimum of six hours during thesis work, and continuous during dissertation work.

PSYCHOLOGY: CLINICAL

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum number of 82 graduate-level credit hours in Psychology or other related disciplines approved by the student's advising committee.

- **Grade Point Average:** After admission to a doctoral program major, students must earn a minimum cumulative and major GPA of 2.75.

- **Comprehensive Examination:** Students must successfully complete a preliminary examination prior to advancement to doctoral candidacy.

- **Dissertation:** Students must complete an empirical research project in an area of psychology approved by the student's dissertation committee.

- **Additional requirements:** At least two academic years of practica must be through a Quin Curtis Center Clinical Team, and you must have at least two different supervisor/team experiences, each lasting one academic year or twelve month period.

- **Benchmarks:** Dissertation proposal approved not later than May 15, Year 4. For students who entered with an approved master's thesis, May 15, Year 3.

Curriculum Requirements

METHODOLOGY:		**9**
PSYC 511	Research Design and Data Analysis 1	
PSYC 512	Research Design and Data Analysis 2	
PSYC 655	Research Methods in Clinical Psychology [*]	
CORE COURSES:		**35**
PSYC 661	Behavior Therapy	
PSYC 671	Child Behavior Therapy	
PSYC 653	Behavioral and Psychological Assessment 1	
PSYC 654	Behavioral and Psychological Assessment 2	
PSYC 652	Clinical Interviewing	
PSYC 762S	Seminar in Clinical Psychology	
PSYC 603	Professional Issues in Clinical Psychology	
PSYC 607	Ethical and Legal Issues in Psychology	
PSYC 722	Biological Aspects of Behavior	
PSYC 651	Behavior Pathology	
PSYC 725	Social Psychology	
PSYC 745	Seminar in Life-Span Development	
ADVANCED INTEGRATIVE SEMINAR		**3**
PSYC 726	Social Cognition	
CLINICAL SUPERVISION:		**2**
PSYC 755	Seminar in Clinical Supervision	
PRACTICA AND INTERNSHIP: [*]		**21**
PSYC 660	Clinical Psychology Practicum	
PSYC 670	Clinical Child Psychology Practicum	
PSYC 750	Clinical Internship	
RESEARCH:		**6**
PSYC 797	Research	
ELECTIVES:		**6**
Any approved PSYC course at the 500 level or above		
Total Hours		82

[*]   Students must complete at least 18 hours of practica, PSYC 660 or PSYC 670, and three hours of internship, PSYC 750.

PSYCHOLOGY: CLINICAL CHILD

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum number of 82 graduate-level credit hours in Psychology or other related disciplines approved by the student's advising committee.

- **Grade Point Average:** After admission to a doctoral program major, students must earn a minimum cumulative and major GPA of 2.75.

- **Additional Requirement:** Students must pass (defined as a majority of faculty evaluators endorsing "meets expectations" in their ratings) at least 2 case conference presentations before graduation. At least one of these case presentations must be conducted individually and observed and evaluated by at least three faculty members. The other case presentation can occur as part of a team of two presenters.

- **Comprehensive Examination:** Students must successfully complete a preliminary examination prior to advancement to doctoral candidacy.

- **Dissertation:** Students must complete an empirical research project in an area of psychology approved by the student's dissertation committee.

- **Progress toward Graduation:** Dissertation proposal approved not later than May 15, Year 4. For students who entered with an approved master's thesis, May 15, Year 3. Annual written evaluations document student performance.

Curriculum Requirements

CORE COURSES:		**46**
PSYC 511	Research Design and Data Analysis 1	

PSYC 512	Research Design and Data Analysis 2	
PSYC 603	Professional Issues in Clinical Psychology	
PSYC 607	Ethical and Legal Issues in Psychology	
PSYC 651	Behavior Pathology	
PSYC 652	Clinical Interviewing	
PSYC 655	Research Methods in Clinical Psychology	
PSYC 661	Behavior Therapy	
PSYC 653	Behavioral and Psychological Assessment 1	
PSYC 654	Behavioral and Psychological Assessment 2	
PSYC 671	Child Behavior Therapy	
PSYC 722	Biological Aspects of Behavior	
PSYC 725	Social Psychology	
PSYC 745	Seminar in Life-Span Development	
PSYC 755	Seminar in Clinical Supervision (Taken over 2 semesters)	
PSYC 762	Seminar in Clinical Psychology	
ADVANCED INTEGRATIVE SEMINAR		**3**
PSYC 726	Social Cognition	
PRACTICA AND INTERNSHIP		**21**
PSYC 660	Clinical Psychology Practicum	
PSYC 670	Clinical Child Psychology Practicum	
PSYC 750	Clinical Internship	
RESEARCH: [*]		**6**
PSYC 797	Research	
ELECTIVES:		**6**
Any approved PSYC course at the 500 level or higher.		
Total Hours		82

[*]   Students are expected to be involved in research throughout their graduate career, and their enrollment in PSYC 797 should reflect this activity. Students must complete at least six hours.

PSYCHOLOGY: LIFE-SPAN DEVELOPMENT

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum number of 47 graduate-level credit hours in Psychology or other related disciplines approved by the student's advising committee.

- **Grade Point Average:** After admission to a doctoral program major, students must earn a minimum cumulative and major GPA of 2.75.

- **Comprehensive Examination:** Students must successfully complete a preliminary examination prior to advancement to doctoral candidacy.

- **Dissertation:** Students must complete an empirical research project in an area of psychology approved by the student's dissertation committee.

- **Progress toward Completion:** Dissertation proposal approved not later than May 15, Year 4. For students entering with an approved master's thesis, May 15, Year 3. Annual written evaluations document student performance.

Curriculum Requirements

CORE COURSES:		**26**
PSYC 511	Research Design and Data Analysis 1	
PSYC 512	Research Design and Data Analysis 2	
PSYC 541	Infant Development	
PSYC 542	Child Development	
PSYC 543	Adolescent and Young Adult Development	
PSYC 544	Adult Development and Aging	
PSYC 545	Conceptual Issues in Developmental Psychology	
PSYC 546	Methodological Issues in Developmental Psychology	
PSYC 602	Professional Issues in Developmental Psychology	

PSYC 701	Advanced Professional Issues in Psychology	
METHODOLOGY:		**6**
Select 2 courses from the list below:		
PSYC 611	Single-Subject Research Methods	
PSYC 612	Multivariate Analysis	
PSYC 614	Program Evaluation and Intervention	
PSYC 711	Seminar in Methodology	
RESEARCH *		**6**
PSYC 797	Research	
ELECTIVES:		**9**
Any PSYC course approved by the Life-Span Developmental Training Committee		
Total Hours		47

*   Students are expected to be involved in research throughout their graduate career, and their enrollment in PSYC 797 should reflect this activity.

Degree Progress: M.S.

All students will have a plan of study on file no later than their first semester in the program. Students receive at least a yearly letter of evaluation. Thesis proposals should be approved no later than May 15, Year 2. Thesis defense and ETD submission should not occur later than May 15, Year 3.

Degree Progress: Ph.D.

All students will have a plan of study on file no later than their first semester in the program. Students receive at least a yearly letter of evaluation. Dissertation proposals should be approved not later than May 15, Year 4. For students who entered with an approved master's thesis, this date is May 15, Year 3.

Major Learning Outcomes

PSYCHOLOGY

Students graduating with an MS in psychology will:

- Conduct a high-quality research project in close collaboration with a faculty member.
- Describe research projects in the context of a larger body of literature.
- Maintain certification in ethical standards of conducting research.
- Analyze data using a variety of statistical methods.

Major Learning Outcomes

PSYCHOLOGY

Students graduating with a doctorate in psychology will acquire the following research and communication skills:

- Students will design and execute empirical research to investigate psychological topics.
- Students will conduct and interpret statistical analyses.
- Students will clearly communicate results of empirical research, both orally and in writing.
- Students will create and deliver professional oral presentations.
- Students will demonstrate expert knowledge of their area of emphasis.
- Students will be conversant with historical, philosophical, and theoretical issues in psychology.
- Students will abide by the ethical principles of the discipline of psychology.

Public Administration, M.P.A.

Degree Offered

- Master of Public Administration

Nature of the Program

The Master of Public Administration (MPA) degree prepares individuals for a career in public service. WVU's Department of Public Administration offers the only internationally accredited MPA program in West Virginia. The MPA degree prepares individuals to work in government and nonprofit

agencies to develop and implement public policies and programs. The MPA program offers flexible class times, full and part-time enrollment, small class settings, and opportunities to work directly with community and government organizations through team-based class projects, the internship experience, professional development activities and community service.

Dual Degrees

The department has established dual degree programs with a number of other graduate programs. A dual JD/MPA degree program established with the College of Law provides preparation in both law and public administration. A dual MSW/MPA degree in cooperation with the School of Social Work provides preparation for administrators in the social services. Dual degree programs may also be arranged with other academic programs and professional schools. Graduate studies regulations permit limited credit hours from one graduate degree to be applied to a second degree. Students may pursue two degrees and use approved coursework for both degrees.

Graduate Certificates Offered

The department offers graduate certificate programs in Community Development Policy & Practice and Healthcare Administration.

FACULTY

CHAIR

- Maja Husar Holmes - Ph.D. (Syracuse University)
  Public Management and Public Leadership

PROFESSOR

- L. Christopher Plein - Ph.D. (University of Missouri)
  Eberly Professor of Outstanding Public Service, Legal and Political Foundations, Public Policy Analysis, Social Policy, Community and Economic Development

ASSOCIATE PROFESSORS

- Karen Kunz - D.P.A. (University of Illinois, Springfield)
  Financial Management, Corporate Use of Public Funds, Political Economy
- Margaret Stout - Ph.D. (Arizona State University)
  Local Government, Community Development, Public Policy and Public Planning

ASSISTANT PROFESSOR

- Paolo Farah - LLM, JD (College of Europe, University of Paris)
  Energy, Environment, and Natural Resource Law, Human Rights

PROFESSORS EMERITI

- Nancy L. Adams - Ph.D. (Fielding Institute)
- Gerald M. Pops - Ph.D. (Syracuse University)
- David G. Williams - Ph.D. (State University of New York at Albany)

Admissions

MPA

Candidates must meet the WVU general admission requirements for a bachelor's degree from an accredited college. Admission into the MPA program is competitive with decisions based on the following material:

- ***Application for admission and transcripts***. Apply here **(**https://graduateadmissions.wvu.edu/how-to-apply/apply-for-2020-2021/**)**
- ***Two Recommendations***. Recommendations from professional or academic references should be requested through the online Graduate Application portal.
- ***Current Resume***. Please list work experience, volunteer activities, internships, academic degrees and honors, and other accomplishments you feel the admissions committee should take into account in reviewing your application.
- ***Statement of Purpose***. Provide a letter indicating your interest in a career in public service, what you hope to gain from the MPA program, and why WVU offers you the best opportunity for achieving your professional goals.
- ***Graduate Exam Scores (GRE, GMAT, LSAT, or view below for Exemptions)***. Submit standardized test scores from one of the following Graduate Exams:

- Graduate Record Examination (GRE)
- Graduate Management Admission Test (GMAT)
- Law School Admissions Council Exam (LSAT)
- **TOEFL Scores** (for International Students only).

EXEMPTIONS TO THE GRADUATE EXAM REQUIREMENT

The requirement that applicants submit GRE, GMAT, or LSAT scores will be waived under the following circumstances:

Admission based on Undergraduate GPA: The applicant who earned a bachelor's degree from a U.S. accredited college or university and achieved a cumulative GPA of 3.4 or higher are eligible to waive the GRE/GMAT/LSAT requirement to apply for the program.

Evidence of Graduate Level Competence: Applicants who already hold a graduate degree or have successfully completed at least 18 semester hours in another accredited graduate program, may request a waiver of the GRE/GMAT/LSAT requirement.

Significant Managerial Administrative Experience: Applicants with at least 5 years of managerial administrative experience after completing their undergraduate degree may request a waiver of the GRE/GMAT/LSAT requirement. Please provide a letter that describes your verbal/written and quantitative competencies. The letter should provide specific examples of your ability to write effectively, analyze complex situations, and complete quantitative analysis.

Application Deadline

The MPA program accepts students for both Fall and Spring admission. The deadline for all application materials for Fall admission is April 1. Applicants will be notified of the committee's decision around April 15. The deadline for all application materials for Spring admission is October 15. Applicants for the spring term will be notified around October 31. Applications for admission may be considered after these deadlines on a space-available basis. Incomplete applications will not be considered.

For further information, please contact:

Department of Public Administration
P.O. Box 6322
Morgantown, WV 26506
Debbie.Koon@mail.wvu.edu (dkoon@wvu.edu)
(304) 293-2614
or publicadmin.wvu.edu (http://publicadmin.wvu.edu)

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum of 39 credit hours in graduate coursework. Students may take PUBA courses or courses at the 400 level or above in another department as approved by faculty advisor as electives. Students with substantial experience in public administration may request to waive the MPA internship requirement.

- **Grade Point Average:** Students must earn a minimum cumulative GPA of 3.00 in coursework applied to their graduate program. Students must also earn a minimum grade of C in all required MPA courses. Students must earn a B- or better in non-PUBA courses that contribute to the MPA degree program of study.

- **Area of Emphasis:** The Public Administration Department offers two areas of emphasis - Healthcare Administration and Local Governance and Community Development. Students may either complete an Area of Emphasis or 12 credits of electives.
    - **Healthcare Administration:** For students who are interested in a career in a variety of healthcare settings, including hospitals, health departments, nursing homes, mental health services, home health services, nonprofit voluntary agencies, health research foundations, public and private insurance, and a variety of governmental agencies.
    - **Local Governance and Community Development:** For students who are interested in a career in community and economic development with non-profit agencies and local governments, including counties and municipalities, school districts, and public utilities.

- **Graduation Requirement:** Students must complete the curricular program of study and earn a cumulative GPA of 3.0 or better. Students are required to complete 3 credit hours of internship which reflects 360 contact hours in the internship placement. The internship requirement may be waived for students who have substantial public service experience.

- **Benchmarks:** Students are expected to meet at least once a semester with their faculty advisor to review their progress in the program of study. More information is provided in the MPA Student Handbook.

- **Degree Completion**: Full-time students usually complete the MPA degree in fours semester.

Curriculum Requirements

Required Courses		**24**
PUBA 600	Democratic Context of Public Administration	
PUBA 610	Public and Nonprofit Management	
PUBA 620	Public and Nonprofit Financial Management	
PUBA 630	Public Service Research	
PUBA 645	Public Policy and Administration	
PUBA 710	Public Service Leadership	
PUBA 720	Public and Nonprofit Budgeting	
PUBA 700	Capstone Seminar	
Elective Courses		**12**
Select one of the following options:		
Any PUBA courses at the 600 or 700 level		
Courses at the 400 level or above in another department as approved by faculty advisor		
Healthcare Administration Area of Emphasis		
Local Governance and Community Development Area of Emphasis		
Internship		**3**
PUBA 751	Public Service Internship	
Total Hours		39

Healthcare Administration Area of Emphasis

The Public Administration Department offers a healthcare administration area of emphasis for students who are interested in a career in a variety of healthcare settings, including hospitals, health departments, nursing homes, mental health services, home health services, nonprofit voluntary agencies, health research foundations, public and private insurance, and a variety of governmental agencies.

HEALTHCARE ADMINISTRATION AREA OF EMPHASIS REQUIREMENTS

REQUIRED COURSES		**9**
PUBA 670	Health Systems	
PUBA 671	Healthcare Organization and Operation	
PUBA 672	Healthcare Finance	
HEALTHCARE ELECTIVES		**3**
Select electives to total 3 credits. Others approved by Healthcare Advisor		
PUBA 673	Alternative Healthcare Delivery Systems	
PUBA 674	Rural Healthcare	
PUBA 675	Organization Performance Improvement	
PUBA 678	Population Health Management	
PUBA 716	Creativity and Innovation	
PUBA 717	Performance Management	
PUBA 770	Managed Care	
PUBA 772	Integrated Delivery System	
PUBA 773	Policy Issues in Women's Health	
PUBA 774	Healthcare Law and Ethics	
PUBA 775	Healthcare Policy	
PUBA 776	Healthcare Planning/Marketing	
PUBA 777	Healthcare Information Systems	
Total Hours		12

Local Governance and Community Development Area of Emphasis

Counties and municipalities are the levels of government most directly involved in community and economic development. Localities are where we live, learn, work, and recreate. These and other local governments, like school districts and public utilities, comprise the largest sector of public employment in the United States. In fact, employment in local government has even been growing while it declines at other levels of government. Adding to this sub-

sector the many nonprofit organizations that engage in community and economic development, the opportunities for employment in this field of public service abound.

LOCAL GOVERNANCE AND COMMUNITY DEVELOPMENT AREA OF EMPHASIS REQUIREMENTS

PUBA 650	Local Governance	3
PUBA 750	Public Planning	3
PUBA 755	Sustainable Community Development	3
Select 3 credit hours from the list below or an approved course by LGCD Advisor		3
PUBA 645	Public Policy and Administration	
PUBA 651	Equitable Community Development	
PUBA 655	Public Engagement	
PUBA 743	Conflict Management	
Total Hours		12

Degree Progress

Academic Advising: Each student is assigned an faculty advisor to guide students with their program of study, internship placement and career development. All course selections must be approved by you MPA faculty advisor. Students are expected to meet at least once a semester with their faculty advisor to review their progress in the program of study

Plan of Study: The Plan of Study should be discussed with your faculty advisor to ensure appropriate sequencing of courses to meet graduation requirements.

Evaluation Procedures: The Public Administration faculty are committed to support all admitted students in their timely completion of the program. Students will annually receive a "good standing" letter from the Chair of the Department. You will also be provided feedback through academic assignments and individual meetings as needed. Your academic advisor is available to discuss with you any areas in which you may be experiencing challenges and/or need additional support. If you academic advisor is not available, feel free to contact the Chair of the Department of Public Administration.

Grade Point Average (GPA) and Course Grades: Students must earn a minimum cumulative GPA of 3.00 in coursework applied to their graduate program. Students must also earn a minimum grade of C in all required MPA courses. Students must earn a B- or better in non-PUBA courses that contribute to the MPA degree program of study.

Timeline: Master's degree students are permitted to continue in a program for a maximum of eight years following their term of admission to the program. Students who have been inactive for two or more years or who exceed eight years following their term of admission are required to apply for readmission to the University and their graduate program.

Professional Behavior: The Master of Public Administration program is a professional program preparing people for careers in public service. Adherence to professional standards and ethics are expected of students.

More information is provided in the MPA Student Handbook (https://publicadmin.wvu.edu/students/master-of-public-administration/student-resources/).

Major Learning Outcomes

MASTER OF PUBLIC ADMINISTRATION

1. Define democratic values and explain how they frame public service ethics.
2. Make personal choices among and synthesis of differing approaches to public service.
3. Integrate public service values into human resource management.
4. Explain the changes occurring in society as they affect human capital appropriate and recommend responses.
5. Interpret and apply concepts of multiculturalism, diversity, acculturation, culture, and theories of difference.
6. Define and differentiate public management concepts and leadership approaches.
7. Examine, select, and recommend appropriate management strategies and actions to address public issues.
8. Define, distinguish, and apply multiple theoretical frameworks to situational analysis and synthesize preferred approaches.
9. Define, frame, evaluate, and recommend responses to important public issues.
10. Examine the stages and actors involved in public policy making process.
11. Engage in evidence-based and empirical analysis and evaluation that informs policy.
12. Apply management tools and leadership skills in field-based activities.
13. Participate in the policy decision making process in the public or nonprofit context.

14. Formulate, practice, and evaluate public service approaches.
15. Define, frame, evaluate, and recommend responses to specific public contexts.
16. Generate, co-produce, and share innovative research with students.

Certificate Learning Outcomes

GRADUATE CERTIFICATE - COMMUNITY DEVELOPMENT POLICY AND PRACTICE (CDPP)

- Identify, distinguish, and summarize the institutions, processes, and powers of local government in a federalist system.
- Recognize, summarize, and recommend the basic operations and finances of local government.
- Investigate and judge historic and current systems of privilege and oppression.
- Analyze community power dynamics in a particular case.
- Recognize and distinguish various rationales for engaging the public in policy making and implementation.
- Illustrate and model various techniques for mobilizing stakeholders and citizens in collaborative public policy making, planning, and program implementation.
- Identify, define, and compare common arenas of public planning.
- Research and organize planning data to formulate recommendations using a logic model approach, including both data-driven (needs/assets assessment) and mission-driven (strategic) planning practices.
- Distinguish and interpret theoretical approaches to community development.
- Prepare, investigate, develop, and recommend a community development project through implementation, management, and resource development planning.
- Construct a theory of change logic model based on program theory.
- Create a program evaluation research design.

Certificate Learning Outcomes

HEALTHCARE ADMINISTRATION

Upon completion of the certificate, students should be able to:

- Understand, identify, and explain key social, political, and economic issues that shape the delivery of healthcare in the United States.
- Examine and identify the variety of organizations and entities in the healthcare delivery environment.
- Assess current workforce, funding, organizational delivery, quality and equity trends in healthcare administration.
- Understand, interpret, and utilize financial information, reports, policies and tools to implement decision-making in healthcare administration.

Social Work, M.S.W.

Degrees Offered

- Master of Social Work
- Dual MSW/MPA

Nature of the Program

MISSION STATEMENT AND OVERVIEW

The mission of the WVU MSW program is to educate students to become advanced integrated practice social workers. The specialization in advanced integrated practice builds on generalist practice and prepares students to integrate micro, mezzo, and macro practice skills across service sectors and within interdisciplinary teams to effectively address social and human problems pertinent to a wide range of professional practice areas, with a particular emphasis on effective models of rural service delivery. The advanced integrated practice curriculum provides an integrative approach to social work where students are prepared for both direct practice and administrative roles. This curriculum prepares WVU MSW graduates to be well-rounded advanced practitioners who can respond to the complex realities of practice in a variety of roles and settings

The program offers two degree plan options (Regular Standing and Advanced Standing) and two course delivery modalities (on campus and online). The Advanced Standing degree plan is available to students who have either earned a baccalaureate degree in Social Work (BSW) within the previous 8 years from a program accredited by the Council of Social Work Education, that is recognized through its International Social Work Degree Recognition and Evaluation Service, or that is covered under a memorandum of understanding with international social work accreditors. Each degree plan can be completed through a full-time or a part-time option. The full-time program is offered through the on-campus delivery modality only. The WVU MSW program is nationally accredited by the Council for Social Work Education (CSWE).

A dual degree option resulting in the Master of Social Work (MSW) and Master of Public Administration (MPA) degrees is also available through the School of Social Work and the Department of Public Administration for on campus students. The MSW/MPA dual degree program can be completed in 3 years for Regular Standing students or 2 years for Advanced Standing students, including summer coursework. Students can learn more about the MPA degree here: https://publicadmin.wvu.edu/students/master-of-public-administration (https://publicadmin.wvu.edu/students/master-of-public-administration/)

Students interested in the dual degree program must apply to and be accepted by each program (MSW and MPA) separately.

Students interested in applying for the MSW program should consult the School of Social Work website: http://socialwork.wvu.edu (http://socialwork.wvu.edu/) or contact:

MSW Admissions
School of Social Work
West Virginia University
P.O. Box 6830
Morgantown, WV 26506-6830

Phone: (304) 293-3280

Email: socialwork@mail.wvu.edu

CAREER OPPORTUNITIES

Graduates of the MSW program are employed throughout the United States and internationally. They work as individual, family, and group treatment specialists, planners, community organizers, and social researchers. They also work as social work educators and as administrators in a variety of programs such as mental health clinics, hospitals, correctional institutions, courts, delinquency programs, aging programs, family counseling agencies, child protective agencies, public welfare departments, child development programs, drug and alcohol abuse programs, public schools, community action agencies, settlement houses, city governments, state government planning agencies, federal administrative agencies, and private research and development organizations concerned with human problems. Social workers are the largest group of mental health service providers in the country.

There has been a constant growth in the need for professional social workers. It is anticipated by the Bureau of Labor Statistics and other research bodies that the employment demand for social workers will continue to increase in numbers and in varieties of programs. The WVU MSW social work curriculum is designed to help students prepare for these careers.

FACULTY

DIRECTOR

- Deana Morrow - Ph.D. (North Carolina State University)
  Social Work Education, Social Work Practice Regulation, Older Adults: social isolation, dementia, congregate care, community care; Behavioral Health, Sexual Minority Populations, Older Adults, Mental Health

MASTER'S PROGRAM DIRECTOR

- Mary LeCloux - Ph.D. (Simmons College)
  Suicide Prevention, Substance Abuse, Health Service Disparities, Evidence-Based Social Work Practice

PROFESSORS

- Helen Hartnett - Ph.D. (Ohio State University)
  Homelessness, Community Practice, Program Evaluation, Social Geography
- Kristina Hash - Ph.D. (Virginia Commonwealth University)
  Aging and Healthcare, Family Caregiving, Geriatric Education, Technology, Conflict Coaching and Meditation
- Deana Morrow - Ph.D. (North Carolina State University)
  Social Work Education, Social Work Practice Regulations, Sexual Minority Populations, Older Adults, Mental Health
- Carrie Rishel - Ph.D. (University of Pittsburgh)
  Rural Integrated Health Training Director; Children's Mental/Behavioral Health, Prevention of Mental Health Problems, Risk and Protective Factors Related to Child Outcomes, Prevention-Focused Social Work Practice, Integrated Models of Service Delivery
- Leslie Tower - Ph.D. (Barry University)
  Women's Issues, Health Care Administration, Domestic Violence
- Michael Zakour - Ph.D. (Washington University)
  Organizations and Communities, Non-Profit Management, Disaster Response

ASSISTANT PROFESSORS

- Megan Gandee-Guedes - Ph.D. (Virginia Commonwealth University)
  LGBT Populations, Mental Health Services, Social Justice, Technology in Social Work Education
- Mary LeCloux - Ph.D. (Simmons College)
  Master's Program Director; Suicide Prevention, Substance Abuse, Health Service Disparities, Evidence-Based Social Work Practice
- Jiyoung Tabone - Ph.D. (University of Chicago)
  Child Maltreatment and Later Outcomes, Prevention and Intervention Research, Mental Health Service, Risk and Resilience, Program Evaluation

CLINICAL ASSOCIATE PROFESSOR

- Linda Ferrise - MSW (West Virginia University)
  Baccalaureate Program Director; Social Work Practice, Child Welfare

CLINICAL ASSISTANT PROFESSORS

- Jenifer Gamble - Ph.D. (University of Louisville)
  Field Education Director, Macro Practice & Organizational Systems, Non-profit Leaderships, International Social Work

TEACHING ASSISTANT PROFESSOR

- Jeffrey Hanna - DSW (Rutgers University)
  Clinical Practice, Social Work Theory, Geriatrics, Social Work Assessment and Diagnosis

INSTRUCTORS AND FACULTY EQUIVALENTS

- Carol Amendola - MSW (West Virginia University)
  Baccalaureate Program Coordinator; Social Work Practice, Child Welfare
- Rhonda Hayes - MSW (West Virginia University)
  Teaching Instructor; Substance Abuse & Recovery, Family Victimology, Grant Writing, Social Agency and Program Administration
- Jacqueline Englehardt - MSW (West Virginia University)
  MSW Admissions & Recruitment Coordinator, Clinical Instructor, Title IV-E Coordinator; Nonprofit Management, Continuing Education Certificate Programs, Professional Development
- Lindsey Rinehart - MSW (New York University)
  Online Field Coordinator and Clinical Instructor; Field Education, Service Learning, Community Engagement, Homelessness
- Mandy Weirich - MSW (West Virginia University)
  MSW Online Program Coordinator, Clinical Instructor; Policy and Advocacy, Geriatric Education, Use of Technology in Teaching and Research

RESEARCH ASSOCIATE

- Rebekah Bledsoe - MSW (West Virginia University)
  Title IV-E, Child Welfare

EMERITUS FACULTY

- Marjorie H. Buckholz-Cleveland - Ph.D. (West Virginia University)
- Patricia Chase - Ed.D. (West Virginia University)
- Roger A. Lohmann - Ph.D. (Brandeis University)
- Nancy Lohmann - Ph.D. (Brandeis University)
- Caroline T. Mudd - MSW (University of Pennyslavania)

Admissions

Applicants to the MSW programs (online or on campus) are classified as either Regular Standing or Advanced Standing.

REGULAR STANDING

- Domestic applicants: Bachelor's degree from a regionally accredited college or university
- International applicants: Bachelor's degree from an accredited institution

ADVANCED STANDING

- Domestic applicants who have received a BSW from a Council on Social Work Education-accredited program within the last eight years may apply for Advanced Standing.

- International applicants who have received a BSW from a Council on Social Work Education-accredited program, recognized through its International Social Work Degree Recognition and Evaluation Services, or covered under a memorandum of understanding with international social work accreditors within the last eight years may apply for advanced-standing.

ADMISSION TERMS

Admission to the online and on campus MSW programs occurs once per year

- Advanced Standing full-time on campus students are admitted for Summer (May).
- All other students (part-time online Advanced and Regular Standing; part-time on campus Advanced Standing and full and part-time on campus Regular Standing) are admitted for Fall (August).

APPLICATION REQUIREMENTS AND DEADLINES

Consult the School of Social Work website (https://socialwork.wvu.edu/students/msw/) for detailed application requirements and deadlines for both the online and on campus MSW programs. The School of Social Work uses the university online graduate application system.

GRADE POINT AVERAGE REQUIREMENTS

- At least a 2.75 overall GPA is required from the institution granting the applicant's undergraduate degree, though a 3.0 GPA is preferred.
- For advanced standing students, a 3.25 or higher GPA in their undergraduate social work courses is preferred.

TESTING

- International students for whom English is not a native language are required by the University to submit official scores from the Test of English As a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). Please see the English Language Proficiency Requirements (https://graduateadmissions.wvu.edu/how-to-apply/international-applicant/) for more information.
- All test scores must be received by the admission deadline.

Certain application requirements may be waived based on a preliminary review of an application by the program.

Degree Requirements

- **Standing:**
  - Regular Standing: includes students who have completed a baccalaureate degree from a regionally accredited university in a discipline other than Social Work. Regular Standing students can complete their degree on a full-time or part-time basis. Part-time students have the option of completing their degree on campus or online.
  - Advanced Standing: reserved for students who have earned a Council on Social Work Education accredited baccalaureate degree in Social Work within the past 8 years. Advanced standing students can complete their degree on a full-time or part-time basis. Part-time students have the option of completing their degree on campus or online.
- **Credit Hours:**
  - Regular Standing students are required to complete a minimum of 60 graduate credit hours in Social Work and Gerontology at the 500 and 600 level.
  - Advanced Standing students are required to complete a minimum of 36 graduate credit hours in Social Work and Gerontology at the 600 level.
- **Grade Point Average:** Students must earn a minimum cumulative GPA of 2.75, and a GPA of 3.00 in all courses required for the Social Work degree plan.
- **Graduation Requirement:** Students must complete required coursework and maintain the minimum GPA.
- **Benchmarks:** In addition to maintaining GPA requirements, students must pass all field courses, adhere to academic standards, and demonstrate professional ethics consistent with social work practice (see MSW Handbook for details).
- **Additional Requirements:**
  - Regular Standing students are required to complete two community-based field internships (generalist, 6 credits; advanced; 9 credits
  - Advanced Standing students are required to complete one advanced community-based field internship (9 credits).
- **Dual M.S.W/M.P.A.:** A dual degree option resulting in the master of social work (M.S.W.) and master of public administration (M.P.A.) is available through the School of Social Work and the Division of Public Administration.

Curriculum Requirements: Regular Standing

Generalist Courses — **24**

SOWK 513	Research Methods
SOWK 520	Human Behavior in the Social Environment
SOWK 540	Generalist Practice 1: Individuals, Families, and Groups
SOWK 531	Social Welfare Policy and Programs
SOWK 530	Professional Identity and Social Justice

SOWK 541	Generalist Practice 2: Rural Community Macro Practice	
SOWK 581	Generalist Field Experience	
Advanced Courses		**30**
SOWK 616	Evaluation Research in Social Work	
SOWK 633	Social Policy Analysis, Advocacy, and Deliberation	
SOWK 643	Assessment and Diagnosis	
SOWK 649	Practice with Individuals	
SOWK 650	Practice with Families and Groups	
SOWK 654	Organizational Administration and Leadership	
SOWK 656	Financial Management and Grant Writing	
SOWK 682	Advanced Field Experience	
Electives		**6**
Select two of the following:		
SOWK 626	Child Mental Health: Promotion, Prevention, and Treatment	
SOWK 627	Clinical Practice in Integrated Healthcare	
SOWK 675	Addiction and Social Work Practice	
SOWK 680	Child Welfare Continuum	
GERO 645	Fundamentals of Gerontology	
GERO 681	Rural Gerontology	
Total Hours		60

Curriculum Requirements: Advanced Standing

Advanced Courses		**30**
SOWK 616	Evaluation Research in Social Work	
SOWK 633	Social Policy Analysis, Advocacy, and Deliberation	
SOWK 643	Assessment and Diagnosis	
SOWK 649	Practice with Individuals	
SOWK 650	Practice with Families and Groups	
SOWK 654	Organizational Administration and Leadership	
SOWK 656	Financial Management and Grant Writing	
SOWK 682	Advanced Field Experience	
Electives		**6**
Select two of the following:		
SOWK 626	Child Mental Health: Promotion, Prevention, and Treatment	
SOWK 627	Clinical Practice in Integrated Healthcare	
SOWK 675	Addiction and Social Work Practice	
SOWK 680	Child Welfare Continuum	
GERO 645	Fundamentals of Gerontology	
GERO 681	Rural Gerontology	
Total Hours		36

SUGGESTED PLAN OF STUDY: REGULAR STANDING

First Year

Fall	Hours	Spring	Hours	Summer	Hours
SOWK 520		3 SOWK 513		3 SOWK 643	3
SOWK 530		3 SOWK 531		3 SOWK 649	3
SOWK 540		3 SOWK 541		3 SOWK 654	3
SOWK 581		3 SOWK 581		3	
		12		12	9

Second Year

Fall	Hours	Spring	Hours
SOWK 650		3 SOWK 656	3

SOWK 633	3 SOWK 616	3
SOWK 682	4 SOWK 682	5
SOWK Elective 1	3 SOWK Elective 2	3
	13	14

Total credit hours: 60

SUGGESTED PLAN OF STUDY: PART-TIME REGULAR STANDING

First Year

Fall	Hours	Spring	Hours	Summer	Hours	
SOWK 530		3 SOWK 513		3 SOWK 581		3
SOWK 540		3 SOWK 531		3		
		6		6		3

Second Year

Fall	Hours	Spring	Hours	Summer	Hours	
SOWK 520		3 SOWK 541		3 SOWK 643		3
SOWK 581		3 SOWK Elective 1		3 SOWK 649		3
SOWK 633		3				
		9		6		6

Third Year

Fall	Hours	Spring	Hours	Summer	Hours	
SOWK 650		3 SOWK 616		3 SOWK 654		3
SOWK 682		3 SOWK 656		3 SOWK 682		3
SOWK Elective 2		3 SOWK 682		3		
		9		9		6

Total credit hours: 60

SUGGESTED PLAN OF STUDY: ADVANCED STANDING

First Year

				Summer	Hours	
				SOWK 643		3
				SOWK 649		3
				SOWK 654		3
		9				

Second Year

Fall	Hours	Spring	Hours		
SOWK 633		3 SOWK 616		3	
SOWK 650		3 SOWK 656		3	
SOWK 682		4 SOWK 682		5	
SOWK Elective 1		3 SOWK Elective 2		3	
		13		14	

Total credit hours: 36

SUGGESTED PLAN OF STUDY: PART-TIME ADVANCED STANDING

First Year

Fall	Hours	Spring	Hours	Summer	Hours	
SOWK 633		3 SOWK 656		3 SOWK 643		3
SOWK Elective 1		3 SOWK Elective 2		3 SOWK 649		3
		6		6		6

Second Year

Fall	Hours	Spring	Hours	Summer	Hours	
SOWK 650		3 SOWK 616		3 SOWK 654		3

SOWK 682		3 SOWK 682		3 SOWK 682	3
		6		6	6

Total credit hours: 36

DUAL M.S.W/M.P.A.

A dual degree option resulting in the master of social work (M.S.W.) and master of public administration (M.P.A.) is available through the School of Social Work and the Division of Public Administration. For a student admitted to the regular M.S.W. program, a total of eighty-two credit hours are required to meet the dual degree requirements. For a student admitted to the advanced standing M.S.W. program, a total of sixty-nine credit hours are required to meet dual degree requirements. Many students complete such requirements through one or more additional semesters of study beyond the semesters required for the M.S.W. degree. Applicants must meet the admission requirements of each program.

Degree Progress

The School of Social Work outlines specific timelines for degree completion and policies for evaluation of student progress. Students have a total of 8 years from the date of acceptance to complete the MSW degree. If students have not been registered for courses for a period of 24 months or more, they must re-apply to the program in order to continue towards completion of the degree. At that time, the MSW committee will decide whether previously completed coursework can be applied towards the current degree plan and curriculum requirements. Students who are applying for advanced standing status after a period of inactivity must have a BSW degree within 8 years of their most recent acceptance date. Similarly, if a student was previously accepted as an advanced standing student, but has become inactive, his or her advanced standing status is considered based on the most recent acceptance date.

TIMELINES FOR DEGREE COMPLETION

Typical timelines for degree plans are as follows:

- Advanced Standing, full-time: 1 year (3 semesters)
- Advanced Standing, part-time: 2 years (6 semesters)
- Regular Standing, full-time: 2 years (5 semesters)
- Regular Standing, part-time: 3 years (9 semesters)
- Dual Degree (MSW/MPA), Advanced Standing: 2 years (6 semesters)
- Dual Degree (MSW/MPA), Regular Standing: 3 years (8 semesters)

Timelines for degree completion are uniform for face-to-face and online delivery options. However, the online program is offered on a part-time basis only.

Students are asked to sign a copy of their designated degree plan upon admission to the program. If they wish to deviate from the outlined degree plan, they must have an alternate degree plan that outlines their plan of completion that is approved and signed by the MSW director in order to continue in the program.

EVALUATION OF STUDENTS

Students receive a written evaluation of their progress in the program yearly from their academic advisor. These evaluations summarize the student's academic performance, progress in field education, professionalism and interpersonal skills, and progress towards completion of the degree plan. These evaluations are reviewed with students and kept on file at the School of Social Work.

For times when a student's academic performance falls below the threshold, or when there are concerns regarding academic dishonesty or unprofessionalism/policy violations at the school or field placement site, the MSW program has a detailed review and remediation procedure that is clearly outlined in the MSW Student Handbook.

For additional information, please see the MSW Student Handbook (https://socialwork.wvu.edu/files/d/7562c297-e7f1-421c-aae9-c6bb5d828886/student-handbook-final-8.012019-final.pdf).

Major Learning Outcomes

SOCIAL WORK

The mission of the MSW program is to provide students with skills in direct practice with individuals, families, and groups, as well as program and agency administration, community development, and macro-level practice. In addition, students are trained in how to utilize these skills to foster successful interprofessional practice in a wide variety of settings. Specifically, graduates of the MSW program will be prepared to:

1. Formulate and implement integrated service delivery models appropriate to advanced practice with diverse client populations at multi-system levels.

2. Design and conduct brief and/or on-going assessment and intervention methods consistent with integrated systems and context of practice.

3. Construct an integrated evidence-informed theoretical framework appropriate to the level and context of practice situations.

4. Organize collaboration with other professions to coordinate intervention efforts suitable to the practice situation.

5. Design and conduct collaborative, practice-based evaluation methods and apply findings to improve practice, policy, and/or service delivery effectiveness.

School of Social Work Policies

The Master's program in the School of Social Work (SSW) has a detailed student handbook that outlines multiple policies related to admissions, degree requirements, field education, advising, evaluation and other policies. The MSW Student Handbook is posted on the MSW Webpage (https://socialwork.wvu.edu/students/msw (https://socialwork.wvu.edu/students/msw/)) and updated on a yearly basis.

FIELD INSTRUCTION

Field instruction provides the student with an opportunity to test classroom knowledge as well as to develop and refine advanced-practice skills. Field instruction opportunities are available throughout West Virginia and adjacent areas as well as in a select number of settings outside the region. Field placements are available in the greater Morgantown area, and throughout West Virginia. For online students, field placements are arranged in or near student's home communities.

FULL-TIME REGULAR-STANDING M.S.W.GENERALIST FIELD PLACEMENT

All regular standing students complete a 300-hour Foundation-Generalist Field on-site agency placement during the first year of the program. Full-time students will complete 16-20 hours per week at the placement site during standard weekday operating hours, with part-time students completing 12-16 hours per week. All students attend professional seminar sessions during their placement periods. For online students, seminar attendance involves engagement and completion of equivalent activities via online means. This placement is intended to serve as an "introductory" entrance into the social work field, and offers students the opportunity to build and practice foundational skills in the social work competencies.

ADVANCED FIELD PLACEMENT

The MSW Specialized-Advanced Field Experience occurs during all MSW students' final year and requires completion of 600 on-site placement hours. Full-time students will complete 20-24 hours per week over two semesters during the usual operating hours of the agency, plus professional seminar attendance. Part-time students will complete 16-20 hours per week over three semesters, with professional seminar attendance during two of those semesters. For online students, seminar attendance involves engagement and completion of equivalent activities via online means. Students in the Specialized-Advanced Placement will concentrate more intensively and autonomously in levels of intervention that reflect the elements of the Advanced Integrated curriculum, including work at the micro, mezzo, and macro levels of practice. The Specialized-Advanced placement is meant to prepare students for entry into social work practice employment, with the understanding that students have already grasped the generalist concepts, theories and roles, as well as appropriate professional behavior. MSW students coming into the program with Advanced standing are required to complete this field education experience only and can waive the Foundation-Generalist Field Experience requirement.

Students are required to enroll in the appropriate number of credit hours as determined by their degree plan for each semester of field and to participate in integrative seminars with their faculty field liaison. Decisions regarding field placements and the field placement assignment are jointly reached by the student, field office, and faculty advisor. Only sites on the School of Social Work's list of approved agencies may be used for field instruction. For a complete description of field related policies, please see our field instruction manual: https://socialwork.wvu.edu/students/field-education (https://socialwork.wvu.edu/students/field-education/)

Sociology, M.A., Ph.D.

Degrees Offered

- Master of Arts
- Doctor of Philosophy

Nature of the Program

The Department of Sociology and Anthropology offers an M.A. and Ph.D. in Sociology. All students entering the program will be enrolled as doctoral students. Students entering the program with a BA/BS will be dually enrolled in the M.A. and Ph.D. programs until they complete the M.A. requirements.

The Ph.D. program is designed for students who are interested in working as professional sociologists in teaching and research. The curriculum emphasizes foundational coursework in sociology, including theory, methods and statistics, as well as courses and independent research in an area related to the department's specializations in crime, community, and culture.

The department is strongly committed to teaching, mentoring, and collaborative research with students. Members of the faculty have received major research grants, won national teaching and research awards, published several books and numerous academic articles, and served as the editor

or editorial board members of prestigious journals. In many cases, students have worked as research collaborators with faculty and co-authored publications.

FACULTY

CHAIR

- Jeralynn S. Cossman - Ph.D. (Florida State University) Sociology
  Demography, Health, Inequalities

PROFESSORS

- Sharon R. Bird - Ph.D. (Washington State University) Sociology
  Social Inequality (race/ethnicity/class/gender/LGBTQ+), Workplace equity, Research methods
- Henry H. Brownstein - Ph.D. (Temple University) Sociology
  Distinguished Research Professor. Drugs and society, Drug policy, Violence, Qualitative research methods
- Walter S. DeKeseredy - Ph.D. (York University) Sociology
  Anna Deane Carlson Endowed Chair of Social Sciences. Violence against women, Critical criminology, Masculinities and crime, Criminology theory
- R. Gregory Dunaway - Ph.D. (University of Cincinnati) Sociology
  Dean of the Eberly College of Arts and Sciences
- S. Melissa Latimer - Ph.D. (University of Kentucky) Sociology
  Gender/race/ethnicity, Inequality/labor markets/welfare systems
- James Nolan, III - Ph.D. (Temple University) Sociology
  Criminal justice, Group and social processes
- Rachael A. Woldoff - Ph.D. (Ohio State University) Sociology
  Community, Crime, Inequality/race/class

ASSOCIATE PROFESSORS

- Corey Colyer - Ph.D. (Syracuse University) Sociology
  People processing systems, Agencies of social control
- Amy Hirshman - Ph.D. (Michigan State University) Anthropology
  Mesoamerican archaeology, Social complexity, Ceramics
- Daniel Renfrew - Ph.D. (Binghamton University) Anthropology
  Environmental and political anthropology, Social movements, Latin American cultures
- Lisa M. Dilks - Ph.D. (University of South Carolina) Sociology
  Social psychology, Group processes, Law and society, Quantitative methods
- Jason Manning - Ph.D. (University of Virginia) Sociology
  Conflict and social control, Violence, Sociology of knowledge
- Rachel Stein - Ph.D. (University of Akron) Sociology
  Criminology, Victimization, Media and crime
- Heather M. Washington - Ph.D. (Ohio State University) Sociology
  Community, Crime, Family, Inequality
- Karen Weiss - Ph.D. (SUNY-Stony Brook) Sociology
  Criminology, Victimization, Gender/sexuality/culture
- Joshua Woods - Ph.D. (Michigan State University) Sociology
  Social psychology, Media, Complex organizations, Sociology of risk
- Jesse Wozniak - Ph.D. (University of Minnesota) Sociology
  Policing, Criminology, Deviance, State power

SERVICE ASSOCIATE PROFESSOR

- Jennifer Steele - Ph.D. (Pennsylvania State University) Rural Sociology
  Natural resource sociology, Rural and community development

TEACHING ASSOCIATE PROFESSOR

- Adam Dasari - Ph.D. (Oklahoma State University) Sociology
  Social stratification, Globalization, Environmental sociology, Theory

ASSISTANT PROFESSORS

- Katie E. Corcoran - Ph.D. (University of Washington) Sociology
  Theory, Organizations, Culture, Criminology, Religion, Social networks
- Christopher P. Scheitle - Ph.D. (Pennsylvania State University) Sociology
  Religion, Science in society, Crime, Organizations

TEACHING ASSISTANT PROFESSORS

- Cheryl Dennis - J.D. (West Virginia University)
  Law and society, Inequalities, Political sociology
- Susanna Donaldson - Ph.D. (University of Iowa) Anthropology
  Anthropology of work, Identity, Appalachian cultures
- Lindsay L. Kahle - Ph.D. (Virginia Tech) Sociology
  Youth inequality, School violence, Sexual orientation and criminology
- Kirsten Younghee Song - Ph.D. (Rutgers University) Sociology
  Culture,Transnationalism, Young adulthood, Inequality

PROFESSOR EMERITUS

- Ronald C. Althouse - Ph.D. (University of Minnesota) Sociology
  Theory, Work, Occupational safety and health

ASSOCIATE PROFESSORS EMERITI

- Ann L. Paterson - Ph.D. (Michigan State University) Sociology
- Patricia C. Rice - M.A. (Ohio State University) Anthropology
- Joseph J. Simoni - Ph.D. (University of Notre Dame) Sociology
- William I. Torry - Ph.D. (Columbia University) Anthropology

Admissions

The program in Sociology only admits directly to the PhD. Admission to the Doctoral program requires a 3.0 overall GPA in the prior degree. Students who enter the program with a Bachelor's degree or a non-thesis Master's degree are required to complete the MA degree (http://catalog.wvu.edu/graduate/eberlycollegeofartsandsciences/sociologyandanthropology/#masterstext) as part of their progress toward the PhD. Applications must include official transcripts from all colleges and universities previously attended, a personal statement, writing sample, curriculum vitae, references from at least three people familiar with the student's academic record and potential for graduate study, an official statement of the Graduate Record Examination (GRE) scores, and a non-refundable application fee. The GRE should be taken within two years of the application submission.

The application process is online. Please see the Graduate Admissions website (https://graduateadmissions.wvu.edu/) for more information and the University Graduate Application.

International students for whom English is not a native language are required by the University to submit the Test of English As a Foreign Language (TOEFL). WVU accepts either the TOEFL or the IELTS for this purpose. Please see English Language Proficiency Requirements (https://admissions.wvu.edu/how-to-apply/international-students/#anchor-intlelp) for more information.

Application Deadline

The application deadline is February 1 for fall admission. Students are not admitted in the spring semester. Certain application requirements may be waived based on a preliminary review of an application by the program.

Master of Arts

Degree Requirements

- **Credit Hours:** Students must complete 32 hours of coursework. This includes 17 hours of required coursework in SOCA, 6 hours of thesis, and 9 hours of electives in SOCA.

- **Grade Point Average:** Students must earn a minimum cumulative GPA of 2.75, and a GPA of 3.00 in all courses applied to the graduate program.
- **Graduation Requirement:** In addition to completing required coursework, students must complete a thesis following the journal article model. This is a research report intended for publication in a peer-reviewed academic journal and presentation at a professional sociology conference.
- **Benchmarks:** In addition to maintaining GPA requirements, students must receive acceptance of their thesis proposal no later than November 20 of the third semester of the M.A. program (see Sociology Graduate Handbook for details).

Curriculum Requirements

Required Core Coursework

SOCA 600	Becoming a Sociologist	1
SOCA 601	Professional Research/Writing	1
SOCA 610	Advanced General Sociology	3
SOCA 615	Sociological Data Analysis and Interpretation 1	3
SOCA 616	Sociological Data Analysis and Interpretation 2	3
SOCA 620	Sociological Research Methods	3
SOCA 730	Sociological Explanation	3
SOCA 698	Thesis or Dissertation	6
Electives [*]		**9**
Total Hours		32

[*]   Includes SOCA courses at the 600 or 700 level. Excludes the following: 695, 697, 698, 795, 797, 798.

Doctor of Philosophy

Degree Requirements

- **Credit Hours:** Students must complete 47-56 credit hours in the doctoral program. In addition to the requirements shown below, students who enter the PhD program with a BA or non-thesis MA must complete 6 thesis hours. Further, all students on funded graduate teaching assistantships must complete SOCA 710, Teaching Sociology.

- **Grade Point Average:** Students must earn a minimum cumulative GPA of 2.75, and a GPA of 3.00 in all courses applied to the graduate program.
- **Graduation Requirements:** In addition to completing required coursework, students must pass written and oral comprehensive examinations and successfully defend a dissertation. Students can choose from two dissertation models. They can follow the traditional model, which takes the form and substance of a scholarly monograph, or the manuscript model, which consists of three interrelated papers on a single topic.
- **Comprehensive Examination:** The Comprehensive Exam has two parts, the written and an oral. The Written Examination is intended to assess students' broad competencies in a specialized area of sociology with specific focus on understanding sociological theory and methods as they relate to the student's chosen specialization. The exams also test students' writing skills and their ability to think creatively and carry out independent research. In most cases, the student will be asked to give a brief summary of their written comprehensive exam work for the Oral Exam, but the primarily emphasis is on a question and answer session.
- **Dissertation:** The dissertation requirement ensures that students have the ability to carry out a major independent research project. Students can choose from two dissertation models. They can follow the traditional model, which takes the form and substance of a scholarly monograph, or the manuscript model, which consists of three interrelated papers on a single topic. The quality and contribution of each paper should reach the level of articles published in peer-reviewed scholarly journals. The manuscript model must also include an introductory chapter that clarifies the dissertation theme and situates the work as a whole in the sociological literature, as well as a concluding chapter that synthesizes and integrates the three papers.
- **Benchmarks:** Comprehensive exams should take place in the last semester of coursework or the first semester following the completion of coursework. Students might complete comprehensive exams and a dissertation proposal defense in the same semester, provided they complete the comprehensive exam process by mid-semester (see the Sociology Graduate Handbook for details).

Curriculum Requirements

Required Core Coursework

SOCA 600	Becoming a Sociologist	1
SOCA 601	Professional Research/Writing	1
SOCA 610	Advanced General Sociology	3
SOCA 615	Sociological Data Analysis and Interpretation 1	3
SOCA 616	Sociological Data Analysis and Interpretation 2	3
SOCA 620	Sociological Research Methods	3
SOCA 730	Sociological Explanation	3
Doctoral Required Coursework		
SOCA 721	Qualitative Methods	3
Area of Specialization Course		3
Select One of the Following:		
SOCA 740	Theories of Crime and Deviance	

SOCA 760	Space, Place, and Community	
SOCA 780	Individual and Society	
SOCA 797	Research	9
Electives [*]		**15**
Total Hours		47

[*] Includes SOCA courses at the 600 or 700 level. Excludes the following: 695, 697, 795, 797.

Degree Progress

All students will have a plan of study and will receive, at a minimum, a yearly letter of evaluation.

MASTERS

In addition to maintaining GPA requirements, full-time students must receive acceptance of their thesis proposal no later than November 20 of the third semester of the M.A. program (see the Sociology Graduate Handbook for details (https://soca.wvu.edu/files/d/ebc97d18-92be-4887-b378-67b566e0f703/2019-03-04-updates_2019-20-graduate-handbook.pdf)).

DOCTORAL

Comprehensive exams should take place in the last semester of coursework or the first semester following the completion of coursework. Students might complete comprehensive exams and a dissertation proposal defense in the same semester, provided they complete the comprehensive exam process by mid-semester (see the Sociology Graduate Handbook for details (https://soca.wvu.edu/files/d/ebc97d18-92be-4887-b378-67b566e0f703/2019-03-04-updates_2019-20-graduate-handbook.pdf)).

Major Learning Outcomes

SOCIOLOGY

Students graduating with a Ph.D. in Sociology will be able to:

1. Effectively communicate, orally and in writing, the current state of knowledge, research, and needs in the field of sociology
2. Conduct independent and original research of publishable quality
3. Develop a research program to evaluate social issues using sociological theories and methodological skills
4. Critically analyze the canonical literature in one of the three specialty areas (crime, community, or culture)
5. Explain professional practice and ethics as they relate to sociology

Spanish, M.A.

Degree Offered

- Master of Arts

Nature of the Program

The core of the graduate program in Spanish consists of 30 hours of course work in Peninsular Spanish and Latin American literatures and cultures, with an emphasis on the development of these literatures in socio-cultural and historical contexts. Additional coursework includes research methodology, Hispanic linguistics, and foreign-language pedagogy. The program may be completed either by taking comprehensive exams, or by writing and defending a Master's thesis. The program is intended for students who seek specialized knowledge in order to pursue a teaching career in Spanish, as well as for students who plan to prepare for doctoral studies in Hispanic literatures, cultures, or linguistics.

Available Financial Aid

Graduate teaching assistantships are available to students admitted to any of our three M.A. programs for teaching different languages, including Arabic, Chinese, French, German, English as a Second Language, Italian, Japanese, Russian, and Spanish. The assistantships carry full tuition remission and a nine-month stipend (August–May); there are also limited opportunities to teach during the university's summer session.

In addition to the graduate teaching assistantships, a limited number of meritorious tuition waiver awards are sometimes available from the Eberly College of Arts and Sciences through the department. These awards are based on academic performance and financial need.

Graduate Teaching Assistants

The department values the contributions made by our graduate assistants and strives to help them become effective teachers. Graduate assistants normally teach two courses (six class-hours per week). They work under the direct supervision of the course coordinator in the language area, but they are fully responsible for their courses (including evaluating their students' work). The coordinator will conduct orientations and organizational meetings

with graduate assistants and provide course materials (such as syllabi). In addition, the coordinator will periodically observe individual classes in order to assess the graduate assistants' performance and to provide encouragement and assistance.

All graduate teaching assistants must register for one of our language teaching methods classes (LANG 421, LANG 521, or LANG 621, depending on the language they are teaching). In addition, graduate assistants must register for LANG 690 each semester of employment. Students who have already received an M.A. in World Languages, Literatures, and Linguistics from West Virginia University may be ineligible for an assistantship in this department.

Additional Points of Information

ADVISING

All graduate students will have a primary advisor (to be assigned by the chairperson). Students should consult with their advisor when they register for courses or add and/or drop courses. In addition, the Associate Chair of Graduate Studies is available to answer questions regarding the degree program, requirements, comprehensive examinations, graduation, etc. Students may consult with the chairperson regarding departmental matters.

STUDY ABROAD OPPORTUNITIES FOR GRADUATE STUDENTS

Qualified teaching assistants in French may compete for the Marguerite Eynard McBride Award, which funds an academic year in France. Year-long exchange programs for graduate students are also in place for France and Spain. The department also sponsors study abroad during the summers in Canada, China, France, Germany, Italy, Japan, Jordan, Mexico, Spain, and Taiwan that graduate students may participate in if they meet the program's requirements. Grants are available on a competitive basis through the department, the Eberly College of Arts and Sciences, and through the Office of International Programs to assist students who wish to study abroad.

Admissions

The following are admission requirements for the M.A. in Spanish:

- An undergraduate degree in Spanish (or an acceptable related area)
- A minimum undergraduate GPA of 3.0 (overall as well as within the major)
- A minimum TOEFL or IELTS score for international applicants:
  - TOEFL: 79 for applicants in Spanish
  - IELTS: 6.5 for all applicants
- **Application Deadlines**
  - Fall Admission: February 1
  - Spring Admission: October 1

Application Process

1. Fill out Graduate Application

In order to be considered for admission our M.A. programs, please fill out and submit the Graduate Application (https://graduateadmissions.wvu.edu/how-to-apply/).

2. Complete Supplemental Documents to be Uploaded to Your Graduate Application

- A 300-word personal statement, in which you discuss your academic background, past accomplishments, why you want to study in our program and your future goals.
- An academic writing sample in English or in Spanish. This can be a paper that you have prepared for an academic course.
- Your resume
- Request three letters of recommendation from professors who know your academic work

3. TOEFL or IELTS Score

If you are an international applicant who did not complete your bachelor's degree at a US, UK, Australian, Canadian, or New Zealand institution, you must submit an acceptable TOEFL or IELTS score.

4. Submit Official Undergraduate Transcript

It is preferred that official transcripts be sent via an online, secure service such as eScrip-Safe, National Student Clearinghouse, or Parchment to graduateadmissions@mail.wvu.edu. Alternatively, sealed, untampered, physical official transcripts can be mailed to the Office of Admissions.

5. Application for a Teaching Assistantship

To be considered for a teaching assistantship, please fill out the WLLL TA Application (https://worldlanguages.wvu.edu/files/d/fff42445-0e06-43d1-9c73-b479347025ad/wlll-ta-application-with-personal-statement.pdf) and upload it with your personal statement to your graduate application. Please

also submit the supporting documents indicated in this application. You will first be considered for admission to the program. If admitted, you will be considered for an assistantship.

Admission to our M.A. program is competitive. The graduate admissions committee will examine your file and will make a decision based on your academic performance undergraduate studies, letters of recommendation from your professors who know your academic work, your personal statement and your writing sample.

Certain application requirements may be waived based on a preliminary review of an application by the program.

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum of 30 credit hours at the graduate level. No more than 12 hours of coursework done at the 400 level will be counted toward the degree.
- **Grade Point Average:** Students must earn a minimum overall GPA of 2.75, and a GPA of 3.00 in coursework applied to their graduate program.
- **Graduation Requirement**: In addition to completing 30 hours of coursework, students must pass comprehensive examinations or successfully defend a thesis.
  - **Comprehensive Examinations**: The comprehensive examinations are intended to evaluate students' knowledge, including the ability to synthesize and evaluate ideas in their area of emphasis. The examinations are based on standardized reading lists and coursework.
  - **Thesis**: A student may request to write a thesis and prepare an oral defense. For more information about this option, see the document "Thesis Guidelines (https://worldlanguages.wvu.edu/files/d/433511fa-1ec2-448a-8e79-2980e865ed8a/thesis_guidelines-rev10-17.pdf)."
- **Benchmarks:**
  - All students should complete a plan of study by the end of their first semester.
  - Students will be evaluated in writing at the end of the Spring term on a yearly basis. If adequate progress is not made, students may be placed on probation or dismissed from the program.
  - Students who choose the thesis option should typically defend their thesis topic by the midterm of their second semester, have the thesis proposal approved by the end of the second semester, and submit and defend their thesis during the semester in which they intend to graduate. The student's thesis committee may revise these deadlines.
  - Students who choose the examination option should complete examinations during the semester in which they intend to graduate.
- **Additional Requirements:**
  - No more than three hours of independent study will apply to the degree (unless approved by the departmental chairperson).
  - Students must satisfy the foreign language requirement by the time they graduate:
    - Students who are native speakers of English and who are pursuing the major in Spanish are considered to have satisfied this requirement.
    - International students whose native language is not English are considered to have satisfied this requirement by virtue of their TOEFL or IELTS score.
- **Learning Outcomes:**
  - Demonstrate conceptual knowledge of the structure of the Spanish language.

  - Proficiently communicate in Spanish both orally and in writing.

  - Demonstrate knowledge of the historical, cultural, and social contexts related to the Hispanic world.

  - Identify literary and cultural periods and movements in Spain and Latin America.

  - Critically analyze and synthesize written and cinematographic works in Spanish.

  - Communicate research results in the field both in oral and written formats.

M.A. Major in Spanish Curriculum

CORE COURSES:		18
BIBY 615	Methods of Research	
LING 501	Structure of Spanish	
Select 2 courses from the following list:		
SPAN 643	Contemporary Spanish Literature	
SPAN 651	Medieval and Golden Age	
SPAN 653	Eighteenth and Nineteenth Century Literature	
Select 2 courses from the following list:		
SPAN 637	Early Spanish-American Literature	
SPAN 640	19th Century Latin American Literature	
SPAN 641	20th- and 21st-Century Latin American Literature	

ELECTIVES:		12
LANG 621	Teaching Foreign Language in College	
SPAN 611	Literary Criticism	
SPAN 630	Latin American Culture	
SPAN 631	Latin American Short Story	
SPAN 638	Mexican Literature	
SPAN 639	Gaucho Culture and Literature	
SPAN 655	Spanish Literature 1936-1975	
SPAN 656	Spanish Literature after 1975	
SPAN 673	Hispanic Literature and Film	
SPAN 674	Afrohispanic Literature	
SPAN 697	Research (up to 6 credits) [*]	
Total Hours		30

[*]   No more than six hours of thesis credits (697/698) can be applied to the degree.

Degree Progress

M.A. IN SPANISH

- All students should complete a plan of study by the end of their first semester.
- Students will be evaluated in writing at the end of the Spring term on a yearly basis. If adequate progress is not made, students may be placed on probation or dismissed from the program.
- Students who choose the thesis option should typically defend their thesis topic by the midterm of their second semester, have their thesis proposal approved by the end of the second semester, and submit and defend their thesis during the semester in which they intend to graduate. The student's thesis committee may revise these deadlines.
- Students who choose the examination option should complete the examinations during the semester in which they intend to graduate.

Major Learning Outcomes

SPANISH

Upon completion of M.A. in Spanish, students will be able to:

- Demonstrate conceptual knowledge of the structure of the Spanish language.
- Proficiently communicate in Spanish both orally and in writing.
- Demonstrate knowledge of the historical, cultural, and social contexts related to the Hispanic world.
- Identify literary and cultural periods and movements in Spain and Latin America.
- Critically analyze and synthesize written and cinematographic works in Spanish.
- Communicate research results in the field both in oral and written formats.

Statistics

Degree Offered

- Graduate Certificate

Nature of the Program

The Department of Statistics offers a Certificate in Applied Statistics for professionals or students who want to take applied statistics courses to enhance their quantitative skills and job opportunities. Because many students receive baccalaureate degrees from colleges that do not offer undergraduate programs in statistics, and because historically statistics has been primarily a field of graduate education, a student does not need a degree in statistics to enter the certificate program. A good background in mathematics, science, or engineering is reasonable preparation for graduate work in statistics.

FACULTY

CHAIR

- Mark V. Culp - Ph.D. (University of Michigan)
  Statistical Machine Learning, Computational Statistics, Semi-supervised and Multi-view Learning, Biometrics

PROFESSOR

- Kenneth J. Ryan - Ph.D. (Iowa State University)
  Experimental Design, Statistical Machine Learning, Biometrics

TEACHING ASSOCIATE PROFESSOR

- Huey Miin Lee - Ph.D. (Johns Hopkins University)
  Bioinformatics, Statistical Education

ASSISTANT PROFESSOR

- Stacey Culp - Ph.D. (University of Michigan)
  Experimental Design, Healthcare Applications

TEACHING INSTRUCTOR

- Anthony Billings - M.S. (West Virginia University); A.B.D. (Carnegie Mellon University)
  Statistical Computing, Statistical Modeling, Robust Estimation, Nonlinear Dynamic Systems, Statistical Education

PROFESSOR EMERITUS

- Erdogan Gunel - Ph.D. (State University of New York, Buffalo)
  Bayesian Inference, Biostatistics, Categorical Data Analysis
- E. James Harner - Ph.D. (Cornell University)
  Dynamic Graphics, Statistical Computing and Modeling, Statistical Education.
- William V. Thayne - Ph.D. (University of Illinois)
  Experimental Design, Statistical Genetics, Regression Analysis
- Edwin C. Townsend - Ph.D. (Cornell University)
  Experimental Design, Regression Analysis

ASSOCIATE PROFESSOR EMERITUS

- Daniel M. Chilko - M.S. (Rutgers University)
  Statistical Computing, Computer Graphics
- Gerald R. Hobbs Jr. - Ph.D. (Kansas State University)
  Biostatistics, Nonparametric Statistics, Regression Analysis

Admissions

Admission to the Certificate of Applied Statistics (CAS) may be done at any time. Students who are currently admitted to or enrolled in a graduate degree program that want to earn the CAS should contact the Statistics Department to enroll in the certificate program. Students who want to pursue the CAS independent of a graduate degree program must be admitted prior to registering for the certificate program.

Those seeking admission to the CAS must have a minimum GPA of 2.75, have graduated from and accredited institution with a minimum of a Baccalaureate degree and successfully completed College Algebra. Single and Multi-variable Calculus are recommended.

The GRE General Test is not required for admission.

Certificate in Applied Statistics

CERTIFICATE CODE - CG29

The Certificate in Applied Statistics (CAS) is designed for professionals or students who what to take applied statistics courses to enhance their quantitative skills and job opportunities. The certificate will provide students with a solid foundation in statistical methodology, and depending on the elective courses selected, predictive analytics, statistical computing, or statistical theory.   The flexibility in the certificate course work is intended to allow the student to select courses that will meet their needs, whether enhancing professional quantitative skills or research productivity.

Admissions to the CAS may be done at any time. Students who are currently admitted to or enrolled in a graduate degree program that are wishing to earn the CAS should contact the Statistics Department to enroll in the CAS. Students who wish to pursue the CAS independent of a graduate degree program must be admitted as a non-degree graduate student prior to registering their intent to earn the certificate.

Students must earn a grade of C- in all courses applied to the CAS, and must earn at least an overall 3.0 GPA in the courses counted toward the certificate.

REQUIRED COURSES:

Students in the certificate program will complete a minimum of 15 credit hours of graduate level Statistics courses. The courses required for the completion of the CAS are defined below.

Students must earn a grade of C- in all courses applied to the CAS.

Students must earn at least an overall 3.0 GPA in the courses counted toward the certificate.		
STAT 512	Statistical Methods 2	3
STAT 513	Design of Experiments	3
Electives (500, 600, 700-level STAT Courses) [*]		9
Total Hours		15

[*]   Credit towards the Certificate is also given for STAT 461 and STAT 462.

[**]   All courses applied to the certificate must be Statistics (STAT) courses; courses listed as equivalent to Statistics courses in the Catalog may not be counted.

Certificate Learning Outcomes

APPLIED STATISTICS

Upon completion of the certificate students will be able to:

- Identify appropriate statistical methods for the analysis of real-world data;
- Analyze data using statistical programming tools;
- Apply the principles of experimental design in a science and engineering context;
- Interpret the results of designed experiments and observational studies.

Teaching English to Speakers of Other Languages, M.A.

Degree Offered

- Master of Arts

Nature of the Program

The M.A. program in TESOL prepares teachers to teach English as a second language in an English-speaking setting as well as English as a foreign language in countries around the world. The program includes 30 hours of coursework focusing on language, linguistics, literature and culture in conjunction with different aspects of teaching English, while balancing both the theoretical and practical aspects of TESOL. The program may be completed either by taking comprehensive exams, or by writing and defending a Master's thesis. The program is intended for students who seek specialized knowledge in order to pursue an English as a second language teaching career, as well as for students who plan to prepare for doctoral studies in applied linguistics.

Available Financial Aid

Graduate teaching assistantships are available to students admitted to any of our three M.A. programs for teaching different languages, including Arabic, Chinese, French, German, English as a Second Language, Italian, Japanese, Russian, and Spanish. The assistantships carry full tuition remission and a nine-month stipend (August–May); there are also limited opportunities to teach during the university's summer session.

In addition to the graduate teaching assistantships, a limited number of meritorious tuition waiver awards are sometimes available from the Eberly College of Arts and Sciences through the department. These awards are based on academic performance and financial need.

Graduate Teaching Assistants

The department values the contributions made by our graduate assistants and strives to help them become effective teachers. Graduate assistants normally teach two courses (six class-hours per week). They work under the direct supervision of the course coordinator in the language area, but they are fully responsible for their courses (including evaluating their students' work). The coordinator will conduct orientations and organizational meetings with graduate assistants and provide course materials (such as syllabi). In addition, the coordinator will periodically observe individual classes in order to assess the graduate assistants' performance and to provide encouragement and assistance.

All graduate teaching assistants must register for one of our language teaching methods classes (LANG 421, LANG 521, or LANG 621, depending on the language they are teaching). In addition, graduate assistants must register for LANG 690 each semester of employment. Students who have already received an M.A. in World Languages, Literatures, and Linguistics from West Virginia University may be ineligible for an assistantship in this department.

Additional Points of Information

ADVISING

All graduate students will have a primary advisor (to be assigned by the chairperson). Students should consult with their advisor when they register for courses or add and/or drop courses. In addition, the Associate Chair of Graduate Studies is available to answer questions regarding the degree program, requirements, comprehensive examinations, graduation, etc. Students may consult with the chairperson regarding departmental matters.

STUDY ABROAD OPPORTUNITIES FOR GRADUATE STUDENTS

Qualified teaching assistants in French may compete for the Marguerite Eynard McBride Award, which funds an academic year in France. Year-long exchange programs for graduate students are also in place for France and Spain. The department also sponsors study abroad during the summers in Canada, China, France, Germany, Italy, Japan, Jordan, Mexico, Spain, and Taiwan that graduate students may participate in if they meet the program's requirements. Grants are available on a competitive basis through the department, the Eberly College of Arts and Sciences, and through the Office of International Programs to assist students who wish to study abroad.

FACULTY

CHAIR

- Amy S. Thompson - Ph.D. (Michigan State University)
  Applied Linguistics

ASSOCIATE CHAIRS

- Sandra Stjepanovi# - Ph.D. (University of Connecticut)
  Graduate Studies, Linguistics, Syntax, Psycholinguistics, Semantics
- Pablo Garcia Loaeza - Ph.D. (Indiana University Bloomington)
  Undergraduate Studies, Spanish Language, Latin American Colonial Literature

PROFESSORS

- Daniel Ferreras - Ph.D. (Michigan State University)
  French and Spanish, Comparative Romance Literature, French/Spanish 19th and 20th Century Novel, Theory of the Fantastic
- Valérie Lastinger - Ph.D. (University of Georgia)
  French, 18th-century French Literature, French Women Writers
- Janice Spleth - Ph.D. (Rice University)
  French and Francophone Literature and Culture
- Amy S. Thompson - Ph.D. (Michigan State University)
  Applied Linguistics
- Ángel Tuninetti - Ph.D. (Washington University)
  Latin American Literature and Culture

ASSOCIATE PROFESSORS

- Manal AlNatour - Ph.D. (University of Arkansas)
  Arabic Studies, Comparative Literature and Cultural Studies
- Susan Braidi - Ph.D. (University of Delaware)
  ESL/Linguistics, Applied Linguistics, Second Language Acquisition, Syntax
- Cynthia Chalupa - Ph.D. (Ohio State University)
  Fin de Siècle German and Austrian Literature, Poetry, Foreign Language Pedagogy
- Deborah Janson - Ph.D. (University of California)
  German, 18th-21st-century German Literature, Enlightenment, Romanticism, GDR and Post-Wende Literature, Ecofeminism
- Xiangying Jiang - Ph.D. (Northern Arizona University)
  ESL/Linguistics, Second Language Acquisition
- Pablo Garcia Loaeza - Ph.D. (Indiana University Bloomington)
  Spanish Language, Latin American Colonial Literature
- Tania de Miguel Magro - Ph.D. (The State University of New York, Stony Brook)
  Spanish Literature and Culture, Spanish Language, Spanish Golden Age Literature
- Twyla Meding - Ph.D. (University of Virginia)
  French, 16th and 17th-century French Literature, The Pastoral Novel
- Sandra Stjepanovi# - Ph.D. (University of Connecticut)
  Linguistics, Syntax, Psycholinguistics, Semantics

- Ching-Hsuan Wu - Ph.D. (The Ohio State University)
  Chinese, Applied Linguistics

ASSISTANT PROFESSORS

- Sandra Dixon - Ph.D. (Brown University)
  Spanish, Spanish American Literature, Brazilian Literature
- Jonah Katz - Ph.D. (Massachusetts Institute of Technology)
  Phonetics, Phonology, Theoretocal and Experimental Linguistics, Music Cognition
- William Justin Morgan - Ph.D. (University of Alabama)
  Spanish, Applied Linguistics
- Sergio Robles-Puente - Ph.D. (University of Southern California)
  Spanish Phonetics, Phonology, and Sociolinguistics
- Nicole Tracy-Ventura - Ph.D. (Northern Arizona University)
  Applied Linguistics
- Sonia Zarco-Real - Ph.D. (University of Connecticut)
  Peninsular literature and Hispanic transatlantic studies

TEACHING PROFESSORS

- Lisa Di Bartolomeo - Ph.D. (University of North Carolina, Chapel Hill)
  Russian and Polish Language and Literature, Slavic Folklore, Culture and Cinema, Science Fiction, the Holocaust

TEACHING ASSOCIATE PROFESSORS

- Annastella Vester - Ph.D. (University of California, Los Angeles)
  Italian, Contemporary Italian Literature, 18th and 19th-century Italian

TEACHING ASSISTANT PROFESSORS

- Heiko ter Haseborg - Ph.D. (West Virginia University)
  Education, Applied Linguistics
- Rafael Osuna Montanez - Ph.D. (University of Connecticut)
  Spanish

VISITING ASSISTANT PROFESSORS

- Ramona Kreis - Ph.D. (University of South Florida)
  Applied Linguistics
- Yilin Liao-Carlson - Ph.D. (Purdue University)
  Chinese Studies

PROFESSORS EMERITI

- Michael Lastinger - Ph.D. (University of Georgia)
  French, 19th Century French Literature, Critical Theory
- María Amores - Ph.D. (Penn State University)
  Spanish, Foreign Language Acquisition
- Ahmed Fakhri - Ph.D. (University of Michigan)
  ESL/Linguistics, Second Language Acquisition, Applied Linguistics, Discourse Analysis
- Pablo González - Ph.D. (University Complutense de Madrid)
  Spanish American Literature and Culture
- Kathleen McNerney - Ph.D. (Universidad Nacional Autonoma de Mexico)
  Spanish, Catalan Language and Literature, Spanish Literature and Culture, Women Writers

VISITING INSTRUCTOR

- Hilary Woodrum - M.A. (West Virginia University)
  French

INSTRUCTORS

- Yumiko Adachi - M.A. (University of Wisconsin-Madison)
  Japanese Linguistics
- Tracy Dingess - M.A. (West Virginia University)
  ESL

- Livia Cascao - M.A. (West Virginia University)
  ESL
- Beatrice Malvisi - M.A. (University of Pittsburgh)
  Italian
- Lindsei Pereira da Silva - M.A. (West Virginia University)
  ESL
- Kristen Williams - M.A. (West Virginia University)
  ESL

LECTURERS
- Lisa Dunn - M.A. (West Virginia University)
  Spanish
- Veronica Evans - M.A. (West Virginia University)
  Classics, Italian
- Irina Manukova - M.S. (Georgian Politechnial University)
  Russian

Admissions

The following are admission requirements for the M.A. TESOL:
- An undergraduate degree in TESOL (or an acceptable related area)
- A minimum undergraduate GPA of 3.0 (overall as well as within the major)
- A minimum TOEFL or IELTS score for international applicants:
  - TOEFL: 92 for applicants in TESOL
  - IELTS: 6.5 for all applicants
- **Application Deadlines**
  - Fall Admission: February 1
  - Spring Admission: October 1

Application Process

1. Fill out Graduate Application

In order to be considered for admission, please fill out and submit the Graduate Application (https://graduateadmissions.wvu.edu/how-to-apply/).

2. Complete Supplemental Documents to be Uploaded to Your Graduate Application

- A 300-word personal statement, in which you discuss your academic background, past accomplishments, why you want to study in our program and your future goals.
- An academic writing sample in English. This can be a paper that you have prepared for an academic course.
- Your resume
- Request three letters of recommendation from professors who know your academic work

3. TOEFL or IELTS Score

If you are an international applicant who did not complete your bachelor's degree at a US, UK, Australian, Canadian, or New Zealand institution, you must submit an acceptable TOEFL or IELTS score.

4. Submit Official Undergraduate Transcript

It is preferred that official transcripts be sent via an online, secure service such as eScrip-Safe, National Student Clearinghouse, or Parchment to graduateadmissions@mail.wvu.edu. Alternatively, sealed, untampered, physical official transcripts can be mailed to the Office of Admissions.

5. Application for a Teaching Assistantship

To be considered for a teaching assistantship, please fill out the WLLL TA Application (https://worldlanguages.wvu.edu/files/d/fff42445-0e06-43d1-9c73-b479347025ad/wlll-ta-application-with-personal-statement.pdf) and upload it with your personal statement to your graduate application. Please also submit the supporting documents indicated in this application. You will first be considered for admission to the program. If admitted, you will be considered for an assistantship.

Admission to our M.A. program is competitive. The graduate admissions committee will examine your file and will make a decision based on your academic performance in undergraduate studies, letters of recommendation from your professors who know your academic work, your personal statement and your writing sample.

Certain application requirements may be waived based on a preliminary review of an application by the program.

Degree Requirements

- **Credit Hours:** Students are required to complete a minimum of 30 credit hours at the graduate level. No more than 12 hours of coursework done at the 400 level will be counted toward the degree.
- **Grade Point Average:** Students must earn a minimum overall GPA of 2.75, and a GPA of 3.00 in coursework applied to their graduate program.
- **Graduation Requirement**: In addition to completing 30 hours of coursework, students must pass comprehensive examinations or successfully defend a thesis.
  - **Comprehensive Examinations**: The comprehensive examinations are intended to evaluate students' knowledge, including the ability to synthesize and evaluate ideas in their area of emphasis.The examinations are based on standardized reading lists and coursework.
  - **Thesis**: A student may request to write a thesis and prepare an oral defense. For more information about this option, see the document "Thesis Guidelines (https://worldlanguages.wvu.edu/files/d/433511fa-1ec2-448a-8e79-2980e865ed8a/thesis_guidelines-rev10-17.pdf)."
- **Benchmarks:**
  - All students should complete a plan of study by the end of their first semester.
  - Students will be evaluated in writing at the end of the Spring term on a yearly basis. If adequate progress is not made, students may be placed on probation or dismissed from the program.
  - Students who choose the thesis option should typically defend their thesis topic by the midterm of their second semester, have the thesis proposal approved by the end of the second semester, and submit and defend their thesis during the semester in which they intend to graduate. The student's thesis committee may revise these deadlines.
  - Students who choose the examination option should complete the examinations during the semester in which they intend to graduate.
- **Additional Requirements:**
  - No more than three hours of independent study will apply to the degree (unless approved by the departmental chairperson).
  - Students must satisfy the foreign language requirement by the time they graduate:
    - Students in the major in TESOL who are native speakers of English must demonstrate proficiency in a second language prior to graduation by completing one language course of level 204 or above, with a grade of B or better, or by taking the departmental placement examination in one language and placing above the 204-level.
    - International students whose native language is not English are considered to have satisfied this requirement by virtue of their TOEFL or IELTS score.
- **Learning Outcomes:**
  - Demonstrate knowledge of the major theories of second language acquisition and ability to apply them in pedagogical practices and evaluate their usefulness.
  - Demonstrate understanding of assessment concepts and ability to design and develop assessments, analyze and interpret assessment results.
  - Demonstrate knowledge of quantitative and qualitative research methods and ability to read and synthesize research publications and propose research projects.
  - Design and implement English language classes for a variety of contexts.
  - Demonstrate knowledge of English grammar and ability to explain, use, and evaluate for pedagogical purposes.
  - Demonstrate knowledge of the sound system of English and ability to explain, use, and evaluate for pedagogical purposes.

M.A. Major in Teaching English to Speakers of Other Languages (TESOL) Curriculum

CORE COURSES:		24
BIBY 615	Methods of Research	
LANG 521	English as a Second Language Methods	
LANG 622	English as a Second Language Theory	
LANG 625	Language Assessment	
LING 511	English as a Second Language Linguistics	
LING 613	English as a Second Language Phonetics	
Select 2 courses form the following list:		
ESL 630	American Culture	
LANG 422	Second Language Reading	

LANG 522	Computer Assisted Language Learning	
LANG 624	Second Language Writing	
LANG 626	Literacy in a Second Language	
LING 512	Applied Linguistics	
ELECTIVES		**6**
LANG 421	The Teaching of Foreign Languages	
LANG 621	Teaching Foreign Language in College	
LANG 697	Research (up to 6 credits) [*]	
LING 402	Structure of Modern French	
LING 411	Phonology	
LING 412	Syntax	
LING 501	Structure of Spanish	
LING 514	Sociolinguistics	
LING 516	Discourse Analysis	
LING 611	Advanced Phonology	
LING 612	Advanced Syntax	
LING 614	Psycholinguistics	
LING 616	Language Typology	
LING 620	Spanish Prosody	
Total Hours		30

[*]   No more than 6 research credits (697/698) can be applied to the degree.

Degree Progress

M.A. IN TEACHING ENGLISH AS A SECOND LANGUAGE (TESOL)

- All students should complete a plan of study by the end of their first semester.
- Students will be evaluated in writing at the end of the Spring term on a yearly basis. If adequate progress is not made, students may be placed on probation or dismissed from the program.
- Students who choose the thesis option should typically defend their thesis topic by the midterm of their second semester, have their thesis proposal approved by the end of the second semester, and submit and defend their thesis during the semester in which they intend to graduate. The student's thesis committee may revise these deadlines.
- Students who choose the examination option should complete the examinations during the semester in which they intend to graduate.

Major Learning Outcomes

TEACHING ENGLISH AS A SECOND LANGUAGE (TESOL)

Upon completion of M.A. in TESOL, students will be able to:

- Demonstrate knowledge of the major theories of second language acquisition and ability to apply them in pedagogical practices and evaluate their usefulness.
- Demonstrate understanding of assessment concepts and ability to design and develop assessments, analyze and interpret assessment results.
- Demonstrate knowledge of quantitative and qualitative research methods and ability to read and synthesize research publications and propose research projects.
- Design and implement English language classes for a variety of contexts.
- Demonstrate knowledge of English grammar and ability to explain, use, and evaluate for pedagogical purposes.
- Demonstrate knowledge of the sound system of English and ability to explain, use, and evaluate for pedagogical purposes.

Women's and Gender Studies

Nature of the Program

The Graduate Certificate in Women's and Gender Studies is available to any student admitted to a graduate degree program at West Virginia University. The graduate certificate consists of fifteen hours of graduate-level work in women's and gender studies, using courses approved as primary or component courses by the Women's and Gender Studies Curriculum Committee. The certificate offers students interdisciplinary perspectives on

gender and its intersection with race, class, ethnicity, and sexuality. The breadth of the curriculum provides dynamic courses in theory and methods that help students understand the complex social, cultural, economic, political, and historical dimensions of men's and women's lives.

In pursuing a Graduate Certificate in Women's and Gender Studies, students make connections between their primary field of study and issues surrounding gender, race, class, culture, and sexuality. By applying multifaceted problem solving and critical thinking skills learned in women's and gender studies courses to their primary field of study, students bring a broader base of experience and perspectives to their future careers.

Financial Aid is Available

Women's & Gender Studies students are eligible to apply for graduate teaching assistantships (GTAs) in Women's & Gender Studies. The Center for Women's & Gender Studies has five GTA positions available each year. GTAs work with the lead instructor and teach two sections of the course or assist with other courses. Students can apply for GTA positions each winter, usually in early February. Salaries include tuition waivers for the academic year and subsequent summer. GTAs must be enrolled as full-time students (at least nine hours).

For further information about GTA positions, please contact the Center for Women's & Gender Studies. Students may be eligible for GTA positions in the Academic Advising Center and should contact that center directly for more information.

FACULTY

CHAIR

- Sharon R. Bird - Ph.D. (Washington State University)

PROFESSORS

- Lupe Davidson - Ph.D. (Duquesne University)
- Jennifer Kasi Jackson - Ph.D. (University of Kentucky)
- Cris Mayo - Ph.D. (University of Illinois Urbana-Champaign)

ASSISTANT PROFESSOR

- Cynthia Gorman - Ph.D. (Rutgers University)

TEACHING INSTRUCTOR

- Kristiina Riivald - M.A. Liberal Studies (West Virginia University), M.S. Ed. (City University of New York)

ADJUNCT ASSISTANT PROFESSOR

- Ellen Belchior Rodrigues - Ph.D. (West Virginia University)
- Charlotte Hoelke - Ph.D. (Carleton University)

LECTURERS

- Lynda Bowers - M.S. Ed. (Southern Illinois University Edwardsville)
- Matt Carter - M.A. & M.S.W. (West Virginia University)
- Megan Mcgee - Ph.D. (West Virginia University)
- Allyson Perry

Degree Progress

Students should meet at least once a semester with their Women's and Gender Studies advisor to update their progress toward competition of the certificate.

Certificate Learning Outcomes

WOMEN'S AND GENDER STUDIES

In completing a graduate certificate in Women's and Gender Studies, students will be able to:

- Use the lens of feminist and gender theory to analyze manifestations of human endeavor
- Integrate key terms and concepts related to women's and gender studies in an interdisciplinary approach to their primary discipline
- Engage in discourse addressing how gender, class, race, ethnicity, age, sexualities and sexual identities shape experience and reflect societal constructs
- Analyze, dissect, and criticize arguments to demonstrate an understanding of the scholarship and theoretical underpinning of the field of women's and gender studies

Business and Economics

Degrees Offered

- Master of Arts in Economics
- Master of Science in Economics
- Master of Business Administration
- Healthcare Master of Business Administration
- Master of Accountancy
- Master of Science in Business Data Analytics
- Master of Science in Business Cybersecurity Management
- Master of Science in Finance
- Master of Science in Forensic and Fraud Examination
- Master of Science in Human Resource Management
- Doctor of Philosophy in Business Administration
- Doctor of Philosophy in Economics

Certificates Offered

- Business Data Analysis
- Business Data Science
- Business Data Technology Management
- Business Operations Research
- Business Cybersecurity Data Analytics
- Business Cybersecurity Foundations
- Business Cybersecurity Management
- Forensic Accounting and Fraud Examination

The WVU College of Commerce was born by order of the state higher education board on November 10, 1951 and was known as the College of Business and Economics from 1971 until November 9, 2018, when it was renamed the John Chambers College of Business and Economics. In 1954, the College became fully accredited by the AACSB International (http://www.aacsb.edu), the highest level of business accreditation, and has since become one of the largest colleges at West Virginia University.

Nature of the Programs

All graduate programs in the John Chambers College of Business and Economics require that enrolled students maintain a minimum cumulative GPA of 3.0 in coursework applied toward their degree program, as outlined in the specific academic program of study. Students must also have a minimum cumulative GPA of 3.0 to earn a graduate degree from their respective program.

The Doctor of Philosophy and Master of Arts in Economics degrees prepare students for careers in business, government, and/or higher education. Students receive in-depth education in the concepts and methods of economic analysis and econometrics, and specialize in two fields of study from financial, international, monetary, public, regional, urban economics, and resource economics. These programs are well-suited to students with undergraduate degrees in economics, finance, mathematics, statistics, public policy, history, and other humanities majors.

The online Master of Science in Economics (MS Econ) program prepares students to be high-level quantitative economists with the ability to analyze complex policy issues using modern data analysis and econometric methods. This program also prepares students to work with a large and diverse set of policy issues, including taxation, public expenditure, transportation, and health care. Upon the completion of the MS Econ program, students will be able to apply their knowledge to improve the quality of information surrounding policies and proposed polices in local, state, and federal contexts.

The Doctor of Philosophy degree in Business Administration has four areas of specialization: Accounting, Finance, Management, and Marketing. Students develop deep content knowledge in their area of specialization along with a strong foundation in research methodology. The programs are focused on preparing students for research and academic careers.

The Master of Business Administration (MBA) program exposes students to graduate-level coursework in all the functional areas of business and provides students with a broad general management orientation. The MBA program is offered during the day for full-time students on the WVU-Morgantown campus. An online hybrid MBA (OHMBA) program is also offered for working professionals that includes some mandatory residencies as part of the degree requirements (see program website for details).

The online Healthcare Master of Business Administration (HMBA) program prepares students to successfully navigate the business of healthcare, lead through market transitions, and to provide innovative solutions that improve the healthcare system in order to support positive health outcomes. The

HMBA curriculum was designed to advance students' knowledge about business theory and business management by applying a healthcare lens. The program allows students to pursue careers in the healthcare profession or allows healthcare professionals a path to formalize their business skill sets so that they can advance their leadership trajectory.

The Master of Science in Human Resource Management (MSHRM) program provides an interdisciplinary education for students desiring a career in Human Resource Management. All undergraduate majors are acceptable. Elective areas of study may include the functional areas of business, counseling, law, safety, and others.

The Master of Accountancy (MAcc) program is available to students with undergraduate degrees in Accounting. Students without Accounting undergraduate degrees can fulfill specific accounting prerequisites and be admitted to the program. The program follows the American Institute of Certified Public Accountants' recommendations for a five-year accounting education and meets the requirements of most states with 150-hour requirements for C.P.A certification.

The Master of Finance (MSF) program is available to students with a strong background in Finance, Accounting, or other quantitative backgrounds (either through an undergraduate degree in Finance or Accounting or with five years of experience in a Finance-related field). The program offers a series of courses which provides graduates with a thorough understanding of material in the Chartered Financial Analyst (CFA) Candidate Body of Knowledge.

The online Master of Science in Business Data Analytics (MS BUDA) can be completed in a one-year or two-year plan of study. This program offers students flexibility while encouraging them to simultaneously learn valuable business analysis skills, apply concepts in a real-world setting, and experience improved results in an accelerated learning cycle. The MS BUDA program is taught by faculty across various disciplines with both industry and academic experience from around the globe.

The online Master of Science in Business Cybersecurity (MS CYBR) is a 12-month program. The program encourages students to 1) demonstrate managerial expertise in understanding and investigating complex cybersecurity ideas, 2) evaluate data security of businesses from a data and systems security perspective, 3) use appropriate tools to mitigate cybersecurity threats, and 4) communicate the analysis and findings of a comprehensive security audit initiative to enhance the protection and security of an organization.

The online Master of Science in Forensic and Fraud Examination (MS FFE) is a 12-month program geared toward early career professionals in accounting or investigative sciences looking to enhance their career opportunities through a specialized educational experience incorporating case studies and experiential learning in the field of Forensic and Fraud Examination. Students in this program will receive the required preparation for the Certified Fraud Examiners test.

Specific information about graduate programs in the John Chambers College of Business and Economics may be obtained from the Graduate Programs Office, 326 Business and Economics Building, P.O. Box 6027, West Virginia University, Morgantown, WV 26506-6027, BeGradPrograms@mail.wvu.edu, Telephone (304) 293-5505.

ADMINISTRATION

DEAN

- Javier Reyes - Ph.D. (Texas A&M University)
  Milan Puskar Dean

ASSOCIATE DEANS

- Virginia Franke Kleist - Ph.D. (University of Pittsburgh)
  Associate Dean for Graduate Programs, Academic Operations, and Research
- A. Graham Peace - Ph.D. (University of Pittsburgh)
  Associate Dean for Academic Affairs and Undergraduate Programs

ASSISTANT DEANS

- W. Constinia Charbonnette - Ed.D. (West Virginia University)
  Assistant Dean of Graduate Programs
- John Deskins - Ph.D. (University of Tennessee)
  Assistant Dean for Outreach and Engagement
- Abigail Esguerra - M.A. (West Virginia University)
  Assistant Dean of Development
- Heather Richardson - M.B.A. (West Virginia University)
  Assistant Dean of Communications, Engagement, and Impact
- Linda Rudy - M.B.A. (West Virginia University)
  Assistant Dean for Finance and Administration
- Rebel Smith - Ed.D. (University of Arkansas)

Assistant Dean of Undergraduate Programs
- Elizabeth Vitullo - Ph.D. (West Virginia University)
Assistant Dean of Strategic Initiatives

Specialized Accreditation

All academic programs within the John Chambers College of Business and Economics have specialized accreditation through the Association to Advance Collegiate Schools of Business International (AACSB). The Department of Accounting is also separately accredited by the AACSB.

AACSB provides internationally recognized, specialized accreditation for business and accounting programs at the bachelor's, master's, and doctoral level. The AACSB Accreditation Standards challenge post-secondary educators to pursue excellence and continuous improvement throughout their business programs. AACSB Accreditation is known, worldwide, as the longest standing, most recognized form of specialized/professional accreditation an institution and its business programs can earn.

http://www.aacsb.edu/accreditation (http://www.aacsb.edu/accreditation/)

Special Requirements

Admission to any John Chambers College of Business and Economics graduate program requires a bachelor's degree from an accredited institution. Visit the program's webpage for specific admissions requirements.

https://business.wvu.edu/graduate-degrees (https://business.wvu.edu/graduate-degrees/)

Degree Designation Learning Outcomes

Each degree program has designated learning outcomes. Please refer to the program's webpage for program specific learning outcomes.

Certificate Programs

- Business Cybersecurity Data Analytics (p. 43)
- Business Cybersecurity Foundations (p. 44)
- Business Cybersecurity Management (p. 44)
- Business Data Analysis (p. 44)
- Business Data Science (p. 45)
- Business Data Technology Management (p. 45)
- Business Operations Research (p. 46)
- Forensic Accounting and Fraud Examination (p. 52)

Accountancy, M.Acc.

Department website: https://business.wvu.edu/academics/accounting-department/macc (https://business.wvu.edu/academics/accounting-department/macc/)

Degree Offered

- Master of Accountancy (MAcc)

Nature of the Program

Given the changing environment in both the public and private sectors of the economy, many accountants will need an educational background that goes beyond what is taught in an undergraduate degree program. Accountants must be proficient in applying professional concepts and principles to a wide variety of existing and emerging situations as an effective member of a team and also have the ability to adapt to new standards and methods of doing business. Competing in such an environment requires a solid technical foundation, adeptness in analyzing complex business situations, and the ability to effectively communicate recommended solutions and conclusions. Thus, the objectives of the MAcc program include the integration of financial and non-financial data in problem-solving and decision-making, the application of relevant research techniques and information technologies, the integration of varying viewpoints and techniques of conflict resolution, and the importance of adhering to a strong ethical code.

The MAcc program is a 30 credit-hour program, which can be completed in approximately 12 months of full-time study. The program requires that the student has an undergraduate degree and meets very specific accounting and business course prerequisites. Work experience is not a requirement for admission. Careful selection of degree candidates limits the size of classes, leads to high-quality efforts in the program, and permits frequent and direct contact between students and faculty. The full-time program consists of two 12 credit-hour semesters and a six credit-hour summer session.

No thesis is required in the program, but communication skills are emphasized in all courses. Extensive use is made of information technology in accounting applications.

Accreditation

The undergraduate and graduate accounting programs in the WVU John Chambers of Business and Economics have separate accounting accreditation by the Association to Advance Collegiate Schools of Business International (AACSB). Students pursuing a MAcc degree can also pursue a graduate certificate in forensic accounting and fraud examination.

Academic Standards

In addition to the University's academic and professional standards (http://catalog.wvu.edu/graduate/enrollmentandregistration/), students enrolled in a John Chambers College of Business and Economics master's degree program must also abide by the following standards:

- Students must have a minimum cumulative GPA of 3.0 to earn a degree from their graduate program, without exception.
    - A student who cannot mathematically meet the 3.0 GPA requirement to successfully complete the degree, within a reasonable period of time (as defined by the Program Coordinator or designee), will be dismissed from their academic program. Visit the Probation, Suspension, and Dismissal (http://catalog.wvu.edu/graduate/enrollmentandregistration/#probationsuspensiontext) section of the University's Graduate Catalog for more information about this topic.
- Students must follow the professional standards established by their degree program and/or department. A student who violates the established professional standards may be placed on probation, suspended, or dismissed from their program.
- A student whose cumulative GPA falls below 2.75 will automatically be placed on academic probation.
    - A student will be suspended from their program, for up to one year, if their GPA is not raised to 2.75 by the end of their subsequent semester of enrollment. The program will reevaluate the student after the term of suspension to determine whether they may return to the program or be dismissed.
- A student will be suspended from their program if they earn a letter grade below C- in more than one required course.
- A student who earns a letter grade of D or F in any required course must repeat the course and earn a minimum letter grade of C-.
    - Any grade earned in a repeated course at the graduate level is included in the calculation of a student's overall and major GPA, along with the original grade earned in the course. Additionally, the original grade earned in the course will remain on the student's academic transcript/permanent record. Visit the Grades (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/advising_and_evaluation/#gradestext) section of the University Graduate Catalog for more information about this topic.

Any exceptions to the above standards must be approved in writing by the Assistant or Associate Dean **and** the Program Coordinator.

Requirements to Sit for C.P.A. Examination

C.P.A. exam preparation is incorporated directly into the MAcc program. MAcc students are required to enroll and demonstrate their progress completing an approved third-party C.P.A. review program. In addition to required coursework and participating in the C.P.A. review program, MAcc students are required to sit for at least two sections of the C.P.A. exam to graduate with a MAcc degree. Students are responsible for the cost of the C.P.A. exam review program and any fees associated with sitting for the C.P.A. exam, which are not included in the cost of tuition.

The specific requirements to sit for the Uniform C.P.A. Examination vary with each state board of accountancy. Some states (or other jurisdictions such as the District of Columbia or Guam) require candidates to have a bachelor's degree with a specified distribution of accounting and business courses as the minimum educational requirement to take the examination, whereas others require a bachelor's degree and the completion of 150 semester hours of academic credit (including a specified distribution of courses) as the minimum. These standards are subject to change; thus, students should review the requirements (including the distribution of courses) of the board in the jurisdiction in which they plan to sit for the examination. Incidentally, these are the requirements to sit for the examination, not to be certified. Most boards of accountancy require 150 semester hours of academic credit for certification.

For the specific requirements to sit for the C.P.A. examination in West Virginia, visit the Board's website at https://www.boa.wv.gov/ or call (304) 558-3557. For requirements in other jurisdictions, visit the National Association of State Boards of Accountancy's website at http://www.nasba.org.

Content specification of the C.P.A. examination and related information may be found at http://www.cpa-exam.org.

FACULTY

CHAIR

- Richard Riley - Ph.D
  University of Tennessee

MACC PROGRAM COORDINATOR

- Gary LeDonne - M.P.A.
  West Virginia University

ASSOCIATE PROFESSORS

- Jack Dorminey - Ph.D.
  Virginia Commonwealth University
- Scott Fleming - Ph.D.
  Virginia Polytechnic Institute and State University
- Mark Nigrini - Ph.D.
  University of Cincinnati

ASSISTANT PROFESSORS

- John Treu - J.D., LL.M.
  New York University
- Lauren Cooper - Ph.D.
  Oklahoma State University

VISITING PROFESSOR

- Nicholas Apostalou - D.B.A.
  University of Tennessee

TEACHING ASSISTANT PROFESSOR

- Frank DeGeorge - M.S.A.
  Duquesne University

ADJUNCT PROFESSORS

- James Alexander
- James Cooper

Admissions

Admission to the MAcc program is determined by a committee of accounting faculty members. The committee acts upon individual applications within a short period of time after receipt of the completed application.

The admission committee seeks applicants who ideally possess a 3.2 cumulative grade point average and a total GMAT score in the 60 percentile or higher. The GMAT score is used in consideration for awarding graduate assistantships.

Applicants who have passed the Certified Public Accountant examination are exempt from the GMAT requirement. Candidates who meet most of the above requirements will still be considered. Other factors such as work experience and other graduate degree work may also be a part of the committee's decision-making.

International students should note that the John Chambers College of Business and Economics TOEFL requirement is higher than the University's requirement. Applicants must have a TOEFL score of 580 (paper), 237 (computer), or 92 (internet-based). If applicants have taken the IELTS instead of the TOEFL, the minimum score is 7.0.

Prerequisites

To assure that all students in the program have the same foundation in business, the following prerequisite courses (or their equivalent) must be completed before enrolling in MAcc graduate courses:

- Principles of Accounting (six hours)
- Intermediate Accounting (six hours)
- Cost Accounting
- Income Tax Accounting
- Auditing
- Principles of Microeconomics
- Principles of Marketing
- Principles of Management
- Principles of Finance
- Statistics
- Business Law (six hours, three of which may be taken concurrently with graduate courses)
- Accounting Systems

Application Deadline

The Admissions Committee reviews applications on a rolling basis, and students admitted to the program may begin in the fall, spring, or summer semester. Please visit the MAcc program's webpage (https://business.wvu.edu/academics/accounting-department/macc/) to learn more about the specific application deadlines and other important information. Students may also contact the John Chambers College of Business and Economics Graduate Programs Office for assistance at (304) 293-5505 or BeGradPrograms@mail.wvu.edu.

Students are required to maintain a minimum cumulative GPA of 3.0 in coursework applied toward their degree program, as outlined in the academic program of study. Students must also have a minimum cumulative GPA of 3.0 to earn a graduate degree from this program.

Master of Accountancy Curriculum Requirements

A cumulative grade point average of at least 3.0 is required in all course work towards the degree.

Core Requirements		
ACCT 501	Accounting/Economic Decision Making	3
ACCT 511	Financial Accounting Theory and Practice	3
ACCT 551	Assurance Services and Professional Standards	3
Select four of the following (unless required by AOE selected):		12
ACCT 520	Advanced Technology for Accounting	
ACCT 512	Mergers and Acquisitions	
ACCT 541	Federal Tax Research and Writing	
ACCT 542	Advanced Federal Corporate Tax	
ACCT 543	Advanced Federal Partnership Tax	
ACCT 561	Governmental and Not-for-Profit Accounting	
ACCT 571	Accounting/Business Consulting	
ACCT 581	Fraud Investigation	
ACCT 582	Fraud Data Analysis	
BUDA 525	Business Statistical Methods 1	
BUDA 550	Business Data Visualization	
ACCT 580	Accounting for Forensic and Fraud Investigators	
FIN 453	Life Insurance and Estate Planning	
FIN 521	Financial Reporting and Analysis	
LAW 753	Estate and Gift Taxation	
Select one of the following AoEs:		**9**
Assurance, Forensic and Fraud Examination		
Business Data Analytics		
Tax		
Other MAcc degree requirements		
Complete CPA Examination Review Course		
Sit for CPA Examination (Two Sections)		
Total Hours		30

Assurance, Forensic and Fraud Examination Area of Emphasis

The Area of Emphasis in Assurance, Forensic and Fraud Examination is intended to provide MAcc students expertise in assurance. Students will be exposed to course work in detection, prevention, examination/deterrence and remediation of white-collar crime.

Course Requirements. In order to satisfy the requirements of the Area of Emphasis, a student must have completed the three required courses with a passing grade (a grade of C- or better). Note, that a cumulative GPA of 3.0 is required for graduation from the MAcc program. The courses and grades from the Area of Emphasis will be counted towards a student's cumulative GPA in the MAcc program. The courses will be required for the Area of Emphasis in a prescriptive plan of study.

A minimum grade of C- is required in AOE coursework		
ACCT 580	Accounting for Forensic and Fraud Investigators	3
ACCT 581	Fraud Investigation	3

ACCT 582	Fraud Data Analysis	3
Total Hours		9

Business Data Analytics Area of Emphasis

The AoE in Business Data Analytics is intended to provide MAcc students expertise in analytics commonly used by accounting professionals. Students will be exposed to coursework in advanced technology for accounting, data visualization, and statistical methods for analyzing data.

Course Requirements. In order to satisfy the requirements of this AOE, students must complete the three required courses with a passing grade (grade of C or better). Note that a cumulative GPA of 3.0 is required for graduation from the MAcc program; the grades from this AOE will be counted towards students' cumulative GPA in the MAcc program.

ACCT 520	Advanced Technology for Accounting	3
BUDA 525	Business Statistical Methods 1	3
BUDA 550	Business Data Visualization	3
Total Hours		9

Tax Area of Emphasis

The Area of Emphasis in Tax is intended to provide MAcc students deeper tax knowledge. Students will be exposed to course work in detection, prevention, examination/deterrence and remediation of white-collar crime.

Course Requirements. In order to satisfy the requirements of the Area of Emphasis, a student must have completed the three required courses with a passing grade (a grade of C- or better). Note, that a cumulative GPA of 3.0 is required for graduation from the MAcc program. The courses and grades from the Area of Emphasis will be counted towards a student's cumulative GPA in the MAcc program. The courses will be required for the Area of Emphasis in a prescriptive plan of study.

A minimum grade of C- is required in AOE coursework

ACCT 541	Federal Tax Research and Writing	3
ACCT 542	Advanced Federal Corporate Tax	3
ACCT 543	Advanced Federal Partnership Tax	3
Total Hours		9

Major Learning Outcomes

ACCOUNTANCY

Goal 1: Students will demonstrate competence in advanced technical topics.

Goal 2: Students will demonstrate research skills by finding and interpreting authoritative literature.

Goal 3: Students will communicate the results of research and/or analysis.

Goal 4: Students will identify an ethical dilemma and propose a solution.

Business Administration, M.B.A., Ph.D.

Degrees Offered

- Master of Business Administration
- Doctor of Philosophy

Nature of the Program

The John Chambers College of Business and Economics Master of Business Administration (M.B.A.) program is accredited by the AACSB. The program is offered in two formats. An accelerated full-time, day-class program on the WVU-Morgantown campus can be completed in 12 months. The online program can be completed in two years. The online program, referred to as the Online Hybrid M.B.A. program, is designed for working professionals. The standards of excellence that support accreditation by the AACSB are maintained across both formats of the program.

The M.B.A. degree program recognizes the need for future managers to be able to anticipate and recognize change and then to manage resources advantageously in that environment. Thus, the curriculum emphasizes a general, broad-based approach to graduate education in management which provides the student with the qualitative and quantitative skills necessary for a manager to succeed in such an environment. The program develops a managerial perspective that is primarily line-oriented as opposed to staff-oriented and is relevant to those in both private and public organizations.

Academic Standards

In addition to the University's academic and professional standards (http://catalog.wvu.edu/graduate/enrollmentandregistration/), students enrolled in a John Chambers College of Business and Economics master's degree program must also abide by the following standards:

- Students must have a minimum cumulative GPA of 3.0 to earn a degree from their graduate program, without exception.
  - A student who cannot mathematically meet the 3.0 GPA requirement to successfully complete the degree, within a reasonable period of time (as defined by the Program Coordinator or designee), will be dismissed from their academic program. Visit the Probation, Suspension, and Dismissal (http://catalog.wvu.edu/graduate/enrollmentandregistration/#probationsuspensiontext) section of the University's Graduate Catalog for more information about this topic.
- Students must follow the professional standards established by their degree program and/or department. A student who violates the established professional standards may be placed on probation, suspended, or dismissed from their program.
- A student whose cumulative GPA falls below 2.75 will automatically be placed on academic probation.
  - A student will be suspended from their program, for up to one year, if their GPA is not raised to 2.75 by the end of their subsequent semester of enrollment. The program will reevaluate the student after the term of suspension to determine whether they may return to the program or be dismissed.
- A student will be suspended from their program if they earn a letter grade below C- in more than one required course.
- A student who earns a letter grade of D or F in any required course must repeat the course and earn a minimum letter grade of C-.
  - Any grade earned in a repeated course at the graduate level is included in the calculation of a student's overall and major GPA, along with the original grade earned in the course. Additionally, the original grade earned in the course will remain on the student's academic transcript/permanent record. Visit the Grades (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/advising_and_evaluation/#gradestext) section of the University Graduate Catalog for more information about this topic.

Any exceptions to the above standards must be approved in writing by the Assistant or Associate Dean **and** the Program Coordinator.

Full-Time M.B.A. Program

The M.B.A. program is a full-time, on-campus program beginning in June with graduation the following May. This program prepares students for business leadership and administration primarily through three developmental avenues. First, at the core of the M.B.A. program is its unique implementation of an experiential learning orientation. Students engage in consulting activities with actual businesses throughout the State, the region, and, in some cases, internationally. Consulting engagements are sometimes arranged in conjunction with the *Encova Center for Innovation and Entrepreneurship*, and typically involve teams of four to six students deployed on each engagement. Second, the program also incorporates seminar sessions where guest speakers are invited to relay professional and practical experiences, and/or practicum events where students interact with executives and administrators in solving case problems based on actual events at a given organization. Third, business theory, practice, and implementation tools are provided through traditional in-class delivery (eight-week courses). The program is designed for individuals with varying educational and professional backgrounds. Additionally, the full-time M.B.A. program includes Accounting and Economics boot camp courses, both of which are required for all students unless waived by the Program Coordinator. These courses are offered as Pass/Fail courses during the first summer term of the program.

Online Hybrid M.B.A. Program

The Online Hybrid M.B.A. plan of study requires 37 credit hours of graduate coursework. Students also have the opportunity to earn a graduate certificate in a specialized area by taking two additional courses. The program is designed for working professionals with varying educational and professional backgrounds. The program requires a minimum of two years of work experience. Students may enter the Online Hybrid M.B.A. program at the start of the fall or spring semester, completing the program two years later. In addition to the online curriculum, students are required to attend residencies (see program website for details).

Approved Dual Degree Programs

The John Chambers College of Business of Economics offers a number of dual degree programs through the full-time and Online Hybrid M.B.A. programs. Please contact a Chambers College academic advisor at BeGradAdvising@mail.wvu.edu for details regarding admission criteria and plans of study.

Dual degree programs in conjunction with the Online Hybrid M.B.A.:

- M.B.A./J.D.
- M.B.A./Pharm.D.
- M.B.A./M.S.N.

FACULTY

ASSOCIATE DEAN FOR GRADUATE PROGRAMS, ACADEMIC OPERATIONS, AND RESEARCH

- Virginia Franke Kleist - Ph.D. (University of Pittsburgh)

ASSISTANT DEAN OF GRADUATE PROGRAMS

- W. Constinia Charbonnette - Ed.D. (West Virginia University)

M.B.A. COORDINATOR

- Jack Dorminey - Ph.D. (Virginia Commonwealth University)

PROFESSORS

- Ednilson Bernardes - Ph.D. (University of Minnesota)
- Jack Fuller - Ph.D. (University of Arkansas)
- Richard Riley - Ph.D. (University of Tennessee)
- Christian Schaupp - Ph.D. (Virginia Tech)
- Paul Speaker - Ph.D. (Purdue University)
- Edward C. Tomlinson - Ph.D. (The Ohio State University)

ASSOCIATE PROFESSORS

- Naomi Boyd - Ph.D. (George Washington University)
- David Dawley - Ph.D. (Florida State University)
- John Deskins - Ph.D. (University of Tennessee)
- Jack Dorminey - Ph.D. (Virginia Commonwealth University)
- Jeff Houghton - Ph.D. (Virginia Polytechnic Institute and State University)
- Nancy McIntyre - Ph.D. (University of Rhode Island)
- Michael Walsh - Ph.D. (University of Pittsburgh)

RESEARCH ASSOCIATE

- Christiadi - Ph.D. (West Virginia University)

TEACHING ASSISTANT PROFESSORS

- David Cale - Ph.D. (Duquesne University)
- Cindy Dalton - M.B.A. (Waynesburg College)
- Janet L. Fraser - Ph.D. (Pennsylvania State University)
- Lisa K. Nix - Ph.D. (West Virginia University)
- Robert L. Waggoner - M.B.A. (University of Washington)

ADJUNCT PROFESSORS

- Jena T. Martin - J.D. (Howard University)
- Elizabeth A. Oppe - Ph.D. (Ohio University)

LECTURERS

- Robert B. Hammer - M.S. Finance (West Virginia University)
- Carole L. Kiger - M.B.A. (West Virginia University)
- Ryan A. Noon - M.S.I.R. (West Virginia University)

Admissions

FULL-TIME M.B.A. PROGRAM

To gain admission to the full-time M.B.A. program, an applicant must have a bachelor's degree from an accredited institution. Admissions decisions are based on an assessment of expected success in the program shown by the application materials and on space available. The Admissions Committee considers grade point average in all previous college-level work, as well as the grade-point average in the last 60 hours of coursework. Applications for admission to the M.B.A. program and official transcripts of all prior academic work should be submitted to the WVU Office of Graduate Admissions and Recruitment as early as possible. Applicants who have attended institutions other than WVU must request the registrar or records office of those institutions to forward a complete official transcript directly to the WVU Office of Graduate Admissions and Recruitment. The Graduate Management Admissions Test (GMAT) or the Graduate Record Examination (GRE) is required; however, the Program Coordinator may waive the score requirement

for applicants who have a GPA of 3.5 or higher. The Admissions Committee takes no action on an application for admission to the full-time program until the applicant submits a GMAT or GRE score or has the requirement waived. Each applicant must also submit a resume, statement of purpose, and one letter of recommendation with the application. The priority deadline for the full-time M.B.A. program is March 1st of each year. For full admissions consider, all applications must be completed by March 15. This accelerated program begins in the summer of each year.

Please visit the full-time MBA's webpage (https://business.wvu.edu/academics/business-administration/business-administration-mba/) to learn more about the specific application deadlines and other important information. Students may also contact the John Chambers College of Business and Economics Graduate Programs Office for assistance at (304) 293-5505 or BeGradPrograms@mail.wvu.edu.

ONLINE HYBRID M.B.A. PROGRAM

To gain admission to the Online Hybrid M.B.A. program, an applicant must have a bachelor's degree from an accredited institution and a minimum of two years of full-time work experience post bachelor's degree. Admissions decisions are based on an assessment of expected success in the program shown by the application materials and on space available. The Graduate Management Admissions Test (GMAT) is required unless an applicant has a terminal degree. GMAT waivers may also be granted if the applicant has five or more years of professional work experience and an undergraduate GPA of 3.0 or better. Applicants must apply for the GMAT waiver; these requests are reviewed by the Admissions Committee. The applicant must have submitted an application to be considered for a GMAT waiver. Each applicant must submit a resume showing prior work experience. For applicants with less than five years of work experience, the GMAT and the undergraduate record provide the strongest indicators of success. For applicants with five or more years of experience, the Admissions Committee will place greater emphasis on the work history. For applicants with terminal degrees, the Admissions Committee may waive the GMAT requirement. Additionally, applicants are required to submit a statement of purpose and letters of reference.

The Admissions Committee reviews applications on a rolling basis, and students admitted to the program may begin in the fall or spring semester. The priority deadline for receipt of applications and transcripts in the College's Office of Graduate Programs is July 1 for the fall intake and December 1 for the spring intake. Admission to the program is competitive and subject to space being available. Students applying for admission into the OHMBA program as a dual degree student are not required to have work experience.

Please visit the OHMBA program's webpage (https://business.wvu.edu/academics/business-administration/online-mba/) to learn more about the specific application deadlines and other important information. Students may also contact the John Chambers College of Business and Economics Graduate Programs Office for assistance at (304) 293-5505 or BeGradPrograms@mail.wvu.edu.

M.B.A. Program

The M.B.A. requires that the candidate achieve a cumulative grade point average of at least 3.0 on all work counting toward the graduate degree. A regular graduate student whose cumulative grade point average falls below 2.75 will be placed on probation. If the average is not brought up to 2.75 by the end of the following semester, the student will be suspended from the program. A grade below C in more than one course taken while enrolled as a graduate student will result in suspension from the program. In addition, the student must maintain a 3.0 average in all work counting toward the graduate degree.

M.B.A. Requirements

A minimum GPA of 3.0 is required in all courses

A grade of C or higher must be earned in all required courses		
BADM 551	Integrative Experiential Simulation	3
BADM 522	Statistical Decision Making	2
BADM 535	Organizational Behavior	3
BADM 571	Practicum 1	1
BADM 554	Leading Projects for Business Innovation	2
BADM 523	Decision Analytics	2
BADM 525	Marketing Management	2
BADM 531	Operations/Supply Chain	2
BADM 555	Financial Management	2
BADM 557	Experiential 1	3
BADM 572	Practicum 2	1
BADM 534	Technology for Business Development	2
BADM 536	Leading with Ethics	2

BADM 541	Business Strategy	2
BADM 556	Data Analytics for Management	3
BADM 593	Special Topics (Experiential 2)	3
BADM 573	Practicum 3	1
Internship (Optional)		
BADM 558	Internship	
Total Hours		**36**

M.B.A. SUGGESTED PLAN OF STUDY

First Semester	Hours
Summer	
BADM 551	3
BADM 522	2
BADM 535	3
BADM 571	1
	9
Second Semester	**Hours**
Fall	
BADM 554	2
BADM 523	2
BADM 525	2
BADM 531	2
BADM 555	2
BADM 557	3
BADM 572	1
	14
Third Semester	**Hours**
Spring	
BADM 534	2
BADM 536	2
BADM 541	2
BADM 556	3
BADM 593	3
BADM 573	1
	13
Fourth Semester	**Hours**
Summer	
BADM 558	3
	3

Total credit hours: 39

Online Hybrid MBA Requirements

The Online Hybrid MBA program requires that the candidate achieve a cumulative grade point average of at least 3.0 on all work counting toward the graduate degree. A regular graduate student whose cumulative grade point average falls below 2.75 will be placed on probation. If the average is not brought up to 2.75 by the end of the following semester, the student will be suspended from the program. A grade below C in more than one course taken while enrolled as a graduate student will result in suspension from the program. In addition, the student must maintain a 3.0 average in all work counting toward the graduate degree.

Management Information Systems		2
BADM 611	Management Information Systems	
Managerial and Team Skills		2
BADM 612	Managerial and Team Skills	
BADM 621	Business Research	3

BADM 622	Financial Statements Analysis	3
BADM 623	Strategy	3
BADM 632	Corporate Finance	3
BADM 641	Decision Analysis for Executives	3
BADM 644	Legal Environment and Ethics	3
Marketing Strategy		2
BADM 652	Marketing Strategy	
BADM 653	Integrated Global Business	3
BADM 693	Special Topics (Macro/Managerial Economics)	4
BADM Electives (600-level BADM courses)		6
Residency 1		
Residency 2		
Total Hours		37

Online Hybrid MBA Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours	Summer	Hours
Managerial and Team Skills		2 BADM 641		3 BADM 693 (Macro/ Managerial Economics)	4
BADM 612		Management Information Systems		2 BADM 644	3
BADM 621		3 BADM 611			
BADM 622		3 BADM 632		3	
		8		8	7

Second Year

Fall	Hours	Spring	Hours
BADM 623		3 BADM 653	3
Marketing Strategy BADM 652		2 Elective	3
Elective		3	
		8	6

Total credit hours: 37

Integrated Marketing Communications Area of Emphasis Requirements

The Integrated Marketing Communications AOE is intended to prepare non-IMC students for careers utilizing an integrated marketing communications strategy. Students will be exposed to course work focused in IMC, audience insight and behavior, brand management and emerging media.

Course Requirements. To satisfy the requirements of the Integrated Marketing Communications Area of Emphasis, a student must complete the four required courses below.

- For MBA students, two of the courses required for an AOE in IMC may also be applied to a student's elective requirement, with the other two taken in addition to their MBA degree requirements. Note that a cumulative GPA of 3.0 is required for graduation from the Online Hybrid MBA program. The courses and grades from the Area of Emphasis will be counted towards a student's cumulative GPA (a C- or better is required in courses, with an overall cumulative GPA of 3.0) in the MBA program.
- For DMC students, one of the courses required for an AOE may also be applied to an DMC student's elective requirement, with the other three taken in addition to the general IMC master's degree requirements. Note that a cumulative GPA of 2.75 is required for graduation from the DMC program. Courses and grades from the Area of Emphasis will be counted towards a student's cumulative GPA (a C- or better is required in courses, with an overall cumulative GPA of 2.75) in the IMC program.

IMC 610	Introduction to Integrated Marketing Communications	3
IMC 612	Audience Insight	3
IMC 613	Brand Equity Management	3
IMC 619	Emerging Media and the Market	3
Total Hours		12

EMBA students who elect to enroll in this Area of Emphasis will be required to complete IMC 610 before moving on to the other courses in the Area of Emphasis.

Major Learning Outcomes

FULL-TIME MASTER OF BUSINESS ADMINISTRATION PROGRAM

Learning goal #1: Students will be able to integrate and apply the functional areas of business to experiential business problems

Learning goal #2: Students will be able to identify problems, collect appropriate data and analyze the data to make informed management decisions

Learning goal #3: Students will be able to articulate a succinct business analysis and make recommendations

Learning goal #4: Students will be able to make management decisions in an ethical and socially responsible manner

Learning goal #5: Students will be able to effectively manage teams and work units and implement strategies to achieve organizational goals

ONLINE HYBRID MASTER OF BUSINESS ADMINISTRATION PROGRAM

Learning goal #1:: Students will be able to integrate the functional areas of business into management decisions in a global environment

Learning goal #2: Students will be able to identify problems, collect appropriate data and analyze the data to make informed management decisions

Learning goal #3: Students will be able to articulate a succinct business analysis and make recommendations

Learning goal #4: Students will be able to make management decisions in an ethically sensitive and socially responsible manner

Learning goal #5: Students will be effective team members in a virtual environment

Learning goal #6: Students will be an effective leader who influences people toward the attainment of organizational goals

Ph.D. in Business Administration-Accounting

Degree Offered

- Doctor of Philosophy

Nature of the Program

The Ph.D. in Business Administration with a major in Accounting is designed to prepare qualified individuals for a career in scholarly accounting research and teaching at the university level. The doctoral program is offered to a relatively small, highly qualified, and motivated group of students who demonstrate the potential to become highly regarded scholars in the field. Doctoral students are expected to be in residence on a full-time basis throughout the duration of the program. Typically, a student will be in-residence, full-time for a period of four years.

Individualized Program

Each doctoral student is paired with a faculty member with similar research interests. The faculty member will work closely with the student and will serve as a research mentor throughout the duration of the program. Currently, the training, background, and interests of the doctoral faculty support behavioral and archival research in fraud, forensics, and ethics across the functional accounting areas of audit, financial, governmental, information systems, international, managerial, and tax accounting. The individual plan of study for each candidate will be determined by the student, the faculty mentor, and the Ph.D. committee.

Academic Standards

The following criteria must be met for a student to remain in good standing:

1. Maintain a minimum 3.0 cumulative grade point average in all graduate courses taken at WVU.*
2. Earn grades of "A" or "B" in all graduate courses taken at WVU.*
3. Earn no more than two incomplete grades per semester, barring exceptional circumstances in which a deferment is officially granted by the Ph.D. Program Coordinator.
4. Resolve any incomplete grade in a timely manner.
5. Successfully complete any qualifying/summer papers and/or qualifying exams within the prescribed timeframe.
6. Successfully complete a comprehensive exam within four years of starting the program. Failure to pass the comprehensive exam after two attempts will result in dismissal from the program.
7. Successfully defend a dissertation proposal within five years of matriculation.
8. Successfully defend a dissertation within seven years of matriculation.

9. Attend scholarly presentations and interact as part of the community of scholars.

10. Perform Graduate Assistantship duties in a satisfactory manner (if applicable).

11. Observation of and adherence to the WVU *Campus Student Code* (https://studentconduct.wvu.edu/files/d/ f0ae69b9-1461-45cb-81ee-40e48e2d978b/main-campus-revised-final-student-conduct-code-8-21-15c.pdf).

12. Observation of and adherence to WVU's Academic and Professional Standards (http://catalog.wvu.edu/graduate/enrollmentandregistration/#text).

13. Observance of and adherence to the professional standards of the student's home discipline, as defined by the recognized scholarly organization that governs the progression (as identified by the Program Ph.D. Committee)

Where either of these conditions are not met, the student will be placed on probation and a remediation plan will be developed by the Ph.D. Program Coordinator. Where the conditions of the remediation plan are not met within the prescribed timeline, the student will be dismissed from the program.

Admissions

Admission to the Ph.D. program in accounting is open to qualified individuals. To be considered for admission into the program, prospective students must:

- Submit an online application by December 1 to be considered for University fellowships. Completed applications submitted by February 1 of each year will be given full consideration for College fellowships and admission in the succeeding fall semester

- Have a bachelor's degree in accounting from an accredited college/university **OR** a bachelor's degree in any field **AND** a master's degree in accounting from an accredited university

- Provide a statement of purpose describing why the applicant is pursuing a Ph.D. and the applicant's career aspirations upon completion of the degree (typically submitted as part of the application)

- Provide a current resume or curriculum vitae (typically submitted as part of the application)

- Provide three letters of reference (typically coordinated and submitted as part of the application)

- Have official transcripts from all colleges and universities attended sent directly from the applicant's colleges and/or universities to the West Virginia University Office of Graduate Admissions and Recruitment. A cumulative GPA on undergraduate courses should be 3.0 or higher and a cumulative GPA on graduate courses should be 3.25 or higher (based on the U.S. standard of 4.0)

- Have an official score on the Graduate Management Admissions Test (GMAT) sent directly from the test administrator to the West Virginia University Office of Graduate Admissions and Recruitment. The GMAT score should be 620 or higher.

- Obtain a score of at least 100 on the TOEFL-ibt (250 on the old computer-based exam or 600 on the paper-based exam) or a score of at least 7.0 on the IELTS test **IF** English is not the applicant's native language. It should be noted that the John Chambers College of Business and Economics TOEFL requirement for applicants to the Ph.D. in Business Administration is higher than the University requirement. Go to www.toefl.org or www.ielts.org to register and find out more about these tests.

- Applicants who have received a high school diploma or a bachelor's degree from an accredited college or university in the United States, United Kingdom, or other predominately English-speaking country are usually exempt from the TOEFL/IELTS requirement. However, applicants having only a master's degree from one of these countries must still provide acceptable TOEFL or IELTS scores.

The items listed above are minimum requirements for admission into the program. Since there is limited space in each class, meeting the above requirements does not guarantee admission. Applicants will not be admitted on a provisional basis.

Minimum 3.0 GPA required.

Doctor of Philosophy

The requirements for a Doctor of Philosophy with a major in Accounting includes successful coursework, a comprehensive examination, a dissertation proposal, and a dissertation defense.

Additionally, candidates are required to work under the guidance of tenure-track research-oriented faculty as graduate research and teaching assistants and are required to teach four courses after successfully passing their comprehensive exams. The program requires full-time enrollment and on-campus attendance, and requires attendance and participation in research workshops and presentations.

The plan of study for each candidate is individualized by the faculty mentor and student, based upon the nature and objectives of the selected research stream. This plan is to be developed by the student and the faculty mentor during the first year.

CURRICULUM REQUIREMENTS

Accounting Content Courses

ACCT 711	Behavioral Accounting Research	3
ACCT 712	Archival Accounting Research	3
ACCT 713	Forensic Accounting and Fraud Examination	3
ACCT 795	Independent Study	3
MANG 710	Philosophy of Research	3

Methods and Statistics Courses*

ECON 721	Mathematical Economics	3
ECON 725	Econometrics 1	3
ECON 726	Econometrics 2	3
Choose 2 of the following:		6
ECON 727	Econometrics 3	
STAT 513	Design of Experiments	
STAT 541	Applied Multivariate Analysis	
STAT 545	Applied Regression Analysis	
STAT 551	Nonparametric Statistics	
Research Hours		**27**
ACCT 797	Research	
Minor Area Courses		15
Qualifying Exams		
Comprehensive Proposal Defense		
Dissertation Defense		
Total Hours		72

*   A minimum of fifteen semester hours of graduate coursework is required in graduate statistical research methods and analysis. Graduate statistic courses offered by the Statistics, Psychology, and Management departments may fulfill this requirement.

SEMINAR

The first doctoral seminar provides an introduction to research and the philosophy of research. This course will be taken with other business doctoral students within the college. Then, each student must take the three accounting focused seminars: Behavioral Research, Archival Research, and Fraud and Forensic Accounting. Each course covers seminal research within the functional areas of accounting.

INDEPENDENT STUDY

One graduate independent study course is required. The course will be centered on a research project selected in conjunction with the faculty mentor.

MINOR AREA

A minimum of fifteen semester hours of graduate coursework is required in a minor supporting area. A minor area is one that is outside, but complementary to, the major area of accounting and the research in which the candidate is interested, e.g., information systems, finance, economics, public finance, psychology, sociology, operations management, law, and industrial engineering. The minor area focus and courses will be selected with the faculty mentor.

WORKSHOPS

Throughout the student's tenure at West Virginia University, the faculty expect the doctoral students to attend the accounting workshops. These workshops consist of internal (faculty and students) and external scholars invited to present their research. Doctoral students are expected to read the research papers carefully and are encouraged to participate in the workshop by asking questions and making comments.

COMPREHENSIVE EXAMINATION

At the end of the second year and after successfully completing at least 39 credit hours of course work from the plan of study, which must include all accounting graduate seminars, each student is required to take a written comprehensive examination. This two-day exam will cover course-related topics and materials from the candidate's plan of study.

Upon successful completion of the comprehensive exam, candidates are considered to be ABD, or "all but dissertation". In the event that all or parts of the exam are not considered to be successful, the candidate may be asked either to re-take select courses and the entire exam or re-take select deficient parts of the exam. A student may retake part of all of the examination only once, and if their efforts are still considered to be unsuccessful, will be asked to leave the doctoral program.

DISSERTATION PROPOSAL

During the third year after a successful comprehensive examination, the doctoral candidate must select a dissertation committee comprised of five members, one of which will be outside of the Accounting Department. The candidate will develop a dissertation proposal through work with the Chair of the Committee (presumably the faculty mentor) and the Committee members. Once the Chair and Committee members feel that the candidate and the research idea is ready, a public presentation of the dissertation proposal is to be made by the candidate. The Chair and Committee will take note of

comments, suggestions, and critiques by those in attendance, and make certain requirements of alteration to the candidate to the proposal. Once the alterations to the proposal are incorporated by the candidate, the Chair and the Committee will approve the candidate's dissertation proposal.

After a successful dissertation proposal the candidate may begin the specific research related to the dissertation. It is recommended that the candidate continue to work closely with the Chair and Committee and keep them appraised of progress towards completion of the dissertation, and to timely notify the Chair and Committee of any unforeseen difficulties as it relates to the dissertation process.

DISSERTATION DEFENSE

After a successfully executing the dissertation proposal and writing the results in a manner appropriate and consistent to the accounting academe and the University guidelines for dissertations, the candidate must defend the dissertation. The dissertation defense should occur during the fourth year, and is conducted in a formal setting with the Chair and the Committee. The candidate will present the information, field questions from the Chair and the Committee, and make adjustments to the dissertation as deemed necessary by the Chair in working with the Committee.

If the changes are minor in nature, the Chair and Committee may approve the dissertation contingent upon making the minor changes. If the changes are substantial, the Chair and Committee may require the candidate to make corrections and defend again at a later date.

Upon a successful dissertation defense, the candidate must follow the University Electronic Thesis and Dissertation (ETD) guidelines for electronic publication. Once the dissertation has been successfully approved by the University, the candidate is eligible for formal graduation ceremonies.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours	Summer	Hours
MANG 710	3	ACCT 711	3	Qualifying Examination	
ECON 721	3	ECON 725	3		
Statistics Course	3	Statistics Course	3		
	9		9		0

Second Year

Fall	Hours	Spring	Hours		
ACCT 712	3	ACCT 713	3		
ECON 726	3	Minor Area Course 2	3		
Minor Area Course 1	3	Minor Area Course 3	3		
	9		9		

Third Year

Fall	Hours	Spring	Hours		
ACCT 795	3	ACCT 797	9		
Minor Area Course 4	3	Dissertation Proposal Defense			
Minor Area Course 5	3				
	9		9		

Fourth Year

Fall	Hours	Spring	Hours	Summer	Hours
ACCT 797	9	ACCT 797	9	Dissertation Defense	
	9		9		0

Total credit hours: 72

Ph.D. in Business Administration-Finance

Degree Offered

- Doctor of Philosophy

Nature of the Program

The Ph.D. in Business Administration with a major in Finance is a full-time, in-residence program lasting 4-5 years. It is a relatively small, high-quality program. The primary goal of the program is to prepare students for careers in research and teaching at comprehensive universities. The program of study requires the satisfactory completion of coursework, a first year summer research paper, a comprehensive examination, and a dissertation. Students will take courses in various finance topics, economics, econometrics, research methods, and statistics. The program distinguishes itself with small classes and an "open-door" policy, which allows for close interaction between students and faculty (https://business.wvu.edu/faculty-and-

staff/directory/?dname=Finance) to discuss ideas and work on joint research projects. Early involvement of students in faculty-directed research projects provides students with the opportunity to develop a pipeline of research while in their doctoral program of study. Our aim is that all students will present their work at academic conferences and have at least one published scholarly paper by the time they graduate. Students also gain teaching experience by teaching undergraduate finance courses typically after their first year in the program.

Academic Standards

The following criteria must be met for a student to remain in good standing:

1. Maintain a minimum 3.0 cumulative grade point average in all graduate courses taken at WVU.*
2. Earn grades of "A" or "B" in all graduate courses taken at WVU.*
3. Earn no more than two incomplete grades per semester, barring exceptional circumstances in which a deferment is officially granted by the Ph.D. Program Coordinator.
4. Resolve any incomplete grade in a timely manner.
5. Successfully complete any qualifying/summer papers and/or qualifying exams within the prescribed timeframe.
6. Successfully complete a comprehensive exam within four years of starting the program. Failure to pass the comprehensive exam after two attempts will result in dismissal from the program.
7. Successfully defend a dissertation proposal within five years of matriculation.
8. Successfully defend a dissertation within seven years of matriculation.
9. Attend scholarly presentations and interact as part of the community of scholars.
10. Perform Graduate Assistantship duties in a satisfactory manner (if applicable).
11. Observation of and adherence to the WVU *Campus Student Code* (https://studentconduct.wvu.edu/files/d/f0ae69b9-1461-45cb-81ee-40e48e2d978b/main-campus-revised-final-student-conduct-code-8-21-15c.pdf).
12. Observation of and adherence to WVU's Academic and Professional Standards (http://catalog.wvu.edu/graduate/enrollmentandregistration/#text).
13. Observance of and adherence to the professional standards of the student's home discipline, as defined by the recognized scholarly organization that governs the progression (as identified by the Program Ph.D. Committee)

Where either of these conditions are not met, the student will be placed on probation and a remediation plan will be developed by the Ph.D. Program Coordinator. Where the conditions of the remediation plan are not met within the prescribed timeline, the student will be dismissed from the program.

Admissions

Students who have an M.S. in Finance or an MBA with a concentration in finance from an accredited academic institution can enter into the Ph.D. program directly. Alternatively, if students lack sufficient academic background in finance, our M.S. in Finance program (p. 280) will serve as an essential preliminary step towards a Ph.D. degree. The following will be considered for admission into the program:

- A completed application received by December 1 is required to be considered for University fellowships. Completed applications received by **February 1** of each admission year will be given full consideration for College fellowships and admission in the succeeding fall semester.
- A bachelor's degree or equivalent from an accredited university.
- A statement of purpose regarding the Ph.D. program describing why the applicant is pursuing a Ph.D. in Business Administration with a major in Finance and the applicant's career aspirations upon completion of the degree.
- A current résumé.
- Two letters of reference.
- Official copies of all university transcripts with cumulative GPA scores of 3.25 or better on all undergraduate courses and 3.5 on graduate courses (based on U.S. standard of 4.0).
- An official Graduate Management Admissions Test (GMAT) score is preferred; however, in some cases a GRE (Graduate Record Examination) will be accepted. A high GMAT/GRE score is required for admission to the Ph.D. Program in Business Administration with a major in finance. Successful applicants to our program usually have GMAT or GRE scores in the 80+ percentile.
- The John Chambers College of Business and Economics TOEFL requirement for Ph.D. in Business Administration applicants is higher than the University's. Students whose first language is not English must obtain a score of at least 100 on the TOEFL-ibt (250 under the old computer-based exam or 600 under the paper-based exam) or a score of at least 7.0 on the IELTS test to be admitted to graduate study. Go to www.toefl.org or www.ielts.org to register and find out more about the test. This is a University requirement.
- Applicants who have received a high school diploma or a bachelor's degree from an accredited college or university in the United States, United Kingdom, or other predominantly English-speaking country are usually exempt from the TOEFL/IELTS requirement. Applicants with only a master's degree from a predominantly English-speaking country must still provide acceptable TOEFL or IELTS scores.

These entrance requirements are the minimum requirements for regular admission. Since there is limited space in each year's class, meeting these entrance requirements does not guarantee admission. Applicants will not be accepted on a provisional basis.

Apply Here **(**https://graduateadmissions.wvu.edu/how-to-apply/**)**

Program Requirements

The program is designed to be completed in four or five years, depending on the student's background, interests, and dissertation progress. The program of study requires the satisfactory completion of coursework plus dissertation research. Students will take courses in economic theory, econometrics, and finance, followed by a comprehensive examination and dissertation research.

The Ph.D. program in Business Administration with a major in Finance is a full-time graduate program and requires at least three years in residence. The residency requirement is important because the doctoral degree has aspects of an apprenticeship which can only be accomplished on campus. Additionally, teaching on campus is a requirement of the program. Students are expected to teach after their first year in the program. They will work closely with faculty to ensure quality instruction and receive feedback on their development as university-level teachers.predominantly English-speaking country

Minimum 3.0 GPA required.

Doctor of Philosophy

Our program is built around an applied curriculum with a strong theoretical and quantitative foundation. The program involves doctoral level coursework, a first year research paper, and presentation to faculty, passing a finance comprehensive exam, and defending a dissertation.

CURRICULUM REQUIREMENTS

ECON 701	Advanced Micro-Economic Theory 1	4
ECON 702	Advanced Macro-Economic Theory 1	3
ECON 711	Advanced Micro-Economic Theory 2	4
ECON 721	Mathematical Economics	3
ECON 725	Econometrics 1	3
ECON 726	Econometrics 2	3
ECON 727	Econometrics 3	3
FIN 736	Asset Pricing	3
FIN 741	Corporate Finance Seminar	3
FIN 742	Investments Seminar	3
FIN 743	Advanced Topics Seminar	3
Research Hours		**39**
FIN 797	Research	
1st Year Research Paper		
Comprehensive Exam		
Dissertation Proposal Defense		
Dissertation Defense		
Total Hours		74

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours	Summer	Hours
ECON 701		4 ECON 711		4 Student Research Paper[*]	
ECON 721		3 ECON 725		3	
ECON 702		3 FIN 736		3	
			10		10	0

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
ECON 726		3 ECON 727		3 Finance Comprehensive Examination	
FIN 741		3 FIN 742		3	
FIN 797		3 FIN 743		3	
			9		9	0

Third Year

Fall	Hours	Spring	Hours	
FIN 797		9 FIN 797		9
		9		9

Fourth Year

Fall	Hours	Spring	Hours	
FIN 797		9 FIN 797		9
		9		9

Total credit hours: 74

Ph.D. in Business Administration-Management

Degree Offered

- Doctor of Philosophy

Nature of the Program

The Ph.D. in Business Administration with a major in Management is a high-quality, full-time, residential program designed to prepare qualified individuals for a career in scholarly research and teaching at the university level. Our program is supported by faculty who actively publish research on a variety of topics in organizational behavior and strategic management that reflect the most relevant and interesting questions from the standpoint of advancing academic knowledge and managerial practice. As such, our Ph.D. students are exposed to a greater scope of scholarly knowledge while getting an in-depth training on a specific topic of their dissertation research. We also believe that an effective scholar should be trained as both a researcher and a teacher. Our Ph.D. program provides Ph.D. students with an opportunity to learn from the best faculty instructors. We also care about what happens to our Ph.D. students after they graduate. Job search training and support are part of our program.

Our program is small and student-centered, which provides students the opportunity to work closely with faculty on various research projects. This personal attention extends to the small, research#oriented doctoral seminars that form the core of our academic program. Students are an integral part of our department and viewed more as junior colleagues, research partners, and co-authors than as traditional students. Consequently, we encourage all students to work with multiple faculty, not just their advisor or dissertation chair.

"*The size of WVU's program is a real competitive advantage for us needy Ph.D. students – at WVU, the Ph.D. students can dip their brush into experiences and opportunities that they couldn't get at any other place.*" -- Drew Carnes, Ph.D., Assistant Professor of Management at Western Carolina University (graduated from WVU in 2015).

"*The WVU PhD program prepared me for academic research at all levels, and from all angles. My favorite memories of the PhD are of discussing research with faculty. who supported my initial ideas yet pushed me further.*" -- Karen Nicholas, Ph.D., Assistant Professor of Management at Boise State University (graduated from WVU in 2018).

"*The training I received at WVU highly prepared me for success as a scholarly academic. The methods training is highly rigorous and the seminars challenged me to think in new ways and also complemented my existing experience in both academia and industry. Completing the program was certainly the biggest challenge of my life, but I left knowing that I had everything I needed to move forward.*" -- Curtis Sproul, Ph.D., Assistant Professor of Management at Georgia Southern University (graduated from WVU in 2017).

WHAT MAKES OUR PH.D. PROGRAM UNIQUE?

People are our competitive advantage! If you join our program, you'll find yourself in a very stimulating and supportive environment. Our Ph.D. students do not compete with each other. The small size of our program allows each student to closely interact with more than one faculty.

Place – Joining West Virginia University will certainly convince you that Mountaineer's spirit is great! Our program is residential and located in Morgantown, West Virginia, an hour and a half away from Pittsburgh, Pennsylvania. On the Best Places to Live (https://livability.com/best-places/top-100-best-places-to-live/2018/wv/morgantown/) list for 2018, Morgantown also appears on the Livability.com Top 10 Cities for Affordable Health Care. (https://livability.com/top-10/health/10-best-cities-for-affordable-healthcare/2014/wv/morgantown/) Known primarily as home to West Virginia University and its 30,000 students, Morgantown has a wide variety of housing options and neighborhoods as well as downtown shops, restaurants and entertainment nightspots for students and residents. The median age here is 22.6 years old, which contributes to a youthful and fun local culture.

Profession – We are an R1 (highest research activity) university, and our College and Department, in particular, correspond to this prestigious status. Faculty in our Department publish in top academic journals and are recognized well beyond West Virginia University for their research and service to the profession. The vast professional network of our faculty is a great asset for our Ph.D. students in their job search.

Our Ph.D. program is looking for people who share our values of curiosity, respect, accountability, service and appreciation.

Academic Standards

The following criteria must be met for a student to remain in good standing:

1. Maintain a minimum 3.0 cumulative grade point average in all graduate courses taken at WVU.*
2. Earn grades of "A" or "B" in all graduate courses taken at WVU.*
3. Earn no more than two incomplete grades per semester, barring exceptional circumstances in which a deferment is officially granted by the Ph.D. Program Coordinator.
4. Resolve any incomplete grade in a timely manner.
5. Successfully complete any qualifying/summer papers and/or qualifying exams within the prescribed timeframe.
6. Successfully complete a comprehensive exam within four years of starting the program. Failure to pass the comprehensive exam after two attempts will result in dismissal from the program.
7. Successfully defend a dissertation proposal within five years of matriculation.
8. Successfully defend a dissertation within seven years of matriculation.
9. Attend scholarly presentations and interact as part of the community of scholars.
10. Perform Graduate Assistantship duties in a satisfactory manner (if applicable).
11. Observation of and adherence to the WVU *Campus Student Code* (https://studentconduct.wvu.edu/files/d/ f0ae69b9-1461-45cb-81ee-40e48e2d978b/main-campus-revised-final-student-conduct-code-8-21-15c.pdf).
12. Observation of and adherence to WVU's Academic and Professional Standards (http://catalog.wvu.edu/graduate/enrollmentandregistration/#text).
13. Observance of and adherence to the professional standards of the student's home discipline, as defined by the recognized scholarly organization that governs the progression (as identified by the Program Ph.D. Committee)

Where either of these conditions are not met, the student will be placed on probation and a remediation plan will be developed by the Ph.D. Program Coordinator. Where the conditions of the remediation plan are not met within the prescribed timeline, the student will be dismissed from the program.

FACULTY

COORDINATOR

- Olga Bruyaka Collignon - Ph.D. (EM Lyon Business School and Jean Moulin University, Lyon, France)
  Expertise: inter-firm alliances and alliance portfolios, technology and innovation, resource-based theories, signaling theory, organizational stigma

PROFESSORS

- Mark Gavin - Ph.D. (Purdue University)
  Expertise: trust, emotions, leadership, and multilevel phenomena
- Jodi Goodman - Ph.D. (Georgia Institute of Technology)
  Expertise: learning processes, adaptive expertise, institutional environments, and research methods
- Edward Tomlinson - Ph.D. (The Ohio State University)
  Expertise: interpersonal trust, behavioral integrity, and deviant workplace behavior

ASSOCIATE PROFESSORS

- Olga Bruyaka Collignon - Ph.D. (EM Lyon Business School and Jean Moulin University, Lyon, France)
  Expertise: inter-firm alliances and alliance portfolios, technology and innovation, resource-based theories, signaling theory, and organizational stigma
- David Dawley - Ph.D. (Florida State University)
  Expertise: organization turn-around, bankruptcy, organizational crisis, signaling theory, and multilevel phenomena
- Jeff Houghton - Ph.D. (Virginia Tech University)
  Expertise: leadership, self-leadership, team processes and performance, international HR, creativity and innovation, and personality and individual differences
- Xiaoxiao Hu - Ph.D. (George Mason University)
  Expertise: workplace affect, social dynamics in organizations, leadership, employee development
- Nancy McIntyre - Ph.D. (University of Rhode Island)
  Expertise: curiosity, self concept-based motivation, emotional intelligence, and perfectionism
- Abhishek Srivastava - Ph.D. (University of Maryland)
  Expertise: leadership, team effectiveness, and the factors that support knowledge sharing

ASSISTANT PROFESSORS

- Ryan Angus - (University of Utah)
  Expertise: value creation, uncertainty, entrepreneurship, pivoting, theory of the firm, human capital
- Tianxu Chen - Ph.D. (Drexel University)
  Expertise: competitive dynamics, technology and innovation, entrepreneurship
- James Field - Ph.D. (Virginia Commonwealth University)
  Expertise: meta-analysis, sensitivity analysis, open science, big data, employee turnover, employee motivation
- Kayla Follmer - Ph.D. (The Pennsylvania State University)
  Expertise: concealable identity management, mental illness, diversity and inclusion
- Lily Morse - Ph.D. (Carnegie Mellon University)
  Expertise: behavioral ethics, prosocial deviance, moral character, negotiation

Admissions

The following will be considered for admission into the program:

• TRANSCRIPTS/ GRADUATE POINT AVERAGE (GPA) SCORES

To be admitted into the Ph.D. in Business Administration with a major in Management program, applicants must have completed a bachelor's degree from an accredited university and should have a cumulative GPA of 3.25 or better for undergraduate work, and a cumulative GPA of 3.5 or better for graduate work (based on the U.S. standard scale of 4.0).

Applicants must send their transcripts to the WVU Office of Graduate Admissions and Recruitment. Official electronic copies of transcripts may be emailed to GraduateAdmissions@mail.wvu.edu. This will help expedite the admissions process. If the institution does not offer the electronic transcript service, please have your official transcripts mailed to: West Virginia University Office of Graduate Admissions and Recruitment, PO Box 6510, Morgantown, WV 26506-6510.

• GMAT OR GRE SCORES

GMAT (Graduate Management Admission Test) or GRE (Graduate Record Exam) score must be submitted. Successful Ph.D. applicants to our Program usually have GMAT or GRE scores in the 70+ percentile. The GRE-GMAT comparison tool (https://www.ets.org/gre/institutions/about/mba/comparison_tool/) will be used to evaluate the GRE scores.

Graduate Management Admission Test (GMAT)

Visit www.mba.com (http://www.mba.com/) for information on the GMAT, including a testing center, scheduling your test, and downloading a sample test. We suggest that you take a few months to study for the GMAT and sit for the test in the autumn prior to the year in which you apply, so that if a re-take is necessary, you will have sufficient time to schedule it. In West Virginia, the test is administered in Morgantown and Charleston (https://www.eduers.com/gmat/gmat-test-centers-in-west-virginia/). Scores are valid for five years from the date of the test.

Graduate Record Examination (GRE)

As an alternative, applicants to the Management Ph.D. program may submit their GRE scores. The GRE revised General Test is available at more than 850 test centers in more than 160 countries. In most regions of the world, the computer-delivered test is available on a continuous basis throughout the year. In Mainland China, Hong Kong, Taiwan, and Korea, the computer-delivered test is available one to three times per month. In areas of the world where computer-delivered testing is not available, the paper-delivered test is available up to three times a year in October, November, and February. For more information about the GRE, visit www.ets.org/gre (http://www.ets.org/gre/).

• LANGUAGE SKILLS TESTS – TOEFL OR IELTS

Applicants whose native language is not English or who did not complete an undergraduate degree at an institution in an English-speaking country must demonstrate their ability to perform successfully in university-level coursework where English is the language of instruction and assessment. WVU requires candidates to submit the appropriate English test scores. The minimum acceptable scores are 600 on the TOEFL paper-based format, 250 on the TOEFL computer-based format, 100 on the TOEFL-iBT, or 7.0 on the IELTS. Go to www.toefl.org (http://www.toefl.org/) or www.ielts.org (http://www.ielts.org/) to register and find out more about the test.

For GMAT / GRE and for TOEFL, our Institution code is 5904, Department code is 1801. Generally, West Virginia University and our department will accept test scores that are no more than five years old as long as the applicant can provide a valid copy of the official score report.

Application Process

Students begin their graduate work in the fall semester. To be assured full consideration for August admission and/or financial aid, the department encourages all interested candidates to submit their completed applications by **February 1**. The department makes most admission decisions during

February and March. With the typical application processing time, we encourage potential students to apply early to ensure all materials are received prior to the due date. However, applications at a later date may be also considered.

WVU has now implemented an application process that is almost completely electronic. Other than academic records (transcripts, etc.), all application materials can now be submitted electronically, including letters of reference. The WVU Office of Graduate Admissions and Recruitment begins accepting applications for the next academic year on or about September 15.

To start the application process Enter the WVU Application portal. (https://app.applyyourself.com/AYApplicantLogin/fl_ApplicantConnectLogin.asp?id=wvugrad)

1. Create a username and password.
2. Once an account has been created, applicants can edit the application at their discretion. Please complete all questions asked.
3. **Upload an up-to-date resume (Curricula Vitae):** Your resume should include enough information for the admissions committee to trace your entire professional work history and should indicate any relevant affiliations.
4. **Request two letters of recommendation** through the online portal. Individual letters should not exceed one page: We recommend that your reference provide some information that is not found in the other materials being submitted. Topics with regards to your ability to work with others, your discipline and ambition, leadership potential, etc. should be addressed. Your reference letter(s) should discuss the aptitude necessary for your success in the Ph.D. program.
5. **Create a Statement of Purpose**: Your statement of purpose should address why you are interested in earning your Ph.D. from WVU (what you hope to learn, career goals, etc.). You should demonstrate your understanding of what academic research is and your commitment to doing this type of work, both in the Ph.D. program and throughout your career. You should discuss any research experience you have, your general area of interest and your specific research interests.
6. **Writing Sample** (if available): Examples include class research papers, conference papers, published research articles, research manuscripts in progress, white papers, technical reports, etc.
7. You may also send other **supporting materials** you wish to have considered with your application. All these materials can now be submitted electronically as part of the online application process. This method is strongly preferred, since it assures timely receipt of the documents.
8. **Pay application fee ($60.00 payable by Visa, Mastercard, or Discover Card).**
9. **Submit application.**
10. To complete your application, you must submit **GMAT or GRE scores** as well as your **TOEFL / IELTS scores (For GMAT / GRE and for TOEFL, our Institution code is 5904, Department code is 1801)**. Generally, West Virginia University and our department will accept test scores that are no more than five years old as long as the applicant can provide a valid copy of the official score report.

The entrance requirements are minimum requirements for admission. Since there is limited space in each year's class, meeting entrance requirements does not guarantee admission. Applicants will not be accepted on a provisional basis.

Start your submission now **(**https://app.applyyourself.com/AYApplicantLogin/fl_ApplicantConnectLogin.asp?id=wvugrad**)**

Minimum 3.0 GPA required.

Doctor of Philosophy

The coursework in management is designed to provide a theoretical, methodological, and statistical foundation for critically evaluating extant research and conducting independent research. Students will take six content courses in management and six research methods and statistics courses. Additional requirements include a qualifying paper and a comprehensive examination. Subsequent to completing coursework and passing comprehensive examinations, students will be admitted to doctoral candidacy. Remaining hours will focus on completing a dissertation.

MAJOR REQUIREMENTS

Methods and Statistics Courses - all required		18
MANG 709	Applied Univariate Statistics	
MANG 710	Philosophy of Research	
MANG 711	Research Methods	
MANG 713	Structural Equation Modeling	
or STAT 512	Statistical Methods 2	
MANG 793	Special Topics (Research Methods II)	
MANG 793	Special Topics (Multivariate Analysis)	
Management Content Seminars (6 courses required)		**18**
MANG 720	Human Resource Management	
MANG 730	Leadership	

MANG 740	Org Behavior: Groups and Teams	
or MANG 770	Strategic Management Theory	
MANG 760	Organizational Theory	
MANG 780	Organizational Behavior: Individuals	
or MANG 785	Contemporary Strategic Mgmt	
MANG 793	Special Topics (Entrepreneurship)	
Open Elective (Doctoral seminars; approval of Management PhD Coordinator required)		
Research Hours		**36**
MANG 797	Research	
Qualifying Paper		
Comprehensive Exam		
Dissertation Proposal Defense		
Dissertation Defense		
Total Hours		72

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours	Summer	Hours
MANG 709		MANG 711	3	Work on Qualifying Paper	3
MANG 710		MANG 740 or 780	3		
MANG 770 or 785		MANG 760	3		
	9		9		0

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
MANG 785 or 770		MANG 740 or 780	3	Research	3
MANG 793 (Multivariate Analysis)		MANG 713 or 793	3		
MANG 730 or PSYC 512 (MANG 730, Org. Behavior; PSYC 512, Strategy)		MANG 720 or 793	3		
	9		9		0

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
MANG 797		MANG 797	9	Research	9
Comprehensive Exam		Dissertation defense proposal			
	9		9		0

Fourth Year

Fall	Hours	Spring	Hours
MANG 797		MANG 797	9
		Dissertation Defense	
	9		9

Total credit hours: 72

Ph.D. in Business Administration-Marketing

Degree Offered

- Doctor of Philosophy

Nature of the Program

The Ph.D. in Business Administration with a major in Marketing is a full-time, residential program that seeks to prepare students to contribute to the marketing discipline though the discovery, development, and dissemination of knowledge. The goal is to strive for continuous improvement in training world-class researchers and college professors who are able to conduct independent, original academic research and teach university-level courses in their major areas of study.

Academic Standards

The following criteria must be met for a student to remain in good standing:

1. Maintain a minimum 3.0 cumulative grade point average in all graduate courses taken at WVU.*
2. Earn grades of "A" or "B" in all graduate courses taken at WVU.*
3. Earn no more than two incomplete grades per semester, barring exceptional circumstances in which a deferment is officially granted by the Ph.D. Program Coordinator.
4. Resolve any incomplete grade in a timely manner.
5. Successfully complete any qualifying/summer papers and/or qualifying exams within the prescribed timeframe.
6. Successfully complete a comprehensive exam within four years of starting the program. Failure to pass the comprehensive exam after two attempts will result in dismissal from the program.
7. Successfully defend a dissertation proposal within five years of matriculation.
8. Successfully defend a dissertation within seven years of matriculation.
9. Attend scholarly presentations and interact as part of the community of scholars.
10. Perform Graduate Assistantship duties in a satisfactory manner (if applicable).
11. Observation of and adherence to the WVU *Campus Student Code* (https://studentconduct.wvu.edu/files/d/f0ae69b9-1461-45cb-81ee-40e48e2d978b/main-campus-revised-final-student-conduct-code-8-21-15c.pdf).
12. Observation of and adherence to WVU's Academic and Professional Standards (http://catalog.wvu.edu/graduate/enrollmentandregistration/#text).
13. Observance of and adherence to the professional standards of the student's home discipline, as defined by the recognized scholarly organization that governs the progression (as identified by the Program Ph.D. Committee)

*Where either of these conditions are not met, the student will be placed on probation and a remediation plan will be developed by the Ph.D. Program Coordinator. Where the conditions of the remediation plan are not met within the prescribed timeline, the student will be dismissed from the program.

Admissions

The following will be considered for admission into the program:

- A completed application received by December 1 is required to be considered for University fellowships. Completed applications received by February 1 of each year will be given full consideration for College fellowships and admission in the succeeding fall semester
- A master's degree or equivalent from an accredited university
- A statement of purpose regarding the Ph.D. program describing why the applicant is pursuing a Ph.D. in Business Administration and the applicant's career aspirations upon completion of the degree
- A current résumé
- Two letters of reference
- Official copies of all university transcripts with cumulative GPA scores of 3.0 or better on all undergraduate courses and 3.25 on graduate courses (based on U.S. standard of 4.0)
- An official Graduate Management Admissions Test (GMAT) score is preferred; however, in some cases a GRE (Graduate Record Examination) may be accepted. A high GMAT/GRE score is required for admission to the PhD Program in Business Administration.
- The John Chambers College of Business and Economics' TOEFL requirement for Ph.D. in Business Administration applicants is higher than the University's. Students whose first language is not English must obtain a score of at least 100 on the TOEFL-ibt (250 under the old computer-based exam or 600 under the paper-based exam) or a score of at least 7.0 on the IELTS test to be admitted to graduate study. Go to www.toefl.org or www.ielts.org to register and find out more about the test. This is a university requirement.
- Applicants who have received a high school diploma or a bachelor's degree from an accredited college or university in the United States, the United Kingdom, or other predominately English-speaking country usually are exempt from the TOEFL/IELTS requirement. However, applicants only having a master's degree from one of these countries must still provide acceptable TOEFL or IELTS scores.

The entrance requirements are minimum requirements for regular admission. Since there is limited space in each year's class, meeting these entrance requirements does not guarantee admission. Applicants will not be accepted on a provisional basis.

Minimum 3.0 GPA required.

Doctor of Philosophy

MAJOR REQUIREMENTS

Research Hours

Research		36
MKTG 797	Research	
Marketing Content Courses		
MKTG 710	Philosophy of Research	3
MKTG 711	Advanced Topics in Marketing 1	3
MKTG 720	Seminar in Buyer Behavior	3
MKTG 721	Advanced Topics in Marketing 2	3
MKTG 730	Advanced Marketing Research	3
MKTG 740	Seminar in Marketing Strategy and Policy	3
Methods and Statistics Courses		
MANG 713	Structural Equation Modeling	3
MANG 793	Special Topics	3
PSYC 612	Multivariate Analysis	3
or STAT 541	Applied Multivariate Analysis	
MANG 711	Research Methods	3
Minor Area Courses		**6**
Dissertation Proposal Defense		
Qualifying Exam		
Comprehensive Exam		
Dissertation Proposal Defense		
Dissertation Defense		
Total Hours		72

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
MKTG 710	3	MKTG 711	3
MANG 793	3	MKTG 720	3
Elective	3	PSYC 612	3
	9		9

Second Year

Fall	Hours	Spring	Hours
MKTG 721	3	MKTG 730	3
MANG 713	3	MKTG 740	3
Elective	3	MANG 711	3
	9		9

Third Year

Fall	Hours	Spring	Hours
MKTG 797	9	MKTG 797	9
		Dissertation Proposal Defense	
	9		9

Fourth Year

Fall	Hours	Spring	Hours
MKTG 797	9	MKTG 797	9
		Dissertation Defense	
	9		9

Total credit hours: 72

Business Cybersecurity Management, M.S.

Degree Offered

- Master of Science in Business Cybersecurity Management

Certificates Offered

- Business Cybersecurity Data Analytics
- Business Cybersecurity Foundations
- Business Cybersecurity Management

Nature of the Program

The M.S. in Business Cybersecurity Management Program is a 12-month or 24-month online program. Students attend an orientation residency and an experiential capstone presentation that corresponds with summer graduation. The online course delivery of this program allows students to work in teams with expert faculty conducting hands-on technical labs, learning complex technologies while working with a flexible schedule and location independence.

This Business Cybersecurity Data Analytics certificate orients both data and technology analysts to the demands and requirements of both securing and analyzing data. The Business Cybersecurity Foundations certificate focuses on the development of a new or overhaul of existing cybersecurity structures in firms of all sizes. The Business Cybersecurity Management certificate prepares students to manage and improve existing cybersecurity programs with an emphasis on the evaluation of risks and where cybersecurity management meets the law.

Although the master's and certificate programs requires the learning of challenging technical material, entry into the program does not assume or require depth in technology fields. The program is constructed in such a way as to allow students from all backgrounds to get up to speed quickly, while simultaneously challenging those with deep technical expertise.

Academic Standards

In addition to the University's academic and professional standards (http://catalog.wvu.edu/graduate/enrollmentandregistration/), students enrolled in a John Chambers College of Business and Economics master's degree program must also abide by the following standards:

- Students must have a minimum cumulative GPA of 3.0 to earn a degree from their graduate program, without exception.
  - A student who cannot mathematically meet the 3.0 GPA requirement to successfully complete the degree, within a reasonable period of time (as defined by the Program Coordinator or designee), will be dismissed from their academic program. Visit the Probation, Suspension, and Dismissal (http://catalog.wvu.edu/graduate/enrollmentandregistration/#probationsuspensiontext) section of the University's Graduate Catalog for more information about this topic.
- Students must follow the professional standards established by their degree program and/or department. A student who violates the established professional standards may be placed on probation, suspended, or dismissed from their program.
- A student whose cumulative GPA falls below 2.75 will automatically be placed on academic probation.
  - A student will be suspended from their program, for up to one year, if their GPA is not raised to 2.75 by the end of their subsequent semester of enrollment. The program will reevaluate the student after the term of suspension to determine whether they may return to the program or be dismissed.
- A student will be suspended from their program if they earn a letter grade below C- in more than one required course.
- A student who earns a letter grade of D or F in any required course must repeat the course and earn a minimum letter grade of C-.
  - Any grade earned in a repeated course at the graduate level is included in the calculation of a student's overall and major GPA, along with the original grade earned in the course. Additionally, the original grade earned in the course will remain on the student's academic transcript/ permanent record. Visit the Grades (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/advising_and_evaluation/#gradestext) section of the University Graduate Catalog for more information about this topic.

Any exceptions to the above standards must be approved in writing by the Assistant or Associate Dean **and** the Program Coordinator.

FACULTY

COORDINATOR

- Christopher Ramezan - Ph.D. (West Virginia University)
  Teaching Assistant Professor, Management Information Systems

PROFESSOR

- Virginia Kleist - Ph.D. (University of Pittsburgh)
  Professor, Management Information Systems

ASSISTANT PROFESSORS

- Mark Nigrini - Ph.D. (University of Cincinnati)
  Assistant Professor, Accounting

TEACHING ASSISTANT PROFESSORS

- Brian Powell - Ph.D. (West Virginia University)
  Teaching Assistant Professor, Computer Science

ADJUNCT PROFESSORS

- John Lympany - Ed.D. (Spalding University)
  Director of Information Technology, WVU John Chambers College of Business and Economics

Admissions

The M.S. in Business Cybersecurity Management program seeks individuals from diverse academic backgrounds who have an interest and aptitude to be successful in the cybersecurity domain. This program prepares students to become cybersecurity professionals, as well as sharpen the skills of those who currently work in the cybersecurity industry so that they can adapt to growing changes in security technology.

The Admissions Committee will take a holistic approach to the application review process and will consider the strength of the following admissions application requirements:

- GPA - To be competitive, an applicant would present a cumulative undergraduate GPA of 3.25
- Statement of Purpose
- Letter of Recommendation - Applicants must have one letter of recommendation from an individual who can provide information about their ability to work with others, discipline and ambition, leadership potential, etc.

The Admissions Committee reviews applications on a rolling basis, and students admitted to the program may begin in the fall or spring semester. Please visit this program's webpage (https://business.wvu.edu/academics/management-information-systems/business-cybersecurity-management/) to learn more about the specific application deadlines and other important information. Students may also contact the John Chambers College of Business and Economics Graduate Programs Office for assistance at (304) 293-5505 or BeGradPrograms@mail.wvu.edu.

All graduate programs in the John Chambers College of Business and Economics require that enrolled students maintain a minimum cumulative GPA of 3.0 in coursework applied toward their degree program, as outlined in the specific academic program of study. Students must also have a minimum cumulative GPA of 3.0 to earn a graduate degree from their respective program.

Degree Requirements

Each student who completes an MS in Business Cybersecurity Management will complete a 10 course online sequence in a one year time period. Students are required to attend an on-campus residency as an introduction to the program in August of their matriculation, and also are required to attend an on-campus residency to present their capstone project at the conclusion of their one year program.

Students must have a cumulative GPA of 3.0 to graduate from the program.

ACCT 582	Fraud Data Analysis	3
BUDA 510	Foundations of Business Intelligence	3
BUDA 520	Data Management	3
BUDA 550	Business Data Visualization	3
CYBR 525	Information Security Assurance Management	3
CYBR 530	Business Data Communications	3
CYBR 535	Business Network Security	3
CYBR 540	Information Ethics and Legal Procedures	3
CYBR 545	Business Cybercrime Management	3
CYBR 555	Business Cybersecurity Practicum	3
Total Hours		30

*   Students may select CPE 538 in place of the CYBR 535 in the Spring semester, on campus.

**   Students may select CS 539 in place of the CYBR 540 in the Spring semester, on campus

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours	Summer	Hours
BUDA 510		3 CYBR 535		3 ACCT 582	3
BUDA 520		3 CYBR 540		3 BUDA 550	3
CYBR 525		3 CYBR 545		3 CYBR 555	3
CYBR 530		3			
		12		9	9

Total credit hours: 30

Major Learning Outcomes

BUSINESS CYBERSECURITY MANAGEMENT

Upon completion of this program, students will:

- Students will be able to demonstrate managerial expertise in understanding and investigating complex cybersecurity ideas.
- Students will be able to evaluate the data security of businesses from a data and systems security perspective, and to recommend and initiate appropriate procedures, policies, and security controls to ensure improved data and systems security.
- Students will be able to use appropriate tools to mitigate cybersecurity threats by applying knowledge of topics such as risk management, disaster recovery, business continuity, digital forensics, and computer network defenses.
- Students will be able to communicate the analysis and findings of a comprehensive security audit initiative to enhance the protection and security of an organization.

Business Data Analytics, M.S.

Degree Offered

- Master of Science in Business Data Analytics

Certificates Offered

- Business Data Analysis
- Business Data Science
- Business Data Technology Management
- Business Operations Research

Nature of the Program

This program is designed to provide students with the ability to perform data analytics in order to enhance business decision making and increase organizational value. The Business Data Analytics degree provides students with a set of tools applicable in every business and industry, for this reason the program is attractive to both recent graduates in entry-level positions and experienced professionals. The certificate programs focus specifically on one slice of the Business Data Analytics and enable students to deeply focus over the course of one or two semesters. Both the M.S. and certificate programs are designed for working professionals with one- and two-year plans of study, and many find they are able to apply the concepts learned to their work before graduation.

The M.S. and certificates in Business Data Analytics are delivered online and may be completed from anywhere in the world. Two residencies are required in the M.S. program: an online residency at the beginning of the program orients students to the program structure, technologies, concepts, and expectations of the program and a live residency at the conclusion of the Capstone project. Capstone presentations are an opportunity to present findings of a Capstone project to the sponsoring company. Corporate Capstone participants represent a broad range of industries, including banking, government contracting, manufacturing, and healthcare.

M.S. Business Data Analytics graduates will understand emerging technology trends in the job market and be well-positioned, by way of their strong technology and analytical and quantitative skills, for career and lifelong success. Data analytics is a rapidly emerging segment in business and industry, and all indications are that it represents one of the fastest growing job markets and has a sustainable future. This program seeks to provide students with the knowledge, skills, and tools to successfully compete for a variety of positions in the emerging job market.

Academic Standards

In addition to the University's academic and professional standards (http://catalog.wvu.edu/graduate/enrollmentandregistration/), students enrolled in a John Chambers College of Business and Economics master's degree program must also abide by the following standards:

- Students must have a minimum cumulative GPA of 3.0 to earn a degree from their graduate program, without exception.
  - A student who cannot mathematically meet the 3.0 GPA requirement to successfully complete the degree, within a reasonable period of time (as defined by the Program Coordinator or designee), will be dismissed from their academic program. Visit the Probation, Suspension, and Dismissal (http://catalog.wvu.edu/graduate/enrollmentandregistration/#probationsuspensiontext) section of the University's Graduate Catalog for more information about this topic.
- Students must follow the professional standards established by their degree program and/or department. A student who violates the established professional standards may be placed on probation, suspended, or dismissed from their program.
- A student whose cumulative GPA falls below 2.75 will automatically be placed on academic probation.
  - A student will be suspended from their program, for up to one year, if their GPA is not raised to 2.75 by the end of their subsequent semester of enrollment. The program will reevaluate the student after the term of suspension to determine whether they may return to the program or be dismissed.
- A student will be suspended from their program if they earn a letter grade below C- in more than one required course.
- A student who earns a letter grade of D or F in any required course must repeat the course and earn a minimum letter grade of C-.
  - Any grade earned in a repeated course at the graduate level is included in the calculation of a student's overall and major GPA, along with the original grade earned in the course. Additionally, the original grade earned in the course will remain on the student's academic transcript/permanent record. Visit the Grades (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/advising_and_evaluation/#gradestext) section of the University Graduate Catalog for more information about this topic.

Any exceptions to the above standards must be approved in writing by the Assistant or Associate Dean **and** the Program Coordinator.

FACULTY
COORDINATOR

- Janet Fraser - Ph.D. (Pennsylvania State University)
  Teaching Assistant Professor, Business Data Analytics

ASSISTANT PROFESSORS

- Stephane Collignon - Ph.D. (Virginia Tech)
  Assistant Professor, Business Data Analytics
- Brad Price - Ph.D. (University of Minnesota)
  Assistant Professor, Business Data Analytics

PROFESSOR EMERITUS

- E James Harner - Ph.D. (Cornell University)

Admissions

The Admissions Committee is made up of faculty teaching in the M.S. in Business Data Analytics Program and representatives of the Graduate Programs Office. The committee members are looking for individuals who have an interest and demonstrated aptitude in quantitative and analytical domains. The committee takes a holistic approach to the admission process and will consider the following factors:

- Undergraduate Degree: students can have an undergraduate degree in any field, but the Admissions Committee looks for strong undergraduate records in quantitative, analytical, and/or programming coursework. Successful students come from many academic backgrounds.
- GMAT or GRE test scores (GMAT or GRE waiver can be requested if the applicant has 5 or more years of related work experience)
- Applicants must provide two letters of recommendation from individuals who can provide information about their academic promise, ability to work with others, professionalism, and potential to succeed in this program.
- Statement of purpose outlining your interest and unique qualifications for the program
- Work or additional experience in the following areas – business intelligence, business analytics, data mining, data warehousing, database management, computer science, programming, web development, web analytics, risk management and related fields – are considered favorably.

The Admissions Committee reviews applications on a rolling basis, and students admitted to the program may begin in the fall semester. Please visit this program's webpage (https://business.wvu.edu/academics/management-information-systems/business-data-analytics-certificates/) to learn more about the specific application deadlines and other important information. Students may also contact the John Chambers College of Business and Economics Graduate Programs Office for assistance at (304) 293-5505 or BeGradPrograms@mail.wvu.edu.

All graduate programs in the John Chambers College of Business and Economics require that enrolled students maintain a minimum cumulative GPA of 3.0 in coursework applied toward their degree program, as outlined in the specific academic program of study. Students must also have a minimum cumulative GPA of 3.0 to earn a graduate degree from their respective program.

Degree Requirements

The 30-hour online program is comprised of ten courses that collectively expose students to data uses to facilitate business operations and decision making. The introductory course (BUDA 510) helps students understand the role of data analytics in the context of business. The next set of courses (BUDA 515 and BUDA 520) covers the collection of data as well as the building, manipulation and management of large databases. This is followed by a set of courses (BUDA 525, BUDA 530, BUDA 535, BUDA 540, BUDA 545 and BUDA 550) that cover analytical tools that can be applied to the large databases, including statistical, data mining, visualization, and simulation modeling tools. Formal coursework concludes with a capstone course (BUDA 555) that requires students to take the knowledge and skills built in the previous nine courses and apply them to a real-world business problem. Throughout all ten courses, there will be an overarching emphasis on 1) the application of data analytics to a business context, and 2) the ethical issues surrounding the collection and use of data. The MS in BUDA program also has two residency requirements. The first residency will occur at the front-end of the program. Students will meet and interact with faculty and staff associated with the MS in BUDA program, as well as their fellow students. This will also provide an opportunity to cover the logistics of the program, build networking capacity in the program, and provide an on-campus experience to strengthen the students' connection to WVU. The second residency will occur at the end of the program. This residency will include presentations by student teams of their capstone project and a recognition/celebratory event surrounding completion of the program.

A minimum cumulative GPA of 3.0 is required

BUDA 510	Foundations of Business Intelligence	3
BUDA 515	Ethics and Data Collection	3
BUDA 520	Data Management	3
BUDA 525	Business Statistical Methods 1	3
BUDA 530	Business Statistical Methods 2	3
BUDA 535	Business Data Mining	3
BUDA 540	Decision Sciences and Analytics	3
BUDA 545	Business Simulation Modeling	3
BUDA 550	Business Data Visualization	3
BUDA 555	Business Analytics Practicum	3
Total Hours		30

*   Students whose cumulative GPA falls below 2.75 will be placed on academic probation. If the GPA is not brought up to 2.75 by the end of the following semester, the student will be suspended from the MS in Business Data Analytics program. Students who are suspended from the program will not be allowed to enroll in program courses for one year.

Suggested Plan of Study (1-year option)

Fall	Hours	Spring	Hours	Summer	Hours
BUDA 510	3	BUDA 530	3	BUDA 550	3
BUDA 515	3	BUDA 535	3	BUDA 555	3
BUDA 520	3	BUDA 540	3		
BUDA 525	3	BUDA 545	3		
	12		12		6

Total credit hours: 30

Suggested Plan of Study (2-year option)

First Year

Fall	Hours	Spring	Hours	Summer	Hours
BUDA 515	3	BUDA 530	3	BUDA 550	3
BUDA 525	3	BUDA 535	3		
	6		6		3

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
BUDA 510	3	BUDA 540	3	BUDA 555	3

BUDA 520		3 BUDA 545		3	
		6		6	3

Total credit hours: 30

Major Learning Outcomes

BUSINESS DATA ANALYTICS

The educational goals and objectives of the M.S. in Business Data Analytics are as follows:

- Students will be able to demonstrate expertise in statistical techniques, data mining, utilizing databases, and analytical tools.
- Students will be able to apply data analytics to enhance the decision-making of the firm in performance metrics and measurement, risk indicators, assessment and response, and compliance.
- Students will be able to use business analytics to synthesize data trends and competitive drivers.
- Students will be able to communicate the analysis and findings of an analytics initiative in moving an organization forward.

Economics, M.A., M.S., Ph.D.

Degrees Offered

- Master of Arts
- Master of Science
- Doctor of Philosophy

Nature of the Program

MASTER OF ARTS AND DOCTOR OF PHILOSOPHY

The master of arts and doctor of philosophy degrees in economics enable students to broaden and refine their knowledge of the concepts and methods of economic analysis. These programs are designed to prepare students for careers in higher education, government, and business. Student programs are planned with the assistance of a faculty advisor and approval of the director of graduate programs. Additional information about the graduate programs in economics and the regulations and requirements pertaining to them is available at https://business.wvu.edu/academics/economics-department/economics-ph-d (https://business.wvu.edu/academics/economics-department/economics-ph-d/). Students are bound by these regulations and requirements, as well as those of the College of Business and Economics.

MASTER OF SCIENCE

The M.S. in Economics program contains 30 credit hours of material and is designed to be completed in one year. Students will begin the program with a set of economic theory and data analysis courses, followed with a field course focusing on topical areas of value to economists working in the local, state, and national policy context.

Prerequisites

Applicants with a bachelor's degree may apply directly to the Ph.D. program. We do not directly admit students into the M.A. program. To be admitted as a regular Ph.D. student, applicants must have a grade point average of 3.0 or better for all undergraduate work completed. Applicants must also complete the general aptitude portion of the Graduate Record Examination (GRE) and receive a minimum combined score of 300 for the verbal and quantitative sections and a minimum score of 3.0 for the analytical writing section. International students must submit their scores on the Test of English as a Foreign Language (TOEFL) or, alternatively, the scores on the International English Language Testing System (IELTS). In addition, applicants must have completed at least one semester of each of the following courses: intermediate microeconomic theory, intermediate macro-economic theory, calculus, and statistics. Applicants not meeting these entrance requirements may be admitted on a provisional and/or deficiency basis, subject to certain performance conditions during their first semester in residence.

Assistantships

Virtually all full-time students newly accepted into the Ph.D. program are offered a graduate assistantship, which includes a cash stipend and tuition waiver. Graduate assistants engage in research and teaching activities under the supervision of a faculty member. Assistantships are evaluated and renewed each year for four years, so long as the student remains full-time, in good standing, and performs duties satisfactorily. A fifth year is also typically available to full-time students who are making satisfactory progress on their dissertations. The faculty of the Department of Economics also nominates outstanding applicants for university fellowships. Special scholarships are available on a competitive basis to minority students. For further information, see https://business.wvu.edu/academics/economics-department/economics-ph-d (https://business.wvu.edu/academics/economics-department/economics-ph-d/).

Academic Standards

To qualify for a graduate degree in economics, students must earn a cumulative grade point average (GPA) of 3.0 or better for all courses completed as a graduate student at WVU. A regular graduate student in economics whose cumulative GPA falls below 3.0 (B) upon completion of the first nine hours of graduate study is not in good-standing and will be placed on probation at the end of the semester in which the GPA fell below 3.0. Such a student, placed on probation, who fails to raise his or her cumulative GPA to 3.0 by the end of the semester succeeding that in which his or her GPA fell below 3.0 is subject to suspension from the program at the end of that probationary semester.

Other academic reasons for suspension from the program include failing grades on more than fifty percent of the coursework taken in any semester, a third failure on either a microeconomic theory or macroeconomic theory comprehensive examination, or failure to complete all degree requirements within the specified time limits.

MASTER OF SCIENCE

In addition to the University's academic and professional standards (http://catalog.wvu.edu/graduate/enrollmentandregistration/), students enrolled in a John Chambers College of Business and Economics master's degree program must also abide by the following standards:

- Students must have a minimum cumulative GPA of 3.0 to earn a degree from their graduate program, without exception.
    - A student who cannot mathematically meet the 3.0 GPA requirement to successfully complete the degree, within a reasonable period of time (as defined by the Program Coordinator or designee), will be dismissed from their academic program. Visit the Probation, Suspension, and Dismissal (http://catalog.wvu.edu/graduate/enrollmentandregistration/#probationsuspensiontext) section of the University's Graduate Catalog for more information about this topic.
- Students must follow the professional standards established by their degree program and/or department. A student who violates the established professional standards may be placed on probation, suspended, or dismissed from their program.
- A student whose cumulative GPA falls below 2.75 will automatically be placed on academic probation.
    - A student will be suspended from their program, for up to one year, if their GPA is not raised to 2.75 by the end of their subsequent semester of enrollment. The program will reevaluate the student after the term of suspension to determine whether they may return to the program or be dismissed.
- A student will be suspended from their program if they earn a letter grade below C- in more than one required course.
- A student who earns a letter grade of D or F in any required course must repeat the course and earn a minimum letter grade of C-.
    - Any grade earned in a repeated course at the graduate level is included in the calculation of a student's overall and major GPA, along with the original grade earned in the course. Additionally, the original grade earned in the course will remain on the student's academic transcript/permanent record. Visit the Grades (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/advising_and_evaluation/#gradestext) section of the University Graduate Catalog for more information about this topic.

Any exceptions to the above standards must be approved in writing by the Assistant or Associate Dean **and** the Program Coordinator.

FACULTY

CHAIR

- Joshua Hall - Ph.D. (West Virginia University)
  Public Economics, Public Choice, Urban and Regional Economics

PROFESSORS

- Roger Congleton - Ph.D. (Virginia Polytechnic Institute and State University)
  Public Economics, Public Choice, Constitutional Political Economy
- Joshua Hall - Ph.D. (West Virginia University)
  Public Economics, Public Choice, Urban and Regional Economics
- Brad Humphreys - Ph.D. (Johns Hopkins University)
  Urban and Regional Economics, Sports Economics
- Feng Yao - Ph,D. (Oregon State University)
  Theoretical Econometrics, Applied Econometrics

ASSOCIATE PROFESSORS

- Arabinda Basistha - Ph.D. (University of Washington)
  Empirical Macroeconomics, International Finance
- John Deskins - Ph.D. (University of Tennessee)
  Public Economics
- Bryan McCannon - Ph.D. (Pennsylvania State University)
  Public Economics, Public Choice, Law and Economics

- Shuichiro Nishioka - Ph.D. (University of Colorado at Boulder)
  International Trade, Economic Development
- Adam Nowak - Ph.D. (Arizona State University)
  Applied Econometrics, Urban and Regional Economics
- Jane Ruseski - Ph.D. (Johns Hopkins University)
  Health Economics, Sports Economics
- Scott Schuh - Ph.D. (Johns Hopkins University)
  Applied Macroeconomic Theory, Monetary Economics, Household Finance

ASSISTANT PROFESSORS

- Daniel Grossman - Ph.D. (Cornell University)
  Health Economics
- Alexander Lundberg - Ph.D. (Emory University)
  Law and Economics, Public Economics

TEACHING ASSISTANT PROFESSOR

- Cathleen Johnson - Ph.D. (Virginia Polytechnic Institute and State University)
  Experimental Economics, Economic Education

ADJUNCT PROFESSORS

- Victor Chow - Ph.D. (University of Alabama)
- Christiadi - Ph.D. (West Virginia University)
- Randall Jackson - Ph.D. (University of Illinois at Urbana-Champaign)
- David Martinelli - Ph.D. (University of Maryland)
- John Meszaros - Ph.D. (West Virginia University)
- Daniel Miller - M.S. (West Virginia University)
- Peter Schaeffer - Ph.D. (University of Southern California)
- Paul Speaker - Ph.D. (Purdue University)
- Meg Tuszynski - Ph.D. (George Mason University)

PROFESSORS EMERITI

- Robert Britt
- Brian Cushing
- Stratford Douglas
- Clifford Hawley
- Ming-Jeng Hwang
- Patrick Mann
- William Reece
- Tom Witt

Admissions

MASTER OF ARTS AND DOCTOR OF PHILOSPHY

The Department of Economics does not directly accept students into the Master of Arts degree. Students who have first been admitted into the Doctor of Philosophy in Economics program with the intention of earning a doctorate may apply for the Masters degree either as a "milepost" on their way to the Ph.D. or as a degree in lieu of the Ph.D. when leaving the program.

Applicants with a bachelor's degree may apply directly to the Ph.D. program. To be admitted as a regular Ph.D. student, applicants must have a grade-point average of 3.0 or better for all undergraduate work completed. Applicants must also complete the general aptitude portion of the Graduate Record Examination (GRE) and receive a minimum combined score of 300 in the new GRE scale for the verbal and quantitative sections and a minimum score of 3.0 for the analytical writing section. International students must submit their scores on the Test of English as a Foreign Language (TOEFL) or, alternatively, the scores on the International English Language Testing System (IELTS).

In addition, applicants are required to complete one semester of each of the following courses:

- Intermediate Microeconomic Theory
- Intermediate Macroeconomic Theory

- Calculus
- Statistics

Grades in these courses play an important role in admission and assistantship decisions.

The entrance requirements are minimum requirements for regular admission. Since there is limited space in each year's class, meeting these entrance requirements does not guarantee admission. Applicants not meeting all entrance requirements may be admitted on a provisional basis, subject to certain performance conditions during their first semester in residence.

Applicants are strongly encouraged to take additional math and statistics courses beyond the required minimum. Only rarely are students admitted without at least the first two courses of the standard calculus sequence. Courses in multivariate calculus, linear algebra, and mathematical economics are also particularly useful. We encourage applicants to take advanced undergraduate or masters level courses in economics.

MASTER OF SCIENCE

The MS in Economics Admissions Committee is made up of John Chambers College of Business and Economics faculty. The Committee reviews applications holistically and will admit students based on strength of their admissions application and potential to succeed in this program.

Applications will be reviewed on a rolling basis once all parts of the application are received, including transcripts, test scores, and letters of recommendation.

M.S. in Economics Admissions Requirements:

- Enter the WVU Application portal and create a username and password.
- Select "fall" semester as your desired start term.
- Upload an up-to-date resume and one-page personal statement.
- Request one letter of recommendation through the online portal.
- A GMAT waiver can be requested based on significant work experience (5 or more years of work experience), a terminal degree, or satisfactory undergraduate GPA.
- Pay $60 application fee.

Applicants should send their transcripts to WVU's Office of Admissions, One Waterfront Place, PO Box 6510, Morgantown, WV, 26506-6510 or electronically to graduateadmissions@mail.wvu.edu

Master of Arts

Overall 3.0 GPA required

ECON 701	Advanced Micro-Economic Theory 1	4
ECON 702	Advanced Macro-Economic Theory 1	3
ECON 711	Advanced Micro-Economic Theory 2	4
ECON 712	Advanced Macro-Economic Theory 2	3
ECON 721	Mathematical Economics	3
ECON 725	Econometrics 1	3
ECON 726	Econometrics 2	3
ECON 795	Independent Study	2
Electives		6
Research Paper		
Total Hours		31

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours	Summer	Hours
ECON 701		4 ECON 711		4 ECON 795	2
ECON 702		3 ECON 712		3	
ECON 721		3 ECON 725		3	
		Elective		3	
	10		13		2

Second Year

Fall	Hours
ECON 726	3
Elective	3
Research Paper	
	6

Total credit hours: 31

Masters of Science

A minimum cumulative GPA of 3.0 is required.

BUDA 520	Data Management	3
Research Design and Methodology		3
ECON 509	Research Design and Methodology *	
ECON 510	Microeconomic Theory	3
ECON 525	Econometric Theory and Practice	3
ECON 526	Causal Inference	3
ECON 541	Public Economics Theory and Practice	3
ECON 561	Regional Economics	3
ECON 565	Health Economics Theory and Practice	3
ECON 571	Labor and Education Economics	3
ECON 582	Economics Practicum	3
Total Hours		30

* MS in Economics students are required to take ECON 509 every semester during the program until they reach 3 credits.

Doctor of Philosophy

The Ph.D. degree is not awarded for the mere accumulation of course credits nor for the completion of the specified residence requirements. At least four years of full-time graduate work beyond the baccalaureate degree are usually required to complete the doctorate. A minimum of two consecutive semesters in actual residence as a full-time graduate student is required.

CURRICULUM REQUIREMENTS

Minimum 3.0 GPA required

Core Courses		
ECON 701	Advanced Micro-Economic Theory 1	4
ECON 702	Advanced Macro-Economic Theory 1	3
ECON 709	Research Design and Methodology	1
ECON 711	Advanced Micro-Economic Theory 2	4
ECON 712	Advanced Macro-Economic Theory 2	3
ECON 721	Mathematical Economics	3
ECON 725	Econometrics 1	3
ECON 726	Econometrics 2	3
ECON 727	Econometrics 3	3
Complete two required Area of Emphasis		12
700-level ECON electives (minimum grade of B- required)		6
Dissertation		
Total Hours		45

COMPREHENSIVE EXAMINATIONS

Students must pass written comprehensive examinations in microeconomic theory and macroeconomic theory. For detailed rules, see the Rules and Regulations (https://business.wvu.edu/graduate-degrees/phd-economics/current-student-resources/rules-and-regulations/) page on our website.

DISSERTATION INITIAL PROGRESS REPORT

By the end of the first semester of their third year in the Program each student must file a completed Dissertation Initial Progress Report, signed by the student's faculty dissertation advisor and the Economics Graduate Coordinator. The Dissertation Initial Progress Report must contain evidence that the student has performed substantial initial work on his or her dissertation research. Such evidence should include a title, an outline of the proposed dissertation, a review of relevant literature, a description of the sources, availability, and characteristics of any data the student plans to analyze in the dissertation, and a discussion of empirical and analytical methods the student plans to employ. It should also include drafts of completed chapters, if any, and any other materials deemed relevant by the student's faculty advisor. The faculty advisor's signature will signify that the advisor has reviewed the material and consulted with the student, and believes the student's dissertation research project is sufficiently detailed, concrete, and significant as to show promise of ultimate success. The Graduate Coordinator's signature will attest that the Dissertation Initial Progress Report is complete and satisfactory.

CANDIDACY AND DISSERTATION

When an applicant has passed the written comprehensive examinations and submits a Dissertation Initial Progress Report approved by the Economics Graduate Coordinator, the applicant will be formally promoted to candidacy for the Ph.D. degree. The candidate must submit a dissertation pursued under the supervision of a member of the graduate faculty in economics on some problem in the area of the candidate's major interest. The dissertation must present the results of the candidate's individual investigation and must embody a definite contribution to knowledge. It must be approved by a committee of the graduate faculty in economics. After approval of the candidate's dissertation and satisfactory completion of other graduate requirements, a final oral examination on the dissertation is required.

Each Ph.D. candidate is required to present a dissertation proposal to the graduate director after approval by at least three members of his or her dissertation committee including the chairperson. This proposal will include a statement of the problem (topic summary), a preliminary survey of the literature, a description of the research methodology, and other pertinent material. With the approval of the graduate director, the student is then required to present the proposal in a faculty-student seminar. Credit for dissertation research and writing is available under ECON 797, but only if the student has a dissertation chairperson and an approved topic.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ECON 701	4	ECON 711	4
ECON 702	3	ECON 712	3
ECON 721	3	ECON 725	3
	10		10

Second Year

Fall	Hours	Spring	Hours
ECON 726	3	ECON 727	3
AOE 1 Course 1[*]	3	AOE 1 Course 2[*]	3
AOE 2 Course 2[*]	3	AOE 2 Course 2[*]	3
	9		9

Third Year

Fall	Hours
ECON 709	1
Elective Course 1[**]	3
Elective Course 2	3
	7

Total credit hours: 45

[*]   Six semester hours (or the equivalent) must be taken in each of the student's two Areas of Emphasis. The Areas of Emphasis offered by the Department are international economics, monetary economics, public economics, regional and urban economics, and resource economics. Other fields, conducted in cooperation with other units on campus, may possibly be approved in unusual cases. Only one of the Areas of Emphasis may be in an outside area; selection must be approved by the graduate economics faculty.

[**]   Students must complete two additional three-hour 700-level elective courses in Economics in addition to their core courses, field courses, ECON 795, and ECON 797.

Health Economics Area of Emphasis Requirements

ECON 765	Health Economics 1	3
ECON 766	Health Economics 2	3
Total Hours		6

International Economics Area of Emphasis Requirements

Select 2 of the following		6
ECON 751	International Trade	
ECON 752	International Macro-Economics	
ECON 754	Comparative Economic Systems	
ECON 755	Development Economics	
Total Hours		6

Monetary Economics Area of Emphasis Requirements

ECON 731	Monetary Economics 1	3
ECON 732	Monetary Economics 2	3
Total Hours		6

Public Economics Area of Emphasis Requirements

Select 2 of the following		6
ECON 741	Public Economics 1	
ECON 742	Public Economics 2	
ECON 743	State and Local Public Economics	
Total Hours		6

Regional and Urban Economics Area of Emphasis Requirements

ECON 761	Advanced Regional Economics	3
ECON 762	Advanced Urban Economics	3
Total Hours		6

Resource Economics Area of Emphasis Requirements

ARE 703	Advanced Natural Resource Economic Theory	3
ARE 710	Advanced Environmental Economics	3
Total Hours		6

Major Learning Outcomes

MASTER OF ARTS IN ECONOMICS

The doctoral program in economics trains students to 1) conduct independent and original research in economics of publishable quality; 2) analyze questions of interest to economists and policymakers, employing tools and methods of theoretical and empirical economics in a manner that meets or exceeds the expectations of the economics profession for a doctorate in economics; and 3) effectively communicate both what economists in general know and the fruits of the student's own research.

- Students will demonstrate the ability to teach, at any undergraduate level or beyond, core courses in economics and courses in at least two areas of specialization within economics.

- Students will produce research papers that lead to refereed publications in economics journals.

- Students will demonstrate the ability to apply the methods and insights of economics in ways that are valued by society.

Major Learning Outcomes
MASTER OF SCIENCE IN ECONOMICS

Learning Goal 1: Students will be able to demonstrate economics expertise in the application of microeconomic theory to local, state, and federal policy.

Learning Goal 2: Students will be able to identify the impacts of economic activity and policy on multiple stakeholders through the application of economic theory and modern quantitative methods.

Learning Goal 3: Students will be able to collect data and analyze it using modern data analysis tools and econometric methods.

Learning Goal 4: Students will be able to analyze and summarize the scholarly literature to identify areas of agreement and disagreement.

Learning Goal 5:Students will be able to communicate complex economic analysis to diverse audiences orally and in writing.

Major Learning Outcomes
DOCTOR OF PHILOSOPHY IN ECONOMICS

The doctoral program in economics trains students to 1) conduct independent and original research in economics of publishable quality; 2) analyze questions of interest to economists and policymakers, employing tools and methods of theoretical and empirical economics in a manner that meets or exceeds the expectations of the economics profession for a doctorate in economics; and 3) effectively communicate both what economists in general know and the fruits of the student's own research.

- Students will demonstrate the ability to teach, at any undergraduate level or beyond, core courses in economics and courses in at least two areas of specialization within economics.

- Students will produce research papers that lead to refereed publications in economics journals.

- Students will demonstrate the ability to apply the methods and insights of economics in ways that are valued by society.

Finance, M.S.

Degree Offered

- Master of Science in Finance

Nature of the Program

The West Virginia University is a CFA® Institute Partner School through the M.S. Finance program. Program graduates are prepared to sit for examination for the Chartered Financial Analyst designation and graduates boast a high pass rate on all three testing levels.

The M.S. Finance program is ideal for potential candidates with undergraduate degrees in Accounting, Finance, Engineering, Mathematics, Physics, Geology, or Economics, or those with industry experience and the drive to be successful. M.S. Finance graduates, especially those earning the Chartered Financial Analyst credential, enjoy careers with leadership positions across the gamut of financial positions. This includes investment banking positions, portfolio management, financial analyst, fund management, and corporate finance positions, among others.

Academic Standards

In addition to the University's academic and professional standards (http://catalog.wvu.edu/graduate/enrollmentandregistration/), students enrolled in a John Chambers College of Business and Economics master's degree program must also abide by the following standards:

- Students must have a minimum cumulative GPA of 3.0 to earn a degree from their graduate program, without exception.
    - A student who cannot mathematically meet the 3.0 GPA requirement to successfully complete the degree, within a reasonable period of time (as defined by the Program Coordinator or designee), will be dismissed from their academic program. Visit the Probation, Suspension, and Dismissal (http://catalog.wvu.edu/graduate/enrollmentandregistration/#probationsuspensiontext) section of the University's Graduate Catalog for more information about this topic.
- Students must follow the professional standards established by their degree program and/or department. A student who violates the established professional standards may be placed on probation, suspended, or dismissed from their program.
- A student whose cumulative GPA falls below 2.75 will automatically be placed on academic probation.
    - A student will be suspended from their program, for up to one year, if their GPA is not raised to 2.75 by the end of their subsequent semester of enrollment. The program will reevaluate the student after the term of suspension to determine whether they may return to the program or be dismissed.
- A student will be suspended from their program if they earn a letter grade below C- in more than one required course.
- A student who earns a letter grade of D or F in any required course must repeat the course and earn a minimum letter grade of C-.

- Any grade earned in a repeated course at the graduate level is included in the calculation of a student's overall and major GPA, along with the original grade earned in the course. Additionally, the original grade earned in the course will remain on the student's academic transcript/permanent record. Visit the Grades (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/advising_and_evaluation/#gradestext) section of the University Graduate Catalog for more information about this topic.

Any exceptions to the above standards must be approved in writing by the Assistant or Associate Dean **and** the Program Coordinator.

FACULTY

CHAIR

- Naomi Boyd - Ph.D.
  (The George Washington University)

PROFESSORS

- K. Victor Chow - Ph.D. (University of Alabama), C.F.A.
  Portfolio Management, Investments
- Paul Speaker - Ph.D. (Purdue University)

ASSOCIATE PROFESSORS

- Ashok Abbott - Ph.D. (Virginia Polytechnic Institute and State University)
  Financial Institutions, Corporate Finance, Mergers and Acquisitions
- Naomi Boyd - Ph.D. (The George Washington University)
  Financial Market Microstructure, Behavioral Finance
- Ann Marie Hibbert - Ph.D. (Florida International University)
  International Finance, Asset Pricing, Behavioral Finance
- Alex Kurov - Ph.D. (State University of New York, Binghamton), C.F.A.
  Financial Market Microstructure, Futures Markets
- Terry L. Rose - Ph.D. (University of Illinois)
  Insurance, Risk Management

ASSISTANT PROFESSORS

- Bingxin Li - Ph.D. (University of Houston)
  Energy finance, Investments, Risk management
- Gulnara Zynutdinova - Ph.D. (Washington State University)
  Mutual Funds and Investor Behavior

TEACHING ASSISTANT PROFESSOR

- Frank DeGeorge, C.P.A. - M.S.A. (Duquesne University)
  Financial Statement Analysis

Admissions

To gain admission to the M.S. in Finance program, an applicant must have a bachelor's degree from an accredited institution. Admissions decisions are based on an assessment of expected success in the program shown by the application materials and according to space available. The Admissions Committee considers grade point average in all previous college-level work and also the grade point average in the last sixty hours of coursework. Admissions decisions will be based on strength of the following application requirements:

- Academic transcript(s)
- GMAT test scores
- Applicants must provide two letters of recommendation from individuals who can provide information about the applicant's academic promise, ability to work with others, professionalism, and potential to succeed in this program.
- Statement of purpose
- Resume or CV

Note: The following prerequisite courses may be taken at other institutions but must be successfully completed prior to entering the M.S. in Finance program:

- Principles of Economics – six hours
- Principles of Accounting – six hours

- Investments
- Business Finance
- Statistics
- Calculus

The Admissions Committee reviews applications on a rolling basis, and students admitted to the program may begin in the fall or spring semester. Please visit this program's webpage (https://business.wvu.edu/academics/finance-department/ms-finance/) to learn more about the specific application deadlines and other important information. Students may also contact the John Chambers College of Business and Economics Graduate Programs Office for assistance at (304) 293-5505 or BeGradPrograms@mail.wvu.edu.

Students are required to maintain a minimum cumulative GPA of 3.0 in coursework applied toward their degree program, as outlined in the academic program of study. Students must also have a minimum cumulative GPA of 3.0 to earn a graduate degree from this program.

M.S. Finance Requirements

A cumulative GPA of at least 3.0 is required in all course work towards the degree.

Core Coursework		
FIN 511	Financial Economics	3
FIN 520	Quantitative Finance	3
FIN 521	Financial Reporting and Analysis	3
FIN 523	Equity Investment	3
FIN 525	Derivative Securities	3
FIN 526	Portfolio Management	3
Additional Coursework *		
FIN 527	Alternative Investments	3
or FIN 533	Energy Financial Risk Management	
FIN 528	Integrated Financial Analysis	3
or FIN 532	Energy Financial Accounting	
FIN 593	Special Topics (CFA CBOK Ethics Online Course)	2
FIN 593	Special Topics (Macro Economics)	2
FIN 593	Special Topics (FinTech)	3
Total Hours		31

*   Students enrolled in the Energy AOE are required to complete a specific subset of these courses. Please see Energy AOE requirements.

M.S. Finance Suggested Plan of Study

First Semester	Hours
FIN 511	3
FIN 520	3
FIN 521	3
FIN 527 or 533	3
FIN 593 (Macro Economics)	2
FIN 593 (CFA CBOK Ethics Online Course)	2
	16
Second Semester	**Hours**
FIN 523	3
FIN 525	3
FIN 526	3
FIN 528 or 532	3
FIN 593 (FinTech)	3
	15

Total credit hours: 31

Major Learning Outcomes

FINANCE

Goal 1: Students will demonstrate understanding of the ethical and professional standards in the securities industry.

Goal 2: Students will demonstrate understanding of how microeconomic and macroeconomic factors influence the values of financial assets.

Goal 3: Three: Students will apply appropriate quantitative investment analysis tools.

Goal 4: Students will interpret and analyze external financial information from the viewpoint of investors and creditors.

Goal 5: Students will master the fundamental economic techniques for valuing financial assets.

Goal 6: Students will construct, evaluate, and manage diversified portfolios and effectively communicate the process.

Forensic and Fraud Examination, M.S.

Degree Offered

- Master of Science in Forensic and Fraud Examination

Certificate Offered

- Forensic Accounting and Fraud Examination

Nature of the Program

The 30 credit-hour online program is comprised of a core curriculum of forensic and fraud examination classes centered on data analytics for success in this career path. Students complete an intensive 12-month program with online classes and two required residencies. The core curriculum is paired with a focused selection of online MBA courses to create a well-balanced approach to the field. Courses build throughout the program to incorporate previously acquired skills and allow students to immediately put those skills to use through hands-on experiential learning. During the first residency, students will evaluate a simulated crime scene to collect electronic and paper financial evidence and make a pitch to a prosecutor as to whether or not an indictment should be pursued. In the second residency, students will concentrate on the detection of deception during an interview and testify as expert witnesses in moot court. Content incorporates auditing, information technology, financial, and managerial accounting, etc. particularly as these topics interface with forensic and fraud examination material.

Academic Standards

In addition to the University's academic and professional standards (http://catalog.wvu.edu/graduate/enrollmentandregistration/), students enrolled in a John Chambers College of Business and Economics master's degree program must also abide by the following standards:

- Students must have a minimum cumulative GPA of 3.0 to earn a degree from their graduate program, without exception.
  - A student who cannot mathematically meet the 3.0 GPA requirement to successfully complete the degree, within a reasonable period of time (as defined by the Program Coordinator or designee), will be dismissed from their academic program. Visit the Probation, Suspension, and Dismissal (http://catalog.wvu.edu/graduate/enrollmentandregistration/#probationsuspensiontext) section of the University's Graduate Catalog for more information about this topic.
- Students must follow the professional standards established by their degree program and/or department. A student who violates the established professional standards may be placed on probation, suspended, or dismissed from their program.
- A student whose cumulative GPA falls below 2.75 will automatically be placed on academic probation.
  - A student will be suspended from their program, for up to one year, if their GPA is not raised to 2.75 by the end of their subsequent semester of enrollment. The program will reevaluate the student after the term of suspension to determine whether they may return to the program or be dismissed.
- A student will be suspended from their program if they earn a letter grade below C- in more than one required course.
- A student who earns a letter grade of D or F in any required course must repeat the course and earn a minimum letter grade of C-.
  - Any grade earned in a repeated course at the graduate level is included in the calculation of a student's overall and major GPA, along with the original grade earned in the course. Additionally, the original grade earned in the course will remain on the student's academic transcript/permanent record. Visit the Grades (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/advising_and_evaluation/#gradestext) section of the University Graduate Catalog for more information about this topic.

Any exceptions to the above standards must be approved in writing by the Assistant or Associate Dean **and** the Program Coordinator.

Admissions

To gain admission to the M.S. in FFE or FAFE Certificate programs, an applicant must have a bachelor's degree from an accredited institution. Admissions decisions are based on an assessment of expected success in the program shown by the application materials and according to space available. Each applicant must submit the following as part of their application:

- Academic transcript(s) of all prior academic work
  - A minimum GPA of 2.9 is required for admission to this program
- Statement of purpose - A short essay in which an applicant reflects on the expected contribution of the MS in FFE degree (or FAFE Certificate) to the applicant's future and the special characteristics that the applicant brings to the program. We are interested in value-added experiences, both from the program to the student and from the individual student to the program.
- Current resume - Applicants round out their profile with other evidence provided in their resume. The resume should include enough information for the admissions committee to trace the applicant's entire professional work history and should indicate any relevant affiliations.

The Admissions Committee reviews applications on a rolling basis, and students admitted to the program may begin in the fall, spring, or summer semester. Please visit the MS in FFE program's webpage (https://business.wvu.edu/academics/accounting-department/forensic-and-fraud-examination/) to learn more about the specific application deadlines and other important information. Students may also contact the John Chambers College of Business and Economics Graduate Programs Office for assistance at (304) 293-5505 or BeGradPrograms@mail.wvu.edu.

Prerequisite Courses

- ACCT 201 Principles of Accounting
- ACCT 311 Intermediate Accounting
- ACCT 322 Accounting Systems
- ACCT 451 Auditing Theory

The prerequisites may be taken at any accredited institution of higher education including online courses. Two years of related professional experience may be substituted for the prerequisite courses. The Admissions Committee will assess prior experience.

International Students

International students who are required to take the TOEFL (Test of English as a Foreign Language) examination should note that the Department of Accounting requires a minimum of 250 (computer scoring) or 600 (paper scoring).

Students are required to maintain a minimum cumulative GPA of 3.0 in coursework applied toward their degree program, as outlined in the academic program of study. Students must also have a minimum cumulative GPA of 3.0 to earn a graduate degree from this program.

Forensic and Fraud Examination Master of Science Requirements

Overall 3.0 GPA required.

Minimum grade of C required in all courses applied toward the degree.		
ACCT 580	Accounting for Forensic and Fraud Investigators	3
ACCT 581	Fraud Investigation	3
ACCT 582	Fraud Data Analysis	3
BADM 621	Business Research	3
BADM 641	Decision Analysis for Executives	3
BADM 622	Financial Statements Analysis	3
ACCT 585	Forensic and Fraud Examination Advanced Analytical Techniques	3
BADM 644	Legal Environment and Ethics	3
ACCT 583	Fraud: Criminology/Legal Issues	3
ACCT 584	Advanced Fraud Investigation	3
Total Hours		30

SUGGESTED PLAN OF STUDY

First Semester	Hours
ACCT 580	3
ACCT 581	3
ACCT 582	3
	9

Second Semester	Hours
BADM 621	3
BADM 641	3
BADM 622	3
ACCT 585	3
	12
Third Semester	**Hours**
ACCT 583	3
ACCT 584	3
BADM 644	3
	9

Total credit hours: 30

Major Learning Outcomes

FORENSIC AND FRAUD EXAMINATION

After completing the program, graduates will be able to:

- Discuss the impact of legal, societal, and ethical considerations on business decision-making and strategic planning in forensic and fraud examination, and how civil litigation and fraud interact with and impact the global economy.
- Explain how money laundering schemes and policies influence organizations around the world from a microeconomic perspective, and how these issues affect economic profitability and success.
- Evaluate financial reports focusing on fraudulent financial statements and the associated nuances regarding fraud examination.
- Evaluate evidentiary material associated with asset misappropriation (i.e., theft of assets) and complete fraud examinations that meet judicial standards of investigation
- Complete examination of facts and circumstances associated with fraud acts and other financial violations of the law with the goal of remediating those issues based on investigative outcomes.
- Discuss and apply the various investigative tools in forensic and fraud examination across different industries.
- Develop an analytical skill set including the utilization of electronic techniques and data mining software used to assist forensic professionals and fraud examiners in developing litigation.
- Develop anti-fraud knowledge, skills, and abilities that address the issues of prevention, deterrence, and detections of financial shenanigans.

Healthcare Business Administration, M.B.A.

Degree Offered

- Master of Business Administration

Nature of the Program

The program includes 33 credit hours of core courses that represent graduate-level course work in all the functional areas of business delivered with a healthcare lens where students will take deep dives in cases, assignments and real word applications of the business of healthcare. The program is taught by expert faculty who understand the intersection of business and healthcare and executive professionals who are industry leaders. The remaining six credit hours are made up an elective and an application course. The program offers electives in the areas of business intelligence, business cybersecurity, and strategic communication. Additionally, students will have the opportunity to apply the knowledge they've acquired through the program in either an applied executive project or an innovation course. The online courses are delivered in 8-week segments that are primarily asynchronous but will offer students the opportunity to work in talented teams and participate in virtual synchronous experiential learning.

Academic Standards

In addition to the University's academic and professional standards (http://catalog.wvu.edu/graduate/enrollmentandregistration/), students enrolled in a John Chambers College of Business and Economics master's degree program must also abide by the following standards:

- Students must have a minimum cumulative GPA of 3.0 to earn a degree from their graduate program, without exception.
  - A student who cannot mathematically meet the 3.0 GPA requirement to successfully complete the degree, within a reasonable period of time (as defined by the Program Coordinator or designee), will be dismissed from their academic program. Visit the Probation, Suspension, and Dismissal (http://catalog.wvu.edu/graduate/enrollmentandregistration/#probationsuspensiontext) section of the University's Graduate Catalog for more information about this topic.

- Students must follow the professional standards established by their degree program and/or department. A student who violates the established professional standards may be placed on probation, suspended, or dismissed from their program.
- A student whose cumulative GPA falls below 2.75 will automatically be placed on academic probation.
  - A student will be suspended from their program, for up to one year, if their GPA is not raised to 2.75 by the end of their subsequent semester of enrollment. The program will reevaluate the student after the term of suspension to determine whether they may return to the program or be dismissed.
- A student will be suspended from their program if they earn a letter grade below C- in more than one required course.
- A student who earns a letter grade of D or F in any required course must repeat the course and earn a minimum letter grade of C-.
  - Any grade earned in a repeated course at the graduate level is included in the calculation of a student's overall and major GPA, along with the original grade earned in the course. Additionally, the original grade earned in the course will remain on the student's academic transcript/permanent record. Visit the Grades (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/advising_and_evaluation/#gradestext) section of the University Graduate Catalog for more information about this topic.

Any exceptions to the above standards must be approved in writing by the Assistant or Associate Dean **and** the Program Coordinator.

Admissions

The HMBA Admissions Committee is made up of John Chambers College of Business and Economics faculty. The Committee reviews applications holistically and will admit students based on strength of their admissions application and potential to succeed in this program.

Applications will be reviewed on a rolling basis once all parts of the application are received, including transcripts, test scores, and letters of recommendation.

HMBA Admissions Requirements:

- Enter the WVU Application portal and create a username and password.
- Select "fall" semester as your desired start term.
- Upload an up-to-date resume and one-page personal statement.
- Request one letter of recommendation through the online portal.
- A GMAT waiver can be requested based on significant work experience (5 or more years of work experience), a terminal degree, or satisfactory undergraduate GPA.
- Pay $60 application fee.

Applicants should send their transcripts to WVU's Office of Admissions, One Waterfront Place, PO Box 6510, Morgantown, WV, 26506-6510 or electronically to graduateadmissions@mail.wvu.edu.

Degree Requirements

A minimum cumulative GPA of 3.0 is required.

Required Coursework		
BADM 611	Management Information Systems	2
BADM 612	Managerial and Team Skills	2
BADM 614	Health Services Management	3
BADM 621	Business Research	3
BADM 622	Financial Statements Analysis	3
BADM 626	Health Economics	4
BADM 634	Health Services Marketing	2
BADM 638	Operation and Supply Chain Management	3
BADM 646	Management Science and Health Services	3
BADM 656	Law and Medicine	2
BADM 693	Healthcare Leadership and Cultural Competency	3
BADM 693	Healthcare Financial Management	3
Elective		**3**
Select one of the following:		
BUDA 510	Foundations of Business Intelligence	
BADM 658	Communication & Public Relations for Executives	
CYBR 535	Business Network Security	
Application		**3**
Select one of the following:		

| BADM 693 | Executive Project for Healthcare Administration |
| BADM 693 | Innovation and Commercialization |

| Total Hours | 39 |

Major Learning Goals

HEALTHCARE BUSINESS ADMINISTRATION

Leaning Goal 1: Students will be able to integrate both managerial and financial expertise across the various business functional areas while applying a healthcare lens.

Learning Goal 2: Students will be able to identify problems, collect appropriate data and analyze the data to make informed healthcare management decisions.

Learning Goal 3: Students will be able to effectively communicate and articulate a succinct business analysis in a healthcare environment.

Learning Goal 4: Students will be able to make healthcare management, personnel and patient-based decisions in an inclusive, ethically sensitive and socially responsible manner.

Learning Goal 5: Students will be an effective healthcare leader who influences people toward the attainment of organizational goals and benefits all stakeholders.

Human Resource Management, M.S.

Degree Offered

- Master of Science in Human Resource Management

Nature of the Program

The Department of Management offers the Master of Science in Human Resource Management (MSHRM). This AACSB-accredited program of study prepares students for professional positions in human resource management and labor relations. The curriculum is aligned with the standards set forth by the Society for Human Resource Management (http://www.shrm.org).

Professional opportunities for MSHRM graduates include such positions as human resource business partner, human resource manager, labor relations specialist, training coordinator, talent acquisition specialist, compensation analyst, and benefits administrator. Many graduates find employment with Fortune 500 companies. Other positions include opportunities in government such as National Labor Relations Board Field Examiner, positions with the Federal Mediation and Conciliation Service, state and local Human Rights Commission representatives, and Department of Labor compliance officers. Some find positions with organized labor, all levels of government, and advocacy organizations. The Management Department, in conjunction with the John Chambers College of Business and Economics Center for Career Development, makes a concerted effort to place graduates in positions that fulfill students' career objectives.

The MSHRM program is a full-time program of instruction designed to be completed in three semesters. Accepted students will begin in the fall semester, with a planned graduation after completing program requirements at the end of the following fall semester (fall, spring, fall). The program requires students to complete an applied, non-credit internship experience (or equivalent) designed to occur during the summer between the second and third semesters.

Experiential learning opportunities are embedded into many courses in the curriculum, enabling students to work on meaningful, applied projects while learning core content. Additionally, all students complete an applied internship experience. Many organizations return to WVU each year seeking MSHRM students as summer interns, and many of those lead to full time employment offers upon degree completion. Other co-curricular learning opportunities include the General Electric Interview Competition (GEIC), PepsiCo Case Study Competition, WVU Talent & Culture Fellowship opportunity, collective bargaining simulations, site visits with HR professionals, and the opportunity to develop international HR skills while traveling abroad.

Another program highlight is the Practicum series. Through a series of required practicum courses, students engage in a variety of professional development activities including resume building, mock interviews, and engaging in formal and informal networking opportunities. The Practicum series brings HR practitioners to the classroom to share knowledge, insights, and best practices with students on a variety of topics. These topics complement their in-class studies by presenting diverse perspectives that cut across the academic/practitioner landscape.

One-Year Option

Incoming students who already possess a master's degree in a complementary discipline may be eligible for the condensed, one-year version of the MSHRM program. Completed applications will undergo a transcript review to ensure equivalency of prior coursework and will be admitted to the one-

year program upon approval of the Program Coordinator. One-year students will be required to complete an applied, non-credit internship experience (or equivalent) prior to graduation.

Tuition Loyalty Program

Students completing an undergraduate degree at any West Virginia college or university, are eligible for current, in-state (resident) tuition rates while enrolled in the MSHRM program.

Student Organizations

Students are encouraged to participate in academic-related extracurricular activities. Many are co-sponsored by the Human Resource Management Student Association including: the IRSA Newsletter, the mentorship program, company site visits, guest speakers, community service efforts, social events, and honors banquets. Outstanding academic achievement is recognized by membership in the Human Resource Management Honor Society. The faculty makes Outstanding IR Student awards annually to persons selected on the basis of scholarship, leadership, and extracurricular activities. A student SHRM chapter is operational within the John Chambers College of Business and Economics and is an additional student-centered organization that emphasizes the career specialties of the MSHRM degree.

Academic Standards

In addition to the University's academic and professional standards (http://catalog.wvu.edu/graduate/enrollmentandregistration/), students enrolled in a John Chambers College of Business and Economics master's degree program must also abide by the following standards:

- Students must have a minimum cumulative GPA of 3.0 to earn a degree from their graduate program, without exception.
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- Students must follow the professional standards established by their degree program and/or department. A student who violates the established professional standards may be placed on probation, suspended, or dismissed from their program.
- A student whose cumulative GPA falls below 2.75 will automatically be placed on academic probation.
  - A student will be suspended from their program, for up to one year, if their GPA is not raised to 2.75 by the end of their subsequent semester of enrollment. The program will reevaluate the student after the term of suspension to determine whether they may return to the program or be dismissed.
- A student will be suspended from their program if they earn a letter grade below C- in more than one required course.
- A student who earns a letter grade of D or F in any required course must repeat the course and earn a minimum letter grade of C-.
  - Any grade earned in a repeated course at the graduate level is included in the calculation of a student's overall and major GPA, along with the original grade earned in the course. Additionally, the original grade earned in the course will remain on the student's academic transcript/permanent record. Visit the Grades (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/advising_and_evaluation/#gradestext) section of the University Graduate Catalog for more information about this topic.

Any exceptions to the above standards must be approved in writing by the Assistant or Associate Dean **and** the Program Coordinator.

ADMINISTRATION

PROGRAM COORDINATOR

- Thomas A. Zeni - Ph.D. (University of Oklahoma)

CHAIR, DEPARTMENT OF MANAGEMENT

- Abhishek Srivastava - Ph.D. (University of Maryland)

FACULTY

PROFESSOR

- Edward Tomlinson - Ph.D. (Ohio State University)
  Compensation Issues

ASSOCIATE PROFESSOR

- Jeffery Houghton - Ph.D. (Virginia Polytechnic Institute & State University)
  Workgroup Dynamics & Leadership

TEACHING ASSOCIATE PROFESSOR

- Thomas A. Zeni - Ph.D. (University of Oklahoma)
  Talent Acquisition; Organizational Change

ASSISTANT PROFESSORS

- Jamie Field - Ph.D. (Virginia Commonwealth University)
  HR Data Analytics
- Kayla Folmer - Ph.D. (Pennsylvania State University)
  Performance Management
- Lily Morse - Ph.D. (Carnegie Mellon University)
  Conflict Management Processes

TEACHING ASSISTANT PROFESSOR

- Kelly Nix - Ph.D. (West Virginia University)
  Strategic Management for HR

LECTURERS

- Cris DeBord - MSIR
  Business & HR Integration
- Emily Dennis - Ph.D. (Robert Morris University)
  Training & Development
- Tina Parton - MSIR
  Benefits Management
- Jon Reed - J.D.
  Employment Law

EMERITI

- Neil Bucklew - Ph.D.
- Randyl Elkins - Ph.D.

Admissions

The MSHRM degree is interdisciplinary in nature and no specific undergraduate major is required. Coursework in computer science, labor economics, statistics, and business disciplines is helpful. To gain admission into the MSHRM program, an applicant must have a bachelor's degree from an accredited institution. Overall grade point average is considered with additional attention given to the grade point average achieved in the last sixty hours of coursework, and/or major-specific coursework. Additionally, several other criteria are evaluated as requested in the Application Requirements below. Only completed applications will be considered.

Admission to the MSHRM is determined by the Program Coordinator at the recommendation of the MSHRM Admissions Committee. This is a multiple-hurdle process where completed applications are reviewed by the MSHRM Admissions Committee, and those selected to move forward in the process are then interviewed either face-to-face or via telephone/video-conference. The MSHRM Admissions Committee then makes an admittance recommendation to the Program Coordinator. Completed applications are reviewed on a rolling basis beginning in January for the following Fall semester. The priority deadline for MSHRM applications is March 15, although applications may continue to be reviewed and accepted later based on available space in the cohort. Admission to the program is highly competitive and total enrollment is limited to approximately 35 students per year.

Application Requirements

A completed, electronic application will consist of:

- Official copy of the applicant's undergraduate transcript
- Up-to-date resume including all prior professional experiences and affiliations
- 2 letters of recommendation from individuals that can directly speak to the applicant's fit and ability to complete the MSHRM program, and their desire to be an HR professional. Letters of recommendation are to be submitted via the online application portal only.
- Statement of Purpose (not to exceed one page): The statement of purpose should describe your interest in the MSHRM program at WVU, your interest in an HR career and career aspirations, how you believe the MSHRM program will help you meet those aspirations, and any other relevant information you would like to share with the MSHRM Admissions Committee and Program Coordinator that will help us to better understand your candidacy.
- Official GRE/GMAT scores: Applicants are required to complete either the GRE or GMAT standardized test (GRE is preferred). Scores should be sent directly to the school. Program codes may be found on the program website (http://www.be.wvu.edu/msir (http://www.be.wvu.edu/msir/)).

Applicants whose cumulative undergraduate GPA is a 3.5 or higher (based on a 4.0 scale) are not required to take the GRE/GMAT and may exclude this portion of the application process.

- International Students (only) are required to submit TOEFL or IELTS scores. The John Chambers College of Business and Economics TOEFL requirement is higher than the University's - applicants must have a TOEFL score of either 580 (paper prior to July 27) or 68 (paper after July 27), 237 (computer), or 92 (Internet-based). If you have taken the IELTS instead of the TOEFL, the minimum score must be 6.5. English language exam scores should be sent to the Office of Graduate Admissions and Recruitment, West Virginia University, PO Box 6009, Morgantown, WV 26506-6009.

Prerequisites

All students from a non-business undergraduate major will be admitted conditionally based on successful completion of a series of prerequisite coursework. Students will be informed of exactly which prerequisite courses they will need to complete after a review of their completed undergraduate transcript by the Program Coordinator and their Graduate Advisor. Incoming students are expected to complete their prerequisite coursework prior to beginning classes in the MSHRM Program. Upon their request, students may be granted an extension until the beginning of their second semester with approval of the Program Coordinator.

Application Deadline

Please visit the MSHRM program's webpage (https://business.wvu.edu/academics/management-department/ms-industrial-relations/) for specific application deadlines and other important information. Students may also contact the John Chambers College of Business and Economics Graduate Programs Office for assistance at (304) 293-5505 or BeGradPrograms@mail.wvu.edu.

All graduate programs in the John Chambers College of Business and Economics require that enrolled students maintain a minimum cumulative GPA of 3.0 in coursework applied toward their degree program, as outlined in the specific academic program of study. Students must also have a minimum cumulative GPA of 3.0 to earn a graduate degree from their respective program.

Human Resource Management Master of Science Degree Program Requirements

REGULAR STANDING CURRICULUM REQUIREMENTS

A minimum GPA of 3.0 is required in all courses [*]

A grade of C or higher must be earned in all required courses		
ILR 505	Employment Law	3
ILR 534	Work Group Dynamics and Leadership	3
ILR 509	Talent Acquisition	3
ILR 562	Labor Relations	3
ILR 525	HR Analytics	3
ILR 571	Human Resource/Industrial Relations Practicum 1	1
ILR 522	International Industrial Relations	3
ILR 546	Training and Development	3
ILR 530	Compensation Issues	3
ILR 515	Business and Human Resource Integration	3
ILR 572	Human Resource/Industrial Relations Practicum 2	1
Elective		**3**
ILR 507	Conflict Management Processes	
ILR 581	Collective Bargaining Practice	
ILR 595	Independent Study	
ILR 544	Benefits Management	3
ILR 508	Organizational Change and Renewal	3
ILR 548	Strategic Management for Human Resources	3
ILR 506	Performance Management	3
ILR 573	Human Resource/Industrial Relations Practicum 3	1
Total Hours		45

[*]   **Grade Point Average**: The M.S.I.R. program requires that the student maintain a grade point average of at least 3.0 on all work taken as a graduate student while enrolled in the College of Business and Economics. In addition, the student must maintain a 3.0 average in all work counting toward the graduate degree. A student whose cumulative grade point average falls below 2.75 will be placed on probation. If the student's average is not brought up to 2.75 by the end of the following semester, the student will be suspended from the program. A grade below C in more than one course taken while enrolled as a graduate student will result in suspension from the program.

**   Successful completion of the degree program requires participating in a supervised, non-credit internship experience. Internships are typically completed in the summer between semester two and three, and may be substituted with a similar, hands-on learning experience with the approval of the Program Coordinator.

SUGGESTED PLAN OF STUDY

Three semester course of study with a fall start: (forty-five credit hours including thirteen core courses and *one elective)

First Year

Fall	Hours	Spring	Hours
ILR 505	3	ILR 530	3
ILR 534	3	ILR 515	3
ILR 509	3	ILR 522	3
ILR 562	3	ILR 546	3
ILR 525	3	ILR 572	1
ILR 571	1	Elective	3
	16		16

Second Year

Fall	Hours
ILR 544	3
ILR 508	3
ILR 548	3
ILR 506	3
ILR 573	1
	13

Total credit hours: 45

ONE-YEAR PROGRAM CURRICULUM REQUIREMENTS

Admission to the One-Year Program:
Students entering the program with a Master's degree in an associated discipline may be considered for the one-year option. During the application process, the program coordinator will determine if the applicant qualifies for the one-year program.

A minimum GPA of 3.0 is required in all courses [*]

A grade of C or higher must be earned in all required courses		
ILR 505	Employment Law	3
ILR 544	Benefits Management	3
ILR 509	Talent Acquisition	3
ILR 562	Labor Relations	3
ILR 506	Performance Management	3
ILR 571	Human Resource/Industrial Relations Practicum 1	1
ILR 530	Compensation Issues	3
ILR 515	Business and Human Resource Integration	3
ILR 522	International Industrial Relations	3
ILR 546	Training and Development	3
ILR 572	Human Resource/Industrial Relations Practicum 2	1
Elective		**3**
ILR 507	Conflict Management Processes	
ILR 581	Collective Bargaining Practice	
ILR 595	Independent Study	
Total Hours		32

*   Successful completion of the degree program requires participating in a supervised, non-credit internship experience. Internships may be completed at the beginning or end of the program, and may be substituted with a similar, hands-on learning experience with the approval of the Program Coordinator.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ILR 505	3	ILR 530	3
ILR 544	3	ILR 515	3
ILR 509	3	ILR 522	3
ILR 562	3	ILR 546	3
ILR 506	3	ILR 572	1
ILR 571	1	Elective	3
	16		16

Total credit hours: 32

Major Learning Outcomes

HUMAN RESOURCE MANAGEMENT

STUDENT LEARNING GOALS

Goal 1: The HR Functional Environment

Graduates acquire knowledge and skills in basic HR functional areas that prepare them for their future careers in human resources management and industrial relations and related fields

1.1 Selection, Performance Management, and Training and Development. Graduates are able to participate and lead in the selection processes in their organizations as well as in the measurement of performance of the human asset and the identification of training and development activities either to enhance performance or correct deficiencies in the output of human assets.

1.2 Compensation and Benefits. Graduates are able to establish and maintain equitable compensation programs and associated benefits and insurance in their organizations. Graduates are familiar with and able to impact organizational economics through the development, modification, and implementation of compensation systems and benefit plan design and administration.

Goal 2: The Current Global Environment

Graduates have capabilities and knowledge relating to current HR/IR trends, both domestically and internationally, that prepare them for their future careers in human resources management and related fields.

2.1 International HR/IR and Understanding Cultural Differences. Graduates are able to apply human resource and industrial relations functional tools in an international context based on a detailed comprehension of the economic, social and moral ramifications of globalization and cultural differences.

2.2 Management of Change, Current Trends, and Technologies. Graduates are able to participate in managing change processes within their organizations and to apply knowledge of current events, trends and developments in the human resources profession and in the overall business environment, including contemporary information systems and associated technologies, in order to solve problems and perform functions commonly encountered in human resource management.

Goal 3: The Employee and Labor Relations Environment

Graduates acquire knowledge and skills in employee and labor relations that prepare them for their careers in human resources management and industrial relations and related fields.

3.1 Management of Conflict. Graduates are able to use foundational knowledge of individual behavior and interpersonal relations in order to successfully manage and resolve conflict through processes such as mediation and facilitation.

3.2 Negotiation. Graduates are able to demonstrate effective negotiating capacities and competencies in win-win and position bargaining in general and specifically in labor relations. Students are effective advocates in labor relations, mediation, alternate dispute resolution, employee/management concerns and disputes.

Goal 4: The Legal and Ethical Environment

Graduates develop comprehensive knowledge and skill in the areas of employment law and ethical decision making.

4.1 Legal and Ethical Decision Making. Graduates are able to successfully implement the procedural and substantive aspects of labor and employment law in making ethical decisions and taking ethical actions that reflect a standard of professional behavior and values within their

organizations. Employment law principles are embedded in each of the major course offerings to insure a solid fact-based application of legal practices, precedents, and contemporary interpretations.

Goal 5: The Strategic Environment

Graduates develop knowledge and skills in strategic decision making, leadership, teamwork and communications

5.1 Strategic Decision Making. Graduates are able to participate in and support strategic decision-making in human resources, industrial relations and beyond. Students are knowledgeable in the use and application of strategic planning tools and techniques and are aware of the economic and social impact of strategic business decisions.

5.2 Leadership, Teamwork and Communication. Graduates possess leadership and teamwork skills and abilities and are able to effectively communicate recommendations to management and other constituencies, orally and in writing.

Creative Arts

Degrees Offered

- Master of Arts in Art (Art Education, Art History, or Studio Art)
- Master of Fine Arts in Art & Design (Ceramics, Graphic Design, Intermedia/Photography, Painting, Printmaking, or Sculpture)
- Master of Fine Arts in Theatre (Acting, Costume Design and Technology, Lighting Design and Technology, Scenic Design and Technology, or Technical Direction)
- Master of Arts in Music (Music Industry or Musicology)
- Master of Music (Collaborative Piano, Composition, Conducting, Jazz Pedagogy, Music Education, Music Theory, Performance, or Piano Pedagogy)
- Doctor of Musical Arts (Collaborative Piano, Composition, Conducting, or Performance)
- Doctor of Philosophy in Music Education
- Graduate Certificates (Artist Diploma in Music Performance, Music Industry, or Therapeutic Art)

Introduction

Creative development in art, music, theatre, and dance is central to the College of Creative Arts. The College provides graduate students with a place where they can forge a personal understanding between artistic practice and theory, and form both personal and professional insights that explore and expand the nature of human creativity. Combining performance, exhibition, and scholarship in ways that address both traditional and innovative approaches to art, music, theatre, and dance, graduate students gain a greater understanding of the arts and--in turn--themselves.

A distinguished faculty of scholars and artists brings to the college's outstanding facilities a commitment to a creative process of artistic growth and advanced education. In a rich environment of plays, exhibitions, and concerts, the college offers graduate students the knowledge, skills, and inspiration necessary for artistic and professional success.

Graduate programs in art, music, and theatre are characterized by quality of faculty, students, and curricular opportunity. Each school is an accredited member of the nationally recognized accrediting agency for professional instruction in the discipline: art programs by the National Association of Schools of Art and Design, music programs by the National Association of Schools of Music, and theatre programs by the National Association of Schools of Theatre.

VISION STATEMENT

We envision broadening our role as a leader of innovation and engagement in the arts.

MISSION STATEMENT

The College of Creative Arts educates succeeding generations of artists, teachers, and scholars through an experimental student-centered approach to learning. The college advocates the arts as a medium through which the diversity of human experience is understood and valued. Exemplifying excellence and innovation in performance, exhibition, scholarship, and creative research, the college offers artistic and cultural opportunities for the citizens of West Virginia and the global community.

ARTISTIC ACHIEVEMENT

The College of Creative Arts is committed to supporting students in vigorous artistic and cultural endeavors at the national and international levels through individualized advising to determine goals for artistic and scholarly distinction and travel grants to support those activities. Students receive mentoring to create specific plans to apply for targeted opportunities, and receive support, encouragement, expertise, and resource guidance for successful applications. The College is dedicated to an ever-increasing presence of current West Virginia University College of Creative Arts students on the national and international stages of art, music, theatre, and dance.

FACILITIES

The Creative Arts Center, which houses the College, is a modern, multimillion-dollar instructional and performance facility with five theatres, recital halls, and recording studio; scenery, painting, drawing, design, costume, printmaking, sculpture, ceramic, puppet, and instrumental studios; additional art studios and two art galleries.

The Art Museum of WVU, located beside the Creative Arts Center, makes education, opportunity, engagement, culture, and creativity possible. The Art Museum's collection numbers nearly 5,000 objects and is international in scope, including paintings, prints, works on paper, sculpture, and ceramics.

PROGRAMS OF STUDY

The doctor of musical arts (D.M.A.) curricula in performance (piano, collaborative piano, voice, flute, oboe, clarinet, bassoon, saxophone, horn, trumpet, trombone, tuba, low brass, percussion, violin, viola, cello, double bass, or conducting) or composition and the Ph.D. curriculum in music education prepares students for careers as teachers in higher education.

The master of fine arts (M.F.A.) is a terminal degree in art and theatre that prepares students for careers in ceramics, graphic design, intermedia/photography, painting, printmaking, sculpture, acting, theatre technical direction, or theatre design and technology (costume, scenery, and lighting).

The master of music (M.M) degree enhances undergraduate training in performance, music education, theory, composition, collaborative piano, piano pedagogy, jazz pedagogy, and conducting.

The master of arts (M.A.) has concentrations in art education, art history, music industry, musicology, and studio art.

For More Information

Additional information on programs of study and areas of emphasis within each degree can be found in the individual school's description in this catalog and/or on the school's website listed below. Students may also contact the individual Graduate Directors for each School's graduate program.

ART & DESIGN

Joseph Lupo, Graduate Director, School of Art & Design
Phone: (304) 293-4077.   Website: http://artanddesign.wvu.edu/

MUSIC

Cynthia Anderson, Graduate Director, School of Music
Phone: (304) 293-4532.   Website: http://music.wvu.edu/

THEATRE

Gerald McGonigle, Graduate Director, School of Theatre and Dance
Phone: (304) 293-6806.   Website: http://theatre.wvu.edu/

Written requests for information should be sent to the appropriate Graduate Director and school at the following address: College of Creative Arts, Creative Arts Center, West Virginia University, P.O. Box 6111, Morgantown, WV 26506-6111.

General information about graduate study and life at West Virginia University can be found at https://graduate.wvu.edu/

ADMINISTRATION

DEAN

- Keith Jackson - D.M.A. (Arizona State University)

ASSOCIATE DEAN

- John Hendricks III - M.M. (West Virginia University)

ASSISTANT DEAN FOR STUDENT ARTISTIC ACHIEVEMENT

- Mikylah Myers - D.M.A. (University of Houston)

Degree Designation Learning Outcomes

The language stated in the learning goals for the College of Creative Arts graduate programs is based on (directly quoted, paraphrased or modified) current standards written and employed by the Council of Arts Accrediting Associations (National Association of Schools of Art and Design, National Association of Schools of Dance, National Association of Schools of Music and National Association of Schools of Theatre).

The appropriate association of the Council has awarded accreditation to all of West Virginia University's graduate degree programs within the College of Creative Arts.

As stated by the Council of Arts Accrediting Association:

National accreditation requirements outline threshold standards for institutional and individual achievement. These thresholds indicate essentials; they are rigorous. Attaining them represents a significant accomplishment. Therefore, these standards are both a foundation and a framework for specific achievements and evaluations of their quality.

The general learning goals listed below are for graduate degrees offered by the College. **Specific learning goals for individual programs are listed under each School's section of the catalog.** Due to the nature of the College's specialized degrees, none of these goals listed are intended to be comprehensive.

MASTER OF ARTS

The following are general learning goals for students pursuing a Master of Arts:

- Develop advanced capacities to work independently and make effective artistic and intellectual judgments and professional decisions in the area of specialization.
- Demonstrate professional competence in the area of specialization before peers and faculty.
- Gain knowledge and skills in one or more areas outside the major.

MASTER OF MUSIC

The Master of Music (MM) degree focuses on the development of professional competence in a music specialization or in a music-related field. The MM may be taken in performance (including conducting), music education, composition, collaborative piano, piano pedagogy, jazz pedagogy, or music theory.

- Develop advanced capacities to work independently and make effective artistic and intellectual judgments and professional decisions in the area of specialization.
- Demonstrate professional competence in the area of specialization before peers and faculty.
- Gain knowledge of repertory and historical performance practices.
- Gain knowledge and skills in one or more fields of music outside the major such as theory, history, musicology, ethnomusicology and performance.

MASTER OF FINE ARTS

The Master of Fine Arts (MFA) degree is for advanced graduate-level programs that focus on the practice in a specific discipline of the Visual and Performing Arts.

- Awareness of current issues and developments that influence the principal field of study, and professional ability and clear potential to contribute to the practice and advancement of the field.
- Writing and speaking skills to communicate clearly and effectively to the public and in formal or informal teaching situations.
- Understanding of appropriate related disciplines, the ability to think independently, and to integrate and synthesize information associated with high levels of practice in an area of specialization.
- Develop advanced competencies to work independently and make effective artistic and intellectual judgments and professional decisions in the area of specialization.
- Demonstrate professional competence in the area of specialization before peers and faculty.
- Understanding of professional ethics and practice associated with the major field.

DOCTOR OF MUSICAL ARTS AND THE DOCTOR OF PHILOSOPHY

The Doctor of Philosophy (Ph.D.) in music education prepares students for careers as teachers in higher education. The Doctor of Musical Arts (DMA) degree is intended for those planning to work at the most advanced academic and professional levels of musical endeavor. The DMA degree may be taken in performance (including conducting), collaborative piano, or composition.

- Intellectual awareness and curiosity sufficient to predict continued growth and contribution to the discipline.
- Significant advanced, professional-level accomplishment in performance, composition, scholarship or conducting.
- Knowledge of the techniques of music theory sufficient to perform advanced analysis.
- Knowledge of representative literature and composers of each major period of music history.
- Knowledge of general bibliographical resources in music.
- Considerable depth of knowledge in some aspect of music, such as an historical period, an aspect of theory, performance practice or compositional styles.
- Writing and speaking skills to communicate clearly and effectively to members of the scholarly community and the wider community, and especially in teaching situations.

Admissions

ADMISSION REQUIREMENTS

The College of Creative Arts uses the admission standards and procedures of the university for the admission of graduate students. Each school within the college also has individual admission requirements.

Potential graduate students should refer to the specific admission criteria of each school found in their program descriptions in this catalog and on the school's website.

Because of the creative nature of the arts, some students may be admitted under the individual consideration clause of the university's general admission policy. This category allows admission of exceptionally talented students in art, music, and theatre who might not meet the criteria for grade point averages and standardized test scores to be admitted to one of the College's programs of study.

TUITION

In addition to University tuition and fees, College of Creative Art students will also be charged College tuition. Music students (undergraduate and most graduate) and musical theatre undergraduate students will also be charged an Applied Lesson tuition. Music minor students who must take applied lessons for their programs will also be assessed the Applied Lesson tuition.

ASSISTANTSHIPS, TUITION WAIVERS AND FINANCIAL AWARDS

To assist in funding the cost of graduate education, West Virginia University and the College of Creative Arts offer a number of financial assistance packages for qualified applicants. These include graduate assistantships, graduate tuition waivers, and cash awards.

Assistantships are offered in each school; however, the number of assistantships is limited and their award is competitive based on their availability as well as the quality of the applicants and their potential for significant contribution to the school and college. Assistantships pay stipends, health insurance, and a university tuition waiver. In return, graduate assistants provide approximately twenty hours of work per week during the nine month academic year with duties that range from instructional to service positions within each school.

For more information on assistantships, graduate tuition waivers, cash awards, application process, and important deadlines, please refer to each school's individual website.

Additional information on funding for graduate study at West Virginia University can be found at https://graduate.wvu.edu/

Certificate Programs

Accreditation

The following programs within the College of Creative Arts have specialized accreditation through the National Association for Accreditation of Schools of Theater: Acting, Costume Design and Technology, Lighting Design and Technology, Scenic Design and Technology, and Technical Direction

The following programs within the College of Creative Arts have specialized accreditation through the National Association of Schools of Art and Design: Art Education, Art History, Ceramics, Graphic Design, Intermedia/Photography, Painting, Printmaking, Sculpture, and Studio Art

The following programs within the College of Creative Arts have specialized accreditation through the National Council on Accreditation of Teacher Education: Art Education and Music Education

The following programs within the College of Creative Arts have specialized accreditation through the National Association of Schools of Music: Collaborative Piano, Conducting, Jazz Pedagogy, Music Composition, Music Education, Music Industry, Music Performance, Music Theory, Musicology, and Piano Pedagogy

School of Art and Design

Degrees Offered

- Master of Arts
- Master of Fine Arts

Graduate Certificate Offered

- Therapeutic Art

The graduate programs in the School of Art and Design lead to a master of arts (M.A.) with emphasis in art history, art education, or studio art (two years and a minimum of thirty credit hours; thirty-six is recommended) or to a master of fine arts (M.F.A.) with emphasis in a studio art (three years and seventy-two credit hours). These programs are highly selective and closely integrated. All applicants are expected to have academic competence, artistic maturity, and the motivation to achieve excellence in their areas of concentration.

The master of fine arts is a professionally-oriented terminal degree in the studio arts, with concentration in ceramics, graphic design, intermedia/ photography, painting, printmaking, or sculpture. Applicants typically hold a baccalaureate degree in art or its equivalent for admission. Recommended preparation includes twelve hours of art history, seventy hours of studio art or equivalent experience, and thirty-six hours of general education.

The School also offers a Graduate Certificate in Therapeutic Art to provide additional training for art teachers. This field offers new professional opportunities to art educators who are trained, knowledgeable, and versed in therapeutic art concepts and technical skills within their teaching practice in the PreK-21 classroom.

Accreditation

The School of Art and Design is an accredited institutional member of the National Association of Schools of Art and Design (NASAD), the only nationally recognized accrediting agency for professional art instruction. Applicants for graduate studies must comply with the standards for admission set by West Virginia University, the College of Creative Arts, and the School of Art and Design.

Reviews

All students enter the graduate programs in art as preliminary candidates. Students in the M.F.A. program are reviewed for advancement to degree candidacy at the end of their third semester of study or upon the completion of a minimum of thirty credit hours. Candidacy status is obtained upon review by the full faculty of the School and must be approved by the student's graduate committee. Students in the M.A. program are reviewed for advancement to degree candidacy at the end of their first semester of study or upon the completion of a minimum of twelve credit hours.

The School of Art and Design has high expectations for its graduate students. Because of this, certain standards of achievement exceed the minimum standards set by the university for all graduate students. The School of Art and Design reserves the right to impose stricter limitations on all art graduate students. Credit hours in courses with an earned grade of C do not automatically count toward graduate degree requirements. The graduate committee and the school director have the right to declare such credit hours unacceptable.

Program Transfer

A preliminary candidate in a graduate art program is not guaranteed acceptance into another graduate art program. A change from the M.F.A. program to the M.A. program (or the reverse) must be approved by the graduate faculty of the School of Art and Design. Under normal conditions, such a change is not considered until the student has established credibility by successfully completing a minimum of twelve approved credit hours of study at WVU. Transfer to a program outside the School of Art and Design must be approved by the receiving unit. To make an application for a double degree program or a special interdepartmental program at the graduate level, students must have prior written approval of the School of Art and Design Director.

Thesis

All candidates for a graduate degree in art must prepare a written thesis (or graduate project) related to their work and activity as a graduate student. The chair of the student's graduate committee supervises the preparation of the thesis. The thesis must be prepared according to the form prescribed in the WVU regulations governing the preparation and electronic submission of dissertations and theses as well as School guidelines, unless an exception is authorized in advance by the student's graduate committee and the School Director. A final draft of the thesis must be submitted to committee members at least one month prior to the electronic filing date for review and approval.

Residence Requirements

M.F.A. students take nine to fifteen hours per semester. All students accepted into the M.F.A. program are required to spend six full-time semesters (excluding summer sessions) in residence. Approved study abroad semesters count toward the residency requirement.

FACULTY

DIRECTOR

- Alison Helm - M.F.A. (Syracuse University)
  Sculpture

ASSOCIATE DIRECTOR, UNDERGRADUATE ADVISOR

- Kristina Olson - M.A. (Stony Brook University)
  Art History-Modern and Contemporary, Art criticism

GRADUATE ADVISOR

- Joseph Lupo - M.F.A. (University of Georgia)
  Printmaking

PROFESSORS

- Eve Faulkes - M.F.A. (Rhode Island School of Design)
  Graphic Design
- Alison Helm - M.F.A. (Syracuse University)
  Sculpture

- Joseph Lupo - M.F.A. (University of Georgia)
  Printmaking

ASSOCIATE PROFESSOR

- Joseph Galbreath - M.F.A. (Maryland Institute College of Art)
  Graphic Design
- Gerald Habarth - M.F.A. (University of South Florida)
  Electronic Media
- Jason Lee - M.F.A. (University of Wisconsin-Madison)
  Sculpture, Foundations
- Robert Moore - M.F.A. (Utah State University)
  Ceramics
- Kristina Olson - M.A. (Stony Brook University)
  Art History-Modern and Contemporary, Art criticism
- Kofi Opoku - M.F.A. (West Virginia University)
  Graphic Design
- Rhonda Reymond - Ph.D. (University of Georgia)
  Art History-American, African American, 17th-19th century European art
- Shoji Satake - M.F.A. (University of Indiana-Bloomington)
  Ceramics
- Michael Sherwin - M.F.A. (University of Oregon)
  Photography, Digital Imaging
- Naijun Zhang - M.F.A. (West Virginia University)
  Painting, Drawing

ASSISTANT PROFESSOR

- Dylan Collins - M.F.A. (Kent State University)
  Sculpture, Drawing
- Terese Giobbia - Ph.D. (Northern Illinois University)
  Art Education
- Anne McFarland - Ph.D. (Florida State University)
  Art Therapy, Art Education
- Jeffrey Moser - M.F.A. (University of Delaware)
  Interactive Media Design

VISITING ASSISTANT PROFESSOR

- Hannah Freeman - M.F.A. (University of Notre Dame)
  Painting
- Hanna Szczepanowska - Ph.D. (University of Lyon)
  Technical Art History

LECTURERS

- Jennifer Allen - M.F.A. (Indiana University-Bloomington)
  Ceramics
- Douglas Barkey - M.F.A. (University of Iowa)
  Photography
- Aaron Blum - M.F.A. (Syracuse University)
  Photography
- Ceci Dadisman - B.M. (West Virginia University)
  Arts Administration
- Kelley Galbreath - M.F.A. (Maryland Institute College of Art)
  Graphic Design
- Ronald Hollingshead - M.F.A. (West Virginia University)
  Sculpture
- Katherine Inge - Ph.D. candidate (University of Arizona)
  Art History
- Patrick Jones - M.F.A. and M.A. (West Virginia University)

Painting, Drawing, Art History

- Lourdes Karas - B.A. (Allegheny College)
  Arts Administration
- Megan Leight - Ph.D. candidate (City University of New York)
  Art History
- Michael Loop - M.F.A. (West Virginia University)
  Foundations and Sculpture
- Shalya Marsh - M.F.A. (University of Nebraska-Lincoln)
  Gallery Manager, 3D Ceramic Printing
- Jack Moffett - Master of Design in Interaction Design (Carnegie Mellon University)
  Graphic Design
- Linda Rosefsky - M.A. (West Virginia University)
  Art History
- Charles Scott - M.F.A. (Southern Illinois University-Carbondale)
  Foundations, Interactive Design for Media
- Kristian Thacker - B.F.A. (Shepherd University)
  Photography

PROFESSORS EMERITI

- J. Bernard Schultz
  Dean, Art History
- Janet Snyder
  Art History

ASSOCIATE PROFESSORS EMERITI

- Victoria Fergus
  Art Education

Admissions

The application deadline occurs annually on January 15. There is a two-step process for graduate applications.

Step 1: Apply (http://graduateadmissions.wvu.edu) to West Virginia University Graduate School online. This application will require you to upload your transcripts, resume, letter of intent, three letters of recommendation, and pay an application fee.

Step 2: Submit your portfolio (https://wvuart.slideroom.com/) to the WVU School of Art & Design.

Submit the following material for the degree you are interested in:

MFA Studio Art and MA Studio Art: Portfolio: 20 images or video documentation of recent work

MA Art Education: PDF writing sample; Applicants with teaching experience may include images of student work

MA Art History: PDF writing sample of a recent research paper and GRE scores

Applicants may be required to take additional course work after careful review of undergraduate transcripts.

In addition to the application materials listed, transfer students must transfer graduate work completed elsewhere. Transcripts must accompany the written request. The acceptance of transfer credit is not automatic. The graduate faculty, the graduate advisor, and the School Director will determine how much, if any, previous graduate-level work may be transferred. The maximum allowable number of graduate transfer credits toward the degree is nine. All transfer credits must be in place by the end of the first semester.

Financial Aid

Financial aid information is available through the Student Financial Aid Office, West Virginia University, P.O. Box 6004, Morgantown WV 26506-6004.

Graduate Assistantships

Graduate assistantships and other forms of financial aid are awarded to students of exceptional promise by the faculty of the School of Art and Design.

Certificate Program

- Therapeutic Art (p. 68)

Art Education, M.A.

Degree Offered

- Master of Arts

Nature of the Program

Specialization in art education requires the completion of a minimum of thirty hours with a recommended total of thirty-six. The exact course of study is determined through consultation with the student's advisor and graduate committee. This degree can also lead to certification with an additional semester for student teaching.

M.A. art education students are required to produce a written thesis or, at the graduate committee's discretion, may complete a research project.

A graduate certificate in Therapeutic Art is also offered.

Degree Requirements

Studio and/or Academic Electives		12-18
Art Education or Approved Studies		12
ART 602	Master's in Art Education Project	6
Total Hours		30-36

Major Learning Outcomes

ART EDUCATION

The following are general learning goals for students pursuing a Master of Arts:

- Develop advanced capacities to work independently and make effective artistic and intellectual judgments and professional decisions in the area of specialization.
- Demonstrate professional competence in the area of specialization before peers and faculty.
- Gain knowledge and skills in one or more areas outside the major.

Art History, M.A.

Degree Offered

- Master of Arts

Nature of the Program

The Master of Arts in art history program offers a two-year degree that provides a solid foundation in historical and theoretical study of the history of Western Art, from Medieval to Contemporary. The program emphasizes independent exploration and interdisciplinary research.

Art history studies the traditions and techniques of the visual arts. It is an interdisciplinary field, drawing upon philosophy, history, literature, religion, and mythology to examine works of art and their contexts. The history of art provides means to penetrate cultural constructions and their aesthetic and artistic productions. To assist the student in developing skills needed to analyze and understand the object, the course of study includes requirements in academic coursework and research.

The collection of the Art Museum of West Virginia University provides both first-hand experience with works of significant aesthetic and cultural value and introduces students to curatorial and museum practice. The Laura and Paul Mesaros Galleries in the Creative Arts Center and the Visiting Artist and Scholar program form a crucial link in the course of study, presenting installation and curatorial opportunities. Through the School of Art and Design's association with regional institutions, museum and gallery internships are encouraged.

Degree Requirements

Students must matriculate having attained reading proficiency in a language other than English through course credit or to be demonstrated by passing a proficiency exam. If incoming students have not yet acquired reading proficiency in a second language, they should plan to obtain it before completing the M.A. degree.

Completion of the program culminates in the master's thesis, which may take a variety of forms within the context of art's historical and critical practices. The student will select a thesis topic that must be approved by the art history faculty. The thesis consists of a research paper demonstrating

critical knowledge of relevant sources, skill in analysis and interpretation, and ability to present the results in a well-organized and intelligent manner. The thesis must be defended in an oral examination.

Admissions

Applicants for admission to the master's program are expected to demonstrate competence in the history of art, equivalent to an undergraduate major, demonstrated through coursework and a sample research paper. The B.A. degree in an area of substantial humanistic research plus a foreign language may also be considered appropriate preparation. It is recommended that the applicant have reading competence of at least one language other than English (four-semester equivalent). All applicants must submit GRE examination scores.

Degree Requirements

Art History		21
Selected from the following:		
ARHS 501	Independent Study	
ARHS 507	Native American	
ARHS 510	Intro Curatorial Practice	
ARHS 520	Greek and Roman	
ARHS 531	Medieval	
ARHS 533	Medieval Architecture	
ARHS 538	History of Stained Glass	
ARHS 544	Art Theory	
ARHS 545	Modern Art Theory	
ARHS 548	Women in Art	
ARHS 550	Northern Renaissance	
ARHS 554	Italian Renaissance	
ARHS 560	Baroque	
ARHS 570	American	
ARHS 575	Nineteenth Century	
ARHS 580	Modern	
ARHS 581	Modern Architecture	
ARHS 582	GPS-Architect Frank Lloyd Wright	
ARHS 585	Print, Propaganda and Art	
ARHS 588	The Art of Andy Warhol	
ARHS 589	Contemporary	
ARHS 593	Special Topics	
ARHS 595	Independent Study	
ARHS 601	Thesis	
ARHS 693	Special Topics	
ARHS 695	Independent Study	
ARHS 696	Graduate Seminar	
Cognate Classes		6
ARHS 601	Thesis	3
Total Hours		30

Major Learning Outcomes

ART HISTORY

- Demonstrate a broad general knowledge of the history of art, as well as specialization in a more limited area.
- Knowledge of historiography and methods of scholarship and be capable of undertaking independent research.
- Demonstrate knowledge of at least one foreign language.

Ceramics, M.F.A.

Degree Offered

- Master of Fine Arts

Nature of the Program

The Master of Fine Arts is a terminal degree in studio art. Our selective and limited enrollment ensures regular individual contact with dedicated, diverse faculty who are committed to a sustained professional exchange with each student. A collaboratively designed curriculum is augmented by regular critiques engaging all studio majors and faculty. Media experimentation is encouraged. Students must be able to apply and communicate a diverse body of knowledge of historical, cultural, contemporary, and aesthetic issues to their professional practice. Students are expected to articulate and defend their position within the context of contemporary art discourse.

The Master of Fine Arts with an emphasis in ceramics fuses art and technology, which recently boosted it into one of the top 20 graduate art programs in the country, as ranked by U.S. News & World Report in 2013.

Degree Requirements

Ceramics		**36**
ART 540	Graduate Ceramics (repeated)	
Studio/Cognate Electives		**15**
Art History		**9**
Select 3 from the following:		
ARHS 501	Independent Study	
ARHS 507	Native American	
ARHS 510	Intro Curatorial Practice	
ARHS 520	Greek and Roman	
ARHS 531	Medieval	
ARHS 533	Medieval Architecture	
ARHS 538	History of Stained Glass	
ARHS 544	Art Theory	
ARHS 545	Modern Art Theory	
ARHS 548	Women in Art	
ARHS 550	Northern Renaissance	
ARHS 554	Italian Renaissance	
ARHS 560	Baroque	
ARHS 570	American	
ARHS 575	Nineteenth Century	
ARHS 580	Modern	
ARHS 581	Modern Architecture	
ARHS 582	GPS-Architect Frank Lloyd Wright	
ARHS 585	Print, Propaganda and Art	
ARHS 588	The Art of Andy Warhol	
ARHS 589	Contemporary	
ARHS 593	Special Topics	
ARHS 595	Independent Study	
ARHS 601	Thesis	
ARHS 693	Special Topics	
ARHS 695	Independent Study	
ARHS 696	Graduate Seminar	
ART 590	Teaching Practicum/Professional Practice	3
ART 696	Graduate Seminar	3
ART 600	Graduate Exhibition and Thesis	6
Total Hours		72

Major Learning Outcomes

CERAMICS

The Master of Fine Arts (M.F.A.) degree is for advanced graduate-level programs that focus on the practice of some aspect of the Visual and Performing Arts.

- Awareness of current issues and developments that influence the principal field of study, and professional ability and clear potential to contribute to the practice and advancement of the field.
- Writing and speaking skills to communicate clearly and effectively to the public and in formal or informal teaching situations.
- Understanding of appropriate related disciplines, the ability to think independently, and to integrate and synthesize information associated with high levels of practice in an area of specialization.
- Develop advanced competencies to work independently and make effective artistic and intellectual judgments and professional decisions in the area of specialization.
- Demonstrate professional competence in the area of specialization before peers and faculty.
- Demonstrate a breadth of understanding of the related disciplines, the ability to think independently and to integrate and synthesize information associated with high levels of practice in an area of specialization.
- Understanding of professional ethics and practice associated with the major field.

Graphic Design, M.F.A.

Degree Offered

- Master of Fine Arts

Nature of the Program

The Master of Fine Arts is a terminal degree in studio art. Our selective and limited enrollment ensures regular individual contact with dedicated, diverse faculty who are committed to a sustained professional exchange with each student. A collaboratively designed curriculum is augmented by regular critiques engaging all studio majors and faculty. Media experimentation is encouraged. Students must be able to apply and communicate a diverse body of knowledge of historical, cultural, contemporary, and aesthetic issues to their professional practice. Students are expected to articulate and defend their position within the context of contemporary art discourse.

A **Master of Fine Arts** in Graphic Design involves rigorous research to find new ways to communicate effectively. WVU Graphic Design alumni live and work in most major US cities and abroad. They have careers at the headquarters of Coca Cola, at the helm of NBC's entertainment division in Burbank, CA, in major packaging firms, designing the web interests of the New York Times, creating multimedia for large corporations in DC, and designing for social concerns in the national offices of Big Brothers/Big Sisters and for numerous environmental groups.

Degree Requirements

Graphic Design		36
ART 523	Graduate Graphic Design	
ART 524	Graduate Graphic Design/Professional Practice	
Studio/Cognate Electives		**15**
Art History		**9**
Select 3 from the following:		
ARHS 501	Independent Study	
ARHS 507	Native American	
ARHS 510	Intro Curatorial Practice	
ARHS 520	Greek and Roman	
ARHS 531	Medieval	
ARHS 533	Medieval Architecture	
ARHS 538	History of Stained Glass	
ARHS 544	Art Theory	
ARHS 545	Modern Art Theory	
ARHS 548	Women in Art	
ARHS 550	Northern Renaissance	
ARHS 554	Italian Renaissance	
ARHS 560	Baroque	

ARHS 570	American	
ARHS 575	Nineteenth Century	
ARHS 580	Modern	
ARHS 581	Modern Architecture	
ARHS 582	GPS-Architect Frank Lloyd Wright	
ARHS 585	Print, Propaganda and Art	
ARHS 588	The Art of Andy Warhol	
ARHS 589	Contemporary	
ARHS 593	Special Topics	
ARHS 595	Independent Study	
ARHS 601	Thesis	
ARHS 693	Special Topics	
ARHS 695	Independent Study	
ARHS 696	Graduate Seminar	
ART 590	Teaching Practicum/Professional Practice	3
ART 696	Graduate Seminar	3
ART 600	Graduate Exhibition and Thesis	6
Total Hours		72

Major Learning Outcomes

GRAPHIC DESIGN

The Master of Fine Arts (M.F.A.) degree is for advanced graduate-level programs that focus on the practice of some aspect of the Visual and Performing Arts.

- Awareness of current issues and developments that influence the principal field of study, and professional ability and clear potential to contribute to the practice and advancement of the field.
- Writing and speaking skills to communicate clearly and effectively to the public and in formal or informal teaching situations.
- Understanding of appropriate related disciplines, the ability to think independently, and to integrate and synthesize information associated with high levels of practice in an area of specialization.
- Develop advanced competencies to work independently and make effective artistic and intellectual judgments and professional decisions in the area of specialization.
- Demonstrate professional competence in the area of specialization before peers and faculty.
- Demonstrate a breadth of understanding of the related disciplines, the ability to think independently and to integrate and synthesize information associated with high levels of practice in an area of specialization.
- Understanding of professional ethics and practice associated with the major field.

Intermedia and Photography, M.F.A.

Degree Offered

- Master of Fine Arts

Nature of the Program

The Master of Fine Arts is a terminal degree in studio art. Our selective and limited enrollment ensures regular individual contact with dedicated, diverse faculty who are committed to a sustained professional exchange with each student. A collaboratively designed curriculum is augmented by regular critiques engaging all studio majors and faculty. Media experimentation is encouraged. Students must be able to apply and communicate a diverse body of knowledge of historical, cultural, contemporary, and aesthetic issues to their professional practice. Students are expected to articulate and defend their position within the context of contemporary art discourse.

The Intermedia and Photography program fosters creative exploration in the production of contemporary art through exploring digital and traditional photographic processes, digital video, animation, installation, interactivity, and sound design.

Facilities including a traditional darkroom and a digital imaging lab, a diverse curriculum, and a supportive and challenging faculty all aim to aid students in their individual journeys as artists.

Degree Requirements

Intermedia and Photography		**36**
ART 534	Alternative Media	
ART 532	Graduate Photography	
Studio/Cognate Electives		**15**
Art History		**9**
Select 3 from the following:		
ARHS 501	Independent Study	
ARHS 507	Native American	
ARHS 510	Intro Curatorial Practice	
ARHS 520	Greek and Roman	
ARHS 531	Medieval	
ARHS 533	Medieval Architecture	
ARHS 538	History of Stained Glass	
ARHS 544	Art Theory	
ARHS 545	Modern Art Theory	
ARHS 548	Women in Art	
ARHS 550	Northern Renaissance	
ARHS 554	Italian Renaissance	
ARHS 560	Baroque	
ARHS 570	American	
ARHS 575	Nineteenth Century	
ARHS 580	Modern	
ARHS 581	Modern Architecture	
ARHS 582	GPS-Architect Frank Lloyd Wright	
ARHS 585	Print, Propaganda and Art	
ARHS 588	The Art of Andy Warhol	
ARHS 589	Contemporary	
ARHS 593	Special Topics	
ARHS 595	Independent Study	
ARHS 601	Thesis	
ARHS 693	Special Topics	
ARHS 695	Independent Study	
ARHS 696	Graduate Seminar	
ART 590	Teaching Practicum/Professional Practice	3
ART 696	Graduate Seminar	3
ART 600	Graduate Exhibition and Thesis	6
Total Hours		72

Major Learning Outcomes

INTERMEDIA AND PHOTOGRAPHY

The Master of Fine Arts (M.F.A.) degree is for advanced graduate-level programs that focus on the practice of some aspect of the Visual and Performing Arts.

- Awareness of current issues and developments that influence the principal field of study, and professional ability and clear potential to contribute to the practice and advancement of the field.
- Writing and speaking skills to communicate clearly and effectively to the public and in formal or informal teaching situations.
- Understanding of appropriate related disciplines, the ability to think independently, and to integrate and synthesize information associated with high levels of practice in an area of specialization.
- Develop advanced competencies to work independently and make effective artistic and intellectual judgments and professional decisions in the area of specialization.
- Demonstrate professional competence in the area of specialization before peers and faculty.

- Demonstrate a breadth of understanding of the related disciplines, the ability to think independently and to integrate and synthesize information associated with high levels of practice in an area of specialization.
- Understanding of professional ethics and practice associated with the major field.

Painting, M.F.A.

Degree Offered

- Master of Fine Arts

Nature of the Program

The Master of Fine Arts is a terminal degree in studio art. Our selective and limited enrollment ensures regular individual contact with dedicated, diverse faculty who are committed to a sustained professional exchange with each student. A collaboratively designed curriculum is augmented by regular critiques engaging all studio majors and faculty. Media experimentation is encouraged. Students must be able to apply and communicate a diverse body of knowledge of historical, cultural, contemporary, and aesthetic issues to their professional practice. Students are expected to articulate and defend their position within the context of contemporary art discourse.

A Master of Fine Arts with a concentration in painting invites students to consider interdisciplinary media and multicultural sources of inspiration for their work.

Degree Requirements

Painting		36
ART 513	Graduate Painting	
Studio/Cognate Electives		**15**
Art History		**9**
Select 3 from the following:		
ARHS 501	Independent Study	
ARHS 507	Native American	
ARHS 510	Intro Curatorial Practice	
ARHS 520	Greek and Roman	
ARHS 531	Medieval	
ARHS 533	Medieval Architecture	
ARHS 538	History of Stained Glass	
ARHS 544	Art Theory	
ARHS 545	Modern Art Theory	
ARHS 548	Women in Art	
ARHS 550	Northern Renaissance	
ARHS 554	Italian Renaissance	
ARHS 560	Baroque	
ARHS 570	American	
ARHS 575	Nineteenth Century	
ARHS 580	Modern	
ARHS 581	Modern Architecture	
ARHS 582	GPS-Architect Frank Lloyd Wright	
ARHS 585	Print, Propaganda and Art	
ARHS 588	The Art of Andy Warhol	
ARHS 589	Contemporary	
ARHS 593	Special Topics	
ARHS 595	Independent Study	
ARHS 601	Thesis	
ARHS 693	Special Topics	
ARHS 695	Independent Study	
ART 590	Teaching Practicum/Professional Practice	3
ART 696	Graduate Seminar	3

ART 600	Graduate Exhibition and Thesis	6
Total Hours		72

Major Learning Outcomes

PAINTING

The Master of Fine Arts (M.F.A.) degree is for advanced graduate-level programs that focus on the practice of some aspect of the Visual and Performing Arts.

- Awareness of current issues and developments that influence the principal field of study, and professional ability and clear potential to contribute to the practice and advancement of the field.
- Writing and speaking skills to communicate clearly and effectively to the public and in formal or informal teaching situations.
- Understanding of appropriate related disciplines, the ability to think independently, and to integrate and synthesize information associated with high levels of practice in an area of specialization.
- Develop advanced competencies to work independently and make effective artistic and intellectual judgments and professional decisions in the area of specialization.
- Demonstrate professional competence in the area of specialization before peers and faculty.
- Demonstrate a breadth of understanding of the related disciplines, the ability to think independently and to integrate and synthesize information associated with high levels of practice in an area of specialization.
- Understanding of professional ethics and practice associated with the major field.

Printmaking, M.F.A.

Degree Offered

- Master of Fine Arts

Nature of the Program

The Master of Fine Arts is a terminal degree in studio art. Our selective and limited enrollment ensures regular individual contact with dedicated, diverse faculty who are committed to a sustained professional exchange with each student. A collaboratively designed curriculum is augmented by regular critiques engaging all studio majors and faculty. Media experimentation is encouraged. Students must be able to apply and communicate a diverse body of knowledge of historical, cultural, contemporary, and aesthetic issues to their professional practice. Students are expected to articulate and defend their position within the context of contemporary art discourse.

Explore monoprinting, relief, silk-screen, computer-mediated images and alternative printing processes in the printmaking program. Courses focus on the student's visual expression through their examination of formal issues, media exploration, relevant histories, contemporary critical discourse, and diverse approaches to problem solving. The visiting artist and collaborative print initiative are exciting components of the program where nationally-recognized artists work with students to produce limited edition prints.

Degree Requirements

Printmaking		**36**
ART 530	Graduate Printmaking	
Studio/Cognate Electives		**15**
Art History		**9**
Select 3 from the following:		
ARHS 501	Independent Study	
ARHS 507	Native American	
ARHS 510	Intro Curatorial Practice	
ARHS 520	Greek and Roman	
ARHS 531	Medieval	
ARHS 533	Medieval Architecture	
ARHS 538	History of Stained Glass	
ARHS 544	Art Theory	
ARHS 545	Modern Art Theory	
ARHS 548	Women in Art	
ARHS 550	Northern Renaissance	

ARHS 554	Italian Renaissance	
ARHS 560	Baroque	
ARHS 570	American	
ARHS 575	Nineteenth Century	
ARHS 580	Modern	
ARHS 581	Modern Architecture	
ARHS 582	GPS-Architect Frank Lloyd Wright	
ARHS 585	Print, Propaganda and Art	
ARHS 588	The Art of Andy Warhol	
ARHS 589	Contemporary	
ARHS 593	Special Topics	
ARHS 595	Independent Study	
ARHS 601	Thesis	
ARHS 693	Special Topics	
ARHS 696	Graduate Seminar	
ART 590	Teaching Practicum/Professional Practice	3
ART 696	Graduate Seminar	3
ART 600	Graduate Exhibition and Thesis	6
Total Hours		72

Major Learning Outcomes

PRINTMAKING

The Master of Fine Arts (M.F.A.) degree is for advanced graduate-level programs that focus on the practice of some aspect of the Visual and Performing Arts.

- Awareness of current issues and developments that influence the principal field of study, and professional ability and clear potential to contribute to the practice and advancement of the field.
- Writing and speaking skills to communicate clearly and effectively to the public and in formal or informal teaching situations.
- Understanding of appropriate related disciplines, the ability to think independently, and to integrate and synthesize information associated with high levels of practice in an area of specialization.
- Develop advanced competencies to work independently and make effective artistic and intellectual judgments and professional decisions in the area of specialization.
- Demonstrate professional competence in the area of specialization before peers and faculty.
- Demonstrate a breadth of understanding of the related disciplines, the ability to think independently and to integrate and synthesize information associated with high levels of practice in an area of specialization.
- Understanding of professional ethics and practice associated with the major field.

Sculpture, M.F.A.

Degree Offered

- Master of Fine Arts

Nature of the Program

The Master of Fine Arts is a terminal degree in studio art. Our selective and limited enrollment ensures regular individual contact with dedicated, diverse faculty who are committed to a sustained professional exchange with each student. A collaboratively designed curriculum is augmented by regular critiques engaging all studio majors and faculty. Media experimentation is encouraged. Students must be able to apply and communicate a diverse body of knowledge of historical, cultural, contemporary, and aesthetic issues to their professional practice. Students are expected to articulate and defend their position within the context of contemporary art discourse.

The sculpture program encourages experimental approaches to art-making including mixed media, mold making, installation, community based and environmental work. Students have the opportunity to participate each year in group metal pours, learning the technical and safety requirements to successfully cast in bronze and aluminum.

Degree Requirements

Sculpture		**36**
ART 526	Graduate Sculpture	
Studio/Cognate Electives		**15**
Art History		**9**
Select 3 from the following:		
ARHS 501	Independent Study	
ARHS 507	Native American	
ARHS 510	Intro Curatorial Practice	
ARHS 520	Greek and Roman	
ARHS 531	Medieval	
ARHS 533	Medieval Architecture	
ARHS 538	History of Stained Glass	
ARHS 544	Art Theory	
ARHS 545	Modern Art Theory	
ARHS 548	Women in Art	
ARHS 550	Northern Renaissance	
ARHS 554	Italian Renaissance	
ARHS 560	Baroque	
ARHS 570	American	
ARHS 575	Nineteenth Century	
ARHS 580	Modern	
ARHS 581	Modern Architecture	
ARHS 582	GPS-Architect Frank Lloyd Wright	
ARHS 585	Print, Propaganda and Art	
ARHS 588	The Art of Andy Warhol	
ARHS 589	Contemporary	
ARHS 593	Special Topics	
ARHS 595	Independent Study	
ARHS 601	Thesis	
ARHS 693	Special Topics	
ARHS 694	Seminar	
ART 590	Teaching Practicum/Professional Practice	3
ART 696	Graduate Seminar	3
ART 600	Graduate Exhibition and Thesis	6
Total Hours		72

Major Learning Outcomes

SCULPTURE

The Master of Fine Arts (M.F.A.) degree is for advanced graduate-level programs that focus on the practice of some aspect of the Visual and Performing Arts.

- Awareness of current issues and developments that influence the principal field of study, and professional ability and clear potential to contribute to the practice and advancement of the field.
- Writing and speaking skills to communicate clearly and effectively to the public and in formal or informal teaching situations.
- Understanding of appropriate related disciplines, the ability to think independently, and to integrate and synthesize information associated with high levels of practice in an area of specialization.
- Develop advanced competencies to work independently and make effective artistic and intellectual judgments and professional decisions in the area of specialization.
- Demonstrate professional competence in the area of specialization before peers and faculty.

- Demonstrate a breadth of understanding of the related disciplines, the ability to think independently and to integrate and synthesize information associated with high levels of practice in an area of specialization.
- Understanding of professional ethics and practice associated with the major field.

Studio Art, M.A.

Degree Offered

- Master of Arts

Nature of the Program

The studio art concentration promotes advanced study in ceramics, painting, printmaking, graphic design, intermedia/photography, and sculpture. M.A. studio art students are required to produce a written thesis and, at the graduate committee's discretion, may be required to hold a thesis exhibition.

Admissions

This course of study requires a baccalaureate degree in art or its equivalent for admission. Preparation should include twelve hours of art history, forty-five hours of studio art related to professional needs, and thirty-six hours of general education.

Degree Requirements

Studio Art		18
ART 513	Graduate Painting	
ART 515	Arts Administration	
ART 523	Graduate Graphic Design	
ART 524	Graduate Graphic Design/Professional Practice	
ART 526	Graduate Sculpture	
ART 530	Graduate Printmaking	
ART 532	Graduate Photography	
ART 534	Alternative Media	
ART 540	Graduate Ceramics	
ART 580	GPS-Art and Environment	
ART 595	Independent Study: Graduate Studio	
ART 593	Special Topics (Mold Making)	
ART 593	Special Topics (3D Printing)	
ART 693	Special Topics (Kiln Building)	
Cognates/Electives		**6**
Art History		**6**
Select 2 from the following:		
ARHS 501	Independent Study	
ARHS 507	Native American	
ARHS 510	Intro Curatorial Practice	
ARHS 520	Greek and Roman	
ARHS 531	Medieval	
ARHS 533	Medieval Architecture	
ARHS 538	History of Stained Glass	
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ARHS 548	Women in Art	
ARHS 550	Northern Renaissance	
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ARHS 580	Modern	
ARHS 581	Modern Architecture	

ARHS 582	GPS-Architect Frank Lloyd Wright	
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ARHS 589	Contemporary	
ARHS 593	Special Topics	
ARHS 595	Independent Study	
ARHS 601	Thesis	
ARHS 693	Special Topics	
ARHS 694	Seminar	
ART 696	Graduate Seminar	3
ART 600	Graduate Exhibition and Thesis	3
Total Hours		36

Major Learning Outcomes

STUDIO ART

The following are general learning goals for students pursuing a Master of Arts:

- Develop advanced capacities to work independently and make effective artistic and intellectual judgments and professional decisions in the area of specialization.
- Demonstrate professional competence in the area of specialization before peers and faculty.
- Gain knowledge and skills in one or more areas outside the major.

School of Music

Degrees Offered

- Master of Arts
- Master of Music
- Doctor of Musical Arts
- Doctor of Philosophy

Graduate Certificates Offered

- Artist Diploma in Music Performance
- Music Industry

The School of Music is an accredited institutional member of the National Association of Schools of Music, the only nationally recognized accrediting agency for professional music instruction. All programs comply with the objectives and guidelines required by this organization.

FACULTY

DIRECTOR

- Michael Ibrahim - D.M.A. (Manhattan School of Music)
  Saxophone

DIRECTOR OF GRADUATE STUDIES

- Cynthia Babin Anderson - M.M. (Manhattan School of Music)
  Oboe, Theory

DIRECTOR OF UNDERGRADUATE STUDIES

- Sandra Schwartz - Ph.D. (University of Miami)
  Coordinator of Music Education, Music Education

PROFESSORS

- Peter Amstutz - D.M.A. (Peabody Conservatory)
  Piano
- Cynthia Anderson - M.M. (Manhattan School of Music)

Oboe, Theory

- Michael Ibrahim - D.M.A. (Manhattan School of Music)
  Saxophone
- Hope Koehler - D.M.A. (University of Kentucky)
  Coordinator of Voice Studies, Voice
- Andrew Kohn - Ph.D. (University of Pittsburgh)
  Double Bass, Theory
- Mikylah Myers - D.M.A. (University of Houston)
  Violin, Chamber Music
- David Taddie - Ph.D. (Harvard University)
  Music Theory, Electronic Music
- Michael Vercelli - D.M.A. (University of Arizona)
  Director of World Music Performance Center
- John F. Weigand - D.M.A. (Florida State University)
  Coordinator of Woodwinds, Clarinet, Chamber Music
- George Willis - M.M. (Temple University)
  Coordinator of Percussion Studies

ASSOCIATE PROFESSOR

- Mitchell Arnold - D.M.A. (Northwestern University)
  Director of Orchestral Activities, Conducting
- Nina Assimakopoulos - M.M. (Munich Academy of Music)
  Flute, Chamber Music
- Lynn Hileman - D.M.A. (Eastman School of Music)
  Bassoon, Theory
- Andrea Houde - M.M. (Peabody Institute)
  Coordinator of Strings, Viola, String Pedagogy, Chamber Music
- Lucy Mauro - D.M.A. (Peabody Institute)
  Piano Pedagogy, Class Piano, Piano, Chamber Music
- Sandra Schwartz - Ph.D. (University of Miami)
  Coordinator of Music Education, Music Education
- Travis D. Stimeling - Ph.D. (University of North Carolina - Chapel Hill)
  Coordinator of Musicology
- Scott C. Tobias - D.M.A. (The University of Georgia)
  Director of Bands

ASSISTANT PROFESSOR

- Hakeem Bilal - M.M. (Carnegie Mellon University)
  Trombone
- Ryan Carroll - M.S. (Indiana University - Purdue University Indianapolis)
  Music Therapy
- Robert Chafin - M.M. (Cincinnati Conservatory of Music)
  Voice
- YuChun Chien - D.M.A. (Manhattan School of Music)
  Theory, Composition - Visiting
- Erin Ellis - D.M.A. (Eastman School of Music)
  Cello, Chamber Music, String Pedagogy
- Jason Gossett - Ph.D. (The Pennsylvania State University)
  Music Education
- Matthew Heap - Ph.D. (University of Pittsburgh)
  Coordinator of Theory and Composition, Theory, Composition
- Ching-Wen Hsiao - D.M.A. (Juilliard School)
  Coordinator of Keyboard, Piano
- James Kenon Mitchell - M.M. (Westminster Choir College)
  Opera, Vocal Coaching
- Angela Munroe - Ph.D. (University of Colorado Boulder)
  General Music Education

- Kym Scott - D.M.A. (University of Southern California)
  Director of Choral Activities
- Robert Sears - DMA - ABD (University of Illinois at Urbana-Champaign)
  Trumpet, Jazz, Chamber Music
- Jeffrey Siegfried - D.M.A. (University of Michigan)
  Saxophone, Chamber Music
- Jared Sims - D.M.A. (Boston University)
  Director of Jazz Studies
- Joshua Swiger - M.A. (West Virginia University)
  Music Industry - Visiting
- Jonas Thoms - M.M. (University of Cincinnati-College Conservatory of Music)
  Coordinator of Brass, Horn, Chamber Music
- Darko Velichkovski - M.A. (City University of New York)
  Director of Music Industry
- Laura Knoop Very - M.M. (Yale University)
  Voice
- Jennifer Walker - Ph.D. (University of North Carolina - Chapel Hill)
  Musicology

FACULTY EQUIVALENT ACADEMIC PROFESSIONAL

- Mark Benincosa - M.S. (West Virginia University)
  Recording Technology
- Sun Jung Lee - D.M.A. (West Virginia University)
  Accompanying, Piano, Chamber Music

LECTURERS

- Timothy DeWitt - D.M.A. (Eastman School of Music)
  Music Education
- William Koehler - D.M.A. (University of Minnesota)
  Voice
- Rebecca Kreider - M.M. (Indiana University)
  General Education Courses
- Teresita Lozano - ABD (University of Colorado Boulder)
  Ethnomusicology/Musicology
- Christine Mazza - M.M. (Cleveland Institute of Music)
  Harp
- Carson McTeer - B.A. (Rice University)
  Tuba, Euphonium, Chamber Music
- Adam Osmianski - M.M. (West Virginia University)
  General Education Courses
- Brian Plitnik - D.M.A. (West Virginia University)
  General Education Courses
- Stacey Russell - D.M.A. (University of South Carolina)
  Theory, Music Education
- Brian Wolfe - B.M. (West Virginia University)
  Drum Set, Percussion, Jazz
- Renee Wyatt - M.M. (West Virginia University)
  Music Education

PROFESSORS EMERITI

- John Beall
- James W. Benner
- Thomas S. Brown
- Philip J. Faini
- Mary T. Ferer
- William Haller

- Barton Hudson
- Leo Horacek, Jr.
- Christine B. Kefferstan
- Gerald Lefkoff
- James Miltenberger
- Janet Robbins
- William Skidmore
- Connie Arau Sturm
- Robert H. Thieme
- Virginia Thompson
- Gilbert Trythall
- Molly Weaver
- Don G. Wilcox
- Christopher Wilkinson

ASSOCIATE PROFESSORS EMERITI

- David Bess
- Joyce A. Catalfano
- Rose M. Crain
- John E. Crotty
- June D. Swartwout

Admissions

Prospective graduate students in music are required to have completed the appropriate curriculum of undergraduate study in music at WVU or its equivalent at another institution of recognized-standing. For acceptance into a degree program, the applicant should make inquiry to the Director of Graduate Studies, School of Music, College of Creative Arts, P.O. Box 6111, Morgantown, WV 26506-6111.

Applicants for degree study in composition, music theory, musicology, and performance (including conducting) must take a diagnostic test in music theory; masters students must pass a piano proficiency. In addition, performance majors in voice and conducting take diagnostic tests in pedagogy and literature. Applicants for degree study in music education must take proficiencies in piano and voice. Applicants in music education have the option to take the diagnostic exam in music theory. The results of these tests may indicate the need for remedial study, which must be completed before admission to candidacy.

Admission to Masters Program

Applicants to the program leading to the degree of master of music or master of arts in musicology must present necessary credentials for evaluation of previous training and experience to the School of Music. These include transcripts from all institutions previously attended showing a grade point average of at least 3.0 in all undergraduate study submitted through the WVU Office of Admissions. Three letters of recommendation from individuals who are qualified to judge the applicant's potential success as a graduate student in music may be submitted to the WVU Office of Graduate Admissions or directly to the Director of Graduate Studies in Music.

With the exception of applicants in composition, musicology, and music industry, all applicants are also required to demonstrate, by audition, their level of attainment in a principal performance area. The evaluation of performance proficiency is based on technical ability, repertoire, and musicianship. A listing of representative material for each performance area, graded by proficiency level, is available upon request. A recording may be submitted in cases where travel makes an audition impractical. Each degree option has established standards which must be met for admission. For performance majors, the estimated proficiency level must be confirmed by a jury examination at the end of the first semester of performance study. Credit in performance may be counted toward degree requirements only after the proficiency-level prerequisite has been reached.

Applicants seeking admission as composition majors must submit representative compositions for evaluation and approval. When the application for composition is complete, it will be reviewed by the composition faculty. If this review is favorable, a representative of the composition faculty will contact the applicant to schedule an entrance audition and interview.

Applicants seeking admission as music theory or musicology majors must submit a sample of writing, such as a term paper. A musical subject is recommended but not required. Musicology applicants must have taken the equivalent of four semesters of training in a language other than English; remedial work in languages may be recommended during masters degree study, if necessary.

Applicants seeking admission to the master of arts in music industry must submit transcripts from a bachelor's degree from an accredited university showing a GPA of 3.0 or higher. GPA exceptions will be made on an individual case-by--case basis, depending upon previous experience and/or years of applicable professional experience. Applicants must submit GRE scores, as well as a CV, and a 500 word essay describing the student's professional preferences, goals and aspirations. Students must achieve 153 on the verbal and 144 on the quantitative GRE sections. The GRE requirement may be

waived if the student's bachelor's degree GPA is 3.3 or higher (on 4.0 scale), <u>and/or</u> if his/her professional experience in the industry exceeds 5 years, with strong academic and/or professional recommendations. The master of arts in music industry degree is offered online through https://online.wvu.edu (https://online.wvu.edu/). Admission to the master of arts in music industry is selective and competitive.

Applicants to music education curricula must submit the following:

1. An essay describing and discussing your training, experiences, present interests, and career aspirations in the field of music education

2. A current résumé

3. A video recording of teaching, preferably a K-12 music class or rehearsal (Please submit a detailed lesson plan for each class or rehearsal presented on your video of teaching. When the application for music education is complete, it will be reviewed by the music education faculty. If this review is favorable, a representative of the music education faculty will contact the applicant to schedule an entrance interview and audition. Note: This is not required of those who are applying for the certification option.)

PROVISIONAL ADMISSION

Applicants whose admission profile does not meet the qualifications outlined above may be considered for acceptance as provisional students. The decision to offer provisional admission will be made by the School of Music Committee on Graduate Studies based upon information available for review. If a student is offered and accepts enrollment as a provisional admit, the student may thereafter be accepted as degree student if, upon completion of up to twelve semester hours of graduate study, the student has earned a minimum of a B (3.0) average and satisfied any previous undergraduate deficiencies or other conditions.

Admission to Doctor of Musical Arts Programs

Acceptance into doctoral programs is competitive. Applicants to the program leading to the D.M.A. must present necessary credentials for evaluation of previous training and experience. These include transcripts showing an average of at least a 3.0 grade point average in a minimum of twenty-eight hours in liberal arts studies submitted through the WVU Office of Admissions. Copies of programs of recent major recitals must be submitted directly to the Director of Graduate Studies in Music. Three letters of recommendation from individuals who are qualified to judge the applicant's potential success as a graduate student in music may be submitted to the WVU Office of Graduate Admissions or directly to the Director of Graduate Studies in Music. Normally, the admission process also includes an on-campus audition and interview with the faculty of the major performance area. Applicants to the D.M.A. in composition must also submit scores and recordings for review. Applicants who do not meet all of the criteria for regular admission to the D.M.A. degree program may be considered for provisional admission subject to the satisfactory completion of certain specified courses or the attainment of a specified grade point average within a semester's work. The decision to offer or deny provisional admission will be made by the School of Music Committee on Graduate Studies based upon information available for review at the time of the application.

Applicants for the D.M.A. in conducting must meet language prerequisites: at least two years of undergraduate study of one language (French, Italian, German, or Spanish) or appropriate undergraduate study in diction (English, French, Italian, German, or Latin). At the discretion of the conducting faculty, a demonstrated ability to read in a language other than English may be accepted as meeting the prerequisite. Students who have not taken the required courses at the undergraduate level may meet the prerequisite by passing a proficiency exam subsequent to admission or may be directed to take additional language or diction courses to address any deficiencies, as determined by the conducting faculty, and as appropriate to the expectations of the degree.

AUDITION REQUIREMENTS

Have a complete résumé and prepared list of your completed repertoire in hand for examination by the audition committee. On this list, using asterisks indicate those numbers that you have performed from memory. Auditions are approximately sixty minutes of performance. Live auditions are strongly recommended, but recordings can be considered when travel distance poses a hardship.

The following repertoire guidelines are intended to be flexible and to encourage diversity of individual interests, but they also provide a sense of expected scope. Offering repertoire from all the categories listed below is not mandatory at your audition, but you should certainly choose a program that contains stylistic variety and represents your own strengths. Works customarily performed from memory in public recitals should be performed from memory at your audition.

PERCUSSION

- Keyboard
    a. Major contemporary marimba work
    b. Solo violin work (one movement) from J.S. Bach Sonatas and Partitas
    c. Vibraphone solo of any style
    d. Perform six orchestral excerpts (xylophone and glockenspiel)
- Snare Drum
    a. Solo or etude from the advanced classical repertoire
    b. Solo or etude from the advanced rudimental repertoire
    c. Three orchestral excerpts
- Drumset

  a. Perform at least four varying styles
  b. World percussion (optional) - possibilities include steel drums, African drumming, taiko, etc.
- Multi-media
  a. Video recording of last solo percussion recital that includes multiple percussion and chamber music (if possible)

PIANO

- A major Baroque work, such as a group of Scarlatti sonatas, a suite by Bach, or one or more preludes and fugues from the *Well-Tempered Clavier*
- A complete sonata, variation set, or similar work by Beethoven or another classical composer
- A major Romantic or Impressionist work
- Another work of your choice, preferably a major composition (or several shorter pieces) representative of twentieth-century style

COLLABORATIVE PIANO

- Sixty minutes of music, including a major instrumental sonata and art songs, as well as one solo memorized major work

VOICE

Have a prepared list of your previous vocal teachers and vocal coaches and a precise statement of your present language background, e.g., foreign language study, diction, phonetics, etc.

1. An Aria from an Oratorio: Handel, Haydn, or Mendelssohn
2. One selection of your own; preferably a major operatic aria
3. At least two selections from each of the four language categories:

   - Italian - 17th and 18th-century, Aria by Mozart, 19th and 20th-century opera
   - German - An Aria by Bach, Lieder, Mozart, Schubert, Schumann, Brahms, Wolf, Mahler, Strauss
   - French - Art Songs: Debussy, Ravel, Faure, Poulenc
   - English - Early Songs: Purcell or Arne, Contemporary American and British songs (such as Britten, Menotti, or Floyd)

STRINGS

Audition repertoire for the D.M.A. in music performance should be chosen to demonstrate the applicant's current level of achievement. Early in the application process, potential students should contact the major teacher in the area and discuss audition repertoire possibilities. Suggested repertoire could include a concerto, sonata, show piece, solo Bach, and for the double bass, three major orchestral excerpts.

WOODWINDS, BRASS

Audition repertoire for the D.M.A. in music performance should be chosen to demonstrate the applicant's current level of achievement. Early in the application process, potential students should contact the major teacher in their area and discuss audition repertoire possibilities.

CONDUCTING

An on-campus audition with the WVU Wind Symphony, Chamber Singers, or Symphony Orchestra is preferred, although video recorded auditions are allowed when great distance precludes a visit to campus. The student is encouraged to audition in his/her strongest performance area: wind band, choir, or orchestra. Further audition requirements are as follows:

1. The applicant will perform a conducting audition with an appropriate WVU ensemble which will consist of twenty to thirty minutes of rehearsal of repertoire to be assigned at least two weeks in advance by the appropriate conducting faculty.
2. The applicant will perform an audition on his/her major instrument or voice before appropriate music faculty. Those who have been away from solo performance for a period of several years may offer evidence of past proficiency (e.g. recital programs, letters, reviews, video or audio recording, etc.)
3. Knowledge of literature and techniques appropriate to the applicant's desired area of emphasis will be assessed by appropriate faculty.
4. Applicants desiring a choral emphasis will also be asked to demonstrate knowledge of appropriate vocal pedagogy within the choral rehearsal as well as appropriate piano skills.

Admission to the Doctor of Philosophy in Music Education Program

A prospective doctoral student in music education is required to have completed appropriate undergraduate and master's degrees in music or their equivalent at institutions of recognized standing. Also, an applicant must provide evidence of excellence in teaching and musicianship demonstrated during at least three years of successful, full-time contractual K-12 music teaching. Applicants to the program leading to the doctor of philosophy must present necessary credentials for evaluation of previous training and experience to the School of Music. These include transcripts showing at least a 3.0 grade point average in a minimum of twenty-eight hours in liberal arts studies submitted through the WVU Office of Graduate Admissions. The following items must be submitted directly to the Director of Graduate Studies in Music:

1. An essay describing and discussing your training, experiences, present interests, and career aspirations in the field of music education
2. A current résumé
3. A video recording of teaching, preferably a K-12 music class or rehearsal (Please submit a detailed lesson plan for each class or rehearsal presented on your video of teaching. When the application for music education is complete, it will be reviewed by the music education faculty. If this review is favorable, a representative of the music education faculty will contact the applicant to schedule an entrance interview and possible audition.)

Applicants who do not meet all of the criteria for regular admission to the Ph.D. degree program may be granted a provisional admission subject to the satisfactory completion of certain specified courses or the attainment of a specified grade point average within a semester's work.

In this Section:

1. MASTER OF MUSIC/MASTER OF ARTS

2. DOCTOR OF MUSICAL ARTS

3.DOCTOR OF PHILOSOPHY IN MUSIC EDUCATION

Master of Music/Master of Arts

The Master of Music degree may be taken in music education, performance (including conducting), composition, collaborative piano, piano pedagogy, jazz pedagogy, or music theory. The Master of Arts degree may be taken in musicology or music industry.

ADDITIONAL REQUIREMENTS FOR MASTER OF MUSIC DEGREES AND MASTER OF ARTS IN MUSICOLOGY:

In addition to fulfilling the degree requirements for each specific program, the following pertains to all students in master of music programs or the master of arts in musicology program:

- Master's degree students must establish an overall grade point average of 3.0.
- A representative public recital is required of candidates majoring in performance. Composition majors must submit a composition in a large form as a thesis.
- All candidates for the master of music degree are required to participate for credit for two semesters (or summer sessions) in a performing group which meets at least two clock-hours per week and which is selected with the advisor's approval. Candidates for the master of arts in musicology are required to participate for credit in a performing ensemble for two semesters.
- A general comprehensive oral examination must be passed by all candidates for the master of music degree and the master of arts in musicology degree. Unsuccessful candidates may repeat this examination after a three-month period. The results of the second oral examination will normally be considered final. The examining committee will decide immediately after an unsuccessful second attempt whether a petition for a third attempt will be granted.
- Students must complete their programs within eight calendar years. Failure to do so will result in the loss of credit for courses taken at the outset of the program.

ADDITIONAL REQUIREMENTS FOR MASTER OF ARTS IN MUSIC INDUSTRY:

- Students must complete their programs within eight calendar years. Failure to do so will result in the loss of credit for courses taken at the outset of the program.

Doctor of Musical Arts

The primary objective of the doctor of musical arts degree is the recognition of the highest achievement in music performance and teaching. The principal objective of the degree is to prepare artist-pedagogues for careers in higher education and in the professional world.

The degree may be taken in performance and literature (with specialization in piano, collaborative piano, voice, percussion, flute, oboe, clarinet, saxophone, bassoon, horn, trumpet, trombone, tuba, low brass, violin, viola, cello, double bass, or conducting) or in composition. Historical and theoretical knowledge sufficient to support individualized interpretations for performers, original voice research for vocal pedagogues, and original creative work for composers is expected, as are writing and speaking skills needed to communicate clearly and effectively. To assist the student in achieving these objectives, the course of study includes requirements in performance or composition, pedagogy, academic coursework, and research.

The doctor of musical arts curriculum in conducting prepares students for careers in higher education and in the professional world. During the program of study, students will study repertoire and technique specific to ensembles in all three major performance areas: wind band, choir, and orchestra. Demonstration of knowledge, skill, expressive fluency, and general conducting competency will be developed through public performance preparation with all three areas; however, most performing will be completed in the student's primary area of emphasis.

CURRICULUM

The exact amount and nature of coursework undertaken will be determined by the student's advisor with the approval of the committee on graduate studies in light of previous preparation and field of specialization. A paradigm detailing recommended courses and other requirements is available upon request.

CANDIDACY

Upon completion of the requirements of the School of Music and the general WVU graduate studies requirements, the student will be recommended for admission to candidacy for the degree. These requirements are (in order of occurrence):

1. Pass written qualifying examinations satisfactorily to show the following:

   - Broad knowledge in music theory and music history and literature
   - In-depth knowledge of the literature of the field of specialization or of the craft of composition

2. Satisfactorily pass a comprehensive oral qualifying examination.

The qualifying examinations shall be considered one integral examination consisting of written and oral parts. If the first attempt is unsuccessful, the student is allowed to try the entire examination a second time. The second attempt will be considered final. The applicant's committee may elect to discourage a second attempt if the first does not indicate probable success upon repetition. Graduate students who have met these requirements and who have maintained a minimum average of B (3.0) in courses completed shall be admitted to candidacy.

RESIDENCY REQUIREMENTS

Completion of the requirements for this degree normally requires at least three years of full-time graduate work. A minimum of two consecutive semesters must be spent in full-time graduate study at WVU beyond the master's degree or its equivalent.

ACADEMIC REQUIREMENTS

- Academic requirements include courses in music theory, musicology, and music literature.

PERFORMANCE REQUIREMENTS (FOR D.M.A. IN PERFORMANCE)

Performance requirements include private lessons, master classes in applied repertory, and public performance of at least two solo recitals and other types of presentations appropriate for the preparation of an artist-teacher, such as chamber music programs, concerto performances, lecture recitals, major roles in opera oratorio, musical theater, or major accompaniments. Collaborative piano requirements include private lessons, master classes in applied collaborative repertory, and public performances of collaborative vocal and instrumental repertoire, along with presentations appropriate for the preparation of a collaborative artist-teacher, such as chamber music programs, concerto performances, piano in large ensemble works, major large ensemble accompaniments, and lecture recitals. Credit for each public performance is determined in advance, usually during the first semester of study, along with the establishment of the student's doctoral committee. A performance prospectus indicating projected performance repertoire is prepared by the student in consultation with his/her committee and the major ensemble directors as appropriate.

COMPOSITION REQUIREMENTS (FOR D.M.A. IN COMPOSITION)

Composition requirements include private lessons and the creation of a composition portfolio. The student will be encouraged by the major professor to compose works in a timely manner in a wide variety of genres from which can be drawn a select number of pieces for the portfolio. The comprehensive

examination determines the admission to candidacy and is normally taken after the successful completion of required coursework in music theory and music history. Work on the major project and research document normally will commence only after admission to candidacy. The candidate will submit to his/her doctoral committee for approval a prospectus for the portfolio to include the proposed major work, the proposed research document, and the other compositions with proposed credit weighting for each.

RESEARCH REQUIREMENTS (FOR ALL D.M.A. PROGRAMS)

Research requirements are intended to develop theoretical and historical investigative techniques sufficient to enable the performer to form valid individualized interpretations and to assist the composer in developing an original style. These requirements consist of the course Music Research and Bibliography (MUSC 771); for composers, a doctoral seminar; and for all students, a research project culminating in an extended written study related to the student's area, although not necessarily constituting original research. Projects will be supervised by an approved graduate faculty member who is a member of the student's doctoral committee in consultation with the entire doctoral committee.

FINAL EXAMINATION

For performers, the final examination will consist of a major solo recital (which will be regarded as the equivalent of the Ph.D. dissertation defense). Immediately following the public performance, the candidate's committee will meet to evaluate the performance as evidence of mature musicianship and finished technique. The final recital will not occur in the same semester as the qualifying examination.

For composers, when all compositions and the major project have been approved and all other requirements have been fulfilled, the candidate's doctoral committee will administer the final oral examination. At the option of the committee, a written examination may also be required. The final examination(s) shall be concerned with the compositions, the major project, and the candidate's grasp of the field of specialization and its relation to other fields. The final examination will not be given in the same semester as the qualifying examination.

TIME LIMITATION

Following admission to candidacy, doctoral students are allowed five years to complete all remaining degree requirements. An extension of time not to exceed one year may be permitted only upon repetition of the qualifying examination and completion of any other requirements specified by the student's doctoral committee.

Doctor of Philosophy in Music Education

The doctor of philosophy curriculum in music education prepares students for careers as teachers and researchers in higher education. A main purpose of the program is to develop skilled and knowledgeable professionals who will challenge the present and enrich the future with significant contributions to the field through teaching, research, and service. Acceptance into the doctoral program is competitive.

EXAMINATIONS
WRITTEN QUALIFYING

Each student must demonstrate the following areas of knowledge:

- A broad knowledge in the fields of music history and music theory
- Appropriate knowledge in the cognate field
- In-depth knowledge in the field of music education

ORAL QUALIFYING

The student's doctoral committee will administer a comprehensive oral examination integral with the written examinations; passage of all is the basis for formal admission to candidacy.

CANDIDACY

Upon completion of the requirements of the School of Music and the general WVU graduate studies requirements, the student will be recommended for admission to candidacy for the degree. These requirements are (in order of occurrence):

1. Complete all coursework.
2. Complete a major project from a graduate music education seminar. (This project should be appropriately refined and presented publicly under the supervision of a member of the graduate music education faculty. A concise written proposal articulating the scope and context of the project and the nature of its intended forum must be submitted to the graduate music education faculty for consensus approval.)
3. Pass written qualifying examinations demonstrating the following:
   a. Broad knowledge in music history and music theory
   b. Appropriate knowledge in the cognate field (usually integrated into the music education exam)
   c. In-depth knowledge in the field of music education
4. Pass a comprehensive oral qualifying examination.

The qualifying examinations shall be considered as one integral examination consisting of the written and oral parts. If the first attempt is unsuccessful, the student is allowed to try the entire examination a second time. The second attempt will be considered final. The applicant's committee may elect to discourage a second attempt if the first does not indicate probable success upon repetition.

DISSERTATION PROSPECTUS

1. The requirement for doctoral seminars must be completed before the presentation of the dissertation prospectus.
2. The prospectus must include the following: table of contents, introduction, statement of purpose, research hypothesis, summary of related literature, specifics of methodology, research design, data collection process, analysis procedures, appendices, and a comprehensive bibliography.

DISSERTATION

The candidate must submit a dissertation produced at WVU under the direction of a major professor that demonstrates a high-order of independent scholarship, originality, and competence in research and that makes an original contribution to the field of specialization.

After the dissertation has been approved and all other requirements have been fulfilled, the candidate's doctoral committee will administer the final oral examination. However, a final examination will not be given in the same semester as the qualifying examination. At the option of the student's committee, a final written examination may also be required. The final examination(s) shall be concerned with the dissertation, its contribution to knowledge, its relation to other fields, and the candidate's grasp of the field of specialization.

RESIDENCE REQUIREMENTS

Completion of the requirements for this degree normally requires at least three years of full-time graduate work. A minimum of two consecutive semesters must be spent in residence in full-time graduate study at WVU beyond the master's degree or its equivalent.

TIME LIMITATION

Following admission to candidacy, Ph.D. students are allowed five years to complete all remaining degree requirements. An extension of time not to exceed one year may be permitted only upon repetition of the qualifying examination and completion of any other requirements specified by the student's doctoral committee.

Collaborative Piano, M.M., D.M.A.

Degrees Offered

- Master of Music
- Doctor of Musical Arts

Nature of the Program

The Master of Music in Collaborative Piano provides students wishing to specialize in piano accompaniment an opportunity to study and achieve an advanced degree in this highly demanding and lucrative professional field. Students in the Master of Music in Collaborative Piano program will develop the necessary skills for collaborative performance in today's market, including opera and art song coaching techniques, diction, and vocal and instrumental accompanying, and will engage in a wide array of performing ensemble settings already in place in the School. Applicants should hold an undergraduate performance or collaborative piano degree. In the MM in Collaborative Piano degree, students will further develop their performing abilities as highly skilled and marketable pianists.

The Doctor of Musical Arts in Collaborative Piano represents a high achievement in collaborative performance, teaching, and coaching, and is intended to help students prepare for careers in higher education and the professional world. The program offers courses in literature, theory, and history as well as applied lessons centered on collaborative repertoire. A performance and research component is also included, allowing students flexibility to develop a variety of collaborative vocal, instrumental and chamber recitals and a research paper. Applicants should hold an undergraduate and Master's degree in piano performance and/or collaborative piano.

Admissions

Applicants must earn a Performance Level ten for admission. An undergraduate piano performance or collaborative piano degree is required. A jury is required at end of the first semester. Students must have an appropriate amount of diction at the undergraduate level, or they will be required to register for two semesters of diction as remedial work.

Degree Requirements

Overall GPA of 3.0 or higher required.

MUSC 700E	Performance:Piano	8
MUSC 771	Music Research and Bibliography	3
MUSC 689	Master's Recital (Vocal)	2

MUSC 689	Master's Recital (Instrumental)	2
MUSC 647	Chamber Music: Piano	2
Complete one Music Theory course and one Music History course from the following		5-6
Music Theory:		
MUSC 460	Upper Division Composition	
MUSC 461	Counterpoint	
MUSC 462	Counterpoint	
MUSC 463	Analysis of Eighteenth and Nineteenth Century Music	
MUSC 464	Analysis of Twentieth Century Art Music	
MUSC 465	Electronic Music	
MUSC 466	Electronic Music-Digital Audio	
MUSC 468	Jazz Harmony	
MUSC 761	Theory Topics	
MUSC 762	Pedagogy of Theory	
MUSC 763	Analytical Techniques	
MUSC 764	Compositional Techniques in Contemporary Music	
Music History:		
MUSC 470	European Music before 1500	
MUSC 471	Music of the Sixteenth and Seventeenth Centuries	
MUSC 472	Music of the Eighteenth Century	
MUSC 473	Music of the Nineteenth Century	
MUSC 474	Twentieth and Twenty-First Century Music	
MUSC 475	History of Jazz	
MUSC 593	Special Topics	
MUSC 670	Perspectives of Musicology and Ethnomusicology	
MUSC 731	Keyboard Literature	
MUSC 793	Special Topics	
MUSC 795	Independent Study	
MUSC 796	Graduate Seminar	
Music Electives (no more than four hours in the major performance area)		7-8
Ensembles (two semesters)		2
Comprehensive Oral Examination		
Total Hours		31-33

ADDITIONAL REQUIREMENTS

- A representative public recital is required of candidates majoring in performance.
- All candidates for the master of music degree are required to participate for credit for two semesters (or summer sessions) in a performing group which meets at least two clock-hours per week and which is selected with the advisor's approval.
- A general comprehensive oral examination must be passed by all candidates for the master of music degree.

Degree Requirements

MUSC 700	Performance	16
MUSC 771	Music Research and Bibliography	3
Music History and Literature		
Selected from the following including at lease one doctoral level seminar:		9
MUSC 470	European Music before 1500	
MUSC 471	Music of the Sixteenth and Seventeenth Centuries	
MUSC 472	Music of the Eighteenth Century	
MUSC 473	Music of the Nineteenth Century	
MUSC 474	Twentieth and Twenty-First Century Music	
MUSC 475	History of Jazz	
MUSC 593	Special Topics	

MUSC 670	Perspectives of Musicology and Ethnomusicology	
MUSC 731	Keyboard Literature	
MUSC 793	Special Topics	
MUSC 795	Independent Study	
MUSC 796	Graduate Seminar	
Music Theory		6
Selected from the following including at least one doctoral level seminar:		
MUSC 460	Upper Division Composition	
MUSC 461	Counterpoint	
MUSC 462	Counterpoint	
MUSC 463	Analysis of Eighteenth and Nineteenth Century Music	
MUSC 464	Analysis of Twentieth Century Art Music	
MUSC 465	Electronic Music	
MUSC 466	Electronic Music-Digital Audio	
MUSC 468	Jazz Harmony	
MUSC 761	Theory Topics	
MUSC 762	Pedagogy of Theory	
MUSC 764	Compositional Techniques in Contemporary Music	
MUSC 763	Analytical Techniques	
Recitals/Research		20
MUSC 788	Doctoral Recital (Minimum of 12 credits required)	
MUSC 797	Research (Minimum of 2 credits required)	
Master Class in Applied Repertoire		6
MUSC 730	Master Class in Applied Repertoire: Keyboard (Repeated)	
Written Qualifying Examination		
Comprehensive Oral Qualifying Examination		
Final Oral Examination of Research and Performance of Final Recital		
Total Hours		60

Major Learning Outcomes

COLLABORATIVE PIANO

Students who earn graduate degrees in Collaborative Piano will develop:

- Advanced competencies in vocal and/or instrumental collaboration.
- Knowledge and skills in one or more fields of music outside the major such as theory, history, musicology, ethnomusicology, and performance.
- Knowledge of repertory and historical performance practices.
- Language diction competencies.
- Competencies in chamber music.

Composition, M.M., D.M.A.

Degrees Offered

- Master of Music
- Doctor of Musical Arts

Nature of the Program

Graduate instruction in composition at the masters level is generally in contemporary art music styles but also includes work in various electronic mediums (fixed playback pieces, instrument(s) and electronics, interactive electronics, etc.) with studies available in jazz, world music, and other vernacular musical styles. At least one submitted work must be in the style of art (concert) music for traditional acoustic instruments.

The primary objective of the Doctor of Musical Arts degree is the recognition of the highest achievement in music performance and teaching, preparing artist-pedagogues for careers in higher education and in the professional world. The degree may be taken in composition or in performance and literature (with specialization in piano, collaborative piano, voice, percussion, flute, oboe, clarinet, bassoon, saxophone, horn, trumpet, trombone, tuba,

low brass, violin, viola, cello, double bass, or conducting). Historical and theoretical knowledge sufficient to support individualized interpretations for performers and original creative work for composers is expected, as are writing and speaking skills needed to communicate clearly and effectively. To assist the student in achieving these objectives, the course of study includes requirements in performance or composition, academic coursework, and research.

Admissions

Applicants must demonstrate a piano proficiency (level four); evaluation of previously completed compositions is required.

Applicants for entrance to the MM in Composition should send a portfolio of compositions that include a major work (a work of at least a ten-minute duration and/or a work for large ensemble with or without voice) and two or three other works in various genres. Scores may be submitted as Finale or Sibelius files or as pdf's. Recordings and/or MIDI realizations of application compositions are strongly encouraged but not mandatory. Electronic submission of both score and audio files is highly recommended.

Applicants for entrance to the DMA in Composition should send a portfolio of compositions that include a major work (master's thesis or equivalent) and two or three other works in various genres. Scores may be submitted as Finale or Sibelius files or as pdf's. Recordings and/or MIDI realizations of application compositions are strongly encouraged but not mandatory. Electronic submission of both score and audio files is highly recommended.

Degree Requirements

Overall GPA of 3.0 or higher required.

Composition		6
MUSC 660	Composition (Repeated) [**]	
MUSC 670	Perspectives of Musicology and Ethnomusicology (or other as approved)	3
MUSC 771	Music Research and Bibliography	3
MUSC 764	Compositional Techniques in Contemporary Music	3
or MUSC 464	Analysis of Twentieth Century Art Music	
Music Theory Electives: [***]		6
MUSC 463	Analysis of Eighteenth and Nineteenth Century Music	
or MUSC 763	Analytical Techniques	
MUSC 761	Theory Topics	
MUSC 762	Pedagogy of Theory	
MUSC 765	Transcription and Arranging	
Music Electives [****]		5
MUSC 697	Research	4
Composition/Thesis		
Ensemble (two semesters)		2
Comprehensive Oral Examination		
Total Hours		32

ADDITIONAL REQUIREMENTS

- Composition majors must submit a composition in a large form as a thesis.
- All candidates for the master of music degree are required to participate for credit for two semesters (or summer sessions) in a performing group which meets at least two clock-hours per week and which is selected with the advisor's approval.
- A general comprehensive oral examination must be passed by all candidates for the master of music degree.

[*]   One semester of counterpoint and 1 of electronic music are required if not taken in the undergraduate degree.
[**]   MUSC 660-002 is a separate class and can be used as a music theory elective
[***]   MUSC 660-002 is also a suitable elective.
[****]   Music electives must be selected from available offerings above MUSC 400.

Degree Requirements

One semester of electronic music and 2 of counterpoint or equivalent, if not taken in previous study.

Composition		18
MUSC 660	Composition (Repeated; at least 3 credits must be in electronic music)	
Music History and Literature		9

Including at least one doctoral level seminar.

Music Theory		12
MUSC 762	Pedagogy of Theory	
MUSC 764	Compositional Techniques in Contemporary Music	
MUSC 690	Teaching Practicum	
One additional course selected from the following:		
MUSC 463	Analysis of Eighteenth and Nineteenth Century Music	
MUSC 761	Theory Topics	
MUSC 763	Analytical Techniques	
MUSC 765	Transcription and Arranging	
MUSC 771	Music Research and Bibliography	3
Research/Recitals		20
MUSC 788	Doctoral Recital (May be repeated -- 8-12 hours)	
MUSC 797	Research (major composition project -- 4-8 hours)	
MUSC 797	Research (research document -- 2-6 hours)	
Qualifying Examination, which includes both written and oral components		
Final Oral Examination		
Total Hours		62

Major Learning Outcomes

COMPOSITION

Students who earn graduate degrees in Composition will develop:

- Advanced competencies in composition.
- Knowledge and skills in one or more fields of music outside the major such as history and literature, theory and analysis, musicology and ethnomusicology, performance, and pedagogy.

Conducting, M.M., D.M.A.

Degrees Offered

- Master of Music
- Doctor of Musical Arts

Nature of the Program

During the program of study, students at both the masters and doctoral levels will have the opportunity to study repertoire and techniques specific to ensembles in all three major performance areas: wind band, choir, and orchestra. Demonstration of knowledge, skill, expressive fluency, and general conducting competency will be developed through public performance preparation.

For the M.M. in Conducting, it is strongly recommended that those desiring admission to this degree have a minimum of 2 years successful teaching/conducting experience beyond their undergraduate conducting courses.

The doctor of musical arts curriculum in conducting prepares students for careers in higher education and in the professional world.

An on-campus audition with the Wind Symphony, Chamber Singers, or Symphony Orchestra is preferred, although video recorded auditions are allowed when great distance precludes a visit to campus. The student is encouraged to audition in his/her strongest performance area: wind band, choir, or orchestra. Further audition information is located on the WVU School of Music website.

Degree Requirements

Overall GPA of 3.0 or higher required.

MUSC 700	Performance (major performance area)	8
MUSC 771	Music Research and Bibliography	3
Conducting		6
MUSC 710	Conducting (Repeated)	
Select one survey course from the following in the major performance area		3
MUSC 631	Survey of Orchestral Music	
MUSC 632	Survey of Wind Music	

MUSC 633	Survey of Vocal Music	
Select one techniques course from the following in the secondary area		2
MUSC 780	Choral Techniques	
MUSC 781	Instrumental Techniques	
Music Theory		3
Select one of the following:		
MUSC 761	Theory Topics	
MUSC 762	Pedagogy of Theory	
MUSC 763	Analytical Techniques	
MUSC 764	Compositional Techniques in Contemporary Music	
Complete one Music Theory or Music History course from the following:		2-3
Music Theory		
MUSC 460	Upper Division Composition	
MUSC 461	Counterpoint	
MUSC 462	Counterpoint	
MUSC 463	Analysis of Eighteenth and Nineteenth Century Music	
MUSC 464	Analysis of Twentieth Century Art Music	
MUSC 465	Electronic Music	
MUSC 466	Electronic Music-Digital Audio	
MUSC 468	Jazz Harmony	
If not taken above:		
MUSC 761	Theory Topics	
MUSC 762	Pedagogy of Theory	
MUSC 763	Analytical Techniques	
MUSC 764	Compositional Techniques in Contemporary Music	
Music History		
MUSC 470	European Music before 1500	
MUSC 471	Music of the Sixteenth and Seventeenth Centuries	
MUSC 472	Music of the Eighteenth Century	
MUSC 473	Music of the Nineteenth Century	
MUSC 474	Twentieth and Twenty-First Century Music	
MUSC 475	History of Jazz	
MUSC 593	Special Topics	
MUSC 670	Perspectives of Musicology and Ethnomusicology	
MUSC 731	Keyboard Literature	
MUSC 793	Special Topics	
MUSC 795	Independent Study	
MUSC 796	Graduate Seminar	
MUSC 689	Master's Recital (Qualifying Recital)	2
MUSC 689	Master's Recital (Major Recital)	4
Ensemble (2 semesters)		2
Comprehensive Oral Examination		
Total Hours		35-36

ADDITIONAL REQUIREMENTS

- All candidates for the master of music degree are required to participate for credit for two semesters (or summer sessions) in a performing group which meets at least two clock-hours per week and which is selected with the advisor's approval.
- A general comprehensive oral examination must be passed by all candidates for the master of music degree.

Degree Requirements

MUSC 700	Performance (major performance area)	16
Conducting		6

MUSC 710	Conducting (Repeated)	
MUSC 771	Music Research and Bibliography	3
MUSC 670	Perspectives of Musicology and Ethnomusicology (or another graduate level Music History course as determined by graduate entrance examination)	3
Select one survey course from the following in the secondary area or a Music History course		3
MUSC 631	Survey of Orchestral Music	
MUSC 632	Survey of Wind Music	
MUSC 633	Survey of Vocal Music	
Music History		3
Select one of the following:		
MUSC 731	Keyboard Literature (piano principals only)	
MUSC 793	Special Topics	
MUSC 795	Independent Study	
MUSC 796	Graduate Seminar	
Doctoral seminar in Music Analysis		3
Music Theory		3
Selected from the following:		
MUSC 460	Upper Division Composition	
MUSC 461	Counterpoint	
MUSC 462	Counterpoint	
MUSC 463	Analysis of Eighteenth and Nineteenth Century Music	
MUSC 464	Analysis of Twentieth Century Art Music	
MUSC 465	Electronic Music	
MUSC 466	Electronic Music-Digital Audio	
MUSC 468	Jazz Harmony	
MUSC 761	Theory Topics	
MUSC 762	Pedagogy of Theory	
MUSC 763	Analytical Techniques	
MUSC 764	Compositional Techniques in Contemporary Music	
Recitals/Research		20
MUSC 788	Doctoral Recital (Minimum of 12 credits required)	
MUSC 797	Research (Minimum of 2 credits required)	
Written Qualifying Examination		
Final Oral Examination of Research and Performance of Final Recital		
Total Hours		60

Major Learning Outcomes

CONDUCTING

Students who earn graduate degrees in Conducting will develop:

- Advanced knowledge in major field of study (wind band, choral, or orchestra) and competencies in the other two areas
- Advanced competencies in conducting, score study, and rehearsal techniques
- Advanced knowledge of repertoire
- Knowledge and skills in one or more fields of music outside the major such as history and literature, theory and analysis, musicology and ethnomusicology, performance, and pedagogy.

Jazz Pedagogy, M.M.

Degree Offered

- Master of Music

Nature of the Program

The program is designed to prepare students for independent jazz teaching, public school teaching, college or university studio or group teaching, ensemble coaching, and the teaching of jazz improvisation and pedagogy at the college or university level.

Admissions

Admission to the program requires a score of level nine in the major performance area, piano proficiency (level three), and one year of jazz pedagogy/group or equivalent teaching experience.

Applicants are required to sight-read both musical notation and chord changes. Applicants should be prepared to play common jazz scale forms and improvise in a number of jazz and contemporary styles. In addition, applicants may choose additional music that best reflects their technical ability, overall musicianship, and musical interests. The applicant should demonstrate their versatility and creativity.

Degree Requirements

Overall GPA of 3.0 or higher required.

MUSC 700	Performance (major performance area)	8
MUSC 771	Music Research and Bibliography	3
MUSC 689	Master's Recital	2
Jazz Performance/Pedagogy		6
MUSC 634	Jazz Performance and Pedagogy (Repeated)	
Complete one Music Theory course or one Music History course from the following:		2-3
Music Theory		
MUSC 460	Upper Division Composition	
MUSC 461	Counterpoint	
MUSC 462	Counterpoint	
MUSC 463	Analysis of Eighteenth and Nineteenth Century Music	
MUSC 464	Analysis of Twentieth Century Art Music	
MUSC 465	Electronic Music	
MUSC 466	Electronic Music-Digital Audio	
MUSC 468	Jazz Harmony	
MUSC 761	Theory Topics	
MUSC 762	Pedagogy of Theory	
MUSC 763	Analytical Techniques	
MUSC 764	Compositional Techniques in Contemporary Music	
Music History		
MUSC 470	European Music before 1500	
MUSC 471	Music of the Sixteenth and Seventeenth Centuries	
MUSC 472	Music of the Eighteenth Century	
MUSC 473	Music of the Nineteenth Century	
MUSC 474	Twentieth and Twenty-First Century Music	
MUSC 475	History of Jazz	
MUSC 593	Special Topics	
MUSC 670	Perspectives of Musicology and Ethnomusicology	
MUSC 731	Keyboard Literature	
MUSC 793	Special Topics	
MUSC 795	Independent Study	
MUSC 796	Graduate Seminar	
Music Electives		4-5
MUSC 797	Research	4
Ensemble (two semesters)		2
Comprehensive Oral Examination		
Total Hours		31-33

Major Learning Outcomes

JAZZ PEDAGOGY

Students who earn the Master of Music in Jazz Pedagogy will develop:

- Advanced competencies in jazz studies including areas such as jazz performance, improvisation, composition, and arranging.
- Advanced competencies in pedagogy specific to the study of jazz and its repertory.
- Knowledge and skills in one or more fields of music outside the major such as history and literature, theory and analysis, musicology and ethnomusicology, and recording and studio techniques.

Music Education, M.M., Ph.D.

Degrees Offered

- Master of Music
- Doctor of Philosophy

Nature of the Program

The M.M. music education degree is designed to cultivate continued development of professional competence beyond the baccalaureate degree. High levels of musicianship and pedagogical expertise are integrated into a comprehensive program of study. Unique to the degree in music education are four degree options that enable students to pursue individual interests and talents. At the core of each of the 30-hour degree option is coursework that immerses students in the foundations and research of music education, performance studies, music history, and music theory. To complete the degree, students can select from the following four options of coursework and culminating projects:

- Field Study Option: This degree option emphasizes teaching and includes opportunities to integrate performance studies and research with a school-based field study that demonstrates application of knowledge and skills from graduate study as a culminating project.
- Recital Option: This degree option emphasizes performance studies and includes opportunities to integrate research and teaching with a representative public recital that demonstrates advanced performance competence as a culminating project.
- Thesis Option: This degree option emphasizes research and includes opportunities to integrate performance and teaching with an original thesis that demonstrates advanced research and writing competence as a culminating project.
- Certification Option: This degree option is designed for persons who obtained an undergraduate degree in music other than music education. Coursework (including student teaching) leads to a professional certificate (birth-adult music, West Virginia) and is combined with a master's degree in music education with the generation of a professional portfolio as a culminating project. Students begin the program with a series of undergraduate courses that are necessary for certification. This block of undergraduate courses ranges from zero to twenty credits depending on the student's previous coursework.

The Doctor of Philosophy curriculum in music education prepares students for careers as teachers in higher education. A main purpose of the program is to develop skilled and knowledgeable professionals who will challenge the present and enrich the future with significant contributions to the field through teaching, research, and service. Acceptance into the doctoral program is competitive. A prospective doctoral student in music education is required to have completed appropriate undergraduate and master's degrees in music or their equivalent at institutions of recognized standing.

Admissions

STUDENTS APPLYING TO GRADUATE DEGREE PROGRAMS IN MUSIC EDUCATION MUST:

- Apply to West Virginia University through the Office of Graduate Admissions.
- Submit a current resume to the Office of Graduate Studies in Music.
- Submit an essay to the Office of Graduate Studies in Music describing and discussing your training, experiences, and present interests in the field of Music Education. Also, discuss your career aspirations five years from now as they relate to earning master's (or doctoral) degree in Music Education.
- Submit a video recording of teaching, preferably a K-12 music class or rehearsal, and a lesson plan to accompany the recording. Please submit a detailed lesson plan for each class or rehearsal presented on your video of teaching. The video recording container should clearly indicate your name and degree program for which you are applying. Recordings should have been made within the six months prior to the submission of the application. Video recordings must be of high quality. The preferable format is DVD, and the disc should clearly indicate that it is a DVD format. Applicants should review the video recording in its entirety to ensure audio, visual, and technical clarity before mailing to the Office of Graduate Studies in Music. (This is not required if you are applying for the Master of Music, Music Education Certification option.)

Any recordings or videos on disc submitted for your admissions file will be held no more than one year. If you would like such materials to be returned to you, please provide a self addressed, stamped envelope.

Students may find more information about admission to graduate study in Music Education online: https://www.music.wvu.edu/academics/masters-programs (https://www.music.wvu.edu/academics/masters-programs/)

Degree Requirements

Ensemble (2 Semesters)		2
MUSC 783	Foundations of Music Education	3
MUSC 784	Introduction to Research in Music Education	3
Advanced seminars [*]		6
Complete one Music Theory course and one Music History course from the following:		5-6
Music Theory:		
MUSC 460	Upper Division Composition	
MUSC 461	Counterpoint	
MUSC 462	Counterpoint	
MUSC 463	Analysis of Eighteenth and Nineteenth Century Music	
MUSC 464	Analysis of Twentieth Century Art Music	
MUSC 465	Electronic Music	
MUSC 466	Electronic Music-Digital Audio	
MUSC 468	Jazz Harmony	
MUSC 761	Theory Topics	
MUSC 762	Pedagogy of Theory	
MUSC 763	Analytical Techniques	
MUSC 764	Compositional Techniques in Contemporary Music	
Music History:		
MUSC 470	European Music before 1500	
MUSC 471	Music of the Sixteenth and Seventeenth Centuries	
MUSC 472	Music of the Eighteenth Century	
MUSC 473	Music of the Nineteenth Century	
MUSC 474	Twentieth and Twenty-First Century Music	
MUSC 475	History of Jazz	
MUSC 593	Special Topics	
MUSC 670	Perspectives of Musicology and Ethnomusicology	
MUSC 731	Keyboard Literature	
MUSC 793	Special Topics	
MUSC 795	Independent Study	
MUSC 796	Graduate Seminar	
Field Study, Recital, and Thesis Options [**]		
Select 1 of the following options:		12
Field Study		
MUSC 678	Masters Field Study (4 hours)	
MUSC 500 or MUSC 700 Performance (4 hours)		
Music Electives (4 hours)		
Recital Option		
MUSC 500 or MUSC 700 Performance (8 hours)		
MUSC 689	Master's Recital (2 hours)	
Music electives (2 hours)		
Thesis Option		
MUSC 500 or MUSC 700 Performance (4 hours)		
MUSC 697	Research (4 hours)	
Music Electives (4 hours)		
Total Hours		31-32

[*] Advanced seminars in music education, methods, workshops, and directed studies. (Maximum of two hours from workshops; maximum of two hours from directed studies.)

**   <u>Certification Option</u>: In lieu of completing the Field Study, Recital, or Thesis Option, students may complete the Core Requirements and the Certification Requirements to earn the Masters Degree in Music Education and be eligible for certification.

CERTIFICATION REQUIREMENTS

C&I 491	Professional Field Experience	4
Select one of the following:		3
EDP 600	Educational Psychology	
EDP 700	Psychological Foundations of Learning	
MUSC 200	Fundamentals of Conducting	2
MUSC 201	Conducting and Score Interpretation	2
MUSC 202	Conducting and Rehearsing	2
MUSC 280	Woodwind Instrument Pedagogy	2
MUSC 281	Brass Instrument Pedagogy	2
MUSC 282	String Instrument Pedagogy	2
MUSC 283	Percussion Instrument Pedagogy	2
MUSC 284	Vocal Pedagogy	2
MUSC 380	Instrumental Methods and Technology Applications	3
MUSC 381	Choral Music Methods and Technology Applications	3
MUSC 382	General Music Methods and Technology Applications	3
MUSC 487	Student Teaching Seminar	2
MUSC 491	Professional Field Experience	10
MUSC 500 or MUSC 700	Performance	4
RDNG 422	Reading in the Content Areas	3
SPED 500	Legal/Educational Foundations: Special Education	3
SPED 601	Academic Interventions for Special Needs	3
Total Hours		57

Degree Requirements

Music Education Courses		16
Additional Required Courses (Music History, Music Theory, Music Composition, Statistics, Educational Psychology)		11-12
Cognate Courses (9 credits must be in the same discipline)		12
Electives		8-9
Major Project from a graduate music education seminar		
Written Qualifying Examination		
Oral Qualifying Examination		
MUSC 797	Research	12
Total Hours		59-61

Major Learning Outcomes

MUSIC EDUCATION

Students who earn the graduate degrees in Music Education will develop:

- Advanced competencies in music education.
- Graduate-level perspectives on contemporary issues and problems in music education.
- Knowledge and skills in one or more fields of music outside the major such as performance, conducting, theory and analysis, and history and literature.

Music Industry, M.A.

Degree Offered

- Master of Arts

Nature of the Program

The music industry is a vibrant, multi-billion dollar global industry, vast in scope and reach, offering a product that is deeply ingrained into the fabric of every country and culture, across social strata, around the world. As such, it offers extensive professional opportunities to those who are trained, knowledgeable, and versed in its systems, methods, and practices.

The Master of Arts Program in Music Industry at the School of Music offers such knowledge and training by providing an engaging, systematic, and rigorous course of study leading to analytical, creative, regulatory, and entrepreneurial understanding and skills necessary to succeed in today's complex and challenging music industry field.

The program is offered online as a high quality graduate-level distance-learning opportunity. The program will provide all students possessing appropriate interest, qualifications, and ambition, regardless of their geographic location, access to extensive academic training and acquisition of professional skills necessary for building or furthering their careers in the music industry.

The School of Music also offers a Graduate Certificate in Music Industry.

Admissions

Admission is selective and competitive. Minimum application materials will include the following:

- a bachelor's degree from an accredited university and a GPA of 3.0 or higher;
- GRE results with minimum scores including 153 on the verbal and 144 on the quantitative GRE sections. (The GRE requirement may be waived if the student's Bachelor's Degree GPA is 3.3 or higher [on a 4.0 scale], and/or if his/her professional experience in the industry exceeds 5 years, with strong academic and/or professional recommendations.)
- a curriculum vitae
- a 500-word essay describing student's professional preferences, goals and aspirations.

COURSE REQUIREMENTS

If a student has not already completed the following undergraduate course(s) prior to registering for the program, they must complete them during the first year of the program:

- Bachelor's Degree in Music earned - Undergraduate Accounting / Financial Management course needed
- Bachelor's Degree in Business earned - Undergraduate Music Appreciation course needed
- Other Bachelor Degree(s) earned - Undergraduate Accounting / Financial Management course and Undergraduate Music Appreciation course needed

Degree Requirements

Minimum Grade in any course: C-.

Minimum GPA requirement: 2.75.

Music Industry Foundations Module (9 credits)

Required course:		3
MUSC 611	Music Industry Regulations	
Select two courses from the following:		6
MUSC 610	Foundations of Recording Industry	
MUSC 616	Foundations of Music Publishing Industry	
MUSC 617	Development of Music Technology	

Music Commerce, Management, and Operations Module (18 credits)

Required courses:		12
MUSC 612	Music Product Advancement	
MUSC 613	Music Performance Organization and Commerce	
MUSC 614	Advanced Recording Industry	
MUSC 615	Advanced Music Publishing	
Select two from the following:		6
MUSC 619	Music in Multimedia	
MUSC 620	International Music Industry	
MUSC 621	Artist Representation	

Music Production Methods and Technology Module (3 credits)

Select one from the following:		3

MUSC 623	Recording Production
MUSC 624	Live Music Production
Industry Project (3 credits)	
Required course:	3
MUSC 626	Music Industry Project

Total Hours	33

Suggested Plan of Study

The required Music Industry Foundations course, MUSC 611, must be taken prior to any of the required and elective Music Commerce, Management, and Operations Module courses can be taken. All of the other elective courses can be taken anytime. MUSC 626 can only be taken after all required and elective courses are successfully completed, and a student has earned 30 credits in the program.

First Year

Fall	Hours	Spring	Hours	Summer	Hours
MUSC 611		3 MUSC 613		3 Select one of the following:	3
MUSC 615		3 MUSC 614		3 MUSC 619	
		Select one of the following:		3 MUSC 620	
		MUSC 610		MUSC 621	
		MUSC 616			
		MUSC 617			
		6		9	3

Second Year

Fall	Hours	Spring	Hours
Select one of the following:		3 MUSC 612	3
MUSC 619		MUSC 626	3
MUSC 620			
MUSC 621			
Select one of the following:	3		
MUSC 623			
MUSC 624			
Select one of the following:	3		
MUSC 610			
MUSC 616			
MUSC 617			
	9		6

Total credit hours: 33

Major Learning Outcomes
MUSIC INDUSTRY

Students who earn the Master of Arts in Music Industry will develop the following:

- The ability to delineate and analyze current music industry regulations regarding their commercial implications, business opportunities, and appropriate music industry management practices across the industry income streams.
- The knowledge of the historical progress and development of various music business sectors and relevant regulatory frameworks in demonstrating mastery and understanding of the present music business regulations, systems and methods.
- The ability to perform and manage standard and management level music business procedures and processes utilized in the music publishing, recording, and live music industries, including conception and management of various music product development and placement strategies and plans.

- The ability to construct and evaluate budgets and financial projections across the music industry income streams based on the project parameters, and the relevant market level, regulations, indicators and trends.
- The ability to plan and manage music production processes and activities in recording and live music business sectors including scheduling, budgeting, equipment, personnel, union issues, and regulatory requirements.
- The ability to utilize the music industry research and analysis knowledge and skills to make a constructive contribution to the scholarship in the field, and/or to create a proper business opportunity, or to productively manage a music product, so to create new value and generate positive returns on investments.

Music Theory, M.M.

Degree Offered

- Master of Music

Nature of the Program

The Master of Music in Music Theory is intended for performers and music educators who desire advanced training in the analysis of Western art music and preparation for teaching basic musicianship in either a high school or college setting. This degree can also prepare students for doctoral work in either academic or applied areas, depending upon the electives chosen. It is recommended that those considering this degree have above average keyboard skills; specifically the student should be able to play select Bach *Two-Part Inventions* and be able to sight read a hymn or chorale.

Admissions

Applicants for the MM in Music Theory must submit a sample of writing, such as a term paper; a music theory paper is recommended. The paper may be uploaded as part of the WVU Graduate Application or may be sent directly to the School of Music.

Admission to the program requires a level eight audition in the major performance area, demonstrated proficiency on piano (level four), and equivalent undergraduate courses of MUSC 461 16th-century counterpoint and MUSC 462 18th-century counterpoint (MUSC 461 and MUSC 462 will be required as deficiency courses in the Masters program if not taken at the undergraduate level.)

Degree Requirements

Overall GPA of 3.0 or higher required.

MUSC 771	Music Research and Bibliography	3
MUSC 763	Analytical Techniques	3
MUSC 764	Compositional Techniques in Contemporary Music	3
MUSC 762	Pedagogy of Theory	3
MUSC 761	Theory Topics	3
Music History		3
Select one Music History course from the following:		
MUSC 470	European Music before 1500	
MUSC 471	Music of the Sixteenth and Seventeenth Centuries	
MUSC 472	Music of the Eighteenth Century	
MUSC 473	Music of the Nineteenth Century	
MUSC 474	Twentieth and Twenty-First Century Music	
MUSC 475	History of Jazz	
MUSC 593	Special Topics	
MUSC 670	Perspectives of Musicology and Ethnomusicology	
MUSC 731	Keyboard Literature	
MUSC 793	Special Topics	
MUSC 795	Independent Study	
MUSC 796	Graduate Seminar	
Electives		8
MUSC 697	Research	4
Ensemble (two semesters)		2
Comprehensive Oral Examination		
Total Hours		32

Major Learning Outcomes
MUSIC THEORY

Students who earn the Master of Music in Music Theory will develop:

- Advanced competencies in music theory.
- Knowledge and skills in one or more fields of music outside the major such as history and literature, composition, musicology and ethnomusicology, performance, and pedagogy.

Musicology, M.A.

Degree Offered

- Master of Arts

Nature of the Program

Students completing the Master's Program in Musicology develop a broad understanding of the primary methods used in musicological and ethnomusicological research. Courses and seminars explore a wide range of musical repertories and scholarly debates, and the curriculum encourages students to engage meaningfully with the field through pedagogical training and focused research.

The theses of recent graduates have explored the construction of female identity through sheet music collection in the post-bellum U.S. South, early twentieth-century violin pedagogy and African American racial uplift, sexual consent in contemporary country songs, performance practice in the music of Brahms, and the ethics of musical improvisation with computer agents.

Recent graduates have entered leading North American doctoral programs or have found employment in occupations drawing heavily upon the expertise and skills developed through our degree program.

Admissions

Admission to the Master of Arts in Musicology requires academic transcripts, three letters of reference from academic faculty, a personal statement, and a representative sample of academic writing (minimum of 10 pages in length).

Degree Requirements

Students must demonstrate the equivalent of four semesters of training in a language other than English and must demonstrate Level 2 piano proficiency.

Overall GPA of 3.0 or higher is required.

MUSC 670	Perspectives of Musicology and Ethnomusicology	3
MUSC 671	Music History Pedagogy (Music History Pedagogy)	3
MUSC 771	Music Research and Bibliography	3
MUSC 697	Research	4
Ensembles (at least 1 credit must be a world music ensemble)		2
Select 2 of the following courses:		6
MUSC 470	European Music before 1500	
MUSC 471	Music of the Sixteenth and Seventeenth Centuries	
MUSC 472	Music of the Eighteenth Century	
MUSC 473	Music of the Nineteenth Century	
MUSC 474	Twentieth and Twenty-First Century Music	
MUSC 475	History of Jazz	
MUSC 477	Music of Africa (Select one of the following courses)	
Select two of the following courses		6
MUSC 593	Special Topics	
MUSC 793	Special Topics	
MUSC 796	Graduate Seminar	
Select one of the following courses		2
MUSC 461	Counterpoint	
MUSC 462	Counterpoint	
MUSC 463	Analysis of Eighteenth and Nineteenth Century Music	

MUSC 464	Analysis of Twentieth Century Art Music	
MUSC 465	Electronic Music	
MUSC 761	Theory Topics	
MUSC 762	Pedagogy of Theory	
MUSC 763	Analytical Techniques	
MUSC 764	Compositional Techniques in Contemporary Music	
Electives		6
Comprehensive Oral Qualifying Examination		
Total Hours		35

Major Learning Outcomes

MUSICOLOGY

Students who earn the Masters of Arts in Musicology will develop:

- Advanced competencies in music history and literature and/or musicology and/or ethnomusicology.
- Knowledge and skills in one or more fields of music outside the major such as theory and analysis, pedagogy, and performance, including participation in ensembles appropriate to the major emphasis.

Performance, M.M., D.M.A.

Degrees Offered

- Master of Music
- Doctor of Musical Arts

Nature of the Program

Performance majors may specialize in the following:

- Piano
- Voice
- Flute
- Oboe
- Clarinet
- Bassoon
- Saxophone
- Horn
- Trumpet
- Trombone
- Tuba
- Low brass (DMA only)
- Percussion
- Violin
- Viola
- Cello
- Double Bass

An Artist Diploma in Music Performance at the graduate level is also offered by the School of Music.

Admissions

MASTER OF MUSIC IN PERFORMANCE

All applicants to the Master of Music in Performance must demonstrate appropriate proficiency in the primary area of specialization via an audition before a panel of School of Music faculty; in-person auditions are preferred but video auditions may be considered via consultation with appropriate faculty. Audition repertoire for the Master of Music in Music Performance should be chosen that allows candidates to demonstrate their current level

of achievement. Early in the application process potential students should contact the major teacher in their area and discuss audition repertoire possibilities. Initial inquires may be sent to the Director of Graduate Studies in Music.

DOCTOR OF MUSICAL ARTS IN PERFORMANCE

All applicants to the Doctor of Musical Arts in Performance must demonstrate appropriate proficiency in the primary area of specialization via an audition before a panel of School of Music faculty; in-person auditions are preferred but video auditions may be considered via consultation with appropriate faculty.

Have a complete résumé and prepared list of your completed repertoire in hand for examination by the Audition Committee. On this list, use asterisks to indicate those numbers that you have performed from memory. Auditions are approximately 60 minutes of performance.

Repertoire guidelines for doctoral applicants to individual areas of specialization can be found at the School of Music Website (https://www.music.wvu.edu/academics/doctoral-programs/). These guidelines are intended to be flexible and to encourage diversity of individual interests; you should choose a program that contains stylistic variety and that represents your own strengths. Works customarily performed from memory in public recitals should be performed from memory at your audition. Early in the application process, potential students should contact the major teacher in their area and discuss audition repertoire possibilities. Initial inquires may be sent to the Director of Graduate Studies in Music; you will be given contact information for the major teacher in your area to facilitate your audition preparation.

Master of Music
Degree Requirements

Overall GPA of 3.0 or higher required.

MUSC 700	Performance (major performance area)	8
MUSC 689	Master's Recital	4
MUSC 689	Master's Recital	2
MUSC 771	Music Research and Bibliography	3
Complete one Music Theory course and one Music History course from the following:		5-6
Select one Music Theory course from the following:		
MUSC 460	Upper Division Composition	
MUSC 461	Counterpoint	
MUSC 462	Counterpoint	
MUSC 463	Analysis of Eighteenth and Nineteenth Century Music	
MUSC 464	Analysis of Twentieth Century Art Music	
MUSC 465	Electronic Music	
MUSC 466	Electronic Music-Digital Audio	
MUSC 468	Jazz Harmony	
MUSC 761	Theory Topics	
MUSC 762	Pedagogy of Theory	
MUSC 763	Analytical Techniques	
MUSC 764	Compositional Techniques in Contemporary Music	
Select one Music History course from the following:		
MUSC 470	European Music before 1500	
MUSC 471	Music of the Sixteenth and Seventeenth Centuries	
MUSC 472	Music of the Eighteenth Century	
MUSC 473	Music of the Nineteenth Century	
MUSC 474	Twentieth and Twenty-First Century Music	
MUSC 475	History of Jazz	
MUSC 593	Special Topics	
MUSC 670	Perspectives of Musicology and Ethnomusicology	
MUSC 731	Keyboard Literature	
MUSC 793	Special Topics	
MUSC 795	Independent Study	
MUSC 796	Graduate Seminar	
Music Electives (no more than four hours in the major performance area)		7-8
Ensemble (two semesters)		2

Comprehensive Oral Examination

Total Hours	31-33

Doctor of Musical Arts

Degree Requirements

MUSC 771	Music Research and Bibliography	3
MUSC 700	Performance (major performance area)	16
Music History and Literature		9
Selected from the following including at least one doctoral level seminar:		
MUSC 470	European Music before 1500	
MUSC 471	Music of the Sixteenth and Seventeenth Centuries	
MUSC 472	Music of the Eighteenth Century	
MUSC 473	Music of the Nineteenth Century	
MUSC 474	Twentieth and Twenty-First Century Music	
MUSC 475	History of Jazz	
MUSC 593	Special Topics	
MUSC 670	Perspectives of Musicology and Ethnomusicology	
MUSC 731	Keyboard Literature	
MUSC 793	Special Topics	
MUSC 795	Independent Study	
MUSC 796	Graduate Seminar	
Music Theory		6
Selected from the following with at least one doctoral level seminar:		
MUSC 460	Upper Division Composition	
MUSC 461	Counterpoint	
MUSC 462	Counterpoint	
MUSC 463	Analysis of Eighteenth and Nineteenth Century Music	
MUSC 464	Analysis of Twentieth Century Art Music	
MUSC 465	Electronic Music	
MUSC 466	Electronic Music-Digital Audio	
MUSC 468	Jazz Harmony	
MUSC 761	Theory Topics	
MUSC 762	Pedagogy of Theory	
MUSC 763	Analytical Techniques	
MUSC 764	Compositional Techniques in Contemporary Music	
MUSC 730	Master Class in Applied Repertoire	6
Recital/Research		20
MUSC 788	Doctoral Recital (Minimum 12 credits required)	
MUSC 797	Research (Minimum 2 credits required)	
Written Qualifying Examination		
Comprehensive Oral Qualifying Examination		
Final Oral Examination of Research and Performance of Final Recital		
Total Hours		60

Major Learning Outcomes

PERFORMANCE

Students who earn the graduate degrees in Performance will:

- Demonstrate advanced competencies in performance.
- Develop knowledge and skills in one or more fields of music outside the major such as theory and analysis, history and literature, musicology and ethnomusicology, and pedagogy.

- Expand competencies sufficient to understand texts in the repertoire. Voice majors are expected to be proficient in English, German, French, and Italian diction and to have general phonetic knowledge and skills that can be applied to other languages.

Piano Pedagogy, M.M.

Degree Offered

- Master of Music

Nature of the Program

WVU offers a Master of Music degree in Piano Pedagogy. This program offers a variety of courses and comprehensive experience in individual and group piano instruction.

This Master of Music degree is designed to provide advanced training to help prepare students to teach piano successfully in an independent studio, community music program or college. Topics covered may include:

- Teaching students of all ages
- Teaching students at beginning, intermediate and advanced levels
- Teaching in private- and group-lesson formats
- Evaluating recommended music, methods and materials
- Using technology to enhance music teaching
- Developing well-rounded curriculum for pre-college students
- Teaching students how to help their pupils develop a healthy and efficient technique as well as musical and stylistic playing
- Reviewing research on learning theory, memorization and other topics of importance to piano teachers
- Operating the independent studio as a successful business
- Special topics related to teaching college group instruction and private students
- Special topics related to teaching pre-college and advanced students

Admissions

Applicants must earn a Performance Level nine for admission. An undergraduate piano performance or collaborative piano degree is required. A jury is required at the end of the first semester.

Degree Requirements

Overall GPA of 3.0 or higher required.

Piano Performance		8
MUSC 700E	Performance: Piano (Repeated)	
MUSC 771	Music Research and Bibliography	3
MUSC 689	Master's Recital	2
Keyboard Performance/Pedagogy		6
MUSC 630	Keyboard Performance and Pedagogy (Repeated)	
Pedagogy Project		4
MUSC 695	Independent Study	
Complete one Music Theory course or one Music History course from the following:		2-3
Music Theory		
MUSC 460	Upper Division Composition	
MUSC 462	Counterpoint	
MUSC 463	Analysis of Eighteenth and Nineteenth Century Music	
MUSC 464	Analysis of Twentieth Century Art Music	
MUSC 465	Electronic Music	
MUSC 466	Electronic Music-Digital Audio	
MUSC 468	Jazz Harmony	
MUSC 761	Theory Topics	
MUSC 762	Pedagogy of Theory	
MUSC 763	Analytical Techniques	
MUSC 764	Compositional Techniques in Contemporary Music	

Music History

MUSC 470	European Music before 1500	
MUSC 471	Music of the Sixteenth and Seventeenth Centuries	
MUSC 472	Music of the Eighteenth Century	
MUSC 473	Music of the Nineteenth Century	
MUSC 474	Twentieth and Twenty-First Century Music	
MUSC 475	History of Jazz	
MUSC 593	Special Topics	
MUSC 670	Perspectives of Musicology and Ethnomusicology	
MUSC 731	Keyboard Literature	
MUSC 793	Special Topics	
MUSC 795	Independent Study	
MUSC 796	Graduate Seminar	
Music Electives		4-5
Ensembles (2 semesters)		2
Comprehensive Oral Examination		
Total Hours		31-33

Major Learning Outcomes

PIANO PEDAGOGY

Students who earn the Master of Music in Piano Pedagogy will develop:

- Advanced competencies in pedagogy specific to the study of piano and its repertory.
- Knowledge and skills in one or more fields of music outside the major such as history and literature, theory and analysis, musicology and ethnomusicology, and recording and studio techniques.

School of Theatre & Dance

e-mail: theatre@mail.wvu.edu

Degree Offered

- Master of Fine Arts
  - Acting
  - Costume Design & Technology
  - Lighting Design & Technology
  - Scenic Design & Technology
  - Technical Direction

All MFA degree programs in the School of Theatre & Dance are 3-year, 6-semester programs resulting in a terminal degree in that field of study.

West Virginia University is accredited by the National Association of Schools of Theatre (NAST).

FACULTY

DIRECTOR

- Joshua Williamson - M.F.A. (University of Wisconsin - Madison)
  Professor of Lighting Design

PROFESSORS

- Robert Klingelhoefer
  Scenic Design
- Mary McClung - M.F.A. (West Virginia University)
  Costume Design & Technology

- Jerry McGonigle - M.F.A. (American Conservatory Theatre)
  Acting, Directing

TEACHING PROFESSOR

- Cathy O'Dell - M.F.A. (West Virginia University)
  Acting

ASSOCIATE PROFESSOR

- Lee Blair - M.F.A. (University of Florida)
  Acting & Musical Theatre
- Cornel Gabara - M.F.A. (Columbia University)
  Acting
- General McArthur Hambrick - M.F.A. (University of Washington)
  Dance & Musical Theatre
- Yoav Kaddar - Ph.D. (State University of New York - Albany) and M.F.A. (University of Washington - Seattle)
  Dance
- Jay Malarcher - Ph.D. (Louisiana State University)
  Theatre History, Literature, & Criticism
- Jessica Morgan - M.F.A. (The Ohio State University)
  Stage Movement

CLINICAL ASSOCIATE PROFESSORS

- Alan McEwen - M.F.A. (University of Oregon)
  Lighting & Sound Design
- Steven Neuenschwander - M.F.A. (Yale School of Drama)
  Technical Direction

ASSISTANT PROFESSORS

- Jeremiah Downes - M.M. (Oklahoma City University)
  Musical Theatre
- Radhica Ganapathy - Ph.D. (Texas Tech University)
  Theatre History, Literature, & Criticism
- Brianne Taylor - M.F.A. (West Virginia University)
  Voice for the Stage

CLINICAL ASSISTANT PROFESSOR

- Tiffany Delligatti - M.F.A. (University of Connecticut)
  Costuming
- Aubrey Sirtutus - M.F.A. (Carnegie Mellon University)
  Production and Stage Management

TEACHING ASSISTANT PROFESSOR

- Irene Alby - M.F.A. (Columbia University)
  Acting
- Maureen Kaddar - MFA (University of Wisconsin-Milwaukee)
  Dance

Admissions

Prospective candidates for the degree of master of fine arts in theatre must have a B.A. or B.F.A. degree or equivalent from an accredited institution. Ordinarily, a minimum of thirty semester hours in theatre at the undergraduate level is expected to have been completed with a grade point average of no less than 2.75; although, students with an undergraduate grade point average of 2.25 to 2.75 may be admitted with probationary status.

Auditions

Applicants must audition/interview to gain admittance into the program. Applicants intending to specialize in acting must submit a complete resume of their acting experience, at least two letters of recommendation from acting coaches or directors, and must present an audition before at least one member of the acting faculty. Those intending to specialize in design must submit a complete portfolio of their work, a resume of their design experience, and at least two letters of recommendation from design instructors or directors. An interview with members of the design faculty is also required.

For further details regarding these requirements, please contact the School of Theatre & Dance, West Virginia University, P.O. Box 6111, Morgantown, WV 26506-6111, visit theatre.wvu.edu (http://theatre.wvu.edu), or call (304) 293-2020.

Advanced Standing

Students may be eligible for eighteen hours of graduate transfer credit for advanced-standing if they meet the regular requirements of graduate admission. Students admitted with advanced standing are required to be in residence at WVU for a minimum of two semesters and a summer session. The request for advanced standing should be made to the school director at the time of application.

Acting, M.F.A.

Degree Offered

- Master of Fine Arts

Nature of the Program

The M.F.A. acting program is an intensive three-year course of study designed to train students for the professional theatre world and its related fields including teaching pedagogy. The graduate acting studio program offers conservatory-style actor training in all aspects of acting, voice/speech, and movement. In addition to the studio program, students are required to complete coursework in theatre history, text analysis, criticism, and research methods.

M.F.A. acting students are accepted every three years and must follow the prescribed course sequence in the order that they are offered. The next entrance date will be Fall 2021 and the School of Theatre and Dance will be recruiting and auditioning students in the 2020-21 academic year.

Degree Requirements

Theatre Studies		
THET 610	Research Methods	3
THET 690	Teaching Practicum	3
Seminar		**9**
THET 696	Graduate Seminar	
Research		**3**
THET 697	Research	
Performance Studies		
THET 540	Graduate Vocal Techniques	2
THET 541	Graduate Voice Techniques	2
THET 542	Graduate Stage Movement 1	2
THET 543	Graduate Stage Movement 2	2
THET 544	Graduate Acting Studio 1	3
THET 545	Graduate Acting 2	3
Graduate Scene Study 1 (take twice, 1 credit each)		2
THET 546	Graduate Scene Study 1	
Graduate Scene Study 2 (taken twice, 1 credit each)		2
THET 547	Graduate Scene Studio 2	
Graduate Production Practicum (taken 5 times, 1 credit each)		5
THET 600	Graduate Production Practicum	
THET 640	Advanced Graduate Vocal Techniques	2
Adv Grad Stage Movement (taken twice, 2 credits each)		4
THET 642	Advanced Graduate Stage Movement	
THET 644	Advanced Graduate Acting Studio 1	3
THET 641	Advanced Graduate Vocal Techniques 2	2
THET 643	Advanced Graduate Stage Movement 2	2
THET 645	Advanced Acting Studio	3
THET 740	Advanced Graduate Vocal Techniques 3	2
THET 750	Graduate Showcase 1	1
THET 650	Graduate Study in Musical Theatre	2
THET 651	Graduate Acting for the Camera	2

THET 751	Showcase Development	2
Advance Study Elective		3
Oral Defense		
Evaluation (semesterly)		
Total Hours		69

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
THET 540	2	THET 541	2
THET 542	2	THET 543	2
THET 544	3	THET 545	3
THET 546	1	THET 546	1
THET 610	3	THET 600	1
		Graduate Seminar	3
		THET 696	
	11		12

Second Year

Fall	Hours	Spring	Hours
THET 640	2	THET 641	2
THET 642	2	THET 643	2
THET 644	3	THET 645	3
THET 600	1	THET 600	1
THET 547	1	THET 547	1
Graduate Seminar	3	Graduate Seminar	3
THET 696		THET 696	
	12		12

Third Year

Fall	Hours	Spring	Hours
THET 600	1	THET 697	3
THET 642	2	THET 600	1
THET 740	2	THET 751	2
THET 750	1	Select one of the following:	3
THET 650	2	THET 690	
THET 651	2	Advance Study Elective	
Select one of the following:	3		
THET 690			
Advance Study Elective			
	13		9

Total credit hours: 69

Major Learning Outcomes

ACTING

General Requirements:

Graduates of M.F.A. programs in the School of Theatre & Dance must exhibit exceptional skill in theatre practice and a well-developed personal aesthetic. The competencies outlined below are combined and synthesized to achieve this result. The standards do not require a specific course for each competency.

1. Advanced professional competence in some aspect of theatre practice as exemplified by a considerable depth of knowledge and achievement demonstrated by a significant body of work.

2. A breadth of understanding in theatre and any appropriate related disciplines, the ability to think independently, and to integrate and synthesize information associated with high levels of practice in an area of specialization.

3. Awareness of current issues and developments that are influencing the principal field(s) of study, and professional ability and clear potential to contribute to the practice and advancement of the field.

4. Writing and speaking skills to communicate clearly and effectively to the theatre communities and the public.

5. Advanced capabilities with technologies normally utilized in the creation of work.

6. An understanding of professional ethics and practice associated with the major field.

Specific Requirements:

The graduate must demonstrate advanced professional competence in acting including, but not limited to:

1. The ability to employ a broad range of acting knowledge and skills in the creation and presentation of roles.

2. The ability to perform in plays of various types and from various periods.

3. The acquisition of advanced understanding and capabilities in voice and speech, movement, and play analysis.

4. A working knowledge of historical, critical, and theoretical content and the ways they inform playwriting and dramatic writing, the creation of roles, and other aspects of production.

The student must perform regularly and should have at least two significant roles in full-length, public productions during the period of study.

Costume Design and Technology, M.F.A.

Degree Offered

- Master of Fine Arts

Nature of the Program

The M.F.A. design program is an intense three-year course of study for students seeking professional preparation in scenic, costume, or lighting design.

Studio design courses, together with fully realized production experience, offer expectations found in the real world.

- Three years of graduate courses and production work totaling at least sixty-four designated credit hours
- A production or research thesis
- Oral defense of the thesis project
- A successful evaluation at the end of each semester of study
- An overall grade point average of 3.0

Degree Requirements

Minimum GPA 3.0 required.

Theatre Studies		
THET 610	Research Methods	3
THET 627	Graduate Costume and Decoration 1	3
THET 628	Graduate Costume and Decoration 2	3
THET 697	Research	3
THET 697	Research	3
THET 697	Research	3
Theatre Design and Technology		
THET 423	Costume Crafts	3
THET 425	Advanced Costume Construction	3
THET 520	Principles of Stage Lighting	2
THET 621	Graduate Theatre Make-up	2
THET 622	Graduate Scene Design	3

THET 624	Graduate Costume Design 1	3
THET 626	Graduate Costume Design 2	3
THET 626	Graduate Costume Design 2	3
THET 630	Graduate Rendering Techniques	3
THET 725	Portfolio Development	1
Practicum		
Graduate Production Practicum (taken 4 times, 1 credit each)		4
THET 600	Graduate Production Practicum	
Electives		**12**
Oral Defense		
Portfolio Review		
Total Hours		60

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
THET 600	1	THET 425	3
THET 610	3	THET 626	3
THET 423	3	THET 621	2
THET 624	3	THET 600	1
	10		9

Second Year

Fall	Hours	Spring	Hours
THET 520	2	THET 626	3
THET 622	3	THET 628	3
THET 600	1	THET 600	1
THET 627	3	Elective	3
THET 630	3		
	12		10

Third Year

Fall	Hours	Spring	Hours
THET 697	3	THET 697	3
THET 725	1	THET 697	3
Elective	3	Elective	3
Elective	3		
	10		9

Total credit hours: 60

Major Learning Outcomes

COSTUME DESIGN AND TECHNOLOGY

General Requirements:

Graduates of M.F.A. programs in the School of Theatre & Dance must exhibit exceptional skill in theatre practice and a well-developed personal aesthetic. The competencies outlined below are combined and synthesized to achieve this result.

1. Advanced professional competence in some aspect of theatre practice as exemplified by a considerable depth of knowledge and achievement demonstrated by a significant body of work

2. A breadth of understanding in theatre and any appropriate related disciplines, the ability to think independently, and to integrate and synthesize information associated with high levels of practice in an area of specialization

3. Awareness of current issues and developments that are influencing the principal field(s) of study, and professional ability and clear potential to contribute to the practice and advancement of the field

4. Writing and speaking skills to communicate clearly and effectively to the theatre communities and the public

5. Advanced capabilities with technologies normally utilized in the creation of work

6. An understanding of professional ethics and practice associated with the major field

Specific Requirements:

The graduate must demonstrate advanced professional competence in costume design including, but not limited to:

1. Thorough understanding of and ability to utilize techniques for producing finished garments.

2. Advanced knowledge and abilities in developing costumes for productions of plays covering a range of styles, periods, and types of theatre, and utilization of techniques for production of a full range of costuming effects.

3. Creative and technical ability to develop the costume design of a production from concept to finished product.

4. A working knowledge of play analysis and an overview understanding of ways that historical, critical, and theoretical content inform various aspects of design and production.

5. The ability to work with theatre professionals in their processes of production

The student must design at least two major productions during the period of study, at least one of which must be fully mounted for the public.

Scenic Design and Technology, M.F.A.

Degree Offered

- Master of Fine Arts

Nature of the Program

The M.F.A. design program is an intense three-year course of study for students seeking professional preparation in scenic, costume, or lighting design.

Studio design courses, together with fully realized production experience, offer expectations found in the real world.

- Three years of graduate courses and production work totaling at least sixty-four designated credit hours
- A production or research thesis
- Oral defense of the thesis project
- A successful evaluation at the end of each semester of study
- An overall grade point average of 3.0

Degree Requirements

Minimum GPA of 3.0 required.

Theatre Studies		
THET 610	Research Methods	3
THET 627	Graduate Costume and Decoration 1	3
THET 628	Graduate Costume and Decoration 2	3
THET 697	Research	9
Theatre Performance Design		
THET 424	Advanced Technical Production	3
THET 520	Principles of Stage Lighting	2
THET 622	Graduate Scene Design	3
THET 623	Advanced Graduate Scene Design	3
THET 623	Advanced Graduate Scene Design	3
THET 629	Graduate Computer Assisted Design Seminar	3
THET 630	Graduate Rendering Techniques	3
THET 631	Graduate Drafting for the Stage	3
THET 635	Graduate Scene Painting	3
THET 725	Portfolio Development	1

Practicum	
Graduate Production Practicum (taken 4 times, 1 credit each)	4
THET 600 Graduate Production Practicum	
Electives	**12**
Oral Defense	
Evaluation and Portfolio Review (semesterly)	
Total Hours	61

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
THET 600	1	THET 520	2
THET 610	3	THET 623	3
THET 622	3	THET 629	3
THET 631	3	THET 600	1
	10		9

Second Year

Fall	Hours	Spring	Hours
THET 635	3	THET 623	3
THET 600	1	THET 628	3
THET 627	3	THET 600	1
THET 630	3	THET 424	3
		Elective	3
	10		13

Third Year

Fall	Hours	Spring	Hours
THET 697	3	THET 697	6
THET 725	1	Elective	3
Elective	3		
Elective	3		
	10		9

Total credit hours: 61

Major Learning Outcomes

SCENIC DESIGN AND TECHNOLOGY

General Requirements:

Graduates of M.F.A. programs in the School of Theatre & Dance must exhibit exceptional skill in theatre practice and a well-developed personal aesthetic. The competencies outlined below are combined and synthesized to achieve this result.

1. Advanced professional competence in some aspect of theatre practice as exemplified by a considerable depth of knowledge and achievement demonstrated by a significant body of work

2. A breadth of understanding in theatre and any appropriate related disciplines, the ability to think independently, and to integrate and synthesize information associated with high levels of practice in an area of specialization

3. Awareness of current issues and developments that are influencing the principal field(s) of study, and professional ability and clear potential to contribute to the practice and advancement of the field

4. Writing and speaking skills to communicate clearly and effectively to the theatre communities and the public

5. Advanced capabilities with technologies normally utilized in the creation of work

6. An understanding of professional ethics and practice associated with the major field

Specific Requirements:

The graduate must demonstrate advanced professional competence in scenic design including, but not limited to:

1. Advanced knowledge and skills in working with drawing and rendering, model making, two- and three- dimensional design, computer/digital technology, video and projection, and functional knowledge of the histories of style and scene design.

2. Advanced knowledge and abilities in developing settings for productions of plays covering a range of styles, periods, and types of theatre, and utilization of techniques for production of a full range of theatrical effects.

3. Creative and technical ability to develop scene designs from concept to finished product.

4. A working knowledge of play analysis and of ways that historical, critical, and theoretical content inform various aspects of design and production.

5. The ability to work with theatre professionals in their processes of production.

The student must design at least two major productions during the period of study, at least one of which must be fully realized for the public.

Lighting Design and Technology, M.F.A.

Degree Offered

- Master of Fine Arts

Nature of the Program

The M.F.A. design program is an intense three-year course of study for students seeking professional preparation in scenic, costume, or lighting design.

Studio design courses, together with fully realized production experience, offer expectations found in the real world.

- Three years of graduate courses and production work totaling at least sixty-four designated credit hours
- A production or research thesis
- Oral defense of the thesis project
- A successful evaluation at the end of each semester of study
- An overall grade point average of 3.0

Degree Requirements

Minimum GPA of 3.0 required.

Theatre Studies		
THET 610	Research Methods	3
THET 627	Graduate Costume and Decoration 1	3
THET 628	Graduate Costume and Decoration 2	3
THET 697	Research	3
THET 697	Research	3
THET 697	Research	3
Theatre Performance/Design		
THET 427	Lighting Technology	3
THET 520	Principles of Stage Lighting	2
THET 613	Stage Management	3
THET 622	Graduate Scene Design	3
THET 630	Graduate Rendering Techniques	3
THET 625	Graduate Lighting Design	3
THET 625	Graduate Lighting Design	3
THET 629	Graduate Computer Assisted Design Seminar	3
THET 631	Graduate Drafting for the Stage	3
THET 725	Portfolio Development	1
Practicum		
Graduate Production Practicum (taken 4 times, 1 credit each)		4
THET 600	Graduate Production Practicum	

Electives		**12**
Oral Defense		
Evaluation and Portfolio (semesterly)		
Total Hours		61

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
THET 520	2	THET 427	3
THET 600	1	THET 625	3
THET 610	3	THET 629	3
THET 631	3	THET 600	1
	9		10

Second Year

Fall	Hours	Spring	Hours
THET 622	3	THET 613	3
THET 600	1	THET 628	3
THET 627	3	THET 600	1
THET 630	3	THET 625	3
		Elective	3
	10		13

Third Year

Fall	Hours	Spring	Hours
THET 697	3	THET 697	3
THET 725	1	THET 697	3
Elective	3	Elective	3
Elective	3		
	10		9

Total credit hours: 61

Major Learning Outcomes

LIGHTING DESIGN AND TECHNOLOGY

General Requirements:

Graduates of M.F.A. programs in the School of Theatre & Dance must exhibit exceptional skill in theatre practice and a well-developed personal aesthetic. The competencies outlined below are combined and synthesized to achieve this result.

1. Advanced professional competence in some aspect of theatre practice as exemplified by a considerable depth of knowledge and achievement demonstrated by a significant body of work

2. A breadth of understanding in theatre and any appropriate related disciplines, the ability to think independently, and to integrate and synthesize information associated with high levels of practice in an area of specialization

3. Awareness of current issues and developments that are influencing the principal field(s) of study, and professional ability and clear potential to contribute to the practice and advancement of the field

4. Writing and speaking skills to communicate clearly and effectively to the theatre communities and the public

5. Advanced capabilities with technologies normally utilized in the creation of work

6. An understanding of professional ethics and practice associated with the major field

Specific Requirements:

The graduate must demonstrate advanced professional competence in lighting design including, but not limited to:

1. Advanced knowledge and skills in working with photometrics, brightness relationships, color, computer/digital technology and the history of design.

2. Advanced knowledge and abilities in electrical and optical control and distribution, regulation of lighting equipment, and mechanical drafting or visualization of lighting design.

3. Thorough understanding of (a) human response to light, (b) energy and materials, (c) photographic and photoelectric reproduction technology, and (d) safety codes and practices.

4. Creative and technical ability to develop the lighting design of a production from concept to finished product.

5. A working knowledge of play analysis and an overview understanding of ways that historical, critical, and theoretical content inform various aspects of design and production.

6. The ability to work with theatre professionals in their processes of production.

The student must design at least two fully-mounted, public productions during the period of study.

Technical Direction, M.F.A.

Degree Offered

- Master of Fine Arts

Nature of the Program

The M.F.A. program is an intense three-year course of study for students seeking professional preparation in Technical Direction.

- Three years of graduate courses and production work totaling a minimum of sixty-one designated credit hours
- A production or research thesis
- Oral defense of the thesis project
- A successful evaluation at the end of each semester of study
- An overall grade point average of 3.0

Degree Requirements

Minimum GPA of 3.0 required.

Theatre Studies		
THET 610	Research Methods	3
THET 627	Graduate Costume and Decoration 1	3
THET 628	Graduate Costume and Decoration 2	3
THET 697	Research	9
Theatre Design and Technology		
THET 520	Principles of Stage Lighting	2
THET 524	Production Planning	3
THET 535	Grad Theatre Health and Safety	3
THET 622	Graduate Scene Design	3
THET 631	Graduate Drafting for the Stage	3
THET 635	Graduate Scene Painting	3
THET 629	Graduate Computer Assisted Design Seminar	3
THET 636	Advanced Stagecraft	3
THET 712	Entertainment Rigging	3
THET 725	Portfolio Development	1
THET 726	Graduate Automation	3
Practicum		
Graduate Production Practicum (Repeated)		4
THET 600	Graduate Production Practicum	
Electives		**9**
Total Hours		61

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
THET 631	3	THET 524	3
THET 600	1	THET 600	1
THET 610	3	THET 629	3
THET 520	2	Elective	3
	9		10

Second Year

Fall	Hours	Spring	Hours
THET 627	3	THET 628	3
THET 712	3	THET 636	3
THET 600	1	THET 535	3
THET 622	3	THET 600	1
	10		10

Third Year

Fall	Hours	Spring	Hours
THET 726	3	THET 697	3
THET 697	6	THET 635	3
THET 725	1	Elective	3
		Elective	3
	10		12

Total credit hours: 61

Major Learning Outcomes

TECHNICAL DIRECTION

This degree program may be especially appropriate for students interested in pursuing opportunities as technical directors or theatrical project managers.

The graduate must demonstrate advanced professional competence in technical direction including, but not limited to:

1. The ability to supervise the safe construction of scenery and properties within the scope of allocated/budgeted materials, labor/time, and space.
2. The ability to understand various elements related to (a) theatrical design; (b) the set up and operation of lighting components and systems; (c) the use of sound reinforcement and playback systems; (d) methods of scenic art and construction; (e) rigging and motor systems; (f) fluid power systems (pneumatics and hydraulics) and motion control; and (g) mechanical, structural, and electrical engineering. The ability to work with these elements as appropriate to specific productions is essential.
3. The ability to read and direct personnel based on computer-aided technical drawings.
4. Personnel management, including the ability to safely supervise and, when appropriate, schedule the work of personnel within and across various theatrical shops.
5. The ability to work with theatre professionals in their processes of production.
6. The ability to articulate and apply federal, state, and local health and safety practices and regulations associated with production and performance including, but not limited to, appropriate Occupational Safety and Health Administration (OSHA) regulations and the National Fire Protection Association (NFPA) Life Safety Code.
7. Facilities management, including a) the ability to oversee the daily operations and maintenance of various theatrical shops; and b) the ability to maintain a working schedule of work done in, and outside requests to use, various shops and theatrical facilities.

- The graduate must demonstrate basic competence in the following areas of design and technology including, but not limited to:

  1. Computer-aided technical drawing
  2. Sewing
  3. Technical research
  4. Welding

- The student must successfully serve as the technical director for at least two fully realized productions during the period of study, at least one of which must be fully mounted for the public.

Dentistry

Degrees Offered

- D.D.S. in Dentistry
- M.S. in Dental Specialties (Endodontics, Orthodontics, Periodontics and Prosthodontics)
- M.S. in Dental Hygiene

Historical Background

The School of Dentistry was established by an act of the West Virginia Legislature on March 9, 1951, and the first class was enrolled in September 1957. A class of twenty-three students graduated in 1961, receiving the first dental degrees awarded in West Virginia. In September 1961, the first two students were enrolled in the school's baccalaureate degree program in dental hygiene and graduated in 1965.

Mission

Oral Health...Our Priority is the mission of the West Virginia University School of Dentistry. This is accomplished by promoting a diverse and dynamic learning environment that addresses the present and future oral health needs of the citizens of West Virginia and beyond by providing an oral health center committed to excellence and innovation in education, research, patient care, service, and technology.

The WVU School of Dentistry offers degrees of doctor of dental surgery, master of science in dental specialties and dental hygiene, and bachelor of science in dental hygiene. The Department of Oral and Maxillofacial Surgery offers a four-year residency program, a one-year internship, and a one-year general practice residency program. Programs leading to the master of science and doctor of philosophy degrees are available in the associated basic sciences, public health, and business. Continuing education courses for dentists and auxiliaries are offered throughout the year on a wide variety of oral health related topics.

Accreditation

All programs are accredited by the Commission on Dental Accreditation of the American Dental Association.

Administration

The dean is responsible for implementing the established policies of the School of Dentistry, the Health Sciences Center, and the University. The dean of the School of Dentistry reports to the vice president for Health Sciences.

Dental Clinic

Clinical training and experience constitute a major part of the curriculum for dental and dental hygiene students. Facilities for dental and dental hygiene students include over seventy-five treatment cubicles and all necessary related laboratories. Students treat their assigned patients under close supervision of faculty and receive practical experience while rendering services to thousands of patients annually.

Books and Instruments

Dental and dental hygiene students are required to obtain necessary textbooks for the scheduled courses and special instruments for use in the various laboratories and clinics. Lists of approved instruments and books will be provided at the time of registration, and these supplies will be made available through University services. Official authorization is essential in the purchase of all instruments and books used in dental courses. All dental students must maintain a library of required textbooks through graduation. Used instruments and equipment are not acceptable. A designated laptop computer must also be purchased prior to the first day of class.

Organizations

AMERICAN STUDENT DENTAL ASSOCIATION

Pre-doctoral and advanced education dental students are eligible to become members of the American Student Dental Association. Membership provides for student membership in the American Dental Association.

AMERICAN ASSOCIATION OF DENTAL RESEARCH

All dental and auxiliary students, including advanced education students, are eligible to become student members of the American Association of Dental Research during the period of enrollment in the School of Dentistry.

AMERICAN DENTAL EDUCATION ASSOCIATION

All dental and auxiliary students, including advanced education students, are eligible to become student members of the American Dental Education Association during the period of enrollment in the School of Dentistry.

AMERICAN ASSOCIATION OF WOMEN DENTISTS

The objectives and purposes of the West Virginia University School of Dentistry Chapter of the American Association of Women Dentists are to offer opportunities for personal growth through association with women in the dental profession, support the goals of the American Association of Women Dentists, aid in the advancement of women in dentistry, promote professional support and cooperation among its members, and promote the fundamentals of good oral health.

ACADEMY OF DENTISTRY FOR PERSONS WITH DISABILITIES

The Academy of Dentistry for Persons with Disabilities is an international organization for dental students and dental hygiene students interested in management and treatment of special care patients. Community services are provided by assisting with Special Olympics and presenting disability awareness programs to area grade schools. Guest speakers are sponsored on topics such as: "Managing the Hearing Impaired Patient in the Dental Office," "Use of Restraint in Treating Patients with Disabilities," and "Child Abuse and Neglect in Special Needs Children."

WVU SCHOOL OF DENTISTRY ALUMNI ASSOCIATION

In a series of meetings held during May 1961, the first senior class of the School of Dentistry established the WVU School of Dentistry Alumni Association. The association promotes the educational program of the School of Dentistry. Full membership is extended to all graduates of the school, and associate memberships are available to others interested in the aims of the association.

OMICRON KAPPA UPSILON

On February 6, 1961, the Alpha Beta Chapter of Omicron Kappa Upsilon, national honorary dental society, was chartered at the School of Dentistry. Student membership is limited to twelve percent of each senior class. Candidates are from the academically superior twenty percent.

DENTAL FRATERNITY

Chapter of Delta Sigma Delta International Dental Fraternity.

STUDENT AMERICAN DENTAL HYGIENISTS' ASSOCIATION

Dental hygiene students are eligible for membership in the official organization representing the dental hygiene profession.

SIGMA PHI ALPHA

The Alpha Xi chapter of the national dental hygiene honorary society, Sigma Phi Alpha, was established on March 19, 1968. Student membership is limited to ten percent of each graduating class. Candidates are selected on the basis of scholarship, character, and leadership potential as a dental hygienist.

ADMINISTRATION

DEAN

- Anthony T. Borgia - D.D.S., M.H.A.
  Georgetown University

VICE DEAN

- Fotinos Panagakos - D.M.D.
  (University of Medicine and Dentistry of New Jersey)

ASSOCIATE DEANS

- Christina B. DeBiase - Ed.D. (West Virginia University)
  Academic and Postdoctoral Affairs
- Michael J. Meador - D.D.S (West Virginia University)
  Clinic Education and Patient Care
- Shelia S. Price - D.D.S., Ed.D (West Virginia University)
  Admission, Recruitment and Access

ASSISTANT DEAN

- Robert L. Wanker - D.D.S. (West Virginia University)
  Student and Alumni Affairs

CHAIRS

- Samuel O. Dorn - D.D.S.
  (Fairleigh Dickinson University)

- Bryan Dye - D.D.S. (West Virginia University)
- Amy Funk - M.S.D.H. (West Virginia University)
- Gina Graziani - D.D.S., M.S.
  (University of California - SF)
- Richard Meckstroth - D.D.S. (Loma Linda University)
- Peter Ngan - D.M.D. (Harvard)
- Gian Pietro Schincaglia - D.D.S., PhD (University of Ferrara)
- Bryan Weaver - D.D.S., M.D. (West Virginia University)
- Steven B. Whitaker - D.D.S. (University of Missouri-Kansas City)

PROGRAM DIRECTORS

- Amy Funk - M.S.D.H. (West Virginia University)
  Dental Hygiene
- William Marshall - D.D.S. (West Virginia University)
  General Practice Residency
- Peter Ngan - D.M.D. (Harvard University)
  Orthodontics
- Matthew Bryington - D.M.D., M.S. (University of North Carolina)
  Prosthodontics
- Gian Pietro Schincaglia - D.D.S., PhD (University of Ferrara)
  Periodontics
- Mark A. Byron - D.D.S., M.S. (West Virginia University)
  Endodontics
- Bryan Weaver - D.D.S., M.D. (West Virginia University)
  Oral and Maxillofacial Surgery

Degree Designation Learning Outcomes

The postgraduate programs in dentistry are designed to train well qualified dentists in all aspects of the designated dental specialties offered. Advanced training consists of an integrated educational program designed to provide both knowledge in the dentally applied basic sciences and experiences in the clinical science of the designated specialty. A series of structured didactic and clinical courses provides the student with a level of knowledge and skill development necessary to practice a specialty and to prepare for a career in teaching and research. The program qualifies the student for examination and certification by the specialty board.

MASTER OF SCIENCE (MS)

The Master of Science degree program requires the development of an in-depth research problem which must be reported in the form of a thesis.

LEARNING GOALS:

1. Develop competent and skilled clinicians at the specialty level.
2. Prepare and qualify residents to achieve certification by the specialty board.
3. Prepare residents to successfully manage a specialty practice.
4. Prepare and promote a career long interest in continued professional development.
5. Develop the background and experience necessary to select materials and techniques which will appropriately meet the biological, physiological and biomechanical requirements for various oral rehabilitations.
6. Introduce residents to teaching techniques and experiences enabling them to gain an appreciation for their potential role as educators.
7. Prepare residents to critically evaluate the literature and to formulate and conduct a program of research in their specialty and to write and defend a thesis [Master of Science] presenting the results of original research.

DOCTOR OF DENTAL SURGERY (DDS)

Competencies are the skills, knowledge, attitudes and judgment abilities that a dentist must have at the start of unsupervised independent practice. A graduating student must possess an array of competencies, although he or she may not be proficient or expert yet. By defining a curriculum-wide spectrum of competencies, the educational mission of the School is enhanced in two ways: First, the competencies guide our curriculum design and enable us to analyze content across the curriculum. Second, we can be more focused and efficient in assessing the students' acquisition of the defined competencies. To the extent that it can be affirmed that the student acquires sufficient competency to enter the independent practice of dentistry both safely and ethically, the curriculum has more value.

The ultimate benefits of Competencies for the Graduating Dentist will be a more efficient and rational curriculum that is responsive to the educational mission of the School of Dentistry.

I. SCIENTIFIC AND CRITICAL THINKING

1. Scientific Process: The graduating dentist must acquire, critically evaluate and assimilate scientific information necessary for the a.) evaluation, diagnosis, treatment, management and prevention of oral health problems, and b.) interpretation of professional literative to ensure evidence-based patient care.

II. PATIENT EVALUATION

2. Examination of the Patient: The graduating dentist must be able to perform an examination that collects the medical, physical, psychological and social information needed to evaluate the systemic and oral condition(s) of patients of all ages (infant through older adult) or with special needs (including, but not limited to, persons with developmental disabilities, complex medical problems and physical limitations) and manage behavioral factors which affect oral health and use the information to implement strategies that facilitate the delivery of oral health care.

III. DIAGNOSIS

3. Diagnosis: The graduating dentist must be able to determine a differential, provisional or definitive diagnosis by interpreting and correlating findings from the history, clinical and radiographic examination and other diagnostic tests.

IV. TREATMENT PLANNING

4. Treatment Planning: The graduating dentist must be able to develop, present, and discuss individual treatment plans for patients of all ages consistent with the patient's condition, interest, goals and capabilities.

V. PATIENT TREATMENT AND MANAGEMENT

5. Prevention of Disease and Maintenance of Health: The graduating dentist must be able to provide care for patients of all ages that emphasizes prevention of oral diseases and supports the maintenance of existing systemic and oral health.

6. Tobacco Cessation: The graduating dentist must be able to provide evidence-based tobacco cessation strategies.

7. Diversity Awareness: The graduating dentist must be able to discuss cultural factors that impact oral health and provide culturally-sensitive care to persons with varying individual characteristics and backgrounds.

8. Control of Pain and Anxiety: The graduating dentist must be able to employ techniques to manage orofacial discomfort and psychological distress.

9. Caries Management: The graduating dentist must be able to treat and manage caries in the primary, mixed and permanent dentition.

10. Endodontic Therapy: The graduating dentist must be able to treat diseases of pulpal and periradicular origin in the primary, mixed and permanent dentitions.

11. Periodontal Therapy: The graduating dentist must be able to treat and manage periodontal disease in the primary, mixed, permanent and implant dentitions utilizing a non-surgical approach.

12. Surgical Therapy: The graduating dentist must be able to recognize, evaluate, treat and/or manage conditions requiring surgical procedures on the hard and soft tissues in patients of all ages.

13. Emergency Situations: The graduating dentist must be able to prevent and manage dental and medical emergency situations encountered in the practice of general dentistry.

14. Occlusal/TMD Therapy: The graduating dentist must be able to manage functional disorders of occlusal or non-occlusal origins.

15. Orthodontic Therapy: The graduating dentist must be able to manage developmental or acquired abnormalities in esthetics or occlusion.

16. Stomatology: The graduating dentist must be able to manage limited or common non-life threatening oral mucosal diseases or disorders.

17. Restorative/Prosthodontic Therapy: The graduating dentist must be able to provide restorations and prostheses that are correct in anatomical form, comfortable and functionally effective, and which satisfy the esthetic requirements of the patient or legal guardian.

18. Implant Therapy: The graduating dentist must be able to assess, diagnose, treatment plan and treat patients requiring single tooth posterior implant-supported restorations and mandibular implant-supported overdentures.

19. Assessment of Patient Treatment: The graduating dentist must be able to determine the prognosis for proposed patient care, evaluate the initial results of the care and determine appropriate periodic maintenance.

VI. DISEASE PREVENTION AND HEALTH PROMOTION

20. Community Engagement: The graduating dentist must be able to assume a leadership role in improving the oral health of individuals, families and groups in the community by planning, implementing and evaluating programs to eliminate oral health disparities through a dynamic, evidence-based and interprofessional approach to wellness.

VII. PRACTICE DYNAMICS

21. Ethics: The graduating dentist must be able to discern and manage the ethicolegal issues of dental practice.

22. Dental Informatics and Research: The graduating dentist must be able to effectively utilize computer programming, digital imaging and electronic communication to retrieve and communicate information for patient care, practice management, research and professional development purposes.

23. Professional Practice: The graduating dentist must possess the skills to transition from dental school to various practice settings.

24. Scope of Practice: The graduating dentist must be able to know the limit of one's competence and when to make referrals to colleagues.

25. Dental Sleep Medicine: The graduating dentist must recognize and refer patients at high risk for sleep disorders and prescribe and manage oral appliances, as a member of the sleep medicine team.

Accreditation

The following programs within the School of Dentistry have specialized accreditation through the Commission on Dental Accreditation of the American Dental Association.

- Dentistry
- Dental Hygiene
- Endodontics
- Orthodontics & Dentofacial Orthopedics
- Periodontics
- Prosthodontics
- General Practice Residency
- Oral and Maxillofacial Surgery Residency

Dental Hygiene, M.S.

Degree Offered

- Master of Science in Dental Hygiene

The Profession

Dental hygiene is an exciting profession with many rewarding and challenging career opportunities which include clinical/patient care, administration, education, research, and sales/marketing. Dental hygienists are employed in diverse settings such as private dental practices; clinics; hospitals; long-term care facilities/rehabilitation centers; dental hygiene education programs; national, state, and local government agencies; and private business/industry. As a licensed health professional and oral health educator, the dental hygienist has an important role in the overall health and welfare of the public. The dental hygienist is an integral part of the dental team, providing direct patient care based on the prevention of disease. The duties and responsibilities of dental hygienists vary from state to state but may include oral prophylaxis (removing stains and deposits from teeth); root debridement; exposing radiographs; application of preventive and therapeutic agents; local delivery of antimicrobial agents; nutritional counseling; oral, head, and neck cancer screenings; monitoring nitrous oxide sedation; and administration of local anesthesia. The educational background of a dental hygienist provides the knowledge, attitudes, and skill necessary to be successful in a wide variety of careers. From providing clinical care to research to public administration, dental hygiene opens the door to many successful career options. For more information concerning licensure, please visit the Dental Hygiene website (https://dentistry.hsc.wvu.edu/students/master-of-science/dental-hygiene/).

Nature of the Program

The Master of Science Program in Dental Hygiene provides the terminal degree for the dental hygiene profession. The program is designed to provide both full-time and part-time students with the advanced education in dental hygiene necessary to assume roles in teaching, administration, research and management. Emphasis is also placed on preparing graduates to conduct the evaluate research and to continually advance their knowledge and skills through self directed learning. Graduates from this program will assist in meeting the dental health care needs of the community, the state of West Virginia, and the nation. The program seeks to maintain high quality dental hygiene care by offering a curriculum that provides students with the ability to:

- attend school on a full-time or part-time basis and gain an advanced education in dental hygiene necessary to assume roles in teaching, administration, research and management;
- achieve competency in the development and evaluation of a research project;
- acquire the initiative to grow in his/her capability for independent thought, responsible action, and the motivation to continue professional development.

The dental hygiene program has a strong commitment to providing care and educational programs to residents of West Virginia, which is demonstrated by the required 25 hours of service learning. To provide students in dental hygiene program with the necessary clinical experience that is required, the School of Dentistry maintains and operates dental clinics in the Robert C. Byrd Health Sciences Center School of Dentistry. Through the West Virginia University Institute for Community and Rural Health (WVUICRH), students may be provide direct patient care for the citizens of West Virginia at a rural site. Please visit the Dental Hygiene website (https://dentistry.hsc.wvu.edu/students/master-of-science/dental-hygiene/) for more information.

The dental hygiene program has an excellent reputation for producing outstanding clinicians and many faculty members as well as graduates are recognized as leaders in dental education and organized dentistry. Please visit the Dental Hygiene website (https://dentistry.hsc.wvu.edu/students/master-of-science/dental-hygiene/) for more information.

Academic and Professional Standards

The Dental Hygiene Academic and Professional Standards, including the Student Rights and Responsibilities, are available at the Dental Hygiene Student Resources page (https://dentistry.hsc.wvu.edu/students/bachelor-of-science/dental-hygiene-student-resources/).

FACULTY

DIRECTOR

- Amy D. Funk - M.S.D.H.

PROFESSOR

- Christina B. DeBiase - Ed.D. (West Virginia University)

ASSOCIATE PROFESSORS

- M. Suann Gaydos - MSDH
  (WVU)
- Alcinda K. T. Shockey - BSDH, MA, DHSc
  (NOVA Southeastern University)

CLINICAL ASSISTANT PROFESSORS

- Ashlee B. Sowards - MSDH
  (WVU)
- Lisa E. Lisauckis - MSDH
  (WVU)
- Marlana Thomas - MSDH

Admissions

To apply to the program, please go to the Apply Now page of the Dental Hygiene website (https://dentistry.hsc.wvu.edu/apply-now/master-of-science-in-dental-hygiene/) and follow the directions provided. You do not need to complete a separate application for WVU, you must choose Dental Hygiene in the WVU on-line application to be considered for the Program.

The program's admission requirements are as follows:

- Meet WVU requirements for admission to graduate study. Applicants who do not meet the minimum requirements for admission must gain provisional acceptance into the program. All provisions of admission must be met no later than completion of the eighteenth credit hour to be reclassified as a regular student. A student who fails to meet the provisions of admission or who fails to meet the required GPA will be suspended.
- Possess a baccalaureate degree in dental hygiene from an accredited dental hygiene program or a baccalaureate degree in another field of study from an approved institution of higher education while holding a certificate or associate's degree in dental hygiene from a program fully accredited by the American Dental Association Commission on Dental Accreditation.
- Demonstrate evidence of scholastic and clinical achievement to indicate the applicant's ability to progress in a program of this nature. Generally, a minimum grade point average of 3.0 or above on a 4.0 scale on all college work attempted is required.
- Complete the Graduate Record Examination (GRE) with an acceptable score within the last five years.

- Submit all information requested in the graduate application to the Office of Academic and Postdoctoral Affairs.
- Consent to and pass a criminal background investigation prior to final acceptance.

Degree Requirements

Minimum overall GPA of 3.0 [*]

BIOS 601	Applied Biostatistics 1	4
HPML 601	Foundations of Health Policy	3
C&I 689	Cultural Diversity in the Classroom	3
DENT 687	Research Methods	1
DTHY 679	Clinical Evaluation	2
DTHY 680	Dental Hygiene Seminar and Practice 1	3
DTHY 690	Teaching Practicum	1
DTHY 697	Research	7
Select 13 credits in DTHY, DENT, B&E, EDP, CHPR, HRE		13
Thesis		
Oral defense of thesis		
1 semester of student teaching in the undergraduate clinic		
Total Hours		37

[*]   Students must achieve an overall grade point average of a 3.0 GPA in all work attempted in the master's program. A grade of C or below in one course will require a faculty review of the student's progress. A second C or below will result in dismissal from the program. A student may repeat only one course one time to bring the GPA up to the 3.0 requirement. Credit hours for courses with a grade lower than C do not count toward degree requirements.

Major Learning Outcomes

DENTAL HYGIENE

The goals of this program are to provide graduates with the knowledge, attitudes, and behaviors necessary to be competent in the:

1. Design, implementation, administration, and evaluation of dentally-related educational courses (i.e., nutrition, radiology, histology, pharmacology, pathology, and periodontics) and programs a) in schools of dentistry, dental hygiene, dental assisting, b) public or private institutions or groups requiring in-service, and c) in elementary and secondary schools;
2. Design, implementation, administration and evaluation of dental health care delivery programs; i.e., patient services rendered in professional schools, hospitals, institutions for the mentally and physically disabled, geriatric centers, public health departments etc.;
3. Administration of office/personnel management related areas such as a) group dynamics, collaboration, b) accounting issues, e.g., computerized recall, billing, inventory, third party payment, and insurance, and c) legislation and public policy;
4. Design, obtaining of financial support, conduct, management, evaluation, and presentation of research projects;
5. Development of independent thought, responsible action, and the motivation to continue professional development.

Doctor of Dental Surgery, D.D.S.

Degree Offered

- Doctor of Dental Surgery

Nature of the Program

The WVU School of Dentistry prepares students to provide high-quality, comprehensive oral health care. Students train using state-of the-art technology which includes, but is not limited to, electronic health record, digital radiography, and dental simulation. The school offers enriching interprofessional learning opportunities with the other Health Sciences Center health professions programs to promote their value as essential members of the health care team.. Community service is also integral to our mission. Students participate in a plethora of local, state and global community outreach programs. Prior to graduation, students experience a community-based clinical rotation in rural West Virginia for at least six weeks.

A dental degree offers a variety of career options including private practice, teaching, research, and public health dentistry. In addition to the Doctor of Dental Surgery (DDS) degree, specialty practice areas may be pursued by advanced training.

Due to a large number of applications and limited class size, qualified West Virginia residents receive priority consideration, and outstanding nonresident applicants are also considered. Residency status is determined by the WVU Office of Admission in accordance with the Higher Education Policy Commission Rules and Policies, Series 25. The dental admissions committee utilizes a holistic selection process that takes into account cognitive

and non-cognitive attributes in accordance with defined admission criteria. Competition for admission has elevated the academic profile of admitted candidates to a rather high plateau. Nonresident applicants generally have earned a GPA of $\geq$ 3.75 and DAT scores of 19 or above. The School of Dentistry recognizes the importance of diversity in fulfilling its mission and encourages individuals from diverse backgrounds to apply.

Admissions

Admission to the D.D.S. program is contingent upon satisfactory completion of all admission requirements, appropriate completion of all application instructions, submission of all transcripts from each college attended, submission of Dental Admission Test (DAT) scores, a personal interview, satisfactory completion of all courses taken before registration in dental school (includes courses taken during the summer session immediately preceding initial enrollment), and all other requirements as set forth by the dental admission committee.

The WVU School of Dentistry has minimal technical standards for the assessment of all students admitted to the Doctor of Dental Surgery (D.D.S.) program. Enrollees must have abilities and skills in the following areas: observation; communication; motor; intellectual, conceptual, integrative, quantitative; behavioral and social. Technological compensation can be made in certain situations, but candidates should be able to perform in a reasonably independent manner. (Refer to the School of Dentistry website for additional details about Technical Standards).

COURSE REQUIREMENTS:

A minimum of three years of college course work completed at U.S. or Canadian colleges or universities is required. Applicants must have earned a minimum of 90 semester credit hours at the time of application. Up to 64 semester credit hours completed at community colleges are accepted toward the minimum course hour requirement. No online courses will be accepted toward the prerequisite course work.

 The prerequisites for admission include:

English composition and rhetoric, or equivalent	6
Biology or Zoology (with laboratory)	8
General/Inorganic Chemistry (with laboratory)	8
Organic Chemistry (with laboratory)	8
Physics (with laboratory)	8
Biochemistry	3
Anatomy (Comparative or Human)	3
Total Hours	**44**

Completion of courses in microbiology, embryology/developmental biology, physiology, cellular and molecular biology, genetics and psychology are strongly recommended. In addition, courses in the humanities and the social sciences are suggested to acquire a well-rounded intellectual background for the study and practice of dentistry. Admitted students must complete all required courses by June 1st.

Considerations:

- Grade Point Average (GPA)
- Science Grade Point Average (SGPA)
- Performance in required courses
- Performance in upper-division science courses
- Performance improvement/consistency
- Course load

APPLICATION INFORMATION:

1. The School of Dentistry participates in the Associated American Dental Schools Application Service (AADSAS). All applications must be submitted online via AADSAS (http://www.adea.org). The application deadline is November 1st of the year immediately prior to the applicant's anticipated enrollment. Each year the AADSAS application becomes available in early June. The school uses a rolling admission process and begins admitting highly qualified individuals on December 1st.

2. Applicants are required to have specific letters of recommendation submitted to AADSAS. Specific information regarding recommendation sources and quantity is available on the School of Dentistry website.

3. Satisfactory completion of the Dental Admission Test (DAT) is required. The test is given at testing centers throughout the U.S. and in Canada. DAT registration is available on the American Dental Association (ADA) website (http://catalog.wvu.edu/graduate/schoolofdentistry/docdentalsurg/www.ada.org). DAT scores must be submitted by November 1st of the year preceding the date of matriculation. Scores are valid up to three years after the test date.

4. Applicants must complete shadowing experiences in clinical dental settings including private offices, community health clinics, and service missions. While there is no specific minimum shadowing hour requirement, successful candidates usually observe at least 100 hours in a variety of dental environments.

5. The Dental Admission Committee evaluates all AADSAS applications and invites selected applicants to submit a secondary (WVU) application. West Virginia resident applicants are usually offered an interview, although the admissions committee may elect not to interview unrealistic applicants. Selected non-resident applicants are invited to interview depending on their qualifications.

6. Individuals who received provisional acceptance must obtain criminal background clearance, provide documentation of the specified immunizations, and meet all other requirements as listed in the provisional acceptance prior to matriculation and date specified by the Admissions Committee.

Detailed information is available on the Doctor of Dental Surgery admissions webpage (https://dentistry.hsc.wvu.edu/apply-now/doctor-of-dental-surgery/).

International Dental Graduate Guidelines

International dental graduates who wish to apply to the WVU School of Dentistry Doctor of Dental Surgery (D.D.S.) program as a student in the first-year class must:

1. Submit an application through the Associated American Dental Schools Application Service (AADSAS) by November 1. To obtain additional information, please refer to the general admissions requirements, which include completion of at least 90 semester credit hours at a U.S. or Canadian College or University prior to application submission.

2. Provide documentation of a D.D.S. or D.M.D. degree (or equivalent) from a non-U.S. dental school.

3. Demonstrate proficiency in the English language as demonstrated by performance on the Test of English as a Foreign Language (TOEFL) - paper-based minimum score of 500 or computer-based minimum score of 173 or internet-based test minimum score of 61 - and completion of English 1 and English 2 (or equivalent) at an accredited U.S. college or university earning grade of C or above.

4. Provide three letters of recommendation by college instructors who are familiar with the applicant, excluding family members.

5. Submit Dental Admission Test (DAT) scores showing at least average competence in the various subsections of the test - 17 minimum score, or provide evidence of having successfully passed the National Board Dental Examination, Part I, within five years preceding the application.

6. Have all previous coursework from non-U.S. colleges evaluated by Educational Credential Evaluators (ECE) or the World Educational Services (WES). An official or certified copy of the evaluation must be provided to WVU. The applicant is responsible for payment of fees for this service.

7. Provide official transcripts from all schools attended in the original language of issue.

If granted an interview, applicants must present to the school for a personal interview with the admissions committee. Applicants who are invited for an interview must complete the secondary (institution) application for admission and submit the associated fees. The transcripts of international dental graduates who are approved for an interview will be evaluated by the WVU Office of Admission, International unit. West Virginia residents will be given priority consideration.

Promotion

At the end of each grading period (i.e., each academic semester or summer session), all students will have their individual progress reviewed by the Academic and Professional Standards Committee. The progress of each student in the curriculum is governed by minimum acceptable performance standards upon which the committee bases its decisions.

The standards consist of three categories: scholastic performance, clinic performance and utilization, and professional development. Scholastic performance requires that each student must earn a specified grade point average to be promoted to the succeeding year. Clinic performance and utilization requires that each student must utilize a specified percentage of available clinic time to demonstrate steady progress toward attainment of clinical competency in all disciplines. Professional development is an important component of the study of dentistry. The criteria for determining this development are based on the student's personal behavior and patient management skills.

These performance standards are explained in detail in the document entitled WVU School of Dentistry Academic and Professional Standards. All first-year students are presented this document prior to entering school and are required to acknowledge, by their signature, that they have read and accepted the conditions set by the material contained therein. At the completion of each academic term, following the Committee on Academic and Professional Standards meetings, the status of each student is reported to the dean. The committee may decide that a student be promoted unconditionally, be promoted on probation, be allowed to make up deficiencies, be given the opportunity to repeat the year, or be suspended or dismissed from further studies in the School of Dentistry. Final disposition in each case is the prerogative of the Dean of the School of Dentistry.

Degree Requirements

Candidates for graduation are recommended by the faculty of the School of Dentistry to the Board of Governors for approval and for the conferring of the degree of Doctor of Dental Surgery (D.D.S.), provided they fully meet the following conditions:

- Shall have been a full-time student in regular attendance in the School of Dentistry for the academic period prescribed for each student.
- Shall have completed the prescribed curriculum for each of the academic sessions.
- Shall have shown good moral character and shall have demonstrated a sense of professional responsibility in the performance of all assignments as a student.
- Shall have met in full all financial obligations to the University.

In view of public and professional responsibilities, the faculty of each of the professional schools of WVU has the authority to recommend to the president of the University the removal of any student from its roles whenever, by formal decision reduced to writing, the faculty finds that the student is unfit to meet the qualifications and responsibilities of the profession.

CURRICULUM REQUIREMENTS

BIOC 705	General Biochemistry	5
DENT 700	Anesthesiology	1
DENT 701	Arts & Sciences of Preventive Dentistry	2
DENT 703	Introduction to Patient Care	3
DENT 704	Operative Dentistry	4
Interprofessional Education		2
DENT 706	Interprofessional Education	
DENT 707	Introduction to Clinical Dentistry	2
DENT 710	Dental Anatomy and Occlusion	4
DENT 711	Periodontics	2
DENT 712	Dental Materials	3
DENT 715	Dental Public Health 1	2
DENT 719	Pedodontics	1
DENT 721	Endodontics	2
DENT 722	Tooth-Colored Restorations	4
DENT 723	Advanced Restorations and Esthetics in Dentistry	2
DENT 725	Practice Management	1
DENT 726	Removable Partial Dentures	7
DENT 727	Dental/Maxillofacial Radiology	2
DENT 729	Indirect Restorations	3
DENT 730	Dental Public Health 2	2
DENT 731	Occlusion	2
DENT 733	Advanced Endodontics 2: Biological Applications in Endodontics	1
DENT 734	Complete Dentures	6
DENT 735	Pediatric Dentistry	1
DENT 737	Treatment Planning	3
DENT 739	Oral Surgery	1
DENT 740	Periodontics	1
DENT 744	Diagnosis and Treatment Planning	1
DENT 745	Principles of Orthodontics	1
DENT 746	Orthodontic Techniques	1
DENT 747	Management of Medical and Dental Emergencies	1
DENT 751	Occlusion	1
DENT 752	Professional Communication in Dentistry	2
DENT 754	Introduction to Dental Implantology	2
DENT 756	Fixed Prosthodontics: Part 1	4
DENT 757	Fixed Prosthodontics: Part 2	4
DENT 758	Senior Seminar	2
DENT 759	Oral Surgery	2
DENT 761	Pediatric Dentistry	1
DENT 762	Anxiety and Pain Control	1
DENT 763	Periodontics	2
DENT 765	Orthodontics	1
DENT 766	Applied Pediatric Dentistry	2
DENT 767	Community Dentistry	1
DENT 770	Clinical Oral Radiology	4
DENT 771	Practice Management	2
DENT 774	Principles of Medicine	2

DENT 775	Practice Management	1
DENT 776	Removable Prosthodontics	5
DENT 777	Periodontics	5
DENT 778	Ethics in Dentistry	2
DENT 780	Endodontics	4
DENT 781	Patient Management 1	4
DENT 782	Clinical Patient Management 2	2
DENT 783	Operative Dentistry	6
DENT 784	Oral Surgery	6
DENT 785	Orthodontics	2
DENT 786	Pediatric Dentistry	4
DENT 787	Clinical Oral Diagnosis	1
DENT 789	Fixed Prosthodontics	5
MICB 702	Microbiology	5
PALM 718	Dental Histology	6
PALM 724	Human Gross Anatomy	7
PALM 728	General Pathology	5
PALM 738	Oral Pathology 1	3
PALM 753	Oral Pathology 2	2
PCOL 760	Pharmacology & Therapeutics	3
PCOL 763	Applied Dental Pharmacology	2
PSIO 743	Fundamentals of Physiology	5
Total Hours		191

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours	Summer	Hours
DENT 701		2 BIOC 705		5 DENT 703	3
DENT 710		4 DENT 700		1 DENT 745	1
DENT 712		3 DENT 704		4 DENT 731	2
PALM 724		7 Interprofessional Education		2	
PSIO 743		5 DENT 706			
		DENT 711		2	
		DENT 715		2	
		DENT 719		1	
		PALM 718		6	
		21		23	6

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
DENT 722		4 DENT 707		2 DENT 725	1
DENT 729		3 DENT 721		2 DENT 726	7
DENT 734		6 DENT 727		2 DENT 746	1
DENT 735		1 DENT 737		3 DENT 751	1
DENT 756		4 DENT 739		1 DENT 763	2
MICB 702		5 DENT 744		1	
PCOL 760		3 DENT 757		4	
		DENT 766		2	
		DENT 774		2	
		PALM 728		5	
		PALM 738		3	
		26		27	12

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
DENT 740	1	DENT 730	2	DENT 733	1
DENT 754	2	DENT 747	1	DENT 771	2
DENT 761	1	DENT 752	2	DENT 781	4
DENT 778	2	DENT 773	2	DENT 762	1
PALM 753	2	DENT 759	2	DENT 788	1
PCOL 763	2	DENT 765	1		
	10		**8**		**9**

Fourth Year

Fall	Hours	Spring	Hours
DENT 770	4	DENT 758	2
DENT 788	1	DENT 767	1
		DENT 775	1
		DENT 776	5
		DENT 777	5
		DENT 780	4
		DENT 782	2
		DENT 783	6
		DENT 784	6
		DENT 785	2
		DENT 786	4
		DENT 787	1
		DENT 789	5
	5		**44**

Total credit hours: 191

Major Learning Outcomes

DOCTOR OF DENTAL SURGERY

The ultimate benefits of Competencies for the Graduating Dentist will be a more efficient and rational curriculum that is responsive to the educational mission of the School of Dentistry.

The twenty-five major competencies are divided into seven categories of thought, behavior or knowledge. Each major competency is furthered by course objectives the sum total of which, when accomplished by the student, enable acquisition of the competency. Assessment of the acquisition of each competence will occur in many ways that are appropriate to the subject matter.

I. Scientific and Critical Thinking

   1. Scientific Process: The graduating dentist must acquire, critically evaluate and assimilate scientific information necessary for the evaluation, diagnosis, treatment, management and prevention of oral health problems.

II. Patient Evaluation

   2. Examination of the Patient: The graduating dentist must be able to perform an examination that collects the medical, physical, psychological and social information needed to evaluate the systemic and oral condition(s) of patients of all ages (infant through older adult) or with special needs (including, but not limited to, persons with developmental disabilities, complex medical problems and physical limitations) and manage behavioral factors which affect oral health and use the information to implement strategies that facilitate the delivery of oral health care.

III. Diagnosis

   3. Diagnosis: The graduating dentist must be able to determine a differential, provisional or definitive diagnosis for patients of all ages by interpreting and correlating findings from the history, clinical and radiographic examination and other diagnostic tests.

IV. Treatment Planning

   4. Treatment Planning: The graduating dentist must be able to develop, present, and discuss individual treatment plans for patients of all ages consistent with the patient's condition, interest, goals and capabilities.

V. Patient Treatment and Management (for Patients in all Stages of Life)

5. Prevention of Disease and Maintenance of Health: The graduating dentist must be able to provide evidence-based interprofessional care for patients of all ages that emphasizes prevention of oral diseases and supports the maintenance of existing systemic and oral health.

6. Tobacco Cessation: The graduating dentist must be able to provide evidence-based tobacco cessation strategies.

7. Diversity Awareness: The graduating dentist must be able to discuss cultural factors that impact oral health and provide culturally-sensitive care to persons with varying individual characteristics and backgrounds.

8. Control of Pain and Anxiety: The graduating dentist must be able to employ techniques to manage orofacial discomfort and psychological distress.

9. Caries Management: The graduating dentist must be able to treat and manage caries in the primary, mixed and permanent dentitions.

10. Endodontic Therapy: The graduating dentist must be able to treat diseases of pulpal and periradicular origin in the primary, mixed and permanent dentitions.

11. Periodontal Therapy: The graduating dentist must be able to treat and manage periodontal disease in the primary, mixed, permanent and implant dentitions utilizing a non-surgical approach.

12. Surgical Therapy: The graduating dentist must be able to recognize, evaluate, treat and/or manage conditions requiring surgical procedures on the hard and soft tissues in patients of all ages.

13. Emergency Situations: The graduating dentist must be able to prevent and manage dental and medical emergency situations encountered in the practice of general dentistry.

14. Occlusal/TMD Therapy: The graduating dentist must be able to manage functional disorders of occlusal or non-occlusal origins.

15. Orthodontic Therapy: The graduating dentist must be able to manage developmental or acquired abnormalities in esthetics or occlusion.

16. Stomatology: The graduating dentist must be able to manage limited or common non-life threatening oral mucosal diseases or disorders.

17. Restorative/Prosthodontic Therapy: The graduating dentist must be able to convey laboratory instructions and provide restorations and prostheses that are correct in anatomical form, comfortable and functionally effective, and which satisfy the esthetic requirements of the patient or legal guardian.

18. Implant Therapy: The graduating dentist must be able to assess, diagnose, treatment plan and treat patients requiring single tooth posterior implant-supported restorations and mandibular implant-supported overdentures.

19. Assessment of Patient Treatment: The graduating dentist must be able to determine the prognosis for proposed patient care, evaluate the initial results of the care and determine appropriate periodic maintenance.

VI. Disease Prevention and Health Promotion

20. Community Engagement: The graduating dentist must be able to assume a leadership role in improving the oral health of individuals of all ages, families and groups in the community by planning, implementing and evaluating programs to eliminate oral health disparities through a dynamic, evidence-based and interprofessional approach to wellness.

VII. Practice Dynamics

21. Ethics: The graduating dentist must be able to discern and manage the ethicolegal issues of dental practice.

22. Dental Informatics: The graduating dentist must be able to utilize or appreciate office computerization, different forms of digital imaging and electronic communication and information retrieval for patient care, practice management, research and professional development.

23. Professional Practice: The graduating dentist must possess the skills to transition from dental school to various practice settings.

24. Scope of Practice: The graduating dentist must be able to know the limit of one's competence and when to make referrals to colleagues.

25. Dental Sleep Medicine: The graduating dentist must recognize and refer patients at high risk for sleep disorders and prescribe and manage oral appliances, as a member of the sleep medicine team.

Endodontics, M.S.

Degree Offered

- Master of Science

Nature of the Program

The twenty-six month Master of Science in Endodontics program is designed to prepare the student for all aspects of the practice of endodontics. The clinical program is modeled on a private practice, state-of-the-art facility. The didactic program prepares the resident for a career in endodontics which includes practice, teaching, and/or research. The program is fully accredited by the Commission on Dental Accreditation (CODA). Our core belief is that a strong evidence-based scientific background prepares our residents for the challenges of the current practice environment and Diplomate status reflects the commitment to our chosen profession.

The master's thesis project is designed to obtain results suitable for publication in a reputable dental journal. The ability to read and understand past and current literature is critical to keeping abreast of the latest advances.

Graduates of the program will be well prepared to successfully pass the examination conducted by the American Board of Endodontics that leads to Board certification and status of Diplomate, American Board of Endodontics. It is a requirement for every second year resident to take the written component of the ABE and all endodontic residents are encouraged to complete the board certification process.

A stipend plus tuition waiver will be provided for graduate students in Endodontics during fall and spring semester of year two and summer semester of year three. Special fees are not covered by the tuition waiver. You must pay these each term/semester.

Inquiries concerning this program should be directed to the Office of Dental Admissions, Recruitment and Access (https://dentistry.hsc.wvu.edu/departments/dental-admissions-recruitment-access/). Applications will be processed by the School of Dentistry. Applicants approved for admission to the program will be notified soon after interviews are completed.

This program is accredited by the Commission on Dental Accreditation of the American Dental Association. For details about the faculty, publications, and alumni information, please visit the website at Department of Endodontics. (https://dentistry.hsc.wvu.edu/students/master-of-science/endodontics/)

Program Goals

1. Education - To impart residents with in-depth knowledge of the biologic and mechanical principles involved in endodontics and to encourage continued learning throughout the professional life of the graduate.
   a. Objective 1.1 - To graduate endodontists who will seek and successfully complete Dipomate status of the American Board of Endodontics.
   b. Objective 1.2 - To prepare graduates to enter careers centered on the specialty of endodontics whether in practice, teaching, research, or a combination of the three.
2. Patient Care - To graduate residents who will be proficient in endodontics through adequate clinical exposure and broad based patient case selection.
3. Research - To prepare residents able to contribute to the advancement of the endodontic specialty and the dental profession through basic biomedical and behavioral, clinical and education research.
4. Service - To produce graduates who provide quality endodontic care to the public and who establish productive, competent and socially responsible professional careers as health care educators and providers.

Program Curriculum

The program commences with an orientation on July 1st of the first year and runs continuously until the summer semester ends in mid August, twenty-six months later. The semesters are divided into Fall (mid-August to mid-December), Spring (January to early May) and Summer (mid-May to early August). Didactic course work at the WVU Department of Endodontics consists of lectures and seminar sessions that cover all aspects of endodontic therapy. Clinical experience includes the use and evaluation of new technology such as CBCT, microscopy, ultrasonic irrigation, and 3D modeling for surgery. In case presentations seminars, residents are continually stimulated to evaluate the care they provide so they can engage in a lifelong learning process for a career of continual improvement. Joint treatment with Pediatric Dentistry, and treatment of patients in the hospital operating room adds to the full experience of this residency. In addition, residents will have the opportunity to meet many guest lecturers from around the world who will stimulate them with new ideas.

FACULTY

GRADUATE PROGRAM DIRECTOR

- Mark A. Byron - D.D.S., M.S.
  West Virginia University

CHAIR

- Samuel Dorn - D.D.S.
  Nassau County Medical Center

Admissions

The program's requirements are as follows:

- Must have passed the National Board Dental Examination - Part 1 at the time of application and Part 2 upon entrance to the program or the Integrated Exam (INBDE).
- Must have earned a D.M.D. or D.D.S. degree or its equivalent.
- Must be proficient in the English language and report most recent TOEFL score (if foreign applicant).
- Must display evidence of scholastic and clinical achievement that would indicate the applicant's ability to progress in a program of this nature. A minimum grade-point average of 3.0 is required.
- Must apply to the program through the Postdoctoral Application Support Service (PASS) (http://www.adea.org/) and have all application materials submitted by August 1.
- Must complete and submit a WVU Admissions Application (https://westvirginia.force.com/TX_SiteLogin/?startURL=%2FTargetX_Portal__PB) if invited for an interview.
- Must participate in an onsite interview.
- Must consent to and pass a criminal background investigation prior to final acceptance.
- Must submit documentation of all required immunizations. A complete list is available on the School of Dentistry website.
- Must become familiar with the West Virginia University School of Dentistry's policy and procedure for Bloodborne Pathogens and Infectious Diseases.
- Must meet federal and university standards regarding the Responsible Conduct of Research.
- Must be eligible for and obtain a West Virginia dental license or a dental resident/intern permit prior to the first day of program orientation.

Degree Requirements

- Fulfill University requirements for graduate study.
- Complete 26 months (two academic years plus a summer session) of consecutive full-time advanced study and clinical training at the School of Dentistry.
- Complete an approved master's thesis based on original research completed during the course of study in an area related to endodontics.
- Pass a final oral examination.
- Complete all didactic and clinical work in the required curriculum successfully.
- Demonstrate satisfactory clinical competency in endodontics.
- Complete the written portion of the American Board of Endodontics examination.
- Complete a minimum of 84 credit hours, including 60 hours of endodontic courses, a minimum of 7 hours of selected basic sciences subjects, 5 hours teaching practicum, and research/thesis (12 hours).
- Achieve a 3.0 GPA or an overall competence in the student's field. A minimum grade of B must be earned in all work attempted in the master's program. A grade of C or below in two courses will require a faculty review of the student's progress. A third C or below will result in suspension from the program.

CURRICULUM REQUIREMENTS

Minimum GPA of 3.0 is required.

Minimum grade of B is required in all courses. [*]		
Biomedical Sciences		
DENT 601	Advanced Oral Microbiology	3
PALM 601	Special Studies in Oral Pathology	2
PALM 716	Craniofacial Growth and Maturation	1
PCOL 765	Advanced Biomedical Sciences: Applied Pharmacology	1
Endodontic Courses		
DENT 600	Advanced Oral Surgery	3
ENDO 681	Fundamentals of Endodontics	2
ENDO 682	Fundamentals of Endodontics Laboratory	2
Endodontic Classic Literature Review		7
ENDO 683	Endodontic Classic Literature Review	

Endodontic Current Literature Review		7
ENDO 684	Endodontic Current Literature Review	
Endodontic Case Review and Analysis		7
ENDO 685	Endodontic Case Review and Analysis	
ENDO 688	Clinical Endodontics (Repeated)	30
Clinical Management of Medically Compromised Patients		2
PERI 644	Clinical Management of Medically Compromised Patients	
Teaching Practicum		**5**
ENDO 690	Teaching Practicum	
Research/Thesis		
DENT 686	Applied Statistics in Dentistry	3
DENT 687	Research Methods	1
ENDO 697	Research	8
Master's Thesis		
Oral Examination		
Demonstrate clinical competency in endodontics		
Total Hours		84

SUGGESTED PLAN OF STUDY

First Semester	Hours
DENT 600	1
ENDO 681	2
ENDO 682	2
ENDO 683	1
ENDO 684	1
ENDO 685	1
ENDO 697	1
	9

Second Semester	Hours
DENT 600	2
DENT 686	3
ENDO 683	1
ENDO 684	1
ENDO 685	1
ENDO 688	5
ENDO 697	1
PALM 601	2
PCOL 765	1
	17

Third Semester	Hours
DENT 601	3
DENT 687	1
ENDO 683	1
ENDO 684	1
ENDO 685	1
ENDO 688	5
ENDO 690	1
ENDO 697	1
	14

Fourth Semester	Hours
ENDO 683	1
ENDO 684	1

ENDO 685	1
ENDO 688	5
ENDO 690	1
ENDO 697	1
PALM 716	1
	11

Fifth Semester	Hours
ENDO 683	1
ENDO 684	1
ENDO 685	1
ENDO 688	5
ENDO 690	1
ENDO 697	1
PERI 644	1
	11

Sixth Semester	Hours
ENDO 683	1
ENDO 684	1
ENDO 685	1
ENDO 688	5
ENDO 690	1
ENDO 697	1
PERI 644	1
	11

Seventh Semester	Hours
ENDO 683	1
ENDO 684	1
ENDO 685	1
ENDO 688	5
ENDO 697	2
ENDO 690	1
	11

Total credit hours: 84

Major Learning Outcomes
ENDODONTICS

- Provide the education and training necessary for graduate dentists to practice in their specialty.
- Provide the education and training necessary for a specialist to achieve Board Certification.

Orthodontics, M.S.

Degree Offered

- Master of Science

Nature of the Program

The School of Dentistry and the Department of Orthodontics at West Virginia University offer a 34-month (three academic years) advanced education Master of Science program. The program models a private practice atmosphere with state-of-the-art clinical facilities. The curriculum is centered on daily clinical seminars and private instruction with each individual class. Also included are regularly scheduled orthognathic surgery conferences and seminars with other dental and medical specialists.

A stipend plus tuition waiver will be provided for graduate students in Orthodontics at the end of the second year for summer session and fall/spring semesters. Special fees are not covered by the tuition waiver. You must pay special fees each term/semester.

Inquiries concerning this program should be directed to the <u>Office of Admissions, Recruitment and Access</u>. This program is accredited by the Commission on Dental Accreditation of the American Dental Association. Applications will be processed by the School of Dentistry. For details about the faculty, publications, and alumni information, please visit the Department website at Department of Orthodontics. (https://dentistry.hsc.wvu.edu/departments/orthodontics/)

Program Goals

The postgraduate program is designed to develop skilled practitioners who can easily transition into and manage a busy orthodontic practice. The goal of this program is to teach a variety of treatment mechanics that are scientifically valid, and foster decision making skills based on treatment needed on a case-by-case basis. Clinical experiences are diverse, including cleft lip and palate and orthognathic surgery cases.

An original master's thesis project is required and is designed to obtain results suitable for publication in a reputable dental journal. The curriculum focuses on didactic and clinical materials to prepare residents for taking the American Board of Orthodontics (ABO) Examinations. Classes pertaining to the written board are given throughout the three-year program. It is a requirement for every third year resident to take and pass the written component of the ABO, and all residents are encouraged to complete the board certification process.

Program Curriculum

The 34 month Master in Science program in Orthodontics begins July 1. First-year residents begin an intensive Orthodontic Technique course on July 1 and begin seeing new patients in mid-July. In August, first year residents begin a full clinic schedule which includes morning and afternoon clinic sessions.

Didactic course work at the WVU Department of Orthodontics consists of faculty led, resident taught lectures and seminar sessions for an average of two hours each day. Seminar topics range from patient diagnosis and treatment planning to practice management and financial planning. In addition, orthodontic companies may visit the clinic to present evidence-based products and techniques.

Clinical work simulates the private practice environment. There are two dental assistants and a patient service coordinator available in the clinic to aid residents during clinic sessions. All orthodontic records are computerized. Diagnosis and treatment planning can be completed entirely in the digital realm. Billing, scheduling, and record storage is accomplished using a commercial dental office management system. The orthodontic clinic is completely paperless to maximize clinical efficiency so residents are able to increase their patient experiences.

FACULTY

CHAIR

- Peter Ngan - D.M.D.
  Harvard University

PROFESSOR

- Chris A. Martin - D.D.S., M.S.
  West Virginia University

Admissions

The program's admission requirements are as follows:

- Must have passed National Board Dental Examination - Part 1 at the time of application and Part 2 upon entrance to the program or the Integrated Exam (INBDE).
- Must have earned a D.M.D./D.D.S. degree, or its equivalent.
- Must report GRE scores. ADA ADAT score is highly recommended.
- Must be proficient in the English language and provide a TOEFL score (if you are a foreign applicant).
- Must display evidence of scholastic and clinical achievement that would indicate the applicant's ability to progress in a program of this nature. A minimum grade point average of 3.0 is required.
- Must apply to the program through the Postdoctoral Application Support Service (PASS) (https://www.adea.org/) and have all application materials submitted by September 15.
- Must apply to National Matching Services (https://natmatch.com/) and obtain a MATCH number to be considered of admission to the program. Applicants participating in application to both Match and non-Match programs will not be considered for admission.
- Must complete and submit WVU Admissions Application (https://westvirginia.force.com/TX_SiteLogin/?startURL=%2FTargetX_Portal__PB), if invited for an interview.
- Must participate in an onsite interview.
- Must consent and pass a criminal background investigation prior to final acceptance.
- Must submit documentation of required immunizations. A complete list is available on the School of Dentistry website.

- Must become familiar with the West Virginia University School of Dentistry's policy and procedure for Bloodborne Pathogens and Infectious Diseases (https://dentistry.hsc.wvu.edu/media/1380/wvu-school-of-dentistry-policy-on-dental-health-care-workers-and-patients-infected-with-bloodborne-diseases-2009.pdf).
- Must meet federal and university standards regarding the Responsible Conduct of Research.
- Must be eligible for and obtain a West Virginia dental license or dental resident/intern permit prior to the first day of program orientation.

Degree Requirements

- Fulfill University requirements for graduate study.
- Complete 34 months (three academic years) of consecutive full-time advanced study and clinical training at the School of Dentistry.
- Complete an approved master's thesis based on original research completed during the course of study in an area related to Orthodontics.
- Must pass the Mock ABO clinical examination which includes a written and an oral examination.
- Must pass the written component of the ABO examination.
- Must successfully complete all didactic and clinical work in the required curriculum.
- Must demonstrate satisfactory clinical competency in orthodontics.
- Complete a minimum of 89 credit hours, including 63 hours of orthodontic courses and a minimum of 5 hours of selected basic science subjects, 6 hours of teaching practicum, and 15 hours of research/thesis.
- Achieve a 3.0 GPA or an overall competence in the student's field. A minimum grade of B must be earned in all work attempted in the master's program. A grade of C or below in two courses will require a faculty review of the student's progress. A third C or below will result in suspension from the program.

CURRICULUM REQUIREMENTS

Biomedical Sciences		
DENT 601	Advanced Oral Microbiology	1
PALM 601	Special Studies in Oral Pathology	2
PALM 716	Craniofacial Growth and Maturation	1
PCOL 765	Advanced Biomedical Sciences: Applied Pharmacology	1
Orthodontic Courses		
ORTH 616	Biomechanics	2
Orthodontic Technique		4
ORTH 617	Orthodontic Technique	
ORTH 618	Orthodontic Materials	1
Orthodontic Diagnosis		12
ORTH 619	Orthodontic Diagnosis	
ORTH 620	Cephalometrics	1
Orthodontic Mechanics		8
ORTH 621	Orthodontic Mechanics (Repeated)	
ORTH 623	Growth and Development	2
ORTH 625	Orthodontic Seminar	1
Orthodontic Clinic		22
ORTH 626	Orthodontic Clinic (Repeated)	
Surgical Orthodontics		2
ORTH 627	Surgical Orthodontics (Repeated)	
Early Orthodontic Treatment		1
ORTH 628	Early Orthodontic Treatment (Repeated)	
Orthodontic Patient Management		2
ORTH 629	Orthodontic Patient Management (Repeated)	
ORTH 630	Craniofacial Anomalies	1
Journal Club		2
ORTH 631	Journal Club	
ORTH 632	Dentofacial Orthopedics	1
Orthodontics-Periodontics Seminar		1
ORTH 633	Orthodontics-Periodontics Seminar (Repeated)	
Teaching Praticum		

ORTH 690	Teaching Practicum (Repeated)	6
Research/Thesis		
DENT 686	Applied Statistics in Dentistry	3
DENT 687	Research Methods	1
ORTH 697	Research (Research)	11
Total Hours		89

SUGGESTED PLAN OF STUDY

First Semester	Hours
ORTH 617	2
ORTH 618	1
ORTH 619	3
ORTH 621	2
ORTH 625	1
	9

Second Semester	Hours
PALM 601	2
ORTH 616	2
ORTH 617	2
ORTH 619	1
ORTH 621	1
ORTH 626	1
ORTH 632	1
DENT 686	3
	13

Third Semester	Hours
DENT 601	1
DENT 687	1
ORTH 619	2
ORTH 620	1
ORTH 621	1
ORTH 623	2
ORTH 626	3
	11

Fourth Semester	Hours
PALM 716	1
ORTH 619	2
ORTH 626	4
ORTH 631	1
ORTH 697	1
	9

Fifth Semester	Hours
PCOL 765	1
ORTH 619	1
ORTH 621	1
ORTH 626	3
ORTH 627	1
ORTH 628	1
ORTH 697	1
	9

Sixth Semester	Hours
ORTH 619	1

ORTH 621	1	
ORTH 626	5	
ORTH 697	2	
	9	
Seventh Semester	**Hours**	
ORTH 626	3	
ORTH 631	1	
ORTH 690	2	
ORTH 697	3	
	9	
Eighth Semester	**Hours**	
ORTH 619	1	
ORTH 621	1	
ORTH 626	2	
ORTH 629	1	
ORTH 690	2	
ORTH 697	2	
ORTH 628	1	
	10	
Ninth Semester	**Hours**	
ORTH 619	1	
ORTH 621	1	
ORTH 626	1	
ORTH 627	1	
ORTH 629	1	
ORTH 630	1	
ORTH 690	2	
ORTH 697	2	
	10	

Total credit hours: 89

Major Learning Outcomes

ORTHODONTICS

- Provide the education and training necessary for graduate dentists to practice in their specialty.
- Provide the education and training necessary for a specialist to achieve Board Certification.

Periodontics, M.S.

Degree Offered

- Master of Science

Nature of the Program

The School of Dentistry and the Department of Periodontics offer a program of advanced study and clinical training leading to the degree of Master of Science. The program requires a minimum of thirty-four months (three academic years) of full time residency in the School of Dentistry. It is designed to qualify dentists for careers in periodontic clinical practice, teaching and research.

A stipend plus tuition waiver will be provided for graduate students in Periodontics at the end of the second year for summer session and fall/spring semesters. Special fees are not covered by the tuition waiver. You must pay special fees each term/semester.

Inquiries concerning this program should be directed to the Office of Dental Admissions, Recruitment and Access (https://dentistry.hsc.wvu.edu/departments/dental-admissions-recruitment-access/). Applications will be processed by the School of Dentistry. Applicants approved for admission to the program will be notified soon after interviews have been completed.

This program is accredited by the Commission on Dental Accreditation of the American Dental Association. For details about the faculty, publications and alumni information, please visit the Department of Periodontics (http://dentistry.hsc.wvu.edu/departments/periodontics/) website.

Program Goals

The postgraduate program is designed to train well qualified dentists in all aspects of periodontics. The program is organized into five components: biomedical science didactics, periodontal didactics, clinical activity, research and teaching. The department philosophy is to provide comprehensive training that encompasses all aspects of periodontal and implant therapy. The program qualifies the student for examination and certification by the American Board of Periodontology.

The Master of Science degree program requires the development of an in-depth research problem which must be reported in the form of a thesis.

Program Curriculum

FIRST-YEAR PROGRAM

In the first year of the program, the resident is introduced to the specialty of periodontics, its scope and its history. The resident receives instruction in the scientific and clinical aspects of periodontics and implant dentistry.

Seminars on current and classic periodontal literature will be offered in addition to case presentations and interdisciplinary seminars. The residents will also participate in didactic courses in biostatistics and research methodology.

The didactic activity will be combined with supervised patient care.

SECOND-YEAR PROGRAM

The second year of the program is a continuation of the first year of training, with increased emphasis on the clinical treatment of patients and the advanced concepts of periodontics. The resident will spend more time conducting a research study and in the development of a thesis.

THIRD-YEAR PROGRAM

Throughout the training, the resident is encouraged to be inquisitive regarding all phases of treatment and to use initiative to be resourceful. The senior resident should become a severe critic of his or her own accomplishments and be able to support clinical decisions with references from the literature. Completion of a research problem and thesis are required and the resident must successfully defend the thesis at the Committee level. The senior resident will be expected to present lectures and patient presentations in preparation for Board certification and future teaching responsibilities. Satisfactory completion of this year of training qualifies the resident for examination and certification by the American Board of Periodontology.

FACULTY

CHAIR AND GRADUATE PROGRAM DIRECTOR

- Gian Pietro Schincaglia D.D.S., PhD.

ASSISTANT PROFESSOR

- Abdul Shakore, Arif Salman - M.D.S.

Admissions

The program's admission requirements are as follows:

- Must have passed National Board Dental Examination - Part I at the time of application and Part 2 upon entrance to the program or the Integrated Exam (INBDE).
- Must have earned a D.M.D./D.D.S. degree, or its equivalent.
- Must be proficient in the English language or provide a recent TOEFL score (if foreign applicant).
- Must display evidence of scholastic and clinical achievement that would indicate the applicant's ability to progress in a program of this nature. A minimum grade point average of 3.0 is required.
- Must apply to the program through the Postdoctoral Application Support Service (PASS) (http://www.adea.org/) and have all application materials in PASS by September 15.
- Must apply to National Match Services (https://natmatch.com/) and obtain a MATCH number to be considered for admission to the program.
- Must complete and submit WVU Graduate Application, if invited for an interview.
- Must participate in an onsite interview.
- Must consent to and pass a criminal background investigation prior to final acceptance.
- Must submit documentation of required immunizations. A complete list is available on the School of Dentistry website.
- Must become familiar with the West Virginia School of Dentistry's policy and procedure for Bloodborne Pathogens and Infectious Diseases.

- Must meet federal and university standards regarding the Responsible Conduct of Research.
- Must be eligible for and obtain a West Virginia dental license or dental resident/intern permit prior to the first day of program orientation.

Degree Requirements

- Fulfill University requirements for graduate study.
- Complete 34 months (three academic years) of consecutive full-time advanced study and clinical training at the School of Dentistry.
- Complete an approved master's thesis based on original research completed during the course of study in an area related to Periodontics.
- Pass the Mock AAP oral examination.
- Pass the In-Service AAP written examination with a score > 60 percentile.
- Complete all didactic and clinical work in the required curriculum successfully.
- Demonstrate satisfactory clinical competency in periodontics.
- Complete a minimum of 93 credit hours, including 70 hours of periodontic courses and a minimum of 8 hours of selected basic science subjects, 4 hours of teaching practicum, and a research/thesis (11 hours).
- Achieve a 3.0 GPA or an overall competence in the student's field. A minimum grade of B must be earned in all work attempted in the master's program. A grade of C or below in two courses will require a faculty review of the student's progress. A third C or below will result in suspension from the program.

Curriculum Requirements

Minimum GPA of 3.0 is required.

Minimum grade of B- is required in all courses.

Biomedical Sciences		
DENT 600	Advanced Oral Surgery	3
DENT 601	Advanced Oral Microbiology	1
PALM 601	Special Studies in Oral Pathology	2
PALM 716	Craniofacial Growth and Maturation	1
PCOL 765	Advanced Biomedical Sciences: Applied Pharmacology	1
Periodontic Courses		
ORTH 633	Orthodontics-Periodontics Seminar	1
Core Classic Literature Review		4
PERI 640	Core Classic Literature Review	
Classic Periodontics Literature Review		12
PERI 642	Classic Peri Lit Rev	
Clinical Management of Medically Compromised Patients		6
PERI 644	Clinical Management of Medically Compromised Patients	
Clinical Periodontics		35
PERI 650	Clinical Periodontics	
Implant Dentistry		6
PERI 662	Implant Dentistry	
Advanced Periodontal/Implant Surgery		6
PERI 664	Introduction to Advanced Periodontal/Implant Surgery	
Teaching Practicum		5
DENT 690	Teaching Practicum	
Research/Thesis		
DENT 686	Applied Statistics in Dentistry	3
DENT 687	Research Methods	1
DENT 697	Research	6
Total Hours		93

SUGGESTED PLAN OF STUDY

First Semester	**Hours**
DENT 600	1
PERI 640	2

	Hours
PERI 650	4
PERI 664	2
	9

Second Semester	**Hours**
DENT 600	2
DENT 686	3
PALM 601	2
PCOL 765	1
PERI 642	2
PERI 644	1
PERI 650	3
PERI 662	1
	15

Third Semester	**Hours**
DENT 601	1
DENT 687	1
PERI 642	2
PERI 644	1
PERI 650	4
PERI 662	1
	10

Fourth Semester	**Hours**
DENT 697	1
PALM 716	1
PERI 640	2
PERI 650	3
PERI 664	2
	9

Fifth Semester	**Hours**
DENT 690	1
DENT 697	1
ORTH 633	1
PERI 642	2
PERI 644	1
PERI 650	4
PERI 662	1
	11

Sixth Semester	**Hours**
DENT 690	1
DENT 697	1
PERI 642	2
PERI 644	1
PERI 650	4
PERI 662	1
	10

Seventh Semester	**Hours**
DENT 690	1
DENT 697	1
PERI 650	5
PERI 664	2
	9

Eighth Semester	Hours
DENT 690	1
DENT 697	1
PERI 642	2
PERI 644	1
PERI 650	4
PERI 662	1
	10
Ninth Semester	Hours
DENT 690	1
DENT 697	1
PERI 642	2
PERI 644	1
PERI 650	4
PERI 662	1
	10

Total credit hours: 93

Major Learning Outcomes

PERIODONTICS

- Provide the education and training necessary for graduate dentists to practice in their specialty.
- Provide the education and training necessary for a specialist to achieve Board Certification.

Prosthodontics, M.S.

Degree Offered

- Master of Science

Nature of the Program

The School of Dentistry and the Department of Restorative Dentistry offer a program of advanced study and clinical training leading to the degree of Master of Science. The program requires a minimum of 34 months (three academic years) of full-time residency in the School of Dentistry. It is designed to qualify dentists for careers in prosthodontic clinical practice, teaching, and research.

A stipend plus tuition waiver will be provided for graduate students in Prosthodontics at the end of the second year for summer session and fall/spring semesters. Special fees are not covered by the tuition waiver. You must pay special fees each term/semester.

Inquiries concerning this program should be directed to the Office of Dental Admissions and Recruitment. Applications will be processed by the School of Dentistry. Applicants approved for admission to the program will be notified by the MATCH program if they are selected for admission and a formal letter will be sent from the Office of Dental Admissions.

This program is accredited by the Commission on Dental Accreditation of the American Dental Association. For details about the faculty, publications and alumni information, please visit the Department website at Prosthodontics Program. (https://dentistry.wvu.edu/students/master-of-science/prosthodontics/)

Program Goals

The postgraduate program is designed to train well qualified dentists in all aspects of prosthodontics. Advanced training in prosthodontics consists of an integrated education program designed to provide both knowledge in the dentally applied basic sciences and experiences in the clinical science of prosthodontics. These include but are not limited to, complete denture prosthodontics, removable partial denture prosthodontics, fixed partial denture prosthodontics, maxillofacial prosthetics, and surgical and prosthodontic dental implantology. A series of structured didactic and clinical courses provide the student with a level of knowledge and skill development necessary to practice prosthodontics as a specialty and to prepare for a career in teaching and research. The program qualifies the student for examination and certification by the American Board of Prosthodontics.

The Master of Science degree program requires the development of an in-depth research problem which must be reported in the form of a thesis.

Program Curriculum

FIRST-YEAR PROGRAM

In the first year of the program, the resident is introduced to the specialty of prosthodontics, its scope, and its history. The resident receives instruction in the laboratory and clinical aspects of complete dentures, removable partial dentures, fixed partial dentures, maxillofacial prosthetics, implant prosthodontics, implant surgery and treatment of temporomandibular dysfunction. The resident is required to know and use the materials and techniques for fabricating oral prostheses and to become proficient in performing all phases of laboratory work related to clinical patients.

The resident will participate in seminars on specific topics in prosthodontics and on the relationship of prosthodontics to the other specialties. The resident will study biostatistics, research methodology, and select an in-depth research problem for thesis development and publication.

SECOND-YEAR PROGRAM

The second year of the program is a continuation of the first year of training, with increased emphasis on the clinical treatment of patients and the advanced concepts of prosthodontics. The resident will spend more time conducting a research study and in the development of a thesis. The resident will also expand their clinical skills with the inclusion of surgical implant placement and restoration as well as modern digital dentistry principles to support patient outcomes.

THIRD-YEAR PROGRAM

The third year of the program continues with more advanced clinical treatment and concepts of prosthodontics, including the completion of a master's thesis and defense. The resident will spend a significant amount of time treating older adult patients. The resident will also be trained to identify patients that meet the current requirements for presentation to the American Board of Prosthodontics.

Throughout the training, the resident is encouraged to be inquisitive regarding all phases of treatment and to use initiative to be resourceful. The senior resident should become a severe critic of his or her own accomplishments and be able to support clinical decisions with references from the literature. Completion of a research problem and thesis are required and the resident must successfully defend the thesis at the Committee level. The Senior resident will be expected to present lectures and patient presentations in preparation for Board certification and future teaching responsibilities. Satisfactory completion of this year of training qualifies the resident for examination and certification by the American Board of Prosthodontics.

FACULTY

CHAIR

- Bryan Dye - D.D.S., M.S.
  West Virginia University

GRADUATE PROGRAM DIRECTOR

- Matthew Bryington - D.M.D., M.S.
  U of Penn

ASSISTANT PROFESSORS

- Soo Cheol Jeong - D.D.S., M.S.
  Pusan National University
- Shelby Alexander - D.D.S., M.S.
  West Virginia University

Admissions

The program's admission requirements are as follows:

- Must have passed National Dental Board Examination - Part I at the time of application and Part 2 upon entrance to the program or the Integrated Exam (INBDE).
- Must have earned a D.M.D./D.D.S. degree, or its equivalent.
- Must be proficient in the English language or provide a recent TOEFL score (if foreign applicant).
- Must display evidence of scholastic and clinical achievement that would indicate the applicant's ability to progress in a program of this nature. A minimum grade point average of 3.0 is required.
- Must apply to the program through the Postdoctoral Application Support Service (PASS) (https://www.adea.org/) and have all application materials in PASS by September 15.
- Must apply to National Matching Services (https://natmatch.com/) and obtain a MATCH number to be considered for admission to the program.
- Must complete and submit WVU Graduate Application, if invited for an interview.
- Must participate in an onsite interview.

- Must consent to and pass a criminal background investigation prior to final acceptance.
- Must submit documentation of required immunizations. A complete list is available on the School of Dentistry website.
- Must become familiar with the West Virginia School of Dentistry's policy and procedure for Bloodborne Pathogens and Infectious Diseases.
- Must meet federal and university standards regarding the Responsible Conduct of Research.
- Must be eligible for and obtain a West Virginia dental license or a dental resident/intern permit prior to the first day of program orientation.

Degree Requirements

- Fulfill University requirements for graduate study.
- Complete 34 months (three academic years) of consecutive full-time advanced study and clinical training at the School of Dentistry.
- Complete an approved master's thesis based on original research completed during the course of study in an area related to Prosthodontics.
- Pass a final oral examination.
- Complete all didactic and clinical work in the required curriculum successfully.
- Demonstrate satisfactory clinical competency in Prosthodontics.
- Complete a minimum of 90 credit hours. This includes 67 credit hours of Prosthodontic courses, a minimum of 5 credit hours of selected basic science subjects, 6 hours of teaching practicum, and a research/thesis (12 hours).
- Achieve a 3.0 GPA or an overall competence in the student's field. A minimum grade of B must be earned in all work attempted in the master's program. A grade of C or below in two courses will require a faculty review of the student's progress. A third C or below will result in suspension from the program.

Curriculum Requirements

Minimum GPA of 3.0 required.

Minimum grade of B required in each course.		
Biomedical Sciences		
DENT 601	Advanced Oral Microbiology	1
PALM 601	Special Studies in Oral Pathology	2
PALM 716	Craniofacial Growth and Maturation	1
PCOL 765	Advanced Biomedical Sciences: Applied Pharmacology	1
Prosthodontic Courses		
DENT 600	Advanced Oral Surgery	3
Clinical Management of Medically Compromised Patients		2
PERI 644	Clinical Management of Medically Compromised Patients	
Implant Dentistry		6
PERI 662	Implant Dentistry	
PROS 675	Introduction to Advanced Prosthodontics	2
PROS 676	Introduction to Advanced Complete Dentures Prosthodontics	2
PROS 677	Introduction to Removable Prosthodontics	1
PROS 678	Introduction to Fixed Prosthodontic Theory	2
Prosthodontic Classic Literature Review		9
PROS 680	Prosthodontic Classic Literature Review	
Prosthodontic Current Literature Review		9
PROS 681	Prosthodontic Current Literature Review	
PROS 688	Advanced Clinical Prosthodontics (Repeated)	31
Teaching Practicum		
DENT 690	Teaching Practicum (Repeated)	6
Research/Thesis		
DENT 686	Applied Statistics in Dentistry	3
DENT 687	Research Methods	1
DENT 697	Research	8
Master's Thesis		
Oral Examination		
Demonstrate satisfactory clinical competency		
Total Hours		90

Suggested Plan of Study

First Semester	Hours
DENT 600	1
PROS 675	2
PROS 680	1
PROS 681	1
PROS 688	4
	9

Second Semester	Hours
DENT 600	2
DENT 686	3
PERI 644	1
PERI 662	1
PCOL 765	1
PROS 676	2
PROS 680	1
PROS 681	1
PROS 688	2
	14

Third Semester	Hours
DENT 601	1
DENT 687	1
PERI 644	1
PERI 662	1
PROS 677	1
PROS 678	2
PROS 688	2
PROS 680	1
PROS 681	1
	11

Fourth Semester	Hours
DENT 697	1
PROS 680	1
PALM 716	1
PROS 681	1
PROS 688	5
	9

Fifth Semester	Hours
DENT 697	1
DENT 690	1
PALM 601	2
PERI 662	1
PROS 680	1
PROS 681	1
PROS 688	3
	10

Sixth Semester	Hours
DENT 697	2
PERI 662	1
PROS 680	1
PROS 681	1

PROS 688	4
	9
Seventh Semester	**Hours**
DENT 690	2
DENT 697	1
PROS 680	1
PROS 681	1
PROS 688	4
	9
Eighth Semester	**Hours**
DENT 690	2
DENT 697	1
PERI 662	1
PROS 680	1
PROS 681	1
PROS 688	4
	10
Ninth Semester	**Hours**
DENT 690	1
DENT 697	2
PERI 662	1
PROS 680	1
PROS 681	1
PROS 688	3
	9

Total credit hours: 90

Major Learning Outcomes

PROSTHODONTICS

- Provide the education and training necessary for graduate dentists to practice in their specialty.
- Provide the education and training necessary for a specialist to achieve Board Certification.

Education and Human Services

Degrees Offered

- Master of Arts
  - Counseling
  - Educational Psychology (emphases in Educational Psychology, Child Development and Family Studies, or Program Evaluation and Research)
  - Higher Education Administration (online)
  - Higher Education Administration - Student Affairs Specialization
  - Instructional Design and Technology (online)
  - Literacy Education (online)
- Master of Science
  - Clinical Rehabilitation and Mental Health Counseling (online)
  - Speech-Language Pathology
- Doctor of Audiology
- Doctor of Education
  - Higher Education Administration
  - Instructional Design and Technology (online)
- Doctor of Philosophy
  - Communication Sciences and Disorders
  - Counseling Psychology
  - Educational Theory and Practice
  - Higher Education
  - Learning Sciences and Human Development

The facilities of the College of Education and Human Services include Allen Hall on the Evansdale campus and the WVU Child Development Laboratory/Nursery School. This building has a number of technology based classrooms, conference rooms, a computer lab, research space, and faculty and staff offices. It also houses the Collaborative Assistive Technology Education Laboratory, the Program Evaluation and Research Center, the Teaching and Learning Technologies Center, the WVU Center for the Future of Land-Grant Education, and the WVU Speech and Hearing Clinic. Students may obtain additional information about a particular graduate program by writing to the coordinator of that program or contacting the department.

Nature of the Programs

Some graduate programs require the successful completion of clinical experiences and placements in approved sites. Placements are arranged and evaluated by faculty and the professional judgments of faculty are used to determine continuation of students in these placements. Students may obtain additional information about a particular graduate program by writing to the coordinator of that program.

Master's degree programs require at least thirty semester hours of coursework that may or may not include research, dependent on their programs of study. No student may be awarded a master's degree unless the student has a minimum grade point average of 3.0 on all work taken for the graduate degree. Students are unable to repeat a required graduate course more than once. Master's students are allowed a maximum period of 8 years (16 semesters, not including summer terms) – from date of admission to successful degree completion – to earn the degree.

Doctoral degrees are not awarded on the basis of the completion of any set number of credits. The final determination of the program of coursework and research is the responsibility of students' doctoral committees. Students and their committees will identify competencies to be developed and how they will be assessed. These will be stated in students' individual programs. Students must be enrolled in the semester in which their candidacy examinations occur. Upon successful completion, students will formally propose their dissertation prospectus to the committee. The candidate must submit and justify a prospectus for a doctoral dissertation. The doctoral committee must review and approve, approve with change, or reject the outline or prospectus. Upon fulfillment of the program requirements set by the doctoral committee, the student must successfully defend the dissertation. If the student receives more than one unfavorable vote from the committee, the candidate will not be recommended for the doctoral degree. Doctoral students are allowed a maximum period of 10 years (20 semesters, not including summer terms) – from date of admission to successful defense of the dissertation – to earn the degree. Exceptions to this policy will be determined on a case-by-case basis where necessary (e.g., student leave of absence due to illness).

ADMINISTRATION

DEAN

- Tracy Morris - Ph.D.

ASSOCIATE DEAN FOR ACADEMIC AFFAIRS

- Jessica Troilo - Ph.D.

ASSOCIATE DEAN FOR RESEARCH

- Melissa Luna - Ph.D.

Degree Designation Learning Outcomes

MASTER OF ARTS (MA) AND MASTER OF SCIENCE (MS)

The College of Education and Human Services offers graduate programs that lead to masters and doctoral degrees in specific fields of study and areas of professional practice. Learning goals for students in Master of Arts and Master of Science degree programs include:

- Developing depth and breadth of knowledge across the specialized body of theoretical information and applied topics
- Developing knowledge of the issues and discourses that are central to the discipline
- Learning to effectively communicate one's knowledge about the discipline
- Learning to engage in analytical thinking to address problems in the discipline
- Engaging in collaborative activities in communities of practice with the discipline

DOCTOR OF EDUCATION (EDD) AND DOCTOR OF PHILOSOPHY (PHD)

Doctoral programs build on and extend knowledge and skills related to masters level programs. Students in both the Doctor of Education (EdD) and Doctor of Philosophy (PhD) programs engage in structured research experiences to develop a deeper understanding of educational research as they build research skills by designing and conducting theory-driven inquiry-based studies.

DOCTOR OF AUDIOLOGY (AUD)

The Doctor of Audiology (Au.D) program has been designed to provide a firm understanding of the normal processes of hearing and communication with the academic and clinical preparation to diagnose and treat the full range of hearing disorders in all age groups. Our goal is to prepare audiologists who are competent to work in a wide variety of clinical settings, including hospitals, clinics, special treatment centers, schools, industry, and private practice. To this end, the following goals have been established by the Department of Communication Sciences and Disorders at West Virginia University:

1. Graduates will demonstrate mastery of knowledge and skills necessary to practice audiology in diverse settings encompassing all of the many facets of our profession.
2. Graduates will demonstrate an ability to work autonomously, using sound judgment in a competent and ethical manner.
3. Graduates will contribute to the profession and their community via active membership in professional organizations, scholarly activity, and taking the initiative in public education concerning hearing and balance disorders.
4. Graduates will be employed as audiologists serving the hearing impaired populaces, industry, and the medical community with special emphasis in underserved areas of our state.

Certificate Programs

- Health Professions Education (p. 57)
- Program Evaluation (p. 63)
- Public School Administration - Instructional Supervision Preparation (p. 65)
- Public School Administration - Principal Preparation (p. 65)
- Public School Administration - Superintendent Preparation (p. 65)

Accreditation

The following programs have specialized accreditation through the Council on Academic Accreditation in Audiology and Speech - Language Pathology.

- Audiology
- Speech - Language Pathology

The following programs have a specialized accreditation through the Council for Accreditation of Counseling and Related Educational Programs.

- Clinical Rehabilitation and Mental Health Counseling
- Clinical Mental Health Counseling

The following programs have specialized accreditation through the National Council for Accreditation of Teacher Education and is a Council for the Accreditation of Educator Preparation eligible provider.

- Education
  - Elementary Education
  - Elementary Education/MDS
  - Elementary Education/MDS- Early Education
  - Elementary Education/MDS-English
  - Elementary Education/MDS- General Science
  - Elementary Education/MDS- Mathematics Education
  - Elementary Education/MDS- Multicategorical Special Education
  - Elementary Education/MDS- Social Studies
  - Elementary Education/MDS- World Language Education
  - Literacy Education
  - Secondary Education- Biology Education
  - Secondary Education- Chemistry Education
  - Secondary Education- English
  - Secondary Education- General Science Education
  - Secondary Education- Math Education
  - Secondary Education- Physics Education
  - Secondary Education- Social Studies Education
  - Secondary Education/MDS- Biology and Integrated Science
  - Secondary Education/MDS- Chemistry and Integrated Science
  - Secondary Education/MDS- Physics and Integrated Science
  - Secondary Education/Multicategorical
- School Counseling
- Speech-Language Pathology

Graduates of our state-approved preparation programs are eligible for recommendations for certification/licensure issued by appropriate state agencies. Since certification requirements are changed periodically by the state, the fulfillment of certification requirements as presented in this catalog cannot guarantee compliance with the most recent requirements. The West Virginia State Department of Education requires that a degree be from an accredited institution of higher education for licensure and salary purposes. Students are, therefore, encouraged to seek the counsel of members of the faculty, their advisors, and the college certification officer on matters pertaining to degree and certification requirements.

Department of Counseling, Rehabilitation Counseling, and Counseling Psychology

Degrees Offered

- Master of Arts
- Master of Science
- Doctor of Philosophy

Department of Counseling, Rehabilitation Counseling, and Counseling Psychology offers three graduate programs. These are the master of arts programs in counseling, with specializations in clinical mental health counseling and school counseling; the master of science program in clinical rehabilitation and mental health counseling, an e-campus program; and the Ph.D. program in counseling psychology.

The key unifying component in all of our programs is "counseling**."** The American Counseling Association (ACA) defines professional counseling as "the application of mental health, psychological, or human development principles, through cognitive, affective, behavioral or systematic intervention strategies, that address wellness, personal growth, or career development, as well as pathology."

These interrelated fields all hold great promise in the job market and for your life. Professionals who make their careers in these fields are dedicated to making a difference in the lives of others. We support their learning in many ways—through classroom activities, research, and service learning.

FACULTY

CHAIR

- Jeffrey A. Daniels - Ph.D. (University of Nebraska)
  Chair, Counseling Psychology Training Director, Counseling Psychology, Global Hostage-taking, Averting Lethal School Violence, Violence Prevention

PROFESSOR

- Margaret K. Glenn - Ed.D.,CRC (George Washington University)
  Program Coordinator, Clinical Rehabilitation and Mental Health Counseling, Substance Abuse Treatment and Vocational Rehabilitation, Complementary and Alternative Approaches in Rehabilitation, Meditation Practices.

ASSOCIATE PROFESSORS

- Ed Jacobs - Ph.D. (Florida State University)
  Coordinator of the Master's Degree Program in Counseling, Impact Therapy, Creative Counseling, Group Counseling, Marriage and Family
- Monica Leppma - Ph.D. (University of Central Florida)
  Mental Health Counseling, Counseling in the School System, Counselor Development, Protective Factors, Mindfulness and Meditation
- Christine J. Schimmel - Ed.D. (Marshall University)
  Associate Department Chair, Counseling Fieldwork Coordinator, Coordinator of School Counseling, Counseling Master's Program, School Counseling Role, Creative Counseling, Group Counseling in Schools

ASSISTANT PROFESSORS

- John Blake - Ph.D., CRC (University of Wisconsin-Madison)
  Rehabilitation Counseling, vocational rehabilitation program outome, psychosocial issues, attachment, hope
- George Mamboleo - Ph.D. , CRC (University of Arizona)
  Rehabilitation Counseling, attitudes toward disability, disability accommodation, employment outcomes for individuals with chronic illnesses
- Lisa F. Platt - Ph.D. (The Pennsylvania State University)
  Clinical Training Director, Counseling Psychology Ph.D. Program, LGBTQ populations, Gender and gender diversity

TEACHING ASSISTANT PROFESSOR

- Elisabeth Simpson - Ph.D., CRC, NCC (Duquesne University)
  Social justice competence, assistive technology, employment and disability legislation

VISITING ASSISTANT PROFESSOR

- Edward Baker - Ph.D. , Licensed Psychologist (University of Texas Southwestern Medical School-Dallas)
  Counseling Psychology Ph.D. Program, Intellectual and Personality Assessment, Forensic Populations

CLINICAL ASSISTANT PROFESSOR

- Frankie Tack - MS (Western Carolina University) AADC, CCS, NCC
  Addiction Studies Minor Coordinator

TEACHING INSTRUCTOR

- Regina Burgess - M.S., CRC, LPC (West Virginia University)
  Vocational Assessment, Rehabilitation Counseling
- Heidi O'Toole - MS (West Virginia University), LPC, EMDR-T
  Trauma, Addictions, Neuroscience, EMDR, Energy Psychology, Attachment Theory, and Spirituality

PROFESSORS EMERITI

- L. Sherilyn Cormier - Ph.D. (Purdue University)
- James DeLo - Ph.D. (University of Pittsburgh)
- Ranjit K. Majumder - Ph.D. (University of Oklahoma)
- Robert L. Masson - Ed.D. (State University of New York)
- Jeffrey K. Messing - Ed.D. (Syracuse University)
- David J. Srebalus - Ed.D. (Indiana University)
- Roy Tunick - Ed.D. (University of Northern Colorado-Greeley)

ASSOCIATE PROFESSOR EMERITA

- James W. Bartee - Ph.D. (University of Washington)

Clinical Rehabilitation and Mental Health Counseling, M.S.

Degree Offered

- Master of Science

Nature of the Program

The clinical rehabilitation and mental health counseling program in the College of Education and Human Services offers a curriculum at the master's degree level. All students complete coursework in core counseling knowledge and skill development as well as knowledge associated with disability, mental health, addiction, and rehabilitation issues. The opportunities for working as a professional counselor are numerous - from allied health settings to state-federal systems of vocational rehabilitation and Veterans' Affairs to delivering counseling services in mental health and/or substance use disorder treatment programs

The objectives of the program are linked to the intent to provide:

- educational experiences for every student that facilitates the development of knowledge, skills, and beliefs necessary to practice as a qualified clinical rehabilitation and clinical mental health counselor;
- learning opportunities to support students' ability to implement culturally responsive and ethically sound counseling practices, and
- clinical training environments that are focused on real world expectations.

The combination of didactic and clinical training in counseling theory and techniques for individuals and in group settings is enhanced by a holistic approach toward maximizing the standard of health, comfort, and happiness experienced by an individual, groups, and communities. Students are trained in facilitating opportunities for growth and change in health, social relationships, emotional well-being, finding purpose and meaningful work, belonging, financial well-being and other factors that allow people, families, businesses, and communities to thrive.

The program is available for both full- and part-time students in a hybrid modality that uses asynchronistic online courses coupled with two immersion weeks on campus for counseling skill development, and are now exploring virtual simulation training. Students may work with a faculty advisor to substitute on-campus counseling courses for those offered online as part of their plan of study, on a case by case basis.

This specialty prepares professional counselors to operate in allied health settings as well as part of integrated behavioral health programs, and disability-related agencies or rehabilitation hospitals; vocational rehabilitation and employment departments in private industry, state-federal systems, and for the U.S. Department of Veterans' Affairs; to deliver mental health counseling in private industry, community agencies, and for the U.S. Department of Veterans' Affairs, as well as work effectively in addiction treatment centers and community recovery programs.

The program is fully accredited by the Council for Accreditation for Counseling and Related Education Programs for the specializations of Clinical Rehabilitation Counseling and Clinical Mental Health Counseling until 2023 and is a WVU Program of Excellence.

Program Contact:
Margaret K. Glenn, Ed.D., Coordinator of Clinical Rehabilitation and Mental Health Counseling
Allen Hall, P.O. Box 6122

FACULTY

PROGRAM COORDINATOR

- Margaret K. Glenn - Ed.D., CRC, Professor (The George Washington University)
  Addictions, vocational rehabilitation, complementary and alternative healthcare practices, service dogs

ASSISTANT PROFESSORS

- John Blake - Ph.D. (University of Wisconsin-Madison)
  Rehabilitation counseling, Vocational rehabilitation program outcomes, psychosocial issues, attachment, hope
- George Mamboleo - Ph.D. (University of Arizona)
  Rehabilitation Counseling

TEACHING ASSISTANT PROFESSOR

- Elisabeth Simpson - PhD
  Counselor Education and Supervision (Duquesne University)

TEACHING INSTRUCTOR

- Regina Burgess - M.S., CRC, LPC (West Virginia University)

Admissions

APPLICATION

Applications for admission to the clinical rehabilitation and mental health counseling program must be made to the WVU Office of Admissions. In addition to the admission requirements of the university and the College of Education and Human Services, the program has the following admission requirements.

- A baccalaureate degree with coursework in appropriate areas
- A minimum undergraduate grade point average of 2.8 based on a 4.0 system (students with a lower grade point average and otherwise exceptional credentials may be admitted provisionally); under 2.5 GPA cannot be admitted without faculty consideration
- GRE or MAT scores: current within seven years. A minimum score is not used as the only criterion for admission; use of multiple criteria is particularly important when using GRE scores to assess the abilities of educationally disadvantaged applicants, applicants whose primary language is not English and applicants who are returning to school after an extended absence
- Three letters of reference (can be submitted within the WVU electronic application system)
- Completion of the WVU Graduate School Application (https://graduate.wvu.edu/)
- Completion of the program's supplemental application found on the program's website (http://counseling.wvu.edu/rehabilitation_counseling/future_students/) with a personal statement

The initial screening decision is based upon this information as well as considering the applicant's previous work or related experiences related to persons with disabilities, to include but not limited to physical disability, mental health conditions, substance use disorders, intellectual disability, head injury, autism spectrum disorder, other developmental disabilities, low vision or blindness, and deaf or hard of hearing.

Successful applications are then interviewed by program faculty members.

Final decisions about admission are based on both the requirements and the interview process.

ADMISSION

Admission to the program is a two-step procedure.

Step 1 involves a review of credentials presented in the application materials including references, program application (relevant major; general quality of application), UGPA, and Graduate Record Exam (GRE) scores or the Miller's Analogy Test (MAT) scores.

Step 2 is the department interview which considers personal style relevant to working as a counselor, communication skills, capacity for empathic understanding and communication, ability to articulate professional goals, goals congruent with department focus, knowledge and understanding of rehabilitation counseling as well as an assessment of applicants' capacity to complete the rehabilitation counseling curriculum successfully.

The application deadline for receiving completed materials is March 15 for fall admission and October 1 for spring admission

Major Requirements

A minimum GPA of 3.0 is required in all courses

A grade of C- or higher is required in all courses		
REHB 600	Introduction to Rehabilitation Services	3
REHB 610	Medical Aspects of Rehabilitation	3
REHB 612	Disability Across the Lifespan	3
REHB 620	Career Development and Job Placement	3
REHB 624	Rehabilitation Client Services	3

COUN 501	Counseling Theory and Techniques 1	3
COUN 606	Counseling Theory and Techniques 2	3
COUN 609	Group Counseling Theory and Techniques	3
COUN 505	Theory and Practice of Human Appraisal	3
COUN 665	Diagnosis and Treatment Planning	3
COUN 634	Cultural Issues	3
COUN 640	Addictions Counseling	3
COUN 645	Couples and Family Counseling	3
COUN 664	Ethical Issues in Counseling	3
COUN 668	Crisis Trauma Grief Counseling	3
REHB 680	Seminar	3
REHB 672	Counseling Practicum	3
REHB 675	Clinical Practice	12
Total Hours		63

Major Learning Outcomes

CLINICAL REHABILITATION AND MENTAL HEALTH COUNSELING

The objectives of our program are linked to our mission statement. They are to provide:

- Educational experiences for every student that facilitates the development of knowledge, skills and beliefs necessary to practice as qualified clinical rehabilitation and mental health counselors in a wide variety of circumstances.
- Learning opportunities to support students' ability to implement culturally responsive and ethically sound clinical rehabilitation and mental health counseling practices.
- Clinical training environments that are focused on real world expectations and standards of clinical practice.

Counseling, M.A.

Degree Offered

- Master of Arts

Nature of the Program

The Department of Counseling, Rehabilitation Counseling, and Counseling Psychology of the College of Education and Human Services offers a master's program in counseling. The counseling M.A. program is fully accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP). Variations of the curriculum allow emphasis in school counseling and clinical mental health counseling. All applicants must comply with university, the College of Education and Human Services, and departmental requirements.

A degree in counseling provides a broad opportunity to work with children at the elementary-school level, adolescents at the secondary-school level, and all ages at the community level. The school counselor is involved in personal counseling, career guidance, vocational and educational counseling, family counseling, and consultation on classroom problems with teachers and administrators. Clinical mental health counselors work with all ages and populations in various community settings such as correctional facilities, treatment centers, mental health agencies, etc. Counselors must be equipped to work with both individuals and groups.

Students are encouraged to pursue their studies on a full-time basis; however, part-time students are accepted. Part-time admission is meant only for those who plan to take one or two courses a semester. If admitted with part-time status, students will NOT automatically be able to move into the full-time program. There are no summer practicum or internship placements.

Program Contact:
Edward E. Jacobs, Ph.D., Program Coordinator
502 Allen Hall, P.O. Box 6122, Morgantown, WV 26506-6122

Admissions

APPLICATION

Applications for admission to the counseling program should be made to WVU's Office of Admissions. In addition to the admission requirements of the university and the College of Education and Human Services, the Department of Counseling, Rehabilitation Counseling, and Counseling Psychology has the following admission requirements:

- A baccalaureate degree with coursework in appropriate areas
- A minimum undergraduate grade point average of 2.8, based on a 4.0 system
- GRE scores: 290 preferred
- Three letters of reference
- Completed WVU Graduate School Application

ADMISSION

The West Virginia University counseling department's admission process is a two-step procedure:

Step 1 is a review of paper credentials including references, department application (relevant major, general quality of application), work experience, GRE scores, and GPA. The initial screening decision is based upon this information. Successful applicants are then interviewed by program faculty.

Step 2 is the department interview, which considers interpersonal style relevant to working as a counselor, communication skills, capacity for empathic understanding and communication, ability to articulate professional goals, goals congruent with department focus, knowledge, understanding of counseling, and assessment of applicants' capacity to complete the counseling curriculum successfully.

Application deadline for fall admission is February 15 with review of completed applications beginning February 1. We only accept students once a year.

Major Requirements

All students who are candidates for a master's in counseling are required to take the following core courses:

A minimum cumulative GPA of 3.0 is required

COUN 501	Counseling Theory and Techniques 1	3
COUN 505	Theory and Practice of Human Appraisal	3
COUN 536	Theories of Human Development	3
COUN 606	Counseling Theory and Techniques 2	3
COUN 609	Group Counseling Theory and Techniques	3
COUN 620	Lifespan Career Counseling	3
COUN 630	Children/Adolescents/Parents	3
COUN 634	Cultural Issues	3
COUN 640	Addictions Counseling	3
COUN 645	Couples and Family Counseling	3
COUN 664	Ethical Issues in Counseling	3
COUN 665	Diagnosis and Treatment Planning	3
COUN 668	Crisis Trauma Grief Counseling	3
COUN 684	Supervision Models/Counseling	3
EDP 512	Research and Evaluation in Counseling	3
Required Area of Emphasis		**15**
Clinical Mental Health		
School Counseling		
Total Hours		60

In addition to completing all coursework and the practicum and internship satisfactorily, the candidate must demonstrate the ability to assume the responsibility required of a professional counselor and the personal characteristics and ethical standards essential to effective working relationships with others.

These personal characteristics are assessed throughout the entire program with special emphasis during the clinical coursework components of the program and during the field experience. Students who do not meet professional and clinical standards in these areas are provided feedback, and resources for remediation are recommended. In these cases, successful remediation is required as a prerequisite for successful program completion. Students who violate ACA ethical standards will be evaluated for possible dismissal from the program.

Area of Emphasis

CLINICAL MENTAL HEALTH AREA OF EMPHASIS

A minimum GPA of 3.0 is required.

COUN 622	Introduction to Clinical Mental Health	3
COUN 685	Practicum (Student must take a section of this course that is related to Clinical Mental Health.)	3

| COUN 686 | Counseling Internship (Student must take a section of this course that is related to Clinical Mental Health.) | 9 |
| Total Hours | | 15 |

SCHOOL COUNSELING AREA OF EMPHASIS

A minimum GPA of 3.0 is required.

COUN 608	School Counseling Services	3
COUN 685	Practicum (Student must take a section of this course that is related to School Counseling.)	3
COUN 686	Counseling Internship (Student must take a section of this course that is related to School Counseling.)	9
Total Hours		15

Note: Students enrolled in the School Counseling Area of Emphasis without prior teaching certification will also need to complete COUN 660 and C&I 603.

Major Learning Outcomes

COUNSELING

The objectives of our program in School and Clinical Mental Health Counseling are linked to our mission statement. Specifically, they are to provide:

- An environment that fosters the personal growth and development of each student.
- Educational experiences for every student that fosters individual and group counseling skill development.
- Learning opportunities to support students' interests in diverse populations and cultures.
- Training in schools and clinical mental health settings that give students an opportunity to practice and integrate the skills learned in the classroom.

Counseling Psychology, Ph.D.

Degree Offered

- Doctor of Philosophy

Nature of the Program

All applicants must comply with the graduate requirements of the College of Education and Human Services and the Counseling Psychology program of study. The program includes coursework hours and training experiences in addition to the College of Education and Human Services requirements for the Ph.D. degree.

Admitted students are expected to understand and comply with the current revision of the Ethical Principles of Psychologists and Code of Conduct published by the American Psychological Association.

The aim of the doctoral program at West Virginia University is to provide trainees the means to become competent Health Service Psychologists who, upon graduation, are ready for entry-level clinical and academic practice in the area of Counseling Psychology. Students are expected to work closely with faculty in doing research and in supervised practicum experiences as they integrate science with practice and practice with science. Successful completion of the program requires core coursework and engagement in learning experiences designed to cultivate competence in Discipline-Specific Knowledge (i.e., affective, biological, cognitive, developmental, and social bases of behavior, history and systems of psychology, psychometrics, quantitative methods, research methods, and advanced integrative psychological science), Profession-Wide Competencies (i.e. research, ethical and legal standards, individual and cultural diversity, professional values/attitudes/behaviors, communications and interpersonal skills, assessment, intervention, supervision, consultation and inter-professional/interdisciplinary skills), and Counseling Psychology Area Specific Competencies to include understanding self as instrument; understanding contextual and cultural influences in practice, science, teaching, supervision, and other roles; commitment to holistic strength-based development through preventative, vocational, and social justice approaches.

The Counseling Psychology program at West Virginia University is fully accredited by the American Psychological Association to offer the doctor of philosophy in this specialty area of Health Service Psychology.

Accreditation is a process that reflects the commitment of the institution to self-study and external-review by one's peers in seeking not only to meet professional standards but also to continuously seek ways in which to enhance the quality of education and training provided by the program.

For more information, please refer to The Office of Program Consultation and Accreditation, American Psychological Association, 750 First Street, NE, Washington, DC 20002-4242, phone: (202) 336-5979, fax: (202) 336-5978, e-mail: apaacred@apa.org.

COMPETENCY BASED TRAINING

Training in Health Service Psychology in our Ph.D. program is based on the Competency Benchmarks initiative developed in conjunction with the Council of Counseling Psychology Training Programs (CCPTP) and the Council of University Directors of Clinical Psychology (CUDCP). They can

be found on our website (http://counseling.wvu.edu/counseling_psychology/) and in our Doctoral Student Handbook (http://counseling.wvu.edu/counseling_psychology/future_students/). Seminal documents and related material can also be found on the APA website at: http://www.apa.org/ed/graduate/benchmarks-evaluation-system.aspx. All students are evaluated yearly to document their attainment of the various competencies germane to their level of training within the program.

CANDIDACY

Students are accepted for the preliminary study toward the Ph.D. degree upon admission into the program. Candidacy for the degree is the next stage in the program of study, and requires the following:

- Students must complete the prerequisite doctoral coursework with a 3.25 or better grade point average. The "Readiness for Practicum" benchmark competencies must be achieved.
- Passing scores on the written, comprehensive doctoral qualifying examination covering core Profession-Wide and Counseling Psychology Area Specific competencies. Once advanced to candidacy for the degree, students are afforded an additional five years to complete all remaining elements of the program of study leading to the Ph.D. in Counseling Psychology.

PRACTICUM TRAINING

The practicum consists of a minimum of nine credit-hours requiring 600 on-site clock-hours, and must include at least 200 hours of direct client/patient service and 125 hours of one-to-one supervision by a licensed psychologist. Sites available to our students include the Carruth Center for Psychological and Psychiatric Services at WVU and other college counseling centers within a ninety-minute drive, Veterans Medical Centers, medical centers/hospitals, county agencies, community mental health centers, and private practice settings. All sites must be approved by the program as meeting the standards set forth in the Doctoral Counseling Psychology Handbook.

INTERNSHIP

A one-year, full-time pre-doctoral internship is required in order to complete the program. Students are required to apply via the APPIC Match to APA-accredited programs. As part of the match policies, students must accept and attend the pre-doctoral internship provided by the match. These are typically out-of-state as only a few such programs exist in West Virginia and Morgantown. Students who do not match must petition for an alternative arrangement; approval is at the discretion of the Counseling Psychology faculty.

As of the 2013-14 academic training-year the Counseling Psychology faculty adopted the training model recommend by the Council of Counseling Psychology Training Programs (CCPTP) that recommends the following practicum training requirements for readiness for the pre-doctoral psychology internship:

Trainees successfully complete at least 450 face-to-face, program-sanctioned, doctoral practicum hours of assessment/intervention that includes evidence-based practice and at least 150 hours of supervision by a licensed psychologist that includes observation of the trainee's work. An additional aspect of readiness for internship is the submission for publication as an author or co-author of a professional manuscript, or presenting at least two papers/posters/workshops at a regional, national or international professional conference or meeting.

Program Contact:
Jeff Daniels, Ph.D., Director of Training for Counseling Psychology
502 Allen Hall, P.O. Box 6122, Morgantown, WV 26506-6122

Admissions

The Counseling Psychology Program will **not** be accepting applications for Fall, 2021.

- The admission process consists of two stages and the pertinent materials are evaluated on several facets. Trainees are admitted each fall only for a typical cohort size of six. December 1 is the application deadline for the following fall semester.
- In Stage I, all submitted complete applications are reviewed by the faculty. Completed applications received after December 1 deadline are not guaranteed a review for the coming year, but time permitting, the admissions committee may choose to review them prior to the final selections for interviews.

Applications are screened based on the Departmental Application, Application to the Graduate School, and academic credentials provided to the Admissions Committee, including the following:

- Completion of a master's degree in an area related to counseling psychology
- Graduate grade point average of 3.5 or higher, verified by the official transcripts of graduate coursework
- Three letters of recommendation are required that support the applicant's competency in counseling, assessment, research, and personal qualities that indicate readiness for advanced study in professional psychology.
- GRE Scores: the Educational Testing Service has provided a new set of norms for those persons taking the Graduate Records exams on or after August 1, 2011. We have revised our recommended score levels to reflect these changes. For the Verbal Reasoning section, the faculty recommends a minimum score of 153. For the Quantitative Reasoning section a minimum score of 144 is recommended. If you are reporting scores on the GRE taken prior to August 1, 2011 a combined Verbal and Quantitative score of 1,000 points is recommended. Please remember

the Educational Testing Service only reports scores that are five years aged or less. If your scores are older than that, you will need to take the test again.

- Applicants reporting GRE scores less than these recommended minima may still apply, but their applications may not be competitive with others whose scores achieve the recommended levels. Students offered admission typically have scores well above these minimal, however GRE scores are not the only factor considered by the admissions committee.

The scoring norms for the Analytical Writing section of the GRE have not been changed. A score of 3.0 (out of 6.0) or better on the Analytic Writing section is taken into account in evaluating the application and due credit accorded.

- Two years of relevant work experience is desirable, not necessarily full-time.
- Stage II: Those persons whose basic preparation, references, and relevant application materials recommend them for graduate study in Health Service Psychology/Counseling Psychology are invited to campus for a personal interview with the program faculty and selected students. These typically occur in early to mid-February.

The personal interview is required for a final admission decision. The interview helps to determine the applicant's interpersonal and clinical skills, which are predictive of success in graduate study, internship, and post-degree placement. If an applicant is unable to be on campus during interview day, a phone interview may be scheduled instead. However, in-person interviews are highly recommended. Based on a review of all written materials and the interview, the faculty determines to whom admission will be offered. A waiting list of qualified applicants is usually prepared as well.

- Preliminary admissions decisions are typically made in the two weeks following interviews. Applicants invited to join the program have until April 15 to accept or decline the offer. Final admissions will occur in the next few weeks if openings remain.

Doctor of Philosophy
MAJOR REQUIREMENTS

CPSY 701	Advanced Counseling Psychology Interventions	3
CPSY 709	Advanced Group Counseling / Therapeutic Interventions	3
CPSY 710	Cognitive-Affective Behavior	3
CPSY 734	Multicultural Psychology	3
CPSY 735	Social Psychology	3
CPSY 738	Life Span Psychology	3
CPSY 740	Assessment of Psychopathology	3
CPSY 745	History and Systems of Psychology	3
CPSY 750	Physiological Psychology	3
CPSY 760	Introduction to Counseling Psychology	3
CPSY 763	Advanced Theories of Counseling Psychology	3
CPSY 764	Intellectual Assessment	4
CPSY 766	Vocational Theory and Assessment	3
CPSY 769	Personality Testing and Interpretation	3
CPSY 780	Professional and Ethical Issues in Counseling Psychology	3
CPSY 783	Consultation and Supervision	3
CPSY 770	Doctoral Practicum in Counseling Psychology	9
CPSY 772	Internship	12
CPSY 781	Research Practicum	1
CPSY 782	Research Methods and Design	3
Graduate Seminar		**6**
CPSY 796	Graduate Seminar	
Research		**18**
CPSY 797	Research	
EDP 611	Measurement/Evaluation in Educational Psychology	3
EDP 613	Statistical Methods 1	3
EDP 614	Statistical Methods 2	3
Total Hours		107

THE DOCTORAL DISSERTATION

- By the end of the second year of study, the candidate must define and refine a research topic and select a doctoral dissertation chair. At that time, students must also secure an additional four members to serve on the doctoral committee whose credentials must meet specific criteria as determined by the College of Education and Human Services.
- The candidate prepares and orally presents a research prospectus that elucidates the relevant theory and scientific literature, the research design, and the quantitative or qualitative methods to be used in the study. The written prospectus must be approved by the committee prior to submitting an IRB protocol.
- Approval must be granted by the Institutional Review Board at West Virginia University to proceed with the proposed study.
- Upon completion of the research as determined by the dissertation chair, the student will present an oral defense of his or her study to the full committee and scholarly community. The committee must agree the defense is successful, and the document is ready to be submitted to the Electronic Thesis and Dissertation (ETD) office at West Virginia University. The dissertation is considered complete when the ETD office accepts the final draft approved by the committee.

PREDOCTORAL INTERNSHIP

- After admission to candidacy, students are required to enter the national psychology predoctoral internship matching program (APPIC). APPIC comprises the national database of APA-accredited and APPIC-listed internship programs and positions in the United States. The application process is lengthy and demanding both of time and resources.
- The "Readiness for Internship" benchmarks competencies must be achieved and documented on the competency benchmarks rating form, signed and attested by the candidate's advisor.
- In order to apply for internship, the student must have successfully proposed their dissertation.
- Only if a student is unsuccessful in matches across two years, or there are significant extenuating circumstances, will permission to seek an internship outside the match be granted at the faculty's discretion.
- APA-accredited/APPIC-listed internships are typically off-campus and likely to be out-of-state. They are full-time, twelve-month paid positions usually beginning and ending in August. A successful final evaluation from the internship supervisor is required to complete this element of doctoral study in professional psychology. See *Internship* on the program overview page for further details.

Additional specifics regarding the internship are available on the program website (http://counseling.wvu.edu/counseling_psychology/).

Major Learning Outcomes

COUNSELING PSYCHOLOGY

The West Virginia University Doctoral Program in Counseling Psychology, in compliance with the Health Service Psychology training standards of the American Psychological Association, posits the following major learning goals:

- Students will demonstrate competency with regard to Discipline-Specific Knowledge to include affective, biological, cognitive, developmental, and social bases of behavior, history and systems of psychology, research methods, psychometrics, and advanced integrative psychological science.
- Students will demonstrate Profession-Wide Competencies in research, ethical and legal standards, individual and cultural diversity, professional values/attitudes/and behaviors, communication and interpersonal skills, assessment, intervention, supervision, consultation and inter-professional/interdisciplinary skills.
- Students will demonstrate Program-Specific Competencies in Counseling psychology to include understanding of self as instrument, understanding contextual and cultural influences in practice, science, teaching, supervision and other roles, commitment to holistic strength-based development through preventive, vocational, and social justice approaches.

Department of Curriculum and Instruction/Literacy Studies

Degrees Offered

- Master of Arts
- Doctor of Education
- Doctor of Philosophy

The Department of Curriculum and Instruction/Literacy Studies is comprised of several areas including Education Theory and Practice, Literacy Studies, Social and Cultural Foundations, and Higher Education.

The Department of Curriculum and Instruction/Literacy Studies prepares students to research, develop and implement innovative educational practices. Students in our academic programs are integrated into the field of education through real-world experiences in diverse settings, such as subject-specific clinics and laboratories, professional development classrooms, and research-based practices. Our online programs allow students to gain these experiences in their home communities. The Masters of Arts with certification program prepares and certifies students to teach in K-12 classrooms.

The department also houses several professional programs with M.A., Ed.D, and Ph.D. degrees. Our M.A. literacy education program prepares literacy professionals to assess and motivate struggling learners. The M.A., Ed.D. and Ph.D. programs in higher education prepare students for positions in colleges and universities as faculty, administrators, and researchers. The Ph.D. in Educational Theory and Practice serves as a source of preparation for students toward careers as higher education faculty, education researchers, policy analysts, and work with other educational organizations (e.g., non-profits).

FACULTY

CHAIR

- Nathan M. Sorber - Ph.D. (Pennsylvania State University)
  Higher Education

PROFESSORS

- Allison Swan Dagen - Ph.D (University of Pittsburgh)
  Instructional & Learning Reading and Program Coordinator, Literacy Education
- Dale S. Niederhauser - Ph.D. (University of Utah)
  Foundations of Education, Educational Technology, Elementary Education: Early Childhood
- Sam Stack - Ph.D. (University of South Carolina)
  Foundations of Education

ASSOCIATE PROFESSORS

- Johnna J. Bolyard - Ph.D. (George Mason University)
  Mathematics Education, Mathematics Teacher Development, Use of Representation in Mathematics Teaching
- Jeffrey Carver - Ed.D. (Illinois State University)
  Science Education, Organic Chemistry, Physics
- Sharon Hayes - Ph.D. (University of Florida)
  Elementary Education, Action Research, Professional Development & Literacy
- Melissa Luna - Ph.D. (Northwestern University)
  Associate Dean for Research
- Aimee L. Morewood - Ph.D. (University of Pittsburgh)
  Reading Education, Professional Development, Effective Teaching Strategies
- Ann M. Richards - Ph.D. (University of Arizona)
  mutlicategorical special education, spespecial education law and policy, and therapeutic recreation
- Sarah Selmer - Ed.D. (West Virginia University)
  Mathematics Education
- Melissa Sherfinski - Ph.D. (University of Wisconsin, Madison)
  Curriculum Theory and Research, Research Methodology

ASSISTANT PROFESSORS

- Matthew P. Campbell - Ph.D. (Oregon State University)
  Mathematics Education
- Audra Slocum - Ph.D. (Ohio State University)
  Appalachian Education, Multicultural Teacher Education, Adolescent Literacies
- Denise Lindstrom - Ph.D. (Iowa State University)
  Technology and Techer Education, New Literacies Studies, Digital Media
- Keri D. Valentine - Ph.D. (The University of Georgia, Athens)
  STEM Education (Mathematics), Learning, Design, & Technology, Science Education
- Tiffany Mitchell Patterson - PhD (George Mason University)
  Multilingual/multicultural education, education policy & secondary social studies
- Natasha Murray-Everett - PhD (University of Illinois at Urbana-Champaign)
  Curriculum and Instruction
- Erin McHenry Sorber - Ph.D. (Pennsylvania State University)
  Educational Policy Studies, Administrative, Planning, and Social Policy
- Rodney Hughes - Ph.D. (Penn State University)
  Higher Education and Economics

TEACHING ASSISTANT PROFESSORS

- Beth B. Satterfield - M.S. (West Virginia University)
  Early Childhood Education, Child Development

CLINICAL ASSOCIATE PROFESSOR

- Stephanie Morris Lorenze - Ed.D. (West Virginia University)
  Secondary Education

SERVICE ASSISTANT PROFESSOR

- Melissa Kelley - M.A. (Shepherd University)
  Special Education

PROFESSORS EMERITI

- James Rye - Ph.D. (Pennsylvania State University)
  Emeritus
- Boyd D. Holtan - Ed.D (University of Illinois)
  Emeritus
- Ronald V. Iannone - Ed.D. (Syracuse University)
  Emeritus
- John L. Carline - Ph.D. (Syracuse University)
  Emeritus
- C. Kenneth Murray - Ph.D. (Ohio State University)
  Emeritus
- Patricia K. Smith - Ed.D. (West Virginia University)
  Emerita

ASSOCIATE PROFESSORS EMERITI

- Ardeth M. Deay - Ph.D. (Cornell University)
  Emerita
- Joy Faini Saab - Ed.D. (West Virginia University)
  Emeritus

ASSISTANT PROFESSORS EMERITI

- Michael A. Caruso - M.A. (West Virginia University)
  Emeritus
- Jane S. Cardi - Ed.D. (West Virginia University)
  Emerita
- Barbara Mertins - M.S.L.S. (Syracuse University)
  Emerita

Admissions

MASTER OF ARTS ADMISSION

All applicants for the Elementary & Secondary Education Master of Arts program must:

- Submit WVU Graduate application for admission, found at https://admissions.wvu.edu/how-to-apply (https://admissions.wvu.edu/how-to-apply/). (be sure to upload all required information)
- Hold a Bachelor's degree with a 2.75 GPA or above
- Submit a **one-page goal statemen**t. The Statement should be of professional experiences, career ambitions and will be considered a writing sample
- **Test requirements**: Praxis Core Academic Skills for Educators. Student can take the combined test # 5751 this will include the 3 section (reading #5712, writing # 5722 & math #5732).
- The Praxis CORE may be *waived* with an enhanced ACT score of 26 or higher, a re-centered SAT score of 1125 (April 1995), or a revised SAT of 1170 (March 2005) or higher OR a 26 ACT or Math and Critical Reading SAT total of 1170 (pre-March 2016 test sitting) or an Evidence Based Reading/Writing and Math Section 1240 (post-March 2016 test sitting). (OR) Graduate Records Examination (**GRE**), no older than five years. Please contact department for minimum score requirements.
- TOEFL (international students) - TOEFL score must be at least 550 (paper) or 213 (computer) 79-80 iBT or IELTS 6.5.

MASTER IN LITERACY STUDIES

All applicants for the Master in Literacy Studies (major code 4539) must:

- Submit WVU Graduate application for admission. The application can be found at https://admissions.wvu.edu/how-to-apply (https://admissions.wvu.edu/how-to-apply/)
- Hold a Bachelor's degree with a 2.75 GPA or above
- A valid state teaching license (Attached to application)

Program Policies and Matriculation Benchmarks —Teaching Certification Programs

All students enrolled in Master and Certification (MAC) programs in the Department of Curriculum and Instruction/Literacy Studies must adhere to the following policies. Please consult with your adviser to discuss your program plan.

CRITERIA FOR ADMISSION TO THE M.A. PROGRAMS IN ELEMENTARY/SECONDARY EDUCATION:

- Bachelor's degree
- GPA 2.75
- One page goal statement, describing the reason you wish to complete this program.
- Testing requirements: Passing scores on the combined Praxis Core Academic Skills for Educators: #5751 **OR** GRE. The tests may be waived if the student has completed another masters degree or had 26 on the ACT or 1170 on the SAT.
- TOEFL, required of International students, with the following scores: TOEFL 550 paper or 213 computer. (79-80 iBT)

MATRICULATION CRITERIA:

- Contact 806F Allen Hall for a transcript analysis for content area requirements.
- A 3.0 GPA in graduate coursework, with a "C" or above in all graduate level courses are required for graduation
- C&I 602 and EDP 600 are prerequisite courses for content methods coursework.
- C&I 602 must be taken in the first or second semester after admission into the program, and completed with a "B" or better
- Provide the results of an "Online Criminal Background and Fingerprinting Check to school placement personnel. Please see 806F Allen Hall for more information.
- Application for transient credit for graduate courses taken at other institutions must be approved by the adviser and the associate dean for academic affairs, or designee
- Elective courses must be approved by the adviser prior to enrollment.
- All students must complete 125 hours of approved fieldwork (embedded in the program)
- All students must successfully complete a professional portfolio that demonstrates mastery of WV Professional Teaching standards and specialization content. Students submit the portfolio in C&I 680.

CRITERIA FOR ENTERING STUDENT TEACHING PLACEMENT:

- Completion of all professional education and subject content coursework is required before a student may enter a student teaching placement
- Completion and submission of Student Teaching Application 1 year before your Student teaching semester
- Hold a State Student Teaching Permit
- Approval by the Certification Officer that all requirements have been met.

CERTIFICATION

Students seeking licenses to teach in the State of West Virginia must be recommended by the Certification Officer, Michelle Principe. Recommendations are provided after all the following criteria have been completed:

1. Program completion and Registrar's verification of graduation
2. All students must submit passing scores for the appropriate Praxis PLT to the Office of Student Success prior to recommendation for certification.
3. Submission of all appropriate forms to the Certification Officer. As state certification requirements change, additional coursework may be required.

Note: State requirements for certification may change. Students are responsible for complying with all state requirements for certification at the time of their request for certification.

MASTER OF ARTS ELEMENTARY EDUCATION WITH INITIAL TEACHING CERTIFICATION

This program is available to those students who hold a bachelor's degree in non-education fields or other education fields and choose to pursue a degree and certification in teacher education. This program is also designed for career changers, individuals who choose to change careers after several years on the job. Visit our web site http://cils.wvu.edu/mac (http://cils.wvu.edu/mac/)

This program requires 36 hours of education core classes, 12 hours of clinical experience, and 45 hours of content areas courses. Students must consult with the Program Coordinator for a transcript analysis to determine the exact content requirements required.
Denise Lindstrom
denise.lindstrom@mail.wvu.edu
Allen Hall, 606B

SECONDARY EDUCATION MASTER'S DEGREE PROGRAMS WITH TEACHING CERTIFICATION

The purpose of the secondary education program is to provide rigorous experiences that prepare individuals to be highly qualified and effective teachers. Students pursuing a **master of arts in secondary education with initial certification** may choose one of **eight content specialization** areas (English, German, French, Spanish, math, science, or social studies). Teacher certification requirements are based on the West Virginia Department of Education's Policy 5100, Approval of Educational Personnel Preparation Programs and Policy 5202, Licensure of Professional/ Paraprofessional Personnel. This program requires 36 hours of education core classes, 12 hours of clinical experience, and 37- 56 hours, (depending on the area) in content areas courses. Visit our web site http://cils.wvu.edu/mac (http://cils.wvu.edu/mac/). Students must consult with the Program Coordinator for a transcript analysis to determine the exact content requirements required.
Denise Lindstrom
denise.lindstrom@mail.wvu.edu
Allen Hall, 606B

ONLINE MASTERS (M.A.) IN HIGHER EDUCATION ADMINISTRATION

The master's program is designed to enhance leadership skills and prepare students for administration positions within college and university settings.

FEATURES

- Online graduate program with options for face-to-face courses. Visit our web site http://cils.wvu.edu/hied/masters (http://cils.wvu.edu/hied/masters/)
- Part-time or full-time enrollment options
- Courses can be taken from any geographic location
- Flexible program of study (two to eight years to complete the program)
- Advanced learning platform technologies (synchronous and asynchronous)
- Courses taught by full-time faculty and administrators

CAREER PLACEMENT

- Alumni have been placed in executive, administrative (business administration, academic affairs, and student affairs), and faculty support positions.
- Higher education administrators held about 161,800 jobs in 2012 and employment in this area is projected to grow 15% from 2012 to 2022, faster than the average for all occupations.
- Higher education administrators work at colleges, universities, community colleges, and technical schools.

MASTER OF ARTS IN HIGHER EDUCATION CURRICULUM AND TEACHING PROGRAM

Designed for individuals who wish a master of arts degree in education focusing on teaching in higher education. This program provides flexibility, knowledge, and skills in education especially useful for international students and other students who do not wish to teach in an American public school setting. Program Coordinator **Denise Lindstrom**
denise.lindstrom@mail.wvu.edu

ONLINE ADVANCED MASTER OF ARTS IN ELEMENTARY EDUCATION PROGRAM

Designed for individuals who hold a teaching license. This program provides increased knowledge, skills, and competence for teachers working with students in elementary school settings. The program consists of 30 credit hours and is offered **online** through the Electronic Campus of the Southern Regional Education Board (SREC). **All students pay in-state tuition rates** for courses offered through the Electronic Campus regardless of residency. Visit our web site http://cils.wvu.edu/advanced-ma (http://cils.wvu.edu/advanced-ma/)

MASTERS OF ARTS IN LITERACY EDUCATION

For individuals who hold a teaching license. This **30-credit** hour Master program, is nationally accredited through the Council for the Accreditation of Educator Preparation (CAEP) and International Literacy Association (ILA). This graduate program prepares candidates to be certified as Reading Specialists (Pre-K-Adult) and to fulfill the roles of specialized reading professionals currently outlined by the International Literacy Association (ILA). These roles include: Interventionist, Literacy Coach and School/Literacy Leader. Students should contact the Literacy Education Program Coordinator, **Allison Swan Dagen (**Allison.Swan@mail.wvu.edu). Visit our web site http://cils.wvu.edu/literacy-ed (http://cils.wvu.edu/literacy-ed/)

Doctoral Programs

DOCTOR OF PHILOSOPHY WITH A MAJOR IN EDUCATION

The Doctor of Philosophy degree program provides a rigorous course of study along with mentored research and teaching experiences to enable students to achieve core educational objectives as scholars in four specialization areas: Educational Leadership and Policy; Learning, Instructional Design and Technology; Curriculum, Literacy and Cultural Studies; Human Development and Family Studies. Several thematic contexts, critical to our state and region, provide the platform for the study of education and achieving the competencies in each specialization area. These unique themes include: the rural nature of our state context, the poverty many children and families live in throughout the region, and the cultural context of Appalachia, all as they impact education. The research interests of faculty members participating in the program address aspects of these themes. Research and scholarly experiences prepare graduates who plan to pursue a research agenda in higher education or in educational research/policy centers. Visit our web site http://cehs.wvu.edu/grad/doc/phd-education (http://cehs.wvu.edu/grad/doc/phd-education/)

DOCTOR OF HIGHER EDUCATION ADMINISTRATION

FEATURES

1. Hybrid graduate program with options for online and face-to-face courses. Visit our web site http://cils.wvu.edu/hied/doc (http://cils.wvu.edu/hied/doc/)
2. Part-time or full-time enrollment options
3. Flexible program of study
4. Synchronous online courses
5. Courses taught by full-time faculty and professors

CAREER PLACEMENT

- Executive, administrative (business administration, academic affairs, and student affairs) and faculty support placements.
- Higher education administrators held about 161,800 jobs in 2012 and employment in this area is projected to grow 15% from 2012 to 2022, faster than the average for all occupations.
- Faculty Positions
- Policy Positions
- Higher education administrators work at colleges, universities, community colleges, and technical schools.

DOCTOR OF EDUCATION WITH A MAJOR IN CURRICULUM & INSTRUCTION

The Curriculum and Instruction Doctorate in Education Program provides a personal approach to graduate studies. This program creates individually-planned programs of study to meet the unique experiences and professional goals of each student. Designed to meet the needs of working professionals, the program's courses are offered in the evenings.   The program provides flexibility to support career goals regarding educational research, curriculum design and evaluation, instructional support, and/or leadership in K-12 schools, universities, and other educational organizations. The program addresses three broad areas:

- A major emphasis in one of the following areas: curriculum studies, social theory, teaching and learning, diversity, and technology.
- A specialization or minor in one of the following areas: content (e.g. English education, STEM education, etc.) or integrated area (i.e., diversity, technology, evaluation, research, foundations, etc.)
- Research and educational foundations core: emphasizes the centrality of research commitment and competence—the ability and eagerness to conduct research as well as the ability to read, interpret and engage in professional discourse about research.

Curriculum and Instruction, Ed.D.

Degree Offered

- Doctor of Education

Nature of the Program

The Curriculum and Instruction Doctorate in Education Program provides a personal approach to graduate studies. This program creates individually-planned programs of study to meet the unique experiences and professional goals of each student. Designed to meet the needs of working professionals, the program's courses are offered in the evenings.   The program provides flexibility to support career goals regarding educational research, curriculum design and evaluation, instructional support, and/or leadership in K-12 schools, universities, and other educational organizations. The program addresses three broad areas:

- A major emphasis in one of the following areas: curriculum studies, social theory, teaching and learning, diversity, and technology.
- A specialization or minor in one of the following areas: content (e.g. English education, STEM education, etc.) or integrated area (i.e., diversity, technology, evaluation, research, foundations, etc.)
- Research and educational foundations core: emphasizes the centrality of research commitment and competence—the ability and eagerness to conduct research as well as the ability to read, interpret and engage in professional discourse about research.

PROGRAM OBJECTIVES

The Ed.D. in Curriculum and Instruction prepares students to teach in higher education or to work with school districts or other agencies and organizations where teaching and learning is emphasized. The program provides flexibility to support career goals regarding curriculum design and evaluation, instructional support, and/or leadership in K-12 schools, universities, and other learning organizations.

PROGRAM OUTLINE

When admitted to the doctoral program each student is assigned an adviser. The role of the adviser is to help the student develop a program of study and put together the initial doctoral committee. Within the first 18 hours of formal doctoral coursework the student must submit a **Doctoral Committee Form** with signatures of at least 3 members, and a **Program of Study Form** signed by all Doctoral Committee members. Upon completion of the Program of Study form, the Doctoral committee must be composed of a minimum of five members, of which three must be regular members of the graduate faculty of the College of Education and Human Services. The student's major adviser (chairperson) must be from the major program area and must be a regular member of the graduate faculty. At least two and no more than three members of the doctoral committee must be from the major program area of study. At least one member of the doctoral committee must be from the minor program area of study. At least one member of the doctoral committee, who has professional relevance to the program of study, may be from outside of the program area. * No more than one person may be a non-member of the graduate faculty.

Once the student has selected a committee, it is formalized by the **Doctoral Committee Approval form**, which is signed by each committee member, the major chairperson, the department chairperson, and the student. It is then submitted to 806F Allen Hall where the signature of the Dean or Dean's designee will be obtained.

The student, with the approval of the student's major adviser, may initiate a change in committee membership, by completing a **Change of Committee form** with signatures of the member being replaced (if still available to serve), the student, the major adviser, and the new committee member. It is then submitted to 806F Allen Hall where the signature of the Dean or Dean's designee will be obtained on the form. 806F Allen Hall compiles all student forms, tracks students' progress, and checks compliance with university and college procedures.

Admissions

This program is no longer admitting students.

Doctor of Education

MAJOR REQUIREMENTS

A minimum cumulative GPA of 3.25 is required in all graduate coursework

Research Core		15
EDP 710	Thesis/Dissertation Bootcamp	
EDP 613	Statistical Methods 1	
SCFD 615	Qualitative Research Methods	
SCFD 715	Advanced Qualitative Research	
Additional 600-level or higher research course		
Major Requirements		**28**

C&I 701	Curriculum Development	
C&I 707	Theories, Models and Research of Teaching	
C&I 708	Contemporary Determinants of Curriculum	
C&I 786	Curriculum Evaluation	
C&I 788	Higher Education Curriculum	
C&I 789	Teaching in Higher Education	
C&I 799	Graduate Colloquium	
C&I 794	Seminar	
Electives		
Social and psychological foundations Core		**6**
SCFD 620	Philosophy of Education	
SCFD 640	History of American Education	
SCFD 793	Special Topics	
EDP 703	The Adult Learner	
Minor area		**24**
Dissertation		**12**
C&I 798	Thesis or Dissertation	
Total Hours		85

RESIDENCY

This program requires two consecutive semesters of residency.

COMPREHENSIVE EXAMINATIONS

Comprehensive examinations (major, minor and core) are sometimes called "comprehensives," "competencies," "prelims," or "qualifying exams." These examinations occur when coursework has been completed or substantially completed and are intended to provide a rigorous comprehensive assessment of the student's achievement and professional potential. The nature of the examinations must be specified in the program of study and must include written products covering the major, minor, and college core areas. The written components may be followed by an oral examination.

ADMISSION TO CANDIDACY

A student is officially admitted to candidacy for the Ed.D. by satisfactorily passing the comprehensive examinations in the major and minor areas of study and submitting the completed Admission To Candidacy form to the Center for Student Advising and Records. **Doctoral candidates are allowed a period of no more than five years beyond the date of Admission to Candidacy to complete the remaining degree requirements**. In the event a student fails to complete the doctorate within five years after the date of Admission to Candidacy, s(he) must apply for an extension of time. This may require repeating comprehensive examinations and/or meeting any other requirements specified by the student's committee and University.

After Admission to Candidacy, students are required to register for at least one credit hour each term (excluding summer) as a condition of their continued candidacy. Students who fail to maintain continuity of enrollment can be dropped from candidacy.

Prospectus

When a student passes his or her comprehensive exam, s(he) then forms his or her dissertation committee by adding two additional committee members for a total of five members. These new committee members should be selected based upon the degree to which they support the research focus and the line of inquiry of the student's dissertation. The prospectus should address the first three chapters of the dissertation (or their equivalent):

- Statement of the problem and rationale
- Review of relevant literature
- Research methods and study design

Prior to completing the prospectus, the student and his or her adviser should have a clear understanding of the role each committee member will play in terms of feedback for the prospectus. Some members may need to be more involved to provide guidance and feedback as the prospectus is developed while others may be able to wait until the document is complete before providing guidance or feedback. These roles and relationships should be negotiated and clearly communicated within the committee as the student begins his or her work on the prospectus. Each committee member must receive a copy of the prospectus at least **two weeks** before the prospectus defense. The student should confirm whether each committee member wants a hard copy or an electronic copy of the document at that time.

The prospectus defense should be advertised no later than one week before it takes place. The announcement should include the following: Title, abstract, author, defense time and location. It should take place on campus and in a location where the public can attend. While the prospectus defense is public up to the point of committee deliberation, the adviser may exercise discretion regarding attendees if he or she feels that the necessary

conditions for a supportive and productive meeting are compromised. Guests to any defense are expected to limit their explicit participation in the defense to the specified question and answer period.

Dissertation

A student's dissertation should demonstrate coherent line of inquiry that represents a reasonable outcome given the nature and content of his or her program. Members of the dissertation committee should have adequate expertise to judge the quality of the methods, content, and results of the dissertation. If the committee lacks any element of expertise needed to judge the quality of any part of the dissertation, then the student and adviser should strive to seek out external support to support those needed elements in order to ensure the overall quality of the dissertation.

When the dissertation committee feels that the final document has met reasonable expectations in terms of quality, the student, in consultation with his or her adviser, should set up the defense meeting with his or her full committee.

Committee members are to receive copies of the dissertation at least **three weeks** prior to the defense. The Graduate Advising Office must also receive the Shuttle Sheet Request form signed by the committee members three weeks prior to the defense. This sheet indicates that all committee members have received the dissertation and can attend the defense (See Shuttle Sheet Request form). The defense date, including the title, abstract, author, time and location of defense, is advertised at this time

During the dissertation defense, the student presents an overview of his or her study, focusing on the results and analysis. Members of the committee will ask questions of the student related to the study. The dissertation chair will facilitate the question and answer portion of the defense and will determine whether time and conditions permit additional questions from guests. Deliberations regarding the dissertation defense are conducted immediately following the presentation and question and answer period. The committee members conduct these deliberations exclusively while the student and guests are not in the room. Following the deliberations, the committee shares its decision regarding the student's performance:

- Passing the dissertation and oral defense with minor corrections
- Deferral of judgment until substantive changes are made and approved by the dissertation chair
- Failure of oral defense and/or dissertation. The student cannot pass the dissertation and oral defense if more than one member of the committee judges that either is unacceptable.

After the student has passed the oral defense and the five-member committee has approved the document, the student completes the document according to the WVU Electronic Thesis Document format (See https://etd.lib.wvu.edu/). The Dissertation Defense form must be submitted to 806F Allen Hall within 24 hours of the defense.

Each student is required to complete his or her prospectus meeting and **dissertation defense within five years of being admitted to candidacy**. If the student fails to meet this requirement, he or she will be removed from the doctoral program.

Major Learning Outcomes
CURRICULUM AND INSTRUCTION

The learning goals for the Doctor of Education program in Curriculum and Instruction are to prepare students who:

- Have commitment and skills to engage in life-long learning;
- Are effective communicators;
- Recognize that teaching is a professional, moral, and ethical enterprise with well-developed ethical frameworks which facilitate effective teaching;
- Will serve as a facilitator of learning for all students;
- Possess in-depth knowledge of both pedagogy and content, and the relationships between them;
- Are reflective practitioners;
- Are aware of, and have respect for, human diversity;
- Value and integrate knowledge from a wide variety of fields, are creative and open to new ideas, and are able to act constructively in a world characterized by technological, cultural, and societal diversity and change.

Digital Technologies and Connected Learning, M.A.

Degree Offered

- Master of Arts

Nature of the Program

Why Connected Learning? Learning is powerful when teachers connect students' personal interests to real-world opportunities. Curriculum designed using Connected Learning principles focuses on using new digital and networked technologies to expand opportunities for young people. It differs from traditional approaches to technology integration in which technology is viewed as a means toward more efficient and automated forms of education.

Instead, Connected Learning puts learner-centered and experiential methods at the center of technology-enhanced learning. More importantly, teachers committed to connected learning design principles prioritize learning that create meaningful connections between their peers and their communities.

PROGRAM OVERVIEW

- Teacher leaders work collaboratively with educators, and coach/mentor classroom teachers in the use of research-based ambitious teaching practices to design and implement curriculum and classroom instruction.
- Teacher leaders analyze school-based curriculum and district data to create professional development programs that address the current strengths and needs of teachers and students.
- Teacher leaders collaborate and share information with school stakeholders about students, curriculum, instruction, and assessment.

Admissions

Admission into the Digital Technologies and Connected Learning major is based on the academic accomplishments of the applicant and well as the alignment of the applicant's goals with the goals of the program. Students are selected based on their fulfillment of the specific admissions requirements listed below and the overall strength of their application.

Application requirements:

- Official transcripts verifying completion of an undergraduate degree from an accredited college or university.
- Three official letters of recommendation speaking to the applicant's potential as a teacher leader in *Digital and Connected Learning*.
- Submission of an official goal statement related to the program, including professional goals and interest in this specific program.
- Professional vita.

Applications will be due by April 15 the semester prior to program entrance, although candidates will be reviewed on a rolling basis. Candidates will be admitted for a summer start only.

Applicants will be reviewed by a committee of department faculty using a standardized review rubric in which the reviewer will assess the candidate based on: 1) the applicant's fulfillment of the required admittance criteria; 2) the applicant's fit with the program's goals; and 3) the applicant's potential for success in the program. Reviewers will indicate an overall admissions recommendation for each applicant. Final admissions decisions based on reviewer recommendations will be made by the program coordinator.

Major Requirements

A minimum GPA of 3.0 is required on all coursework.

Core Courses		
C&I 625	Leadership Field Experiences and Clinical Practice	3
C&I 670	Practitioner Inquiry	3
C&I 672	Professional Learning Communities: Creating Spaces for Collaboration, Coaching, and Praxis	3
C&I 673	Teacher Leadership: Transforming Identities, Contexts, and Practices	3
IDT Courses		
IDT 620	Social Network Media	3
IDT 655	Technology for Teachers	3
Technology Education Courses		
C&I 660	Games, Learning, & Design	3
C&I 661	Computational Literacy and Coding for Learning	3
CI 662	Principles and Practices for Connected Learning	3
CI 663	Media Literacy and Digital Citizenship	3
Total Hours		30

Major Learning Outcomes

DIGITAL TECHNOLOGIES AND CONNECTED LEARNING

Goal 1: Teacher leaders will work collaboratively with educators, and coach/mentor classroom teachers in the use of research-based ambitious teaching practices to design and implement curriculum and classroom instruction.

- Teacher leaders will collaborate with classroom teachers to plan standards-based lessons and units that incorporate a variety of digital technologies to promote active learning among K-12 students, deepen their understandings and improve their learning outcomes.
- Teacher leaders will coach and support teachers in creating an equitable learning environment that respects and values all students and addresses their diverse learning needs.

Goal 2: Teacher leaders will analyze school-based curriculum and district data to create professional development programs that address the current strengths and needs of teachers and students.

- Teacher leaders will evaluate standards, textbooks, and standardized assessments to make recommendations for addressing learning and achievement gaps
- Teacher leaders will explore and analyze school and district data to develop a vision for the professional development of educators and school improvement that disrupts the inequities of the educational status quo.
- Teacher leaders will plan, implement, and evaluate professional development programs at the school and/or district level.
- Teacher leaders will coach/model effective teaching practices, defined by professional organizations, as they engage teachers in ongoing professional development and provide support to educators in their classrooms.

Goal 3: Teacher leaders will collaborate and share information with school stakeholders about students, curriculum, instruction, and assessment.

- Teacher leaders will share critical issues, policy initiatives, and curriculum trends in teaching and learning with colleagues, parents and local and state school boards.
- Teacher leaders will collaborate with teachers, parents and community members to create shared visions and action plans to ensure technology integration enhances/support teaching and learning.

Early Childhood Education, M.A.

Degree Offered

- Master of Arts

Nature of the Program

NOTE: Currently not accepting new students into this program.

The Department of Curriculum & Instruction/Literacy Studies, Social and Cultural Foundations, Educational Leadership Studies offers opportunities for graduate study and research leading to a Master's degree in Early Childhood Education. This program is designed to prepare individuals to be well informed about Early Childhood Education. The primary purposes of the graduate program in this department is to provide increased knowledge, skills, and professional competencies related to Early Childhood Education. Students in the program will work with faculty who contribute as educational scholars to the profession at university, state, and national levels. Additionally, the program offers opportunities to explore global initiatives, culturally responsive teaching, and current educational research in Early Childhood Education.

For more information, please visit our website at http://cils.wvu.edu/.

Curriculum and Instruction/Literacy Studies, Social and Cultural Foundations, Educational Leadership Studies

Department Chair, Samuel Stack

Program Contact:
Connie Miranov
connie.miranov@mail.wvu.edu

Admissions

NOTE: Currently not accepting new students into this program.

All applicants for the Early Childhood Education program must:

- Submit WVU Graduate application for admission
- Hold a Bachelor's degree with a 2.75 GPA or above
- Submit a one-page goal statement. The Statement should be of professional experiences, career ambitions and will be considered a writing sample.

Master of Arts

MAJOR REQUIREMENTS

C&I 612	Early Childhood Curriculum	3
C&I 614	Early Childhood Instruction	3
C&I 616	Early Childhood Program Development and Evaluation	3
C&I 617	Language Arts in Early Childhood	3

C&I 618	Storytelling in Early Childhood	3
Child Development Electives		6
Special Education Electives		3
Curriculum & Instruction Electives		6
Total Hours		30

Major Learning Outcomes

EARLY CHILDHOOD EDUCATION

The learning goals for the Master's program in Early Childhood Education are to prepare students who:

- Have commitment and skills to engage in life-long learning;
- Are effective communicators;
- Recognize that teaching is a professional, moral, and ethical enterprise with well-developed ethical frameworks which facilitate effective teaching;
- Will serve as a facilitator of learning for all students;
- Possess in-depth knowledge of both pedagogy and content, and the relationships between them;
- Are reflective practitioners;
- Are aware of, and have respect for, human diversity;
- Value and integrate knowledge from a wide variety of fields, are creative and open to new ideas, and are able to act constructively in a world characterized by technological, cultural, and societal diversity and change.

Education, Ph.D.

Degree Offered

- Doctor of Philosophy

Nature of the Program

The Doctor of Philosophy degree program provides a rigorous course of study along with mentored research and teaching experiences to enable students to achieve core educational objectives as scholars in **one** of the **four** specialization areas: Educational Leadership and Policy; Learning, Instructional Design and Technology; Curriculum, Literacy and Cultural Studies; Human Development and Family Studies. Several thematic contexts, critical to our state and region, provide the platform for the study of education and achieving the competencies in each specialization area. These unique themes include: the rural nature of our state context, the poverty many children and families live in throughout the region, and the cultural context of Appalachia, all as they impact education. The research interests of faculty members participating in the program address aspects of these themes. Research and scholarly experiences prepare graduates who plan to pursue a research agenda in higher education or in educational research/policy centers.

The primary objective is to prepare students who have both breadth and depth of knowledge in education and who will (a) conduct original research and (b) contribute to the production and development of knowledge in the discipline. Candidates who achieve these objectives will be well prepared to serve as members of academic communities at peer institutions of higher education, and researchers and leaders in educational research and policy centers. The educational objectives of the program are clearly connected to the mission of West Virginia University; specifically, conducting focused research and providing professional service to the state and nation based on that research.

1. Students will become conversant with the Theoretical Foundations of Education in one of the **four** specialization areas; Educational Leadership and Policy, Learning, Instructional Design and Technology, Curriculum, Literacy, and Cultural Studies and Human Development and Family Studies, plus the Nature of Inquiry.
2. Students will demonstrate research competencies sufficient to design, conduct, analyze, and report qualitative, quantitative, and mixed-methods research on topics of relevance to their selected specialization.
3. Students will demonstrate teaching competencies sufficient to design, deliver, monitor, and revise instruction at the undergraduate and/or graduate level on content relevant to their selected specialization.
4. Students will demonstrate intellectual competencies sufficient to deliver instruction, conduct research, and provide service at the level of a university faculty member in specializations of relevance to their selected specialization.
5. Students will propose, conduct, analyze, and write a dissertation composed of original research that makes a contribution to the literature in their selected specialization.

Admissions

This program is no longer admitting students.

Doctor of Philosophy

MAJOR REQUIREMENTS

Theoretical Foundations Core		12
SCFD 781	Nature of Inquiry 1	1
SCFD 782	Nature of Inquiry 2	1
SCFD 783	Nature of Inquiry 3	1
Select one of the following Educational Leadership and Policy Area of Emphasis courses:		
EDLS 603	Principles of Educational Leadership	
HIED 650	Higher Education Administration	
HIED 652	Assessment in Higher Education	
Select one of the following Learning, Instructional Design and Technology Area of Emphasis courses:		
EDP 700	Psychological Foundations of Learning	
EDP 640	Instructional Design	
EDP 740	Principles of Instruction	
Select one of the following Curriculum, Literacy, and Cultural Studies Area of Emphasis courses:		
SCFD 600	Sociology of Education	
SCFD 620	Philosophy of Education	
SCFD 640	History of American Education	
C&I 701	Curriculum Development	
C&I 707	Theories, Models and Research of Teaching	
C&I 709	Curriculum Theories	
Select one of the following Human Development and Family Studies Area of Emphasis courses:		
HDFS 793	Families and Human Development in Educational Contexts	
HDFS 793	Family Issues/Problems	
HDFS 793	Human Development within Families	
HDFS 793	Families/Human Development in Rural and Appalachian Contexts	
Research Core		15
EDP 612	Introduction to Research	
EDP 613	Statistical Methods 1	
SCFD 615	Qualitative Research Methods	
EDP 614	Statistical Methods 2	
Survey Research Elective [*]		
Mentored Research/Teaching Practica		12
Research (6 credit hours)		
Teaching (6 credit hours)		
Area of Emphasis coursework		30
Total Hours		72

[*] Elective should be related to research methodology employed for dissertation. This may require that the specific course not be specified on program of study, but rather identified during prospectus development.

Admission to Candidacy and Dissertation Requirements

Program Features

The Doctor of Philosophy degree program provides a rigorous course of study along with mentored research and teaching experiences to enable students to achieve core educational objectives as scholars in four specialization areas, as described below. Several thematic contexts, critical to our state and region, provide the platform for the study of education and achieving the competencies in each area. These unique themes include: the rural nature of our state context, the poverty many children and families live in throughout the region, and the cultural context of Appalachia, all as they impact education. The research interests of faculty members participating in the program address aspects of these themes.

Mentored Research/Teaching Practica. All students will complete a two-semester mentored research practicum [6 hours] that involves guidance from a faculty mentor who represents the student's area of emphasis. This will result in a research document submitted for presentation and/or publication. This mentored research practicum is separate from and prior to the dissertation research project.

All students will complete a two-semester mentored teaching practicum [6 hours] that involves guidance from a faculty mentor who represents the student's area of emphasis. This will result in an implemented and evaluated course design.

All students will attend periodic seminars designed to support their efforts and allow for discussion of those efforts with other doctoral students and faculty members mentoring those efforts throughout the Mentored Research and Mentored Teaching practica.

Candidacy and Dissertation Requirements. All students will be asked to show mastery of their area of interest by successful completion of the Candidacy Examination (preliminary comprehensive) designed by the student's doctoral committee using guidelines developed by each area of emphasis faculty.

After students pass their comprehensive exams, they will complete a dissertation proposal/prospectus that will provide an in-depth overview of their research ideas for their dissertation. Upon approval of the dissertation proposal by (a) their doctoral committee and (b) the institutional review board, students will conduct their dissertation research. The faculty will assess the dissertation and its oral defense and will recommend approval based upon the quality of work. **You have five years to complete your dissertation** upon being admitted as a doctoral candidate.

EDUCATIONAL LEADERSHIP AND POLICY AREA OF EMPHASIS

Area of Emphasis courses	6
Additional courses selected by the student and the doctoral committee	24
Total Hours	30

LEARNING, INSTRUCTIONAL DESIGN AND TECHNOLOGY AREA OF EMPHASIS

Area of Emphasis courses	6
Additional courses selected by the student and the doctoral committee	24
Total Hours	30

CURRICULUM, LITERACY AND CULTURAL STUDIES AREA OF EMPHASIS

Area of Emphasis courses	6
Additional courses selected by the student and the doctoral committee	24
Total Hours	30

HUMAN DEVELOPMENT AND FAMILY STUDIES AREA OF EMPHASIS

Area of Emphasis courses	6
Additional courses selected by the student and the doctoral committee	24
Total Hours	30

Major Learning Outcomes

EDUCATION

The learning goals for the Doctor of Philosophy program in Education are to prepare students who:

- Have commitment and skills to engage in life-long learning;
- Are effective communicators;
- Recognize that teaching is a professional, moral, and ethical enterprise with well-developed ethical frameworks which facilitate effective teaching;
- Will serve as a facilitator of learning for all students;
- Possess in-depth knowledge of both pedagogy and content, and the relationships between them;
- Are reflective practitioners;
- Are aware of, and have respect for, human diversity;
- Value and integrate knowledge from a wide variety of fields, are creative and open to new ideas, and are able to act constructively in a world characterized by technological, cultural, and societal diversity and change.

Educational Leadership/Public School Administration, M.A., Ed.D.

Degrees Offered

- Master of Arts
- Doctor of Education

Certifications Offered

- Certification for elementary and secondary school principals
- Certification for instructional supervisors
- Certification for superintendents

Nature of the Program

The Educational Leadership – Public Education Administration Program at West Virginia University prepares individuals for leadership positions in elementary, secondary, and post-secondary educational institutions. Although most of our students pursue administrative careers at the secondary-education level, some prepare for college or university research, teaching, and/or staff positions.

FACULTY

CHAIR

- Nathan M. Sorber - Ph.D. (Pennsylvania State University)
  Higher Education

Admissions

We are not currently accepting applicants into this program.

Masters

We are not currently accepting applicants into this program.

Doctoral

We are not currently accepting applicants into this program

We are not currently accepting applicants into this program

Educational Theory and Practice, Ph.D.

Degree Offered

- Doctor of Philosophy

Nature of the Program

The Ph.D. in Educational Theory and Practice meets the interests and professional needs of future scholars in the areas of teaching and learning (across various subjects, in- and out-of-school contexts, and ages/grades); teacher education and development (across various subjects and professional levels); and societal, cultural, and critical studies in education. The program serves as a source of preparation for students toward careers as higher education faculty, education researchers, policy analysts, and work with other educational organizations (e.g., non-profits).

Students in the program engage in coursework focused on theoretical, philosophical, and historical foundations of education research and practice. Students also benefit from a core of courses focused on research methodologies. Students are mentored by graduate faculty around research and teaching. Through their work with program faculty, students can further specialize in areas such as: teacher education, education policy, multicultural education, critical theories and pedagogies, mathematics education, science education, English education, social studies education, language/literacy studies, and early childhood education.

Admissions

Admission into the Ph.D. in Educational Theory and Practice program is based on the academic strength of the applicant as well as the fit of the applicant's goals with the goals of the program and the faculty. As such, applicants are strongly encouraged to research the nature of the program and

the expertise of faculty within the program prior to submitting their applications, and to clearly demonstrate in their application how their goals fit with the program and its faculty. Students are selected based on the overall strength of their application.

Applications will be reviewed on a rolling basis until April 1 for Fall admission. Files received by January 15 will receive priority consideration for funding opportunities. Applicants to the Ph.D. in Educational Theory and Practice program must comply with the WVU requirements for admission to graduate studies and the requirements of the College of Education and Human Services. Admission is contingent on an assessment of complete official transcripts, including all higher education work attempted, and other evidence the faculty may deem necessary in order to judge students' prospective success within the graduate program.

Applications will consist of the following materials:

- **Letter of intent/goal statement:** All applicants should submit a goal statement related to the program, including professional and research goals and interest in this specific program. This statement should be well written and clearly indicate how the applicant's goals fit with the program and faculty. To support this, it is recommended that candidates reach out to faculty members whose interests seem to align and discuss their specific career and research goals with them before crafting this statement. Goal statements should be no more than three pages (single spaced).
- **Curriculum vita/resume:** Applicants must provide a history of their academic and professional experience in a vita, serving as evidence that the applicant has appropriate experiences to be able to meet the goals and expectations of the program.
- **Academic Writing Sample**: Applicants must also provide a writing sample (e.g., thesis, submitted or published article, graduate course essay) demonstrating their academic writing abilities, their academic interests, as well as their ability to engage in research and/or scholarship.
- **Three (3) letters of recommendation:** Applicants must provide three letters of recommendation that explicitly address the applicant's potential as a doctoral student. Letter writers should be familiar with the applicant's academic performance and potential for success in the Ph.D. in Educational Theory and Practice program, therefore it is recommended that at least two of the writers be professors.
- **GRE/TOEFL:** All students must submit Graduate Record Exam (GRE) scores as part of their application. Students must have earned a score of 300 on the verbal and quantitative parts of the GRE. In addition to submitting GRE scores, international applicants must meet minimum score requirements for English proficiency as specified by the University. Any test scores submitted for consideration must be no more than five years old.

Applications will be reviewed by a committee of program faculty. Some applicants may be asked to participate in an interview to seek additional information. All individuals accepted into the program will receive information about their assigned adviser and guidance on the development of a personalized program of study. Admitted students will also receive information on funding opportunities and other support.

Doctor of Philosophy

MAJOR REQUIREMENTS

A minimum GPA of 3.0 is required of all coursework.

Educational Theory and Practice Program Core		
SCFD 620	Philosophy of Education	3
C&I 706	Theories and Practices of Learning	3
SCFD 610	Foundations of Education	3
C&I 707	Theories, Models and Research of Teaching	3
Research Core		
SCFD 781	Nature of Inquiry 1	1
SCFD 782	Nature of Inquiry 2	1
SCFD 783	Nature of Inquiry 3	1
SCFD 605	Education Research Literacy	3
SCFD 615	Qualitative Research Methods	3
SCFD 715	Advanced Qualitative Research	3
Advanced Research Methods Electives		6
Research & Teaching Practicum		
C&I 790	Teaching Practicum	3
C&I 797	Research	15
Specialization Track		**12**
Individualized Plan to be developed with advisor and committee		
Total Hours		60

Program of Study: Students, guided by the faculty adviser, will construct a program committee and articulate and approve an initial program of study by the end of their first year. This program will be modified as needed based on student's trajectory and available course offerings. Students may apply up to 18 hours of prior coursework at the graduate level; however the coursework needs to have been completed within 10 years prior to the program of study meeting. Acceptance of prior work toward program requirements will be based upon approval of the student's advisor in consultation with the doctoral committee. The advisor and/or chair will approve other graduate work only if it is consistent in quality, rigor, and purpose with the coursework provided in the current program.

Residency Requirement: Students are expected to complete at least two consecutive terms (fall, spring, and/or summer) of full-time residency (nine or more credits per term).

Written Comprehensive Exam and Candidacy: At the completion of the program's core courses, students will take a written comprehensive exam. Comprehensive exams will be administered by and evaluated by the student's program committee. Students who do not pass their comprehensive exams will be given the opportunity to revise their responses and/or retake the exam in the following semester. Students who are unable to pass their comprehensive exams after a second attempt will be dismissed from the program. After a student passes their comprehensive exams and completes their program of study (excluding dissertation credits), the student completes and submits the CEHS Doctoral Admission to Candidacy form. Note that, once admitted to candidacy, the student has five years to defend their dissertation and graduate and must register for at least one credit in each fall and spring semester as a condition of their continued candidacy.

Dissertation Prospectus: After admission to candidacy, students need to finalize their doctoral committee, consisting of four members, selected according to university and college requirements and based upon the degree to which they help support the research focus and the line of inquiry of the student's dissertation. The dissertation prospectus is the student's proposal concerning a means of investigating a research problem. It is a major step toward completion of the dissertation, which is an original contribution to one's field of study. The prospectus should clearly indicate why the study is of value in the student's field of study and should defend the theoretical basis of the study as well as the analytic decisions and methods for successful completion of a high-quality dissertation. Upon completion, each committee member must receive a copy of the prospectus at least two weeks prior to a scheduled prospectus meeting. The prospectus defense is closed to the public. At the prospectus defense the doctoral committee can either approve or fail to approve the prospectus, or recommend revisions. Failure to approve the prospectus must be accompanied by a plan that outlines the conditions of the student's continued enrollment in the program.

Dissertation and Dissertation Defense: Following the approval of the prospectus, the students must receive Institutional Review Board (IRB) approval before initiating their research activities. After completing the research and writing and finalizing all of the dissertation chapters, the student may schedule the final dissertation defense with their committee. At least three weeks prior to the scheduled defense date, a "request for shuttle sheet" must be received by Allen Hall 806F. Once approved, the dissertation defense will be advertised to the public. The committee must receive the final document at least three weeks prior to the defense date, and all members must be present for the final defense. The dissertation defense is open to the public. Students that successfully defend their dissertation will be recommended for graduation. The final approved dissertation document must be submitted electronically to WVU ETD by the semester deadline published by the university.

Satisfactory Progress Review: In addition to the program's main benchmarks—program of study (including minimum GPA requirements), comprehensive exams, admission to candidacy, dissertation prospectus, and dissertation defense—students will be reviewed annually (each spring) by their adviser according to the program objectives. This review will confirm students' maintenance of satisfactory academic progress as well as development toward the program objectives. If a student is not deemed to be making satisfactory academic progress and/or fails to meet programmatic benchmarks, the adviser and committee with generate an agreement that outlines the conditions of the student's continued enrollment in the program. Failure to meet those expectations in the time specified in the agreement will result in the dismissal of the student from the program.

Major Learning Outcomes

EDUCATIONAL THEORY AND PRACTICE

Objective 1: Students will understand and interpret scholarship on theory, policy, and practice in the fields of teaching and learning, teacher education and development, and/or critical studies in education as the basis for growth over a professional career.

Objective 2: Students will critically evaluate scholarship, policy, and practice in order to promote equity, access, and social justice in educational settings.

Objective 3: Students will plan for, conduct, and report on original research that advances the fields of teaching and learning, teacher education and development, and/or critical studies in education.

Objective 4: Students will demonstrate skills as educators—including designing, implementing, evaluating, and revising educational experiences—as part of preparation for academic careers.

Elementary Education, M.A.

Degree Offered

- Master of Arts

Nature of the Program

The Department of Curriculum & Instruction/Literacy Studies, offers opportunities for graduate study leading to teacher certification and a Master's of arts degree. This program is designed to prepare individuals to become educators in K-6 public schools. Students in this program will work with faculty who contribute as educational scholars to the profession at university, state, and national levels. Additionally, the program offers opportunities to develop technology rich, culturally responsive, and active learning environments that associated with greater student achievement. This program has met accreditation standards.

Program Coordinator
Melissa Kelley
melissa.kelley@mail.wvu.edu
Allen Hall, 604K

Department Chair, Dr. Nathan Sorber

Admissions

All applicants for the Master of Arts in Elementary Education must:

- Submit a WVU Graduate application for admission. The application can be found at https://admissions.wvu.edu/how-to-apply (https://admissions.wvu.edu/how-to-apply/)
- Hold a Bachelor's degree with a 2.75 GPA or above
- Submit a **one-page goal statement**. The Statement should be of professional experiences, career ambitions and will be considered a writing sample
- **Test requirements**: Praxis Core Academic Skills for Educators. Student can take the combined test # 5752 which includes all 3 sections (reading #5713, writing #5723 & math #5733).
- The Praxis CORE may be *waived* with an enhanced ACT score of 26 or higher, a re-centered SAT score of 1125 (April 1995), or a revised SAT of 1170 (March 2005) or higher **OR** a 26 ACT or Math and Critical Reading SAT total of 1170 (pre-March 2016 test sitting) or an Evidence Based Reading/Writing and Math Section 1240 (post-March 2016 test sitting). (**OR**) Graduate Records Examination (**GRE**), minimum score 280 (combined score of verbal and quantitative sections) .
- TOEFL (international students) - TOEFL score must be at least 550 (paper) or 213 (computer) 79-80 iBT or IELTS 6.5.

PROGRAM REQUIREMENTS

- All student in the "Elementary Education Program", **must purchase** a subscription for LiveText.
- A state background check is required before entering a public school classroom.
- No more than nine hours at 400-level, plus student teaching may count toward a thirty-three hour master's degree.
- Application for transient credit for graduate courses taken at other institutions must be approved by the adviser and the Assistant Dean for Student Services.
- Completion of 125 hours of field experiences embedded in the program
- Passing scores on the Praxis II in content area, due one full semester before student teaching.

REQUIREMENTS FOR GRADUATION:

- Completion of all coursework, with a "**C**" or better in all graduate coursework
- On-line application to graduate
- A GPA of 3.0 or better.
- Passing score on the edTPA.
- On-line application to graduate (https://cehs.wvu.edu/current-students/)

Master of Arts in Elementary Education
DEGREE REQUIREMENTS

C&I 602	Curriculum and Teaching Principles	3
C&I 631	Mathematics in the Elementary School	3
C&I 640	Science in the Elementary School	3
C&I 650	Social Studies in the Elementary School	3
C&I 689	Cultural Diversity in the Classroom	3
EDP 600	Educational Psychology	3

RDNG 640	Instructing Students Who Have Reading Difficulties	3
EDUC 460	Foundations of Language and Literacy	3
EDUC 461	Promoting Literacy Connections	3
SPED 500	Legal/Educational Foundations: Special Education	3
SPED 601	Academic Interventions for Special Needs	3
Total Hours		33

CERTIFICATION REQUIREMENTS*

C&I 584	Student Teaching: Elementary-Early Childhood	7
C&I 588	Professional Field Experience	2
C&I 680	Technology Integration Through Capstone Experience	3
Total Hours		12

* These courses are required for WV State Certification, but not for the MA in Elementary Education. Students planning to seek certification are advised to complete these courses in addition to the MA requirements.

SUGGESTED PLAN OF STUDY

First Semester	Hours	
C&I 602	3	
EDP 600	3	
	6	
Second Semester	**Hours**	
EDUC 460	3	
C&I 689	3	
SPED 500	3	
	9	
Third Semester	**Hours**	
SPED 601	3	
EDUC 461	3	
RDNG 640	3	
	9	
Fourth Semester	**Hours**	
C&I 631	3	
C&I 640	3	
C&I 650	3	
	9	
Fifth Semester	**Hours**	
C&I 584	7	
C&I 588	2	
C&I 680	3	
	12	

Total credit hours: 45

NOTE: Students seeking state certification should plan to take C&I 588, 584, and 680 (12 credits) in a fifth semester in addition to the 33 hours required for the degree.

Major Learning Outcomes

ELEMENTARY EDUCATION

The learning goals for the Master's program in Elementary Education are to prepare students who:

- Have commitment and skills to engage in life-long learning;
- Are effective communicators;
- Recognize that teaching is a professional, moral, and ethical enterprise with well-developed ethical frameworks which facilitate effective teaching;

- Will serve as a facilitator of learning for all students;
- Possess in-depth knowledge of both pedagogy and content, and the relationships between them;
- Are reflective practitioners;
- Are aware of, and have respect for, human diversity;
- Value and integrate knowledge from a wide variety of fields, are creative and open to new ideas, and are able to act constructively in a world characterized by technological, cultural, and societal diversity and change.

Elementary Education/Advanced, M.A.

** This program is no longer admitting students

Degree Offered

- Master of Arts

Nature of the Program

The Department of Curriculum & Instruction/Literacy Studies, Social and Cultural Foundations, and Educational Leadership Studies offers a **Master of Arts** program in Elementary Education/Advanced that is designed for individuals currently holding a **teaching license** in elementary education, but who desire to earn a master's degree. This program provides increased knowledge, skill, and competence for teachers working with children in elementary school settings. The program consists of 30 credit hours and is offered **online** through the Electronic Campus of the Southern Regional Education Board (SREB). **All students pay in-state tuition rates** for courses offered through the Electronic Campus regardless of residency. **This degree leads to a Master of Arts only and will NOT lead to teaching certification.**

Students will complete thirty hours of **online** coursework that is designed to broaden their professional knowledge and teaching skills. All student in the "Elementary Education/Advanced Program", must purchase a subscription for LiveText. Courses in this program require students to submit class assignments and final portfolio into LiveText.

** This Program is no longer admitting students

Master of Arts

MAJOR REQUIREMENTS

Minimum GPA of 3.0 required

Minimum grade of C- or higher is required in all graduate coursework		
C&I 605	Twenty-First Century Teaching and Learning	3
C&I 604	School Curriculum	3
C&I 630	Problem Solving in Math	3
C&I 631	Mathematics in the Elementary School	3
C&I 639	Science Research and Technology Ethics	3
C&I 648	Science/Technology: Society Perspectives	3
C&I 757	Social Studies Curriculum Development, K-12	3
SCFD 640	History of American Education	3
LE 621	Knowledge of Literacy Instruction	3
C&I 680	Technology Integration Through Capstone Experience	3
Total Hours		30

Note: All students in the Elementary Education/Advanced Program must purchase a subscription for LiveText. Courses in this program require students to submit class assignments and final portfolio into LiveText. Please contact department for additional information.

Suggested Plan of Study

First Semester	Hours
C&I 604	3
C&I 605	3
LE 621	3
	9

Second Semester	Hours
SCFD 640	3

C&I 648	3	
C&I 630	3	
	9	
Third Semester	**Hours**	
C&I 631	3	
C&I 639	3	
C&I 757	3	
	9	
Fourth Semester	**Hours**	
C&I 680	3	
	3	

Total credit hours: 30

Major Learning Outcomes

ELEMENTARY EDUCATION/ADVANCED

The learning goals for this program are to prepare students who:

- Have commitment and skills to engage in life-long learning;
- Are effective communicators;
- Recognize that teaching is a professional, moral, and ethical enterprise with well-developed ethical frameworks which facilitate effective teaching;
- Will serve as a facilitator of learning for all students;
- Possess in-depth knowledge of both pedagogy and content, and the relationships between them;
- Are reflective practitioners;
- Are aware of, and have respect for, human diversity;
- Value and integrate knowledge from a wide variety of fields, are creative and open to new ideas, and are able to act constructively in a world characterized by technological, cultural, and societal diversity and change.

Elementary Mathematics Specialist, M.A.

Degree Offered

- Master of Arts

Nature of the Program

The Elementary Mathematics Specialist Master of Arts program is designed to prepare currently licensed teachers to be teacher leaders in elementary mathematics. The design of the courses included in the program includes opportunities for students to engage in: 1) an intensive study of mathematics concepts relevant to the elementary grades, 2) an examination of effective teaching practices for supporting mathematics learning for all students; and 3) targeted study of the knowledge, skills, and dispositions needed to be an effective teacher leader.

The program includes four (4), three-credit hour mathematics courses, four (4), two-credit hour mathematics pedagogy courses, three (3), three-credit hour teacher leadership courses, and one field-based practicum course. The courses will be web-based.

Admissions

Admission into the Elementary Mathematics Specialist major is based on the academic strength of the applicant as well as the alignment of the applicant's goals with the goals of the program. Students are selected based on their fulfillment of the specific admissions requirements listed below and the overall strength of their application.

Application requirements:

- Official transcripts verifying completion of an undergraduate degree from an accredited college or university.
- Three official letters of recommendation speaking to the applicant's potential as a teacher leader in elementary mathematics.
- Submission of an official goal statement related to the program, including professional goals and interest in this specific program.
- Professional vita.
- Record of initial certification in elementary or early childhood education with 18 months of successful teaching experience.

Note: the 18 months of experience must be completed by the end of the program.

Applications will be due by the first business day after December 1st of the year prior to program entrance, although candidates will be reviewed on a rolling basis. Candidates will be admitted for a summer start only.

Major Requirements

A minimum GPA of 3.00 is required on all coursework.

Core Courses		
C&I 625	Leadership Field Experiences and Clinical Practice	3
C&I 670	Practitioner Inquiry	3
C&I 672	Professional Learning Communities: Creating Spaces for Collaboration, Coaching, and Praxis	3
C&I 673	Teacher Leadership: Transforming Identities, Contexts, and Practices	3
Mathematics Courses		
MATH 510	Number Systems and Operations	3
MATH 511	Rational Numbers and Proportional Reasoning	3
MATH 512	Geometry and Measurement	3
MATH 513	Functions and Algebraic Reasoning	3
Mathematics Education Courses		
C&I 635	Selecting, Designing, and Using Mathematical Tasks in K-6	2
C&I 636	Learning Trajectories in Elementary Mathematics	2
C&I 637	Classroom Practices for Effective Learning Environments in Elementary Mathematics	2
C&I 638	Planning, Implementing, and Assessing Mathematics Instruction	2
Total Hours		32

Major Learning Outcomes

ELEMENTARY MATHEMATICS SPECIALIST

Goal 1: Teacher leaders will work collaboratively with educators and coach/mentor classroom teachers in the use of research-based ambitious teaching practices to design and implement curriculum and classroom instruction.

- Teacher leaders will collaborate with classroom teachers to plan standards-based mathematics lessons and units that incorporate a variety of pedagogies and learning tasks to promote active learning and deepen understanding of mathematical concepts and improve learning outcomes among K-12 students.
- Teacher leaders will coach and support teachers in creating an equitable learning environment that respects and values all K-12 students and addresses their diverse learning needs.

Goal 2: Teacher leaders will analyze school-based curricula and district data in order to create professional development programs that address the current strengths needs of teachers and K-12 students.

- Teacher leaders will evaluate mathematics standards, textbooks, and standardized assessments to make recommendations for addressing learning and achievement gaps
- Teacher leaders will explore and analyze school and district mathematics data to develop a vision for the professional development of educators and school improvement that disrupts the inequities of the educational status quo.
- Teacher leaders will plan, implement, and evaluate mathematics professional development programs at the school and/or district level.
- Teacher leaders will coach/model effective mathematics teaching practices as defined by professional mathematics organizations as they engage teachers in ongoing professional development and provide support to educators in their classrooms.

Goal 3: Teacher leaders will collaborate and share information with school stakeholders about K-12 students, curriculum, instruction, and assessment.

- Teacher leaders will share critical issues, policy initiatives, and curriculum trends in mathematics teaching and learning with colleagues, parents, and local and state school boards.
- Teacher leaders will collaborate with teachers, parents, and community members to create shared visions and action plans to improve mathematics teaching and learning in their schools.

Higher Education, Ph.D.

Degree Offered

- Doctor of Philosophy

Nature of the Program

The Doctor of Philosophy in Higher Education is designed to prepare graduates to become future faculty, researchers, and policy analysts in higher education. Students in the program benefit from a:

- Higher Education Core designed to provide breadth across critical areas of HIED;
- Specialization within HIED, which may include: Academic Affairs/Curriculum & Assessment, College Student Development, Administration, Organizations, and Policy, or an Individualized Specialization;
- Cognate outside the Higher Education Administration Program to allow for in-depth study in a field related to student interests and research foci;
- Research Core that emphasizes the importance of producing original research as well as the ability to critically evaluate published scholarship.

Features

1. Hybrid graduate program with online and face-to-face courses.
2. Part-time or full-time enrollment options.
3. Flexible program of study.
4. Synchronous online courses.
5. Courses taught by full-time faculty and professors.
6. Graduate Assistant Positions Available.

Career Placement

- Faculty positions;
- Policy Research positions;
- Senior administration positions at colleges, universities, community colleges, and other educational organizations

Admissions

The Higher Education Admissions Committee meets on a semester basis to review all complete submitted applications. The priority application deadline for fall admission is February 15, though on occasion students may be admitted to the spring semester. Once admitted, students will be assigned a faculty advisor, who will remain their advisor until the point at which they find an advisor to guide their dissertation research.

Admission into the Higher Education Ph.D. is a competitive process based upon the academic strength of the applicants as well as the fit of applicants' goals with the goals of the program and faculty. As such, applicants are strongly encouraged to research the nature of the program and the expertise of faculty within the program prior to submitting their applications in order to clearly demonstrate how their goals fit with the program and its faculty. Students are selected according to the overall strength of their application packets described below. Students may be denied admission if their goals are incongruent with the program goals or areas of specialization. Students may also be denied if faculty members have reached the maximum number of students they are able to advise effectively.

Applicants to the Ph.D. in Higher Education must comply with WVU requirements for admission to graduate studies, the requirements of the College of Education and Human Services, and those that the HIED program has specified. Admission is contingent on an assessment of complete official transcripts, including all higher education work attempted, and other evidence the faculty may deem necessary in order to judge students' prospective success within the graduate program.

All students accepted into the program will receive information about their assigned advisor and guidance on the development of a personalized program of study.

Admissions materials include:

1. **GRE/TOEFL:** Applicants for the Ph.D. in Higher Education must submit Graduate Record Exam (GRE) scores as part of their application. Students must earn GRE scores at the 50th percentile for the verbal, quantitative reasoning, and analytical writing sections. In addition to adequate scores on one of the above tests, international students must score a minimum of 550 on the paper version of the TOEFL or a minimum of 213 on the computer version of the TOEFL. Any test scores submitted for consideration must be no more than five years old.
2. **Personal resume/vita:** Applicants must provide a chronological history of their education and experience in a vita. The vita should offer evidence that the applicant has appropriate educational training and professional experiences that would support the goals and expectations of the program.
3. **Goals statement:** All applicants should submit a goal statement related to the program, including professional and research goals and interest in this specific program. This statement should be well written and clearly indicate how the applicant's goals fit with the program. Goal statements should be no more than three pages. Applicants should clearly indicate in the statement if they are seeking an assistantship.
4. **Writing sample:**   All applicants must provide an academic writing sample with their application packets. The writing sample should provide clear evidence of the applicants' academic writing ability as well as their ability to engage in research and/or scholarship.

5. **Three current letters of reference:** All applicants must provide three letters of reference that explicitly address the applicant's potential as a doctoral student. References should be familiar with the applicant's academic performance and potential in the WVU Higher Education doctoral program.

INTERVIEW

The admissions committee may also request an interview to seek additional information in order to judge potential for success in the program.

More information about the Ph.D. can be found on the department website: https://cils.wvu.edu/hied/phd (https://cils.wvu.edu/hied/phd/)

Doctor of Philosophy

MAJOR REQUIREMENTS

A minimum GPA of 3.25 is required of all coursework.

Core Coursework		
HIED 648	History of American Higher Education	3
HIED 650	Higher Education Administration	3
HIED 651	College Student Development	3
HIED 710	Leadership and Organizations	3
HIED 750	Diversity Issues in Higher Education	3
Specialization Coursework		**12**
Select from one of the following specializations:		
Curriculum and Academic Affairs		
College Access, Transition, and Success		
Administration, Organizations, and Policy		
Individualized Studies		
Research Coursework		
Quantitative Methods		6
EDP 613	Statistical Methods 1	
EDP 614	Statistical Methods 2	
STAT 511	Statistical Methods 1	
STAT 512	Statistical Methods 2	
Qualitative Methods		6
SCFD 615	Qualitative Research Methods	
SCFD 715	Advanced Qualitative Research	
Advanced Methods Course		3
EDP 618	Mixing Research Methodologies	
EDP 619	Survey Research Methods	
HIED 693	Special Topics (Quantitative Data Management Education)	
HIED 693	Special Topics (Quantitative Methods in Education)	
HIED 762	College Student Research in Higher Education	
Additional HIED Coursework		**12**
Cognate Coursework		**12**
Research/Teaching Practicum Coursework		**21**
HIED 790	Teaching Practicum	
HIED 797	Research	
Total Hours		87

Major Learning Outcomes

HIGHER EDUCATION

Upon completion of the Ph.D. program in Higher Education, graduates will be prepared to:

- Create original research that advances the field of higher education;
- Be reflective, ethical, and effectual professionals in higher education organizations;

- Apply research and theory to higher education issues and policies;
- Critically evaluate scholarship, policy, and practice in order to promote equity, access, and social justice.

Higher Education Administration, M.A., Ed.D.

Degrees Offered

- Master of Arts
- Doctor of Education

Nature of the Program

The Higher Education Administration program is designed to enhance leadership skills and prepare students for executive, administrative (business administration, academic affairs, and student affairs), academic support, and faculty positions.

MASTER OF ARTS (ONLINE)

The master's program is designed to enhance leadership skills and prepare students for administration positions within college and university settings.

FEATURES

- Online graduate program with options for face-to-face courses
- Part-time or full-time enrollment options
- Courses can be taken from any geographic location
- Flexible program of study
- Synchronous online courses
- Courses taught by full-time faculty and administrators

CAREER PLACEMENT

- Alumni have been placed in executive, administrative (business administration, academic affairs, and student affairs), and faculty support positions
- According to the U.S. Bureau for Labor Statistics, higher education administration jobs are projected to grow 7% between 2018 and 2028, faster than average for all occupations
- Higher education administrators work at colleges, universities, community colleges, and technical schools

DOCTOR OF EDUCATION

FEATURES

1. Hybrid graduate program with options for online and face-to-face courses
2. Part-time or full-time enrollment options
3. Flexible program of study
4. Synchronous online courses
5. Courses taught by full-time faculty and professors

CAREER PLACEMENT

- Executive, administrative (business administration, academic affairs, and student affairs) and faculty support placements; administrative advancement
- Higher education administration jobs are expected to grow by 7% between 2018 and 2028, according to the U.S. Bureau of Labor Statistics
- Faculty Positions
- Policy Positions
- Higher education administrators work at colleges, universities, community colleges, and technical schools

More information can be found on the department website: https://cils.wvu.edu/hied/edd (https://cils.wvu.edu/hied/edd/)

FACULTY

ASSOCIATE PROFESSOR

- Nathan Sorber - Ph.D. (Pennsylvania State University)
  Higher Education Administration

ASSISTANT PROFESSORS

- Rodney Hughes - Ph.D. (Penn State University)
  Higher Education and Economics
- Erin McHenry Sorber - Ph.D. (Pennsylvania State University)
  Educational Policy Studies, Administrative, Planning, and Social Policy

PROFESSOR EMERITUS

- Ernest Goeres - Ph.D. (University of Iowa)

Admissions

ACCEPTANCE POLICY

Applicants for a Master of Arts degree in Higher Education Administration (HIED) and/or Ed.D. must comply with the WVU requirements for admission to graduate studies, the requirements of the College of Education and Human Services, and those that the HIED program has specified. Admission to all programs is contingent on an assessment of complete official transcripts, including all higher education work attempted, and other evidence the faculty may deem necessary in order to judge students' prospective success within the graduate program.

If applicants meet the minimum requirements, they may be invited to an on-campus interview. Students will receive official notification of acceptance or rejection within one month of the interview. All students accepted into the program will receive information about their assigned adviser and guidance on the development of a personalized program of study.

ADMISSION PROCEDURE - MASTER OF ARTS

Applicants are required to submit an online application, found at http://graduateadmissions.wvu.edu/how-to-apply (http://graduateadmissions.wvu.edu/how-to-apply/). The Higher Education Administration Program admits students to the Master of Arts Program on a rolling basis The following must accompany the online application:

1. **Personal statement, describing past work experience and goals for graduate study in higher education administration**. Be sure to include the specific major to which you are applying, interest in assistantships, relevant experience, and program goals.
2. **Resume.** This should include relevant education and work experiences.
3. **Complete contact information and description of professional relationship for three references**.
4. **One Academic Writing Sample.** Please include an academic writing sample to showcase your ability to write research or other academic papers in the program.

ADMISSION PROCEDURE - DOCTOR OF EDUCATION (ED.D.)

A committee of HIED faculty reviews applications to the program. Admissions materials include:

1. **GRE/TOEFL:** Applicants for the HIED Ed.D. should score at the 50th percentile across GRE sections. International students must score a minimum of 550 on the paper version of the TOEFL or a minimum of 213 on the computer version of the TOEFL. All test scores submitted for consideration must be no more than five years old.
2. **Personal resume/vita:** Applicants must provide a chronological history of their education and experience in a vita. The vita should offer evidence that the applicant has appropriate professional experience that would support the goals and expectations of the program.
3. **Goals statement:** Each applicant must provide a clear statement of professional goals. This statement should clearly indicate how the applicant's goals fit with the program. Particular consideration will be given to goal statements that clearly demonstrate that the student has researched the program and faculty and knows how program offerings and faculty expertise meet specific interests and needs.
4. **Writing sample:** All Ed.D. applicants must provide an academic writing sample with their application. The writing sample should provide clear evidence of the applicant's writing ability as well as ability to engage in research.
5. **Three current letters of reference:** All Ed.D. applicants must provide three letters of reference that explicitly address the applicant's potential as a doctoral student. References should know of the applicant's academic performance and potential.

INTERVIEW: The HIED Ed.D. admissions committee may also request an interview to seek additional information in order to judge potential for success in the program**.**

Curriculum Requirements

A minimum GPA of 3.25 is required in all major courses.

A grade of C- or higher is required in all major courses.

Required Content Core		
HIED 648	History of American Higher Education	3
HIED 649	Contemporary Issues in Higher Education	3

HIED 650	Higher Education Administration	3
HIED 651	College Student Development	3
Research (As approved by advisor)		**6**
EDP 612	Introduction to Research	
EDP 613	Statistical Methods 1	
EDP 617	Program Evaluation	
HIED 652	Assessment in Higher Education	
HIED 693	Special Topics (Quantitative Data Management Education)	
HIED 759	Assessment Research in Higher Education	
HIED 762	College Student Research in Higher Education	
SCFD 615	Qualitative Research Methods	
Electives		**9**
HIED 652	Assessment in Higher Education	
HIED 653	College Students and Courts	
HIED 654	College Student Affairs	
HIED 655	Institutional Advancement	
HIED 656	Higher Education Budget and Planning	
HIED 657	Community College Leadership	
HIED 693	Special Topics	
HIED 750	Diversity Issues in Higher Education	
HIED 751	Academic Affairs Roles	
HIED 752	Governance of Higher Education	
HIED 753	Adult and Continuing Education	
HIED 755	Higher Education Law	
HIED 756	Higher Education Finance	
HIED 760	Curriculum Development and Reform in Higher Education	
Capstone		**3**
EDLS 785	Education Administration Internship	
Total Hours		30

College Student Affairs Area of Emphasis

Research [*]		
HIED 762	College Student Research in Higher Education	3
Specialization [**]		**9**
HIED 653	College Students and Courts	
HIED 654	College Student Affairs	
HIED 658	Colleges and Communities	
HIED 750	Diversity Issues in Higher Education	
HIED 754	Women and Gender Issues in HIED	
Total Hours		12

[*]   Completion of HIED 762 contributes to the six hours of research required in the Higher Education Administration major requirements.

[**]   Completion of the nine hours of specialization coursework contributes to the completion of the nine hours of electives required in the Higher Education Administration major requirements.

Doctor of Education
MAJOR REQUIREMENTS

HIED Courses		**15**
HIED 648	History of American Higher Education	
HIED 650	Higher Education Administration	
HIED 651	College Student Development	
HIED 710	Leadership and Organizations	

HIED 750	Diversity Issues in Higher Education	
HIED Specialization Strands		**12**
(Select 12 credits from one of the following strands)		
Curriculum & Assessment and Academic Affairs		
HIED 760	Curriculum Development and Reform in Higher Education	
HIED 751	Academic Affairs Roles	
HIED 753	Adult and Continuing Education	
HIED 652	Assessment in Higher Education	
HIED 759	Assessment Research in Higher Education	
College Access, Transition, and Success		
HIED 653	College Students and Courts	
HIED 654	College Student Affairs	
HIED 762	College Student Research in Higher Education	
HIED 753	Adult and Continuing Education	
HIED 652	Assessment in Higher Education	
HIED 759	Assessment Research in Higher Education	
Administration, Organizations, and Policy		
HIED 656	Higher Education Budget and Planning	
HIED 655	Institutional Advancement	
HIED 657	Community College Leadership	
HIED 752	Governance of Higher Education	
HIED 755	Higher Education Law	
HIED 756	Higher Education Finance	
Individualized Studies in Higher Education Administration		
This individualized plan of study will be developed in consultation with the student's advisor/program committee		
Additional HIED Electives		**12**
HIED 652	Assessment in Higher Education	
HIED 657	Community College Leadership	
HIED 693	Special Topics	
HIED 750	Diversity Issues in Higher Education	
HIED 752	Governance of Higher Education	
HIED 755	Higher Education Law	
HIED 756	Higher Education Finance	
Research		**15**
Students are required to take 15 credits of research coursework, including 6 credits of graduate-level qualitative methods, 6 credits of graduate-level quantitative methods and 3 credits of additional advanced research. Courses may be taken outside CEHS as necessitated by the student in consultation with the student's advisor. Note: With permission of advisor, students pursuing advanced quantitative methodologies may replace the second qualitative course with a fourth advanced quantitative course.		
STAT 511	Statistical Methods 1	
STAT 512	Statistical Methods 2	
EDP 613	Statistical Methods 1	
EDP 614	Statistical Methods 2	
HIED 693	Special Topics (Quantitative Date Management Education)	
HIED 762	College Student Research in Higher Education	
SCFD 615	Qualitative Research Methods	
SCFD 715	Advanced Qualitative Research	
Cognate Minor		**12**
These 12 credits pertaining to the individual student's interests and goals must come from graduate-level courses outside the HIED program in consultation with the student's advisor.		
Internships		**6**
Students are required to take 6 credits of a supervised practicum in higher education administration by enrolling in HIED 785. This internship experience should be conducted after the Qualifying Examination (DQE), and allow the student to apply theoretical concepts to practical situations. The internship experience is designed by the student in consultation with the advisor and proposed supervisor.		

EDLS 785	Education Administration Internship	
HIED 790	Teaching Practicum	
Research		**15**
HIED 797	Research	
Total Hours		87

Major Learning Outcomes

HIGHER EDUCATION ADMINISTRATION, M.A.

The learning goals for this program are to prepare students who:

- Have commitment and skills to engage in life-long learning;
- Are effective communicators;
- Recognize that teaching is a professional, moral, and ethical enterprise with well-developed ethical frameworks which facilitate effective teaching;
- Will serve as a facilitator of learning for all students;
- Possess in-depth knowledge of both pedagogy and content, and the relationships between them;
- Are reflective practitioners;
- Are aware of, and have respect for, human diversity;
- Value and integrate knowledge from a wide variety of fields, are creative and open to new ideas, and are able to act constructively in a world characterized by technological, cultural, and societal diversity and change.

Major Learning Outcomes

HIGHER EDUCATION ADMINISTRATION, ED.D.

The learning goals for this program are to prepare students who:

- Have commitment and skills to engage in life-long learning;
- Are effective communicators;
- Recognize that teaching is a professional, moral, and ethical enterprise with well-developed ethical frameworks which facilitate effective teaching;
- Will serve as a facilitator of learning for all students;
- Possess in-depth knowledge of both pedagogy and content, and the relationships between them;
- Are reflective practitioners;
- Are aware of, and have respect for, human diversity;
- Value and integrate knowledge from a wide variety of fields, are creative and open to new ideas, and are able to act constructively in a world characterized by technological, cultural, and societal diversity and change.

Higher Education Curriculum and Teaching, M.A.

** This program is no longer admitting students

Degree Offered

- Master of Arts

Nature of the Program

Students earn a Master of Arts Degree in Education with a major in Higher Education Curriculum and Teaching. This program provides knowledge and skills in curriculum development, teaching strategies, education psychology, and a general background in higher education. Electives allow students to continue to improve their knowledge of their particular content area of interest at the graduate level. The flexibility of the program lends itself to certified teachers, instructors in higher education, international students, students interested in pursuing a doctoral program, and others who are interested in teaching in higher education. This is a 30 credit hour program.

Admissions

*This program is no longer admitting students.

Master of Arts
MAJOR REQUIREMENTS

A minimum cumulative GPA of 3.0 is required

A grade of C- or higher is required in all graduate coursework		
C&I 701	Curriculum Development	3
C&I 687	Advanced Teaching Strategies	3
C&I 789	Teaching in Higher Education	3
EDP 600	Educational Psychology	3
or EDP 700	Psychological Foundations of Learning	
SCFD 620	Philosophy of Education	3
or SCFD 640	History of American Education	
CEHS Electives		9
Additional Electives		6
Total Hours		30

Suggested Plan of Study

First Semester	Hours	
C&I 701	3	
C&I 687	3	
EDP 600 or 700	3	
	9	
Second Semester	**Hours**	
C&I 789	3	
SCFD 640	3	
LE 624 (Elective)	3	
	9	
Third Semester	**Hours**	
C&I 648	3	
LE 627	3	
HIED 651 (Elective)	3	
	9	
Fourth Semester	**Hours**	
C&I 707 (Elective)	3	
	3	

Total credit hours: 30

Major Learning Outcomes
HIGHER EDUCATION CURRICULUM AND TEACHING

The learning goals for this program are to prepare students who:

- Have commitment and skills to engage in life-long learning;
- Are effective communicators;
- Recognize that teaching is a professional, moral, and ethical enterprise with well-developed ethical frameworks which facilitate effective teaching;
- Will serve as a facilitator of learning for all students;
- Possess in-depth knowledge of both pedagogy and content, and the relationships between them;
- Are reflective practitioners;
- Are aware of, and have respect for, human diversity;
- Value and integrate knowledge from a wide variety of fields, are creative and open to new ideas, and are able to act constructively in a world characterized by technological, cultural, and societal diversity and change.

Literacy Education, M.A.

Degree Offered

- Master of Arts in Literacy Education

Nature of the Program

The Master of Arts in Literacy Education (LE) is a 30-credit hour graduate degree with reading specialist licensure. This program prepares candidates for advanced reading specialist certification* and to fulfill the roles of specialized literacy professionals as outlined by the International Literacy Association's (ILA) *Standards for the Preparation of Literacy Professionals (2018*). These roles include Reading Specialist, Literacy Coach, and Literacy Coordinator/ Literacy Leader. The LE graduate program earned National Recognition with Distinction (https://literacyworldwide.org/about-us/national-recognition/) from ILA.

*Educational Testing Service (ETS) Praxis 5301 (https://www.ets.org/praxis/prepare/materials/5301/), Reading Specialist, is required for state certification.

Features

- 30 credits (10 courses)
- 100% online: Synchronous and asynchronous
- Intensive 8-week content courses
- School based 16-week intervention practicum with technology supported supervision
- Field experiences supervised by WVU faculty and instructors
- Flexible program scheduling with courses offered fall, spring, and summer
- Fall, spring, and summer admission
- Praxis 5301 Reading Specialist required for certification

Allison Swan Dagen, Ph.D

Professor
Program Coordinator, Literacy Education

Allison.Swan@mail.wvu.edu

Nathan Sorber, Ph.D.
Associate Professor
Department Chair

FACULTY

CHAIR

- Nathan Sorber PhD - Penn State University
  Higher Education

PROFESSOR

- Allison Swan Dagen - Ph.D. (University of Pittsburgh)
  Literacy Education Program Coordinator

ASSOCIATE PROFESSOR

- Aimee L. Morewood - Ph.D. (University of Pittsburgh)
  Literacy Education Outreach Coordinator

Admissions

- Bachelor's degree with a 3.0 GPA or above
- Valid state teaching license (attach to application)
- CEHS requires all candidates, including Literacy Education candidates, to purchase a subscription for LiveText.
- WVU Graduate application for admission https://admissions.wvu.edu/how-to-apply (https://admissions.wvu.edu/how-to-apply/)

Major Requirements

Minimum grade of C- is required in all coursework.

Minimum cumulative GPA of 3.0 is required.

Required Courses

LE 620	Specialized Literacy Professionals	3
LE 621	Knowledge of Literacy Instruction	3
LE 622	Disciplinary Literacy	3
LE 624	Foundations of Literacy	3
LE 627	Motivation and Engagement in Literacy Learning	3
LE 640	Literacy Intervention 1	3
LE 682	Literacy Assessments	3
LE 689	Literacy Intervention 2	3
LE 726	Literacy Leadership	3
CEHS Elective		3
Total Hours		30

Suggested Plan of Study

First Semester	Hours	
LE 620	3	
LE 621	3	
	6	
Second Semester	**Hours**	
LE 622	3	
LE 627	3	
	6	
Third Semester	**Hours**	
LE 682	3	
Elective	3	
	6	
Fourth Semester	**Hours**	
LE 624	3	
LE 640	3	
	6	
Fifth Semester	**Hours**	
LE 689	3	
LE 726	3	
	6	

Total credit hours: 30

Major Learning Outcomes

LITERACY EDUCATION

The M.A. program in Literacy Education is aligned with the International Literacy Association's *Standards for the Preparation of Literacy Professionals (2018)* and prepares candidates for roles including Reading Specialist, Literacy Coach, Literacy Coordinator/Literacy Leader. Accordingly, the specific outcomes of candidate participation and completion include:

- demonstrate knowledge of major theoretical, conceptual, historical, and evidence-based foundations of literacy and language, the ways in which they interrelate, and the role of the reading/literacy specialist in schools.
- use foundational knowledge to design literacy curricula to meet needs of learners, especially those who experience difficulty with literacy; design, implement, and evaluate small-group and individual evidence-based literacy instruction for learners; collaborate with teachers to implement effective literacy practices.

- understand, select, and use valid, reliable, fair, and appropriate assessment tools to screen, diagnose, and measure student literacy achievement; inform instruction and evaluate interventions; assist teachers in their understanding and use of assessment results; advocate for appropriate literacy practices to relevant stakeholders.
- demonstrate knowledge of research, relevant theories, pedagogies, and essential concepts of diversity and equity; demonstrate an understanding of themselves and others as cultural beings; create classrooms and schools that are inclusive and affirming; advocate for equity at school, district, and community levels.
- demonstrate the ability to meet the developmental needs of all learners and collaborate with school personnel to use a variety of print and digital materials to engage and motivate all learners; integrate digital technologies in appropriate, safe, and effective ways; foster a positive climate that supports a literacy-rich learning environment.
- demonstrate the ability to be reflective literacy professionals, who apply their knowledge of adult learning to work collaboratively with colleagues; demonstrate their leadership and facilitation skills; advocate on behalf of teachers, students, families, and communities.
- complete supervised, integrated, extended practica/clinical experiences that include intervention work with students and working with their peers and experienced colleagues; practica include ongoing experiences in school-based setting(s); supervision includes observation and ongoing feedback by qualified supervisors.

International Literacy Association (2018). Standards for the Preparation of Literacy Professionals 2017. Newark, DE: Author.

Multicategorical Special Education, M.A.

Degree Offered

- Master of Arts

Nature of the Program

The graduate program in Multicategorical Special Education at WVU is designed to prepare professional educators to work with children and adolescents with mild/moderate disabilities including learning disabilities, emotional/behavior disorders, and intellectual disabilities. This graduate level program prepares special education teachers and other professionals to engage in current research-based practices to provide high quality educational programs and services to promote academic achievement and post-school outcomes in inclusive elementary or secondary schools. WVU is fully accredited by the Higher Learning Commission (HLC), while the program is approved as a teacher education program leading to teaching certification by the West Virginia Department of Education, accredited by the Council for Accreditation of Educator Preparation (CAEP) and nationally recognized by the Council for Exceptional Children.

The program offers these options:

1. Master's degree in Special Education with certification in Multicategorical Special Education Grades K-6 or 5-Adult (or the equivalent in other states);
2. Master's degree only in Special Education with emphasis in Multicategorical Special Education

PROGRAM DELIVERY FORMAT

This program is offered entirely ONLINE throughout the United States and in approved international locations.

RETENTION REQUIREMENTS

To maintain ACTIVE student status, students must enroll in at least one (1) course during the effective term of admission and also at least two (2) courses every year. Students who fail to sustain enrollment each year will be converted to inactive status and will be required to reapply to the university and program and meet any additional new requirements in effect at that time. Students are expected to comply with all academic and conduct policies as outlined in the WVU Graduate Catalog, in the WVU Student Handbook, and on the Department of Curriculum & Instruction/Literacy Studies website.

Retention in the program and/or graduation is based on SATISFACTORY PROGRESS or maintaining a GPA of 3.0 with a grade of A or B in ALL required courses. A grade of Incomplete will only be approved for emergency situations; all requirements must be completed BEFORE the end of the next academic semester. Students who DO NOT clear the grade of Incomplete by the deadline will be assigned a grade of FAIL by the instructor immediately after the due date.

Students who do NOT earn a grade of A or B in a required course will be required to RE-TAKE THE COURSE to be eligible for the culminating practicum or culminating project.

Students who do NOT maintain a GPA of 3.0 (includes courses with grade of Incomplete) in a given semester MAY be placed on PROBATION and permitted one (1) additional semester to increase the GPA to 3.0.

Students whose GPA is too low to be raised by a probationary period OR who do NOT obtain a GPA of 3.0 after the probationary period will be subject to DISMISSAL from the program.

Students who engage in academic dishonesty will be assigned 0 points for the assignment or exam for the first offense, an F for the course for the second offense, and dismissed from the program for the third offense. Students dismissed from a program will NOT be permitted to re-apply to ANY special education program.

GRADUATION AND COMPLETION REQUIREMENTS

The MINIMUM time to complete most certification or degree programs in special education is:

- TWO (2) calendar years at the rate of SIX (6) credits per semester (part-time study – recommended for students who are working full time and/or have extensive family responsibilities.
- ONE AND ONE HALF (1.5) calendar years at the rate of NINE (9) credits per semester (full-time study- recommended for students who are not employed and/or have minimal family responsibilities.

The MAXIMUM time to complete a graduate degree program at WVU (including all transferred courses) is EIGHT (8) years

Admissions

Program closed to admission.

REGULAR ADMISSION

REGULAR admission is granted ONLY WHEN ALL these criteria are met:

- Requirements for ALL graduate programs:
  - Bachelor's degree from a regionally accredited institution with minimum GPA* of 3.00 out of 4.0;
  - passing scores on a nationally standardized test of academic ability (Praxis Core or GRE or MAT) - - contact program for current minimum scores and waiver conditions
  - Permission for Field/Clinical Experiences (see Program Application Form) completed by a school administrator.

NOTE: SCHOOL SYSTEMS MAY REQUIRE CRIMINAL BACKGROUND CHECKS AND FORMAL BOARD APPROVAL PRIOR TO PLACEMENT.

ADDITIONAL special requirements for ALL certification plus degree programs only:

- PRAXIS Core Academic Skills for Educators (CASE) passing scores - scores may be waived in some circumstances - contact program personnel for current minimum scores

NOTE: OTHER TESTS MAY BE SUBSTITUTED IF DOCUMENTATION PROVIDED SHOWS CONTENT SUBSTANTIALLY EQUIVALENT TO CASE.

ADDITIONAL special requirements ALSO NEEDED for certification or certification plus degree programs for grades K-6 only:

- prior certification in early childhood education (K-4) or elementary education (K-6 or K-8) (required for K-6 option only);
- prior certification in early childhood education (K-4) or elementary education (K-6) or secondary education (5-9,7-15, 5-Adult) in biology, chemistry, English, general science, mathematics, physics, reading education/specialist, social studies (required for Gifted Education K-12 only).

OTHER special requirements for INTERNATIONAL STUDENTS only:

- TOEFL score: 550 or higher (paper); 215 or higher (computer); 80 or higher (Internet) (non-native English speakers ONLY) OR IELTS score: 6.5 or higher; the English language testing requirement will NOT be waived even for individuals enrolled in the WVU Intensive English Program;
- personal interview (by phone or in person) to verify proficiency in English (non-native English speakers ONLY).

ADDITIONAL REQUIREMENTS FOR INTERNATIONAL STUDENTS

The individual who is not a native speaker of English must also meet these requirements:

- Test of English as a Foreign Language (TOEFL) score - contact program personnel for current guidelines)
- Personal interview and writing sample to document fluency needed for success in courses and field experiences

NOTE: U.S. VISA CAN NOT BE ISSUED FOR ONLINE PROGRAMS BUT STUDENTS CAN ENROLL AS RESIDENTS IN THEIR HOME COUNTRIES.

INDIVIDUALS WHO ARE LEGAL RESIDENT ALIENS MAY PARTICIPATE IN ONLINE PROGRAMS IF THEY VERIFY THEIR RESIDENT STATUS.

PROVISIONAL ADMISSION

PROVISIONAL admission** MAY be considered under SOME circumstances IF ALL other criteria are met:

- Bachelor's degree from a regionally accredited institution with minimum GPA* of 2.75+ out of 4.0
- Bachelor's degree from a regionally accredited institution with minimum GPA* of 2.50+ out of 4.0 ONLY IF:

- undergraduate degree transcript documents minimum GPA of 3.0 in final 30 credits; OR
- graduate transcript documents at least 18 credits leading to teaching certification with minimum GPA 3.25; OR
- prior Master's degree in education or closely related area with minimum GPA 3.25

NOTE: UNDERGRADUATE COURSES ONLY ARE COUNTED IN CALCULATING THE GPA. APPLICANTS WITH GPAs MAY BE ABLE TO RAISE THEIR UNDERGRADUATE GPA BY TAKING ADDITIONAL UNDERGRADUATE COURSES BEFORE APPLYING.

NOTE: Provisional admission is contingent upon maintaining GPA of 3.0 and grades of A or B (and/or making up any identified deficiencies) within the first 9 credits or within 2 semesters, whichever comes first.

Applications submitted before the due date with all supporting documentation are eligible for EARLY ADMISSION. Applications that are incomplete will be rejected. Applicants who meet all regular admission criteria will be admitted automatically to the program. Applicants who meet criteria for provisional admission are ONLY considered IF additional openings remain at that point. Under NO circumstances will ANY admission requirement be waived. Dual enrollment is only permitted in exceptional circumstances.

The WVU Application for Graduate Admission is available at https://graduateadmissions.wvu.edu/.

For assistance in completing applications, please contact sped@mail.wvu.edu or 304-293-7143.

APPLICATION SUBMISSION PROCESS

Applications for admission beginning FALL semester: DUE AUGUST 1
Applications for admission beginning SPRING semester: DUE JANUARY 1
Applications for admission beginning SUMMER semester: DUE MAY 1

Rolling admissions processing policy means that applications for admissions are processed and a decision is made as soon as all application materials are available, and applicants are notified immediately after the application review has been completed.

Program Closed to Admissions

Master of Arts

MAJOR REQUIREMENTS

A minimum cumulative GPA of 3.0 is required

A grade of B or higher is required in all graduate coursework		
SPED 500	Legal/Educational Foundations: Special Education	3
SPED 601	Academic Interventions for Special Needs	3
SPED 603	Classroom/Behavior Management for Special Needs	3
SPED 609	Technology Applications for Special Needs	3
SPED 663	Collaborative-Consultative Inclusion Strategies	3
SPED 665	Mathematics for Special Needs	3
SPED 666	Reading for Special Needs	3
Select one of the following:		3
SPED 667	Elementary Content Methods	
SPED 668	Secondary Content Methods	
LE 622	Disciplinary Literacy	3
SPED 669	Culminating Practicum: Multicategorical Special Education	6
or SPED 680	Culminating Project	
Approved Electives		3
SPED 604	Characteristics/Educational Adaptations: Developmental Disabilities	
SPED 611	Early Learning Curriculum: Early Intervention	
SPED 630	Intro Low Vision/Blindness	
SPED 650	Learning Characteristics:Autism	
SPED 652	Educational Interventions: Autism	
SPED 661	Transition Planning and Programs for Students with Disabilities	
SPED 662	Differentiating Instruction for English Language Learners with Disabilities	
SPED 665	Mathematics for Special Needs	
SPED 666	Reading for Special Needs	
SPED 668	Secondary Content Methods	

SPED 675	Research to Practice	
Total Hours		36

NOTE: Students seeking certification for grades 5-Adult must also complete fifteen credits of coursework in at least one academic content area (biology, English, general Science, mathematics, or social studies).

Suggested Plan of Study (Full-time Study)

This plan is designed for full-time students who have no other major responsibilities or other students who wish to complete the program more quickly and believe they can manage the workload.

First Year

Fall	Hours	Spring	Hours	Summer	Hours
SPED 601		3 SPED 663		3 SPED 500	3
SPED 603		3 SPED 665		3 SPED 609	3
SPED 666		3 Select one of the following:		3 LE 622	3
		SPED 667			
		SPED 668			
			9		9	9

Second Year

Fall	Hours
Select one of the following:	6
SPED 669	
SPED 680	
Elective	3
	9

Total credit hours: 36

NOTE: Courses may be completed in any order (except culminating practicum or project, which must be completed after all other required courses are completed) and students may start the program in any semester.

Suggested Plan of Study (Part-time Study)

This plan is designed for part-time students who are working full time and have other family responsibilities.

First Year

Fall	Hours	Spring	Hours	Summer	Hours
SPED 601		3 SPED 603		3 SPED 500	3
SPED 666		3 Select one of the following		3	
		SPED 667			
		SPED 668			
			6		6	3

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
SPED 663		3 LE 622		3 SPED 609	3
SPED 665		3 Elective		3	
			6		6	3

Third Year

Fall	Hours
Select one of the following:	6
SPED 669	

SPED 680	
	6

Total credit hours: 36

NOTE: Courses may be completed in any order (except culminating practicum or project, which must be completed after all other required courses are completed) and students may start the program in any semester.

Program Closed to Admissions

Major Learning Outcomes

MULTICATEGORICAL SPECIAL EDUCATION

The Department of Special Education believes that students with with mild/moderate disabilities have a right to equitable, appropriate, and high quality education programs and services designed to meet their unique needs in inclusive schools and community settings; special educators play a critical role in the education of children with mild/moderate disabilities as co-instructors in inclusive general education classrooms, primary instructors in resource rooms or special classes, or as consultants to the classroom teacher; and these individuals and families should be empowered to make decisions about services and supports required to succeed academically, socially, and as a part of the citizenry.

This program has been designed so that program graduates can accomplish the following learning outcomes:

1. provide high quality educational services to children and adolescents with mild/moderate disabilities in inclusive classrooms and resource rooms in elementary and secondary schools;
2. demonstrate knowledge and application of current evidence-practices as exemplified by reputable research and professional standards to deliver individualized instruction to develop academic and social skills;
3. collaborate with other professionals and agencies in delivery of services and engage in individual and systems advocacy for individuals and their families, and empower individuals and families to participate in program planning and decision making; and
4. reflect in and on practice and respond responsibly to the legal, ethical, social, and cultural issues encountered when working with individuals with mild/moderate disabilities and their families in today's world.

Secondary Education, M.A.

Degree Offered

- Master of Arts

Nature of the Program

The Department of Curriculum and Instruction/Literacy Studies offers opportunities for graduate study leading to teacher certification and a Master of Arts degree in content areas that include math, science, social studies, world languages and English. This program is designed to prepare individuals to become educators in grades 6-12 public school classroom. Students in this programs will work with faculty who contribute as educational scholars to the profession at university, state, and national levels. Additionally, the program offers opportunities to develop technology rich, culturally responsive, and active learning environments associated with greater student achievement. This program has met accreditation standards.

Program Coordinator
Melissa Kelley
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Allen Hall, 604K

Department Chair
Dr. Nathan Sorber

Admissions

All applicants for the masters inSecondary Education must:

- Submit a WVU Graduate application for admission. The application can be found at https://admissions.wvu.edu/how-to-apply (https://admissions.wvu.edu/how-to-apply/)
- Hold a Bachelor's degree with a 2.75 GPA or above
- Submit a **one-page goal statemen**t. The Statement should be of professional experiences, career ambitions and will be considered a writing sample
- **Test requirements**: Praxis Core Academic Skills for Educators. Student can take the combined test # 5752 which includes all 3 sections (reading #5713, writing #5723 & math #5733)

- The Praxis CORE may be *waived* with an enhanced ACT score of 26 or higher, a re-centered SAT score of 1125 (April 1995), or a revised SAT of 1170 (March 2005) or higher **OR**   a 26 ACT or Math and Critical Reading SAT total of 1170 (pre-March 2016 test sitting) or an Evidence Based Reading/Writing and Math Section 1240 (post-March 2016 test sitting). (**OR**) Graduate Records Examination (**GRE**), minimum score 280 (combined score of verbal and quantitative sections)
- TOEFL (international students) - TOEFL score must be at least 550 (paper) or 213 (computer) 79-80 iBT or IELTS 6.5

PROGRAM REQUIREMENTS

- C&I 602 must be taken in the first semester after admission into the program. "B" or better is required in C&I 602.
- All student in the "Secondary Education Program", **must purchase** a subscription for LiveText.
- State background checks are required before entering a public school classroom.
- No more than nine hours at 400-level plus may count toward this thirty hour master's degree.
- Application for transient credit for graduate courses taken at other institutions must be approved by the adviser and the Assistant Dean for Student Services.
- Completion of 125 hours of field experience are required before student teaching.
- Passing scores on the Praxis II subject area knowledge assessment are due one full semester before student teaching.
- Passing scores on the edTPA.
- On-line application to graduate (https://cehs.wvu.edu/current-students/)

Master of Arts with Areas of Certification Areas in:

- Biology Education (p.   )
- Chemistry Education (p. 431)
- English Education (p. 431)
- General Science Education (p. 431)
- Math Education (p. 431)
- Physics Education (p. 432)
- Social Studies Education (p. 432)
- World Language Education (p. 432)

MAJOR REQUIREMENTS

A minimum cumulative GPA of 3.0 is required

A grade of C- or higher is required in all graduate coursework		
C&I 602	Curriculum and Teaching Principles (minimum grade of B)	3
C&I 688	Classroom Organization and Management	3
C&I 689	Cultural Diversity in the Classroom	3
EDP 600	Educational Psychology	3
LE 622	Disciplinary Literacy (Secondary English education students will take C&I 425 instead of LE 622)	3
SPED 500	Legal/Educational Foundations: Special Education	3
SPED 601	Academic Interventions for Special Needs	3
Area of Emphasis coursework		9
Total Hours		30

SUGGESTED PLAN OF STUDY

First Semester	Hours
C&I 602	3
EDP 600	3
	6

Second Semester	Hours
SPED 500	3
LE 622	3
	6

Third Semester	Hours
SPED 601	3
Complete Praxis 2	

AoE course	3
	6
Fourth Semester	**Hours**
C&I 688	3
C&I 689	3
	6
Fifth Semester	**Hours**
AoE courses	6
	6

Total credit hours: 30

NOTE: In addition to the 30 degree requirements, testing requirements (Praxis 2 & edTPA) are required.

OTHER REQUIREMENTS

- A WV state background check is required before entering a public school classroom.
- Completion of 125 hours of field experience are required before student teaching.
- Student teaching application must be completed **1 year** in advance if the student teaching semester.
- A standards-based portfolio completed C&I 680 Technology Integration Capstone course.
- Passing scores on the Praxis II in content area, due **one full semester** before student teaching.
- Passing scores on the edTPA completed during the student teaching semester are required for certification and program completion.

BIOLOGY EDUCATION AREA OF EMPHASIS

C&I 644	Science in the Secondary School	3
C&I 648	Science/Technology: Society Perspectives	3
C&I 649	History/Philosophy of Science	3
Total Hours		9

CHEMISTRY EDUCATION AREA OF EMPHASIS

C&I 644	Science in the Secondary School	3
C&I 648	Science/Technology: Society Perspectives	3
C&I 649	History/Philosophy of Science	3
Total Hours		9

ENGLISH EDUCATION AREA OF EMPHASIS

SCFD 640	History of American Education	3
or SCFD 620	Philosophy of Education	
C&I 424	Approaches to Teaching Language	3
C&I 624	Advanced Methods in English Education	3
Total Hours		9

GENERAL SCIENCE EDUCATION AREA OF EMPHASIS

C&I 644	Science in the Secondary School	3
C&I 648	Science/Technology: Society Perspectives	3
C&I 649	History/Philosophy of Science	3
Total Hours		9

MATH EDUCATION AREA OF EMPHASIS

SCFD 620	Philosophy of Education	3
or SCFD 640	History of American Education	
C&I 634/434	Mathematics in the Secondary School	3

C&I 632/432	Research in Math Curriculum and Technology	3
Total Hours		9

PHYSICS EDUCATION AREA OF EMPHASIS

C&I 644	Science in the Secondary School	3
C&I 648	Science/Technology: Society Perspectives	3
C&I 649	History/Philosophy of Science	3
Total Hours		9

SOCIAL STUDIES EDUCATION AREA OF EMPHASIS

SCFD 640	History of American Education	3
or SCFD 620	Philosophy of Education	
C&I 654	Social Studies in the Secondary School	3
C&I 757	Social Studies Curriculum Development, K-12	3
Electives	400 and 500 level from content area or related education courses counted as electives with advisor approval	6
Total Hours		15

WORLD LANGUAGE EDUCATION AREA OF EMPHASIS

SCFD 620	Philosophy of Education	3
or SCFD 640	History of American Education	
LANG 421	The Teaching of Foreign Languages	3
Electives	Taken at the graduate level in foreign language, C&I, and /or related field with advisor approval	3
Total Hours		9

Major Learning Outcomes
SECONDARY EDUCATION

The learning goals for this program are to prepare students who:

- Have commitment and skills to engage in life-long learning;
- Are effective communicators;
- Recognize that teaching is a professional, moral, and ethical enterprise with well-developed ethical frameworks which facilitate effective teaching;
- Will serve as a facilitator of learning for all students;
- Possess in-depth knowledge of both pedagogy and content, and the relationships between them;
- Are reflective practitioners;
- Are aware of, and have respect for, human diversity;
- Value and integrate knowledge from a wide variety of fields, are creative and open to new ideas, and are able to act constructively in a world characterized by technological, cultural, and societal diversity and change.

Department of Communication Sciences and Disorders

Degrees Offered

- Master of Science
- Doctor of Audiology
- Doctor of Philosophy

The Master of Science (M.S.) and Doctor of Audiology (Au.D.) programs in the Department of Communication Sciences and Disorders address the knowledge and skills that prepare graduates to excel in the professions of speech-language pathology and audiology, respectively. Graduates of the professional programs are well-prepared to diagnose and treat the full range of communicative disorders in all age groups and to practice competently as speech-language pathologists and audiologists in a wide range of clinical settings.

The Doctor of Philosophy (Ph.D.) in Communication Sciences and Disorders is a customized post-professional program that prepares audiologists and speech-language pathologists to become effective teachers and researchers with an area of expertise within *hearing science and disorders* or within *speech and language sciences and disorders*.

The Department of Communication Sciences and Disorders provides professional services to the public through our on-campus clinic. The West Virginia University Speech and Hearing Clinic offers a wide variety of speech-language pathology services to children and adults as well as being well-equipped to provide complete diagnostic and rehabilitative audiology services. Fully staffed by professional supervisors, these state-of-the-art clinical facilities help meet the health care needs of the community, while supporting the professional education of the department's graduate students.

The master's program in speech-language pathology at West Virginia University is accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association, 2200 Research Boulevard, #310, Rockville, MD 20850, 800-498-2071 or 301-296-5700.

The doctoral program in audiology at West Virginia University is accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association, 2200 Research Boulevard, #310, Rockville, MD 20850, 800-498-2071 or 301-296-5700.

FACULTY

CHAIR

- Jayne M. Brandel - Ph.D. (University of Kansas)

ASSOCIATE PROFESSORS

- Jayne M. Brandel - Ph.D. (University of Kansas)
  Speech-language pathology; Child language development and disorders
- Jeremy Donai - Ph.D. (Texas Tech University)
  Audiology; Hearing Science
- Michelle W. Moore - Ph.D. (University of Pittsburgh)
  Speech-language pathology; Child language disorders, Literacy, Phonological disorders

ASSISTANT PROFESSORS

- Alex Hollo - Ph.D. (Vanderbilt University)
  Language and Behavior, Special Education
- Kimberly M. Meigh - Ph.D. (University of Pittsburgh)
  Speech-language pathology; Motor speech disorders, Motor learning, Diagnostics, Adult neurogenic disorders

TEACHING INSTRUCTOR

- Janet J. Pettite - M.S. (West Virginia University)
  Audiology; Hearing aids, Clinical supervision

TEACHING ASSOCIATE PROFESSOR

- Ashleigh J. Callahan - Ph.D. (James Madison Univesity)
  Audiology; Vestibular evaluation/rehabilitation, Hearing conservation
- Leslie C. Graebe - M.S. (West Virginia University)
  Speech-language pathology; Clinical practice, Clinical supervision

SERVICE INSTRUCTOR

- Tracy Toman - M.S. (West Virginia University)
  Speech-language pathology; Telepractice, Clinical supervision

VISITING SERVICE INSTRUCTOR

- Tracie Evans - M.S. (West Virginia University)
  Speech-language pathology; Clinical supervision

PROFESSORS EMERITI

- Mary Ellen Tekieli Koay - Ph.D.
- Norman J. Lass - Ph.D.
- Dennis Ruscello - Ph.D.

- Kenneth O. St. Louis - Ph.D.
- Charles M. Woodford - Ph.D.

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- Cheryl L. Prichard - Ed.D.

TEACHING ASSOCIATE PROFESSOR EMERITUS

- Karen Haines - M.S.
- Gayle B. Neldon - Ed.D.

Audiology, Au.D.

Degree Offered

- Doctor of Audiology

Nature of the Program

The Doctor of Audiology (Au.D.) program at West Virginia University was inaugurated in 2004 when the clinical doctorate became the entry-level degree for the profession of audiology. The Au.D. is a professional program that emphasizes the knowledge and skills requisite to practice audiology in an effective, ethical, and inclusive manner. The purpose of the Au.D. program is to provide students with the academic and clinical preparation to diagnose and treat the full range of hearing and vestibular disorders in all age groups. It is the goal of the program to prepare audiologists who are competent to work effectively in a wide variety of clinical settings, including hospitals, clinics, special treatment centers, schools, industry, and private practice. The program consists of 116 credit hours of academic coursework and clinical practicum experiences, including a fourth year residency. Graduates must demonstrate acquisition of all knowledge and skills delineated in the Standards for the Certificate of Clinical Competence in Audiology (CCC-A).

Accreditation

The doctoral (AuD) educational program in audiology at West Virginia University is accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association, 2200 Research Boulevard, #310, Rockville, MD 20850, 800-498-2071 or 301-296-5700.

Note: The faculty of the Department of Communication Sciences and Disorders have placed a moratorium on admissions to the Doctor of Audiology (AuD) program that will be subject to annual review.

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  Speech-language pathology; Clinical supervision

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  Speech-language pathology; Online Program Coordinator

TEACHING INSTRUCTOR

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  Audiology; Clinical supervisor

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- Karen B. Haines - M.S.
- Gayle B. Neldon - Ed.D.

Admissions

Note: The faculty of the Department of Communication Sciences and Disorders have placed a moratorium on admissions to the Doctor of Audiology (AuD) program that will be subject to annual review.

All applicants for the Au.D. program must have a baccalaureate degree or equivalent from a regionally accredited institution of higher learning and present the following:

1. An undergraduate major in speech pathology and audiology *or* communication sciences and disorders
   [*In some cases, applicants without preparatory coursework in speech-language pathology and audiology may be considered for graduate admission, but the program of study will require completion of additional coursework, which may extend the length of the program*];
2. One official transcript from each college attended, including final grades for the fall courses taken during the previous semester if applicable
   [*Transcripts must be submitted to CSDCAS for verification*];
3. An overall undergraduate grade point average (GPA) of at least 3.0 (A = 4.0);
4. An official copy of the applicant's Graduate Record Examination (GRE) scores
   [*GRE Scores must be submitted to CSDCAS using the ETS Designated Institution code 6934*];
5. Proof of English language proficiency for any applicant whose first language is not English
   [*A score of at least 213 on the computer-based TOEFL, 550 on the paper-based TOEFL, or 79 on the internet-based TOEFL, or a score of at least 6.5 on the IELTS is required of applicants whose first language is not English*];
6. Three letters of recommendation (at least 2 from academic faculty) that reflect the applicant's academic and clinical abilities, potential for success in graduate studies, and personal qualities predictive of professional success as a speech-language pathologist

   [*Letters of recommendation must be submitted through CSDCAS*];
7. A personal statement submitted through CSDCAS describing the applicant's goals, aspirations, and motivation for pursuing professional doctoral education in audiology

Applications for the Doctor of Audiology program must be submitted through through the *Communication Sciences & Disorders Centralized Application Service* (CSDCAS). To access CSDCAS, visit https://portal.csdcas.org. To be considered for admission an application must be "complete" on or before January 15. A complete application is one that has been e-submitted and all transcripts, scores, statement, letters of recommendation, and payments have been received by CSDCAS and attached to the application. Documents should be sent two weeks prior to the January 15 deadline to ensure that items arrive on time. The timeliness of the application is considered the responsibility of the applicant.

Applicants subsequently *recommended for acceptance* will then be instructed to submit a WVU Graduate application with the WVU application fee and official transcripts that include final fall grades to complete the admission process. It is only possible for admitted students to begin the Au.D. program in the fall semester.

AU.D./PH.D. OPTION

Doctor of Audiology students who are attending WVU may apply to the Doctor of Philosophy (Ph.D.) program no earlier than spring semester of the second year to begin fall of the third year. If accepted to the Au.D./Ph.D. option, they will hold dual enrollment as an Au.D. and Ph.D. student until completion of the Au.D. degree. This will be a competitive application process and is reserved for highly-qualified and motivated Au.D. students. For additional information, please refer to the Ph.D. in Communication Sciences and Disorders Program Requirements (http://catalog.wvu.edu/graduate/collegeofhumanresourcesandeducation/spa/commsci/#doctoraltext).

Doctor of Audiology
MAJOR REQUIREMENTS

A minimum cumulative GPA of 3.0 is required	
A minimum grade of B or higher is required in all graduate coursework	
CSAD courses and associated laboratories	64
Coursework in related areas of counseling, research methods, and business	6
Electives	3
Clinical Practicum	19
Clinical residency	24
Completion of ASHA-approved practicum experience equivalent to a minimum of twelve months of full-time supervised experience	
Passing score on Praxis exam in Audiology	
Scholarly work approved by the student's advisory committee submitted in written form	
Total Hours	116

RESIDENCY REQUIREMENTS

All students in the Au.D. program must be full-time in residence during the program of study. The minimum duration for graduate study is eleven consecutive semesters (including summer sessions). Part-time students are not eligible for admission to the Au.D. degree program.

Major Learning Outcomes
AUDIOLOGY

The Au.D. program has been designed to provide an understanding of the normal processes of hearing and communication with the academic and clinical preparation to diagnose and treat the full range of hearing disorders in all age groups. The goal is to prepare audiologists who are competent to work in a wide variety of clinical settings, including hospitals, clinics, special treatment centers, schools, industry, and private practice. The program's intent is to provide the knowledge and skills necessary to practice audiology autonomously in an effective, ethical manner. Graduates of the Au.D. Program should be able to:

- Communicate and practice in a contemporary, professional, ethical, culturally sensitive, and effective manner in the areas of advocacy, consultation, education, inter-professional collaboration, and administration.
- Plan, perform, and evaluate services or programs related to the prevention and identification of auditory and vestibular disorders, and related systems.
- Plan, perform, and evaluate assessment of individuals with suspected disorders of auditory and vestibular systems.
- Plan, perform, and evaluate intervention of individuals with disorders of auditory, balance, and related systems.
- Critically evaluate and interpret relevant research to support evidence-based audiological practice.

Communication Sciences and Disorders, Ph.D.

Degree Offered

- `Doctor of Philosophy`

Nature of the Program

The Ph.D. degree program in Communication Sciences and Disorders provides a rigorous course of study along with mentored research and teaching experiences to enable students to become high-quality researchers and serve effectively as leaders in the discipline. Graduates of the program are prepared to assume careers as researchers and scholars at colleges, universities, hospitals, industrial settings, and research facilities. The program is not designed to provide an advanced clinical degree in either audiology or speech-language pathology. Rather, the Ph.D. degree will be conferred in recognition of the attainment of the highest academic excellence and productive scholarship. As doctoral programs are an integral step on a life-long journey of learning and scholarship, the Department of Communication Sciences and Disorders has established the Ph.D. program in Communication Sciences and Disorders to support students in developing knowledge, judgment, skills, and attitudes to facilitate their growth and learning throughout their careers as researchers, scholars, and teachers**.**

The Ph.D. program in Communication Sciences and Disorders is a highly individualized experience that includes prescribed and selected coursework designed to meet the objectives of the program, ongoing participation in research and other scholarly activities, and the independent completion of a dissertation under the mentorship of a research advisor. As such, the time needed to complete the program will vary to ensure sufficient time for the building of adequate teaching and research skills and a creditable curriculum vitae. Some diligent and highly motivated students may be able to complete their work in less time, whereas others may require more time to achieve independence as a scholar and researcher.

Admissions

Note: The PhD in Communication Sciences and Disorders is no longer accepting applications for new students.

A Ph.D. Advisory Committee composed of one member from each of the major areas of study will screen the applications and make admissions decisions based on the following criteria, in consultation with the faculty in their area of emphasis. In particular, applicants must have the following:

1. An entry-level clinical degree for the profession of speech-language pathology (i.e., M.A. or M.S.) or audiology (i.e., M.A., M.S., or Au.D.)
2. A cumulative grade point average of 3.25 or higher (A=4.0) upon completion of a graduate degree
3. An official copy of the results of the Graduate Record Examination (GRE) taken within the past 5 years
4. A TOEFL score of at least 79 (internet version), 213 (computer-based), 550 (paper-based) or an IELTS score of at least 6.5, if English is not the applicant's native language
5. An interview with the Ph.D. Advisory Committee that may include the writing of an essay on an assigned topic to be evaluated by program faculty
6. Three letters of recommendation, two of which must come from previous instructors or professors who can comment meaningfully on the applicant's potential for Ph.D. study
7. A personal statement that addresses the applicant's professional goals within *speech and language sciences and disorders* or within *hearing science and disorders*

AU.D./PH.D. OPTION

Doctor of Audiology (Au.D.) students who are attending WVU may apply to the Ph.D. program no earlier than the spring semester of the second year to begin the fall of the third year. This will be a competitive application process and is reserved for highly-qualified and motivated Au.D. students. The applicant must have requirements 2-7 listed above. Students who intend to enroll in two graduate programs simultaneously (dual enrollment) must obtain permission in writing from the dean.

Doctor of Philosophy (Ph.D.) Program

PROGRAM REQUIREMENTS

Theoretical Foundations Core

CSAD 750	Information Literacy in Communication Sciences and Disorders	3
CSAD 752	Research Design in Communication Sciences and Disorders	3
CSAD 754	Teaching and Supervision in Communication Sciences and Disorders	3
Select one of the following:		3
C&I 707	Theories, Models and Research of Teaching	
EDP 640	Instructional Design	

EDP 700	Psychological Foundations of Learning	
Research Core		
EDP 613	Statistical Methods 1	3
EDP 614	Statistical Methods 2	3
EDP 711	Multivariate Methods 1	3
Select one from the following:		3
EDP 617	Program Evaluation	
EDP 693	Special Topics	
EDP 710	Thesis/Dissertation Bootcamp	
SCFD 615	Qualitative Research Methods	
Content Area Seminars		**9**
CSAD 793	Special Topics	
Supporting Area Coursework		**9**
Students will take at least 9 semester hours in an approved supporting area, for example, neuroscience, psycholinguistics, health science, biology, genetics, vocal performance, or special education.		
Cultural Diversity and Global Initiatives		
CSAD 770	Cultural Diversity in Communication Sciences and Disorders	1
CSAD 780	Global Initiatives in Communication Sciences and Disorders	1
Development of Research Skills		**15**
CSAD 797	Research	
Comprehensive Exams		**6-9**
CSAD 795	Independent Study	
Total Hours		65

RESIDENCY COMMITMENT

The Ph.D. degree program in communication sciences and disorders requires a full-time commitment. Each student who is accepted into the program works on a daily basis with faculty who will help to hone skills and to sharpen the research focus. Furthermore, each student will be expected to conduct research and pursue scholarship activities that will inform classroom teaching and lead to meaningful presentations and publications. Consequently, applicants are required to sign a statement confirming their commitment to full-time status before they may be admitted to the program.

CURRICULUM

Upon admission to the Ph.D. program, students enroll in a series of required courses in the doctoral core, in the research core, and in the area of specialization. Ph.D. students are expected to maintain a cumulative GPA of at least 3.25 each semester. Upon completion of coursework, students must successfully complete written and oral comprehensive examinations to be eligible for candidacy.

Ph.D. students enroll in a minimum of six credits of research (CSAD 797), extending over at least two semesters, under the supervision of their mentor and/or other faculty researcher/s working in related areas. Typically, the focus of the independent study will be on the development of independent research skills through involvement with ongoing or forthcoming projects in the mentor's research program. Each student will be expected to present at one or more scientific meetings and submit one or more manuscripts for publication in relevant peer-reviewed journals before graduating. It is also expected that the student will submit at least one external grant before graduating.

In addition to the teaching and pedagogy courses listed in the course requirements, students are required to teach or co-teach at least one academic course before graduating. Teaching responsibilities also may include clinical supervision.

Major Learning Outcomes
COMMUNICATION SCIENCES AND DISORDERS

The primary objective of the Ph.D. degree program is to assist students to develop in-depth mastery of subject matter in a narrow and specific area within the broad discipline of communication sciences and disorders and, simultaneously, to broaden one's knowledge base in other fields related to the special area of interest, such as health, linguistics, education, and the physical, biological, and socio-behavioral sciences. With the intent to prepare high-quality researchers to serve as leaders in the discipline of communication sciences and disorders, graduates of the program will be prepared to assume independent careers as researchers and scholars at colleges, universities, and hospitals, as well to become key personnel at leading private and public research institutes. Specifically, the learning goals of the Ph.D. program in Communication Sciences and Disorders include:

- The development of independent research skills through sequential experiences that involve the planning and conduct (or implementation) of research projects, the writing of grants, and the dissemination of research findings through the presentation of papers at scientific and other professional conferences and publication in peer-reviewed journals in the discipline;

- The preparation of academicians equipped to teach the university students of tomorrow through guided coursework in educational methods and evaluation, instructional technologies including online course delivery, international and intercultural experiences, and classroom practice; and
- The acquisition of advanced knowledge and understanding of a specialized area with the ability to apply this understanding to research, teaching, and scholarship.

Speech-Language Pathology, M.S.

Degree Offered

- Master of Science

Nature of the Program

The purpose of the Master of Science degree program in Speech-Language Pathology is to provide aspiring professionals with a firm understanding of the normal processes of speech, language, and hearing; the competence to diagnose and treat the full range of communicative disorders in all age groups; and the opportunity to practice in a wide variety of clinical settings, including schools, hospitals, clinics, special treatment centers, and private practice. The M.S. in speech-language pathology, therefore, is a professional program that emphasizes the knowledge and skills requisite for competent and ethical clinical practice. Graduation thus depends on completion of all academic requirements and the demonstration of sound clinical expertise. Additional information regarding graduate student expectations is outlined in the current edition of the *Graduate Student Handbook for Speech-Language Pathology*.

The master's (MS) education program in speech-language pathology at West Virginia University is accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association, 2200 Research Boulevard, #310, Rockville, MD 20850, 800-498-2071 or 301-296-5700.

FACULTY

CHAIR

- Jayne M. Brandel - PhD (University of Kansas)

ASSOCIATE PROFESSORS

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  Speech-language pathology; Child language development and disorders
- Jeremy J. Donai - Ph.D. (Texas Tech University)
  Audiology; Psychoacoustics, Amplification, Hearing Aids
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  Speech-language pathology; Clinical supervision

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Admissions

All applicants for the M.S. in Speech-Language Pathology Program must have a baccalaureate degree or equivalent from a regionally accredited institution of higher learning, and present the following by the *February 1* deadline:

1. Completion of a bachelor's degree and the prerequisite coursework listed below with a grade of C or better:
   - At least one 3-credit course in each of the following CSD content areas:
     - Phonetics/Phonology
     - Language Acquisition/Development
     - Anatomy and Physiology of Speech and Hearing
     - Speech and Hearing Science
     - Introduction to Audiology
   - One 3-credit course in each of the following related content areas:
     - Statistics Course (outside of CSD)
     - Biological Science
     - Physics or Chemistry
     - Social/Behavioral Science
2. One official transcript from each college attended, including final grades for the fall courses taken during the previous semester if applicable [*Transcripts must be submitted to CSDCAS for verification*];
3. An overall undergraduate grade point average (GPA) of at least 3.0 (A = 4.0);
4. An official copy of the applicant's Graduate Record Examination (GRE) scores
   [*Official GRE Scores including percentiles must be submitted to CSDCAS using the ETS Designated Institution code 6934*];
5. Proof of English language proficiency for any applicant whose first language is not English
   [*A score of at least 213 on the computer-based TOEFL, 550 on the paper-based TOEFL, or 79 on the internet-based TOEFL, or a score of at least 6.5 on the IELTS is required of applicants whose first language is not English*];
6. Three letters of recommendation
   [*Letters of recommendation must be submitted through CSDCAS*];
7. A personal statement submitted through CSDCAS

Certain application requirements may be waived based on a preliminary review of an application by the program. For detailed information on the components of the application, please visit the Admissions Requirements page on the department's website (https://csd.wvu.edu/sp-masters/admission).

Applications for the Master of Science program must be submitted through through the *Communication Sciences & Disorders Centralized Application Service* (CSDCAS). To access CSDCAS, visit https://portal.csdcas.org. See http://csd.wvu.edu for details. To be considered for admission, an application must be "complete" on or before January 15 to provide time for transcripts to be verified. A complete application is one that has been e-submitted and all transcripts, scores, statement, letters of recommendation, and payments have been received by CSDCAS and attached to the application. Documents should be received by CSDCAS by January 15 to ensure an application is verified by February 1. The timeliness of the application is considered the responsibility of the applicant.

All applicants being considered for admission will participate in an interview with members of the CSD faculty. Applicants subsequently *recommended for acceptance* will then be instructed to submit a WVU Graduate application with the WVU application fee and official transcripts including the undergraduate degree to complete the admission process. It is only possible for admitted students to begin the M.S. program in the fall semester. Part-time students are not eligible for admission.

Master of Science

MAJOR REQUIREMENTS

A minimum cumulative GPA of 3.0 is required

CSAD 604	Seminars Clinical Practice 1	1
CSAD 605	Seminars Clinical Practice 3	1
CSAD 606	Seminars Clinical Practice 2	1
CSAD 607	Seminars Clinical Practice 4	1
CSAD 608	Audiological Foundations	2
CSAD 610	Advanced Practice Speech-Language Disorders 1	2
CSAD 611	Advanced Practice/Audiology 1	1
CSAD 612	Advanced Practice Speech-Language Disorders 2	2
CSAD 614	Advanced Practice Speech-Language Distorders 3	2
CSAD 616	Advanced Practice Speech-Language Disorders 4	3
CSAD 618	Evidence-Based Practice in Communication Sciences and Disorders	3
CSAD 620	Neurophysics of Speech and Language	3
CSAD 622	Advanced Voice Disorders	3
CSAD 624	Phonological Disorders	3
CSAD 625	Child Language and Literacy Disorders	3
CSAD 626	Experimental Phonetics	3
CSAD 628	Advanced Stuttering Disorders	3
CSAD 630	Adult Neurogenic Communication Disorders	3
CSAD 632	Craniofacial Anomalies	3
CSAD 636	Augmentative/Alternative Communication	3
CSAD 660	Neuropathology of Speech and Language	3
CSAD 662	Dysphagia	3
CSAD 664	Diagnostics in Speech Language Pathology	3
CSAD 718	Externship in Speech Pathology/Audiology	9
or CSAD 697	Research	
Minimum of 400 clock hours of supervised practicum, including at least 25 hours of clinical observation and 325 hours of practicum clock hours at the graduate level as outlined by the ASHA CFCC requirements and including completion of competencies (see student handbook for criteria).		
Professional Portfolio		
Total Hours		64

RESIDENCY REQUIREMENTS

All students in the M.S. program must be full-time in residence during the program of study. The minimum duration for graduate study is five consecutive semesters (including summer sessions).

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours	Summer	Hours
CSAD 604	1	CSAD 606	1	CSAD 605	1
CSAD 610	2	CSAD 612	2	CSAD 608	2
CSAD 618	3	CSAD 625	3	CSAD 614	2
CSAD 620	3	CSAD 626	3	CSAD 632	3
CSAD 624	3	CSAD 628	3	CSAD 636	3
CSAD 664	3	CSAD 630	3		
	15		15		11

Second Year

Fall	Hours	Spring	Hours
CSAD 607	1	CSAD 718 or 697	9
CSAD 611	1		
CSAD 616	3		
CSAD 622	3		
CSAD 662	3		
CSAD 660	3		
	14		9

Total credit hours: 64

Major Learning Outcomes

SPEECH-LANGUAGE PATHOLOGY

The M.S. in Speech-Language Pathology program is a professional program that emphasizes the knowledge and skills requisite to practice speech-language pathology in an effective, ethical, and inclusive manner. Graduates of the Master's Program in Speech-Language Pathology should be able to:

- Communicate and practice in a contemporary, professional, ethical, culturally sensitive, and effective manner in the areas of advocacy, consultation, education, inter-professional collaboration, and administration.
- Plan, perform, and evaluate services or programs related to the prevention and identification of disorders of speech, oral and written language, swallowing, and related systems.
- Plan, perform, and evaluate assessment of individuals with suspected disorders of speech, oral and written language, swallowing, and related systems.
- Plan, perform, and evaluate intervention of individuals with disorders of speech, oral and written language, swallowing, and related systems.
- Critically evaluate and interpret relevant research to support evidence-based clinical practice.

Department of Learning Sciences and Human Development

Degrees Offered

- Master of Arts
- Doctor of Education
- Doctor of Philosophy

Certificates Offered

- Graduate Certificate in Program Evaluation
- Graduate Certificate in Health Professions Education

In the Department of Learning Sciences and Human Development, we focus on understanding and promoting deep learning and healthy human development across the lifespan as central unifying goals. To accomplish these goals, we believe three interrelated areas must be recursively considered: a) Socio/Cultural Context, b) Design, and c) Learning Theory/Human Development. These three areas align with traditional conceptions of Learning Sciences as a field, but we extend those conceptions to explicitly encompass contributions from the study of human development and to situate much of our work in rural or Appalachian social, cultural, and historical contexts. The department houses programs in child development and family studies, educational psychology, instructional design and technology, program evaluation and research, special education, and learning sciences and human development.

ADMINISTRATION

CHAIR

- Reagan Curtis - Ph.D.

ASSISTANT CHAIR

- Amy Root - Ph.D.

Educational Psychology

Degrees Offered

- Master of Arts
- Doctor of Education

Certificates Offered

- Health Professions Education
- Program Evaluation

Nature of the Program

The Educational Psychology Program in the College of Education and Human Services offers opportunities for graduate study and research leading to a Graduate Certificate in Health Professions Education, a Graduate Certificate in Program Evaluation and Research, Master of Arts (MA) degrees in Educational Psychology, Program Evaluation and Research, or Child Development and Family Studies, and a doctoral degree in Educational Psychology. We also contribute to the PhD in Learning Sciences and Human Development and to graduate degrees in Instructional Design and Technology.

GRADUATE CERTIFICATE IN HEALTH PROFESSIONS EDUCATION

The Graduate Certificate in Health Professions Education is designed for *health professionals* who are (1) looking to move into a new career as *health care educators*, (2) who may desire educational knowledge and skills in their present fields, and (3) for those who are in or are preparing for educational leadership positions, but may lack formal training in education. This program will provide a foundation in the theory and practice of curriculum design, instruction, student performance assessment, program evaluation, education leadership and management, and educational scholarship.

The Graduate Certificate in Health Professions Education (HPE) is a joint offering from the School of Medicine (SoM) in the Health Science Center and the Educational Psychology program in the College of Education and Human Services (CEHS). The program consists of completing an online orientation module before taking any courses, developing a professional development plan, and completing four courses in Educational Psychology, one of which requires a capstone project where an educational plan is developed for a health care setting.

GRADUATE CERTIFICATE IN PROGRAM EVALUATION

The Graduate Certificate in Program Evaluation provides individuals the knowledge and experience to conduct group and individual evaluations. Using a practice-based approach, participants will be introduced to content in popular methods and approaches used in everyday evaluations. Graduates will be prepared to locate and implement their own studies in the field while maintaining a one-on-one support structure. Completion of the program includes an introduction to program evaluation, exposure to assessment and measurement, survey of research methods and a hands-on experience locating and implementing an agreed upon study of the participant's choice under the guidance of the program coordinator.

MASTER OF ARTS IN CHILD DEVELOPMENT AND FAMILY STUDIES (NOT ADMITTING NEW STUDENTS)

The Child Development and Family Studies (CDFS) master's degree program provides students with opportunities for conducting research and working with families and children in educational, applied, or other clinical settings. Courses in child development, family studies, parenting strategies, and interpersonal communication skills are supplemented with field experiences in a variety of settings. Individuals studying Child Development and Family Studies may select a professional focus from a wide variety of areas including child care specialist, early childhood teacher, developmental specialist, child life educator, parent educator, extension specialist, and family life specialist.

Note: Not currently admitting new students into the Master of Arts in Child Development and Family Studies degree option.

MASTER OF ARTS IN EDUCATIONAL PSYCHOLOGY

The Educational Psychology master's degree program is designed for individuals who want to pursue general preparation in learning, development, measurement, and research with the flexibility of selecting individualized additional coursework that supports their professional development goals. All

students in this major complete four core courses, additional electives, and are required to design and conduct either 1) a project that solves a practical problem in learning or development or 2) a research thesis that investigates a topic of relevance to learning or development.

MASTER OF ARTS IN PROGRAM EVALUATION AND RESEARCH

The Program Evaluation and Research master's degree program is designed for individuals with interest in conducting research and evaluation projects for private and public educational organizations and agencies. All students in this area of emphasis complete six core courses in research and evaluation methodology, additional electives, and are required to design and conduct at least one full program evaluation during the course of their studies.

DOCTORAL PROGRAM IN EDUCATIONAL PSYCHOLOGY (NOT ADMITTING NEW STUDENTS)

The Educational Psychology program in the College of Education and Human Services offers opportunities for graduate study and research leading to the Doctor of Education. The Learning Goals for the Ed.D. in Educational Psychology seek to educate and train professionals who will focus on teaching and learning environments as they carry out their missions in instruction, service, and research. The principal goal of the program is the education and training of professionals who will focus on teaching and learning environments as they carry out their missions associated with instruction, service, and research. Professional preparation centers on (a) learning and development; (b) instructional development; and (c) measurement, research, and statistics. Accordingly, students are expected to achieve competencies in these areas. The student, the student's adviser, and the student's committee jointly plan programs to meet particular career needs. Minor fields of study are also planned for each student as appropriate. In addition to the general requirements of the University and the College of Education and Human Services, there is a core of courses supporting the development of competencies required of all graduate students in the program.

Note: Not currently admitting new students into the Doctor of Education degree option.

FACULTY

CHAIR & PROFESSOR

- Reagan Curtis - Ph.D. (University of California at Santa Barbara)
  Educational Psychology, Interdisciplinary Human Development, Cognitive Science, Program Evaluation and Research Methodologies

ASSISTANT CHAIR AND ASSOCIATE PROFESSOR

- Amy Root - Ph.D. (University Maryland, College Park)
  Child Development and Family Studies (Coordinator); Parenting and the Development of Emotional Competence, Individual Differences, Development of Shy/Wary Behavior

DIRECTORS OF WVU NURSERY SCHOOL

- Melissa Workman - M.S., M.A. (West Virginia University)
  Early Childhood Education, Early Childhood Teacher, Associate Director of the WVU Nursery School
- Keri Law - M.A. (West Virginia University)
  Early Childhood Education, Early Childhood Teacher

PROFESSOR EMERITUS

- Neal Shambaugh - Ph.D. (Virginia Tech)
- Carol Markstrom - Ph.D. (Utah State University)

PROFESSORS

- William Beasley - Ed.D. (University of Georgia)
  Instructor presence in online environments, integration of external technologies with learning management systems, elearning in cross-cultural contexts
- M Cecil Smith - Ph.D. (University of Wisconsin)
  Educational Psychology, Adult Learning

ASSOCIATE PROFESSORS

- Kristin Moilanen - Ph.D. (University of Nebraska)
  Adolescent Development, Self Regulation, Risk Behavior, Family Relationships
- Jessica Troilo - Ph.D. (University of Missouri)
  Cultural Conceptions of Fathers, Divorced Fatherhood, the Influence of Social Media on Relationships
- Kimberly Floyd - Ph.D. (Old Dominion University)
  Special Education

ASSISTANT PROFESSORS

- Melissa Patchan - Ph.D. (University of Pittsburgh)
Mechanisms of Peer Assessment of Writing, Effectiveness and Validity of Peer Feedback, Issues of Measurement, Multiple Sources, and Validity of Peer Ratings
- Jonathon Beckmeyer - Ph.D. (University of Missouri)
Adolescent Development, Emerging Adulthood, Family Structure, Romantic Development, Sexual Health
- Carla Brigandi - Ph.D. (University of Connecticut)
Educational Psychology, Gifted Education and Talent Development
- Jake Follmer - Ph.D. (Pennsylvania State University)
Educational Psychology, Learning
- Gabrielle Kline - M.S. (University of Missouri)
Adolescence, Young Adulthood, Sibling Relationships
- Abhik Roy - Ph.D. (Western Michigan University)
Program Evaluation, Unification of Evaluation Practice and Theory (Grand Theory), Research on Evaluation (ROE), Evaluation of Non Academic Units within Academia

CLINICAL ASSOCIATE PROFESSOR

- Malayna Bernstein - Ph.D. (Northwestern University)
Learning Sciences

CLINICAL ASSISTANT PROFESSOR

- Ashley Martucci - Ed.D. (West Virginia University)
Early Childhood Education, Curriculum and Instruction

TEACHING ASSISTANT PROFESSOR

- Colleen Wood-Fields - Ph.D. (Old Dominion University)
Special Education

Admissions

ADMISSIONS FOR GRADUATE CERTIFICATES

Students can apply to the certificate programs online at http://graduateadmissions.wvu.edu/how-to-apply (http://graduateadmissions.wvu.edu/how-to-apply/) as a non-degree student (CEHS 4597 – Non-Degree Certificate). Students enrolled in a WVU degree program may also apply for the certificate programs, but should be aware that no more than 6 credits earned toward the certificate may be applied to another degree (and vice versa). To be admitted as a non--#degree student, a student must present evidence of a baccalaureate degree. The student must also maintain a 3.00 grade point average as long as the student is enrolled.

ADMISSIONS FOR MASTER OF ARTS DEGREES

All masters require the same admissions materials and follow similar processes to make admissions decisions. All faculty members affiliated with the program evaluate the credentials submitted for all completed applications. A majority must indicate acceptance and at least one faculty member must be willing to serve as the student's adviser. Final approval for admission rests with the relevant Program Coordinator.

In line with best practices for evaluation and assessment, set cutoff scores for tests and GPA are not used to make unidimensional admissions decisions. Instead, applicant materials are reviewed as a total package and admissions decisions are based on multidimensional factors. That said, successful applicants tend to be at or above the 50th percentile on the GRE or MAT, have undergraduate GPAs at or above 3.0, and graduate GPAs (if any) at or above 3.25.

Applicants interested in being considered for admission to the master's programs should indicate that interest on standard online application forms provided by the West Virginia University Office of Admissions and Records, which can be found here: http://graduateadmissions.wvu.edu/how-to-apply (http://graduateadmissions.wvu.edu/how-to-apply/)

In addition to the completed online application form, the following items must be sent to the appropriate Administrative Assistant (see below) before the admission process can be initiated:

1. A completed WVU online graduate application: http://graduateadmissions.wvu.edu/how-to-apply (http://graduateadmissions.wvu.edu/how-to-apply/)
2. The applicant's undergraduate and graduate (if any) transcript(s)
3. An official copy of the results of either the Graduate Record Examination or the Miller Analogies Test (GRE/MAT may be waived for General Educational Psychology and Evaluation and Research majors, but is required for Child Development and Family Studies majors) and for non-native English speakers an official copy the TOEFL showing a score of 79 or above (no conditional admissions will be considered)
4. Three (3) letters of recommendation

5. A personal vita (resume)
6. A written statement of approximately 500 words, indicating the applicant's fit for the specific major they wish to be admitted to and goals relative to receiving a master's degree. This statement should indicate which faculty members in the program have research or teaching interests that align with the student's own interests and therefore might appropriately mentor the student if admitted to the program.

Review of applicants for admission will not begin until after all items 1-6 listed above have been received by the relevant administrative assistant.

Admission materials should be uploaded to the WVU online graduate application. For answers to questions regarding application materials please contact the appropriate administrative assistant:

Educational Psychology or Program Evaluation and Research master's contact:
Dana Musick (dmusick2@mail.wvu.edu)
c/o The Department of Learning Sciences and Human Development
West Virginia University
PO Box 6122
Morgantown, West Virginia 26506-6122

Child Development and Family Studies master's program and Educational Psychology doctoral programs are not admitting new students.

Major Learning Outcomes

EDUCATIONAL PSYCHOLOGY

The principal goal of the Educational Psychology program is the education and training of professionals who will focus on teaching and learning environments as they carry out their missions associated with instruction, service, and research. Professional preparation centers on the following three content areas: a) Learning and development, b) Instructional development, and c) Measurement, research, and statistics. Additional learning goals associated with specialized majors are provided below.

Graduate Certificate in Health Professions Education

- Use a systematic process to conduct a needs assessment of learners in healthcare education, design educational interventions and materials, integrate emerging technologies.
- Design face-to-face, blended, and online learning environments incorporating research-based learning principles that address teaching and assessment decisions.
- Evaluate the efficiency, effectiveness, and appeal of healthcare learning environments.
- Design studies and disseminate impacts of designed learning environments to prepare healthcare professionals to translate skills and knowledge for benefit of patient care and healthcare systems.
- Develop an educational intervention plan for a healthcare environment.

Graduate Certificate in Program Evaluation

- Conduct program evaluations in both a group setting and as a sole evaluator.
- Understand the criteria, standards and indicators used in evaluation and research.
- Assess the efficiency, effectiveness, and appeal of program evaluations.
- Design studies and develop tools utilizing modern research methods and current instruments.
- Develop writing skills to be used in evaluation studies and reports.

Master of Arts: Program Evaluation and Research

- Demonstrate understanding of the philosophical and historical foundations of inquiry.
- Apply appropriate quantitative, qualitative, and mixed-methods research tools to answer practical educational, programmatic, and other social research questions.
- Apply appropriate program evaluation tools to conduct formative and summative evaluations of existing and prospective educational programs.
- Demonstrate understanding of ethical issues in research and evaluation.
- Create informative reports of research and evaluation studies tailored appropriately for multiple stakeholders and decision-makers.

Master of Arts: Child Development and Family Studies

- To understand and apply theories and current research on child development and family studies.
- To recognize and understand the complexities of diversity (e.g., SES, gender, sexual orientation, ethnicity) in families according to relationship dynamics, gender roles, parent-child relationships, and other dimensions of family life.

- To foster critical thinking relative to the scholarly literature in the field and the applications of knowledge to work with children, adolescents, and families.
- To develop the knowledge and skills for interpreting research as well as other scholarly-derived literature.
- To conduct original research through the application of critical thinking and research skills and content-based scholarly-derived knowledge.
- To build professional development skills that may include preparation for an applied career working with children, adolescents, and/or families or doctoral studies to pursue an academic career.
- To advance and foster students' intellectual interests and their career goals.

Child Development and Family Studies, M.A.

Degree Offered

- Master of Arts

Nature of the Program

The Child Development and Family Studies (CDFS) master's degree program provides students with opportunities for conducting research and working with families and children in educational, applied, or other clinical settings. Courses in child development, family studies, parenting strategies, and interpersonal communication skills are supplemented with field experiences in a variety of settings. Individuals studying Child Development and Family Studies may select a professional focus from a wide variety of areas including child care specialist, early childhood teacher, developmental specialist, child life educator, parent educator, extension specialist, and family life specialist.

Note: Not currently admitting new students.

Master of Arts

MAJOR REQUIREMENTS

Major Requirements

EDP 612	Introduction to Research	3
EDP 613	Statistical Methods 1	3
CDFS 697	Research	6
Content Component:		
CDFS 640	Survey of Family Studies	3
CDFS 645	Socio-Emotional Development of Children	3
CDFS 647	Comparative Study of Family	3
CDFS 648	Theories of Child and Adolescent Development	3
CDFS 649	Socialization Processes	3
Electives (Any courses 500 level or above approved by advisor)		**6**
Total Hours		33

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
EDP 612	3	EDP 613	3
CDFS 640	3	CDFS 649	3
CDFS 648	3	Elective	3
	9		9

Second Year

Fall	Hours	Spring	Hours
CDFS 647	3	CDFS 645	3
CDFS 697	3	CDFS 697	3
Elective	3		
	9		6

Total credit hours: 33

Major Learning Outcomes

CHILD DEVELOPMENT AND FAMILY STUDIES

- To understand and apply theories and current research on child development and family studies.
- To recognize and understand the complexities of diversity (e.g., SES, gender, sexual orientation, ethnicity) in families according to relationship dynamics, gender roles, parent-child relationships, and other dimensions of family life.
- To foster critical thinking relative to the scholarly literature in the field and the applications of knowledge to work with children, adolescents, and families.
- To develop the knowledge and skills for interpreting research as well as other scholarly-derived literature.
- To conduct original research through the application of critical thinking and research skills and content-based scholarly-derived knowledge.
- To build professional development skills that may include preparation for an applied career working with children, adolescents, and/or families or doctoral studies to pursue an academic career.
- To advance and foster students' intellectual interests and their career goals.

Educational Psychology, M.A., Ed.D.

Degrees Offered

- Master of Arts
- Doctor of Education

Nature of the Program

MASTER OF ARTS IN EDUCATIONAL PSYCHOLOGY

The Educational Psychology master's degree program is designed for individuals who want to pursue general preparation in learning, development, measurement, and research with the flexibility of selecting individualized additional coursework that supports their professional development goals. All students in this major complete four core courses, additional electives, and are required to design and conduct either 1) a project that solves a practical problem in learning or development or 2) a research thesis that investigates a topic of relevance to learning or development.

DOCTORAL PROGRAM IN EDUCATIONAL PSYCHOLOGY

The Educational Psychology program in the College of Education and Human Services offers opportunities for graduate study and research leading to the Doctor of Education. The Learning Goals for the Ed.D. in Educational Psychology seek to educate and train professionals who will focus on teaching and learning environments as they carry out their missions in instruction, service, and research. The principal goal of the program is the education and training of professionals who will focus on teaching and learning environments as they carry out their missions associated with instruction, service, and research. Professional preparation centers on (a) learning and development; (b) instructional development; and (c) measurement, research, and statistics. Accordingly, students are expected to achieve competencies in these areas. The student, the student's adviser, and the student's committee jointly plan programs to meet particular career needs. Minor fields of study are also planned for each student as appropriate. In addition to the general requirements of the University and the College of Education and Human Services, there is a core of courses supporting the development of competencies required of all graduate students in the program.

Note: Currently not admitting new students into the Doctor of Education degree option.

Master of Arts

MAJOR REQUIREMENTS

EDP 600	Educational Psychology	3
EDP 611	Measurement/Evaluation in Educational Psychology	3
EDP 612	Introduction to Research	3
EDP 613	Statistical Methods 1	3
EDP 697	Research [*]	3
Additional Courses/Electives (Any courses 500 level or above approved by advisor)		15
Thesis		
Total Hours		30

[*]   Students who select the option of three credits of EDP 697 for practical product development are required to complete 15 credits of Additional Courses/Electives with at least three of those credits in EDP.

Note: The EdD in Educational Psychology is not admitting students and being phased out. Students interested in a doctoral degree related to educational psychology should consider the PhD in Learning Sciences and Human Development (see link to the right).

Doctor of Education

A program of study consists of a minimum of seventy-two hours of graduate credit beyond a bachelor's degree or forty-two hours beyond a master's degree (not including dissertation credits). In addition, successful completion of the competency requirements in the areas of (a) learning and development, (b) instruction, and (c) research are mandatory before a student submits a dissertation prospectus and is admitted as a doctoral candidate.

If a student enters the program with a master's degree, a maximum of thirty hours (of the seventy-two) of relevant course credit from the student's master's degree program may be included in the doctoral program of studies.

Major Requirements		
A student must have an average grade of B for all courses in the program and make satisfactory progress toward the completion of the program competencies to remain in good standing.		
Select one of the following course groups:		9
EDP 612 & EDP 613 & EDP 614	Introduction to Research and Statistical Methods 1 and Statistical Methods 2	
or		
SCFD 715	Advanced Qualitative Research	
SCFD 615	Qualitative Research Methods	
Advanced research methods course (chosen by student in consultation with the advisor and doctoral committee)		
EDP 696	Graduate Seminar	3
EDP 710	Thesis/Dissertation Bootcamp	3
EDP 740	Principles of Instruction	3
Select two of the following courses:		6
EDP 700	Psychological Foundations of Learning	
EDP 702	Human Development and Behavior	
EDP 703	The Adult Learner	
Minor		**18**
Total Hours		42

DOCTORAL COMMITTEE

Each student's doctoral committee shall be composed of a minimum of five members, the majority of whom are regular graduate faculty members. At least two members of the committee (including the permanent advisor), but no more than three must be members of the Educational Psychology Faculty. At least one member of the doctoral committee must be from the student's minor area of study. No more than one person may be a non-member of the Graduate Faculty of WVU. One member of the committee, who has professional relevance to the program of study, must be from outside the program area. The Doctoral Program Coordinator, the Chair of the Department, and the Dean of the College must approve the composition of the doctoral committee.

The duties of the doctoral committee are to: (1) discuss and review the program of study, (2) monitor progress in the program of study, (3) review changes to the approved program of study, (4) evaluate the competency products, (5) approve the dissertation prospectus and admit the student to candidacy, and (6) supervise and approve the dissertation.

The student with the approval of the student's permanent advisor may initiate changes in committee membership. Such a change must be agreed to by the member being replaced (if still available to serve), the student, the major advisor, the new committee member, and the Dean. After approval of any committee membership change, a record of the new committee composition shall be filed in the CEHS Office of Student Advising and Records and in the Educational Psychology Program student file.

COMPETENCY REQUIREMENTS

As an integral part of the Doctoral Program in Educational Psychology, students are required to demonstrate mastery of competencies by producing written products that require them to make use of the work in their formal program of study. The student's committee in collaboration will describe the specific nature of how these competencies will be demonstrated with the student. The competencies are met through satisfactory completion of projects, activities, and/or other experiences.

Competency outcomes will be assessed through three competency products developed by students in the program. These products are in the areas of (a) learning and development, (b) instruction, and (c) research. These products will be developed and assessed according to specifications created by a subcommittee organized by the student's adviser. The student and his/her adviser will select two members for each subcommittee from the members of the student's doctoral committee. The third member of each subcommittee will be appointed by the full doctoral committee (in consultation with the

student and his/her adviser) and must have expertise in the area being assessed. Recommendations for the third member from the student and his/her adviser are welcomed.

ADMISSION TO CANDIDACY

Admission to candidacy for the doctoral degree shall be granted only to persons holding a master's degree. Students may enter the doctoral program without a master's degree but must earn a master's degree within the program before advancing to candidacy for the doctoral program. This master's program shall require a thesis.

Admission to candidacy occurs after:

1. Successfully completing an acceptable Master's Degree.
2. Filing an approved program of study.
3. Successfully completing competency requirements for the Major (in the areas of Learning and Development, Instruction, and Research) and the requirements for the Minor.
4. Satisfactory completion of College requirements (i.e., a student is officially admitted to candidacy for the Ed.D. after obtaining unanimous approval of the written dissertation prospectus from the doctoral committee).
5. A signed copy of the approved prospectus and the form for "Admission to Candidacy for Ed.D." is filed in the CEHS Office of Student Advising and Records. (This constitutes a contract for the dissertation research that the student may begin to conduct.)

DISSERTATION

Students are to meet the competency requirements before submitting a dissertation prospectus to the doctoral committee. The prospectus must be prepared, in consultation with the doctoral committee chairperson, on a topic in the major field, showing a potential for contribution to existing knowledge. Once the doctoral committee chairperson approves the prospectus, the student will schedule a meeting of the full doctoral committee to have the prospectus examined. The committee may accept, reject, or require modification of the prospectus. Each committee member will sign an approved prospectus, including all modifications specified by the committee. The approved prospectus will be filed in the Office of Student Advising and Records and in the Educational Psychology Program student file.

A final oral defense of the completed dissertation shall be held. All doctoral committee members (or approved substitutes) shall be present for the dissertation defense. A committee member other than the student's advisor may serve as dissertation chairperson if the person is a regular member of the graduate faculty and if the student and all members concur in writing. Meetings of the doctoral committee are open to the public, except when in executive session.

Major Learning Outcomes

EDUCATIONAL PSYCHOLOGY

The principal goal of the Educational Psychology program is the education and training of professionals who will focus on teaching and learning environments as they carry out their missions associated with instruction, service, and research. Professional preparation centers on the following three content areas: a) Learning and development, b) Instructional development, and c) Measurement, research, and statistics. Additional learning goals associated with specialized majors are provided below.

Program Evaluation and Research, M.A.

Degree Offered

- Master of Arts

Nature of the Program

The Program Evaluation and Research master's degree program is designed for individuals with interest in conducting research and evaluation projects for private and public educational organizations and agencies. All students in this area of emphasis complete six core courses in research and evaluation methodology, additional electives, and are required to design and conduct at least one full program evaluation during the course of their studies. Graduates of this program have a strong foundation for entry into a doctoral degree program or one of many job fields where data analysis, research design, and evaluation skill sets are in high demand.

Master of Arts

MAJOR REQUIREMENTS

Major Requirements

| EDP 611 | Measurement/Evaluation in Educational Psychology | 3 |

EDP 612	Introduction to Research	3
EDP 613	Statistical Methods 1	3
EDP 617	Program Evaluation	3
EDP 618	Mixing Research Methodologies	3
SCFD 615	Qualitative Research Methods	3
Select one of the following		3-6
EDP 685	Practicum [*]	
EDP 697	Research [**]	
Electives		**6-9**
EDP 600	Educational Psychology	
EDP 614	Statistical Methods 2	
EDP 640	Instructional Design	
EDP 680	Capstone Seminar in Program Evaluation	
EDP 619	Survey Research Methods	
EDP 711	Multivariate Methods 1	
SCFD 715	Advanced Qualitative Research	
Any course 500 level or above approved by advisor		
Thesis or Practicum		
Total Hours		30

[*]   Students who select the option of three credits of EDP 685 Practicum for practical product development are required to complete 9 credits of Additional Courses/Electives.

[**]   Students who select the option of six credits of EDP 697 are required to complete 6 credits of Additional Courses/Electives.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours	Summer	Hours	
EDP 612		3 EDP 611		3 EDP 697		3
EDP 613		3 EDP 617		3		
SCFD 615		3 EDP 685		3		
		9		9		3

Second Year

Fall	Hours	Spring	Hours		
EDP 619		3 EDP 680		3	
EDP 618		3			
		6		3	

Total credit hours: 30

Major Learning Outcomes

PROGRAM EVALUATION AND RESEARCH

- Demonstrate understanding of the philosophical and historical foundations of inquiry.
- Apply appropriate quantitative, qualitative, and mixed-methods research tools to answer practical educational, programmatic, and other social research questions.
- Apply appropriate program evaluation tools to conduct formative and summative evaluations of existing and prospective educational programs.
- Demonstrate understanding of ethical issues in research and evaluation.
- Create informative reports of research and evaluation studies tailored appropriately for multiple stakeholders and decision-makers.

Instructional Design and Technology, M.A., Ed.D.

Degrees Offered

- Master of Arts
- Doctor of Education

Nature of the Program

The online Master of Arts in Instructional Design and Technology Program is designed for the individual who wants to apply cutting edge instructional technologies and design strategies in business, education, and other educational settings. The Learning Goals for the program are to advance knowledge and critical thinking relative to instructional design and instructional technologies. Features of the program include courses in educational psychology, instructional design and technology, and program evaluation.

The online Instructional Design and Technology Doctor of Education (Ed.D.) Program is designed to allow a graduate to immediately apply knowledge and skills to pragmatic needs in any educational setting, particularly for those interested in teaching and conducting research in a university environment. The Learning Goals for the program are to enhance knowledge and skill-building that are designed into the courses and address three areas of competency, including inter-connectivity, instructional design, and software-multimedia design. Students are encouraged to address research toward the pragmatic needs of students, programs, and institutions. IDT knowledge and skills are developed within courses, practicums, and independent studies as jointly determined by student and advisor. Student interests and career plans are discussed upon enrollment in the program and students are advised to be prepared to identify these in their application and throughout the program.

Students are encouraged to identify topics of interest and to develop an appropriate topic for inquiry as they take courses. Research in instructional technology is addressed throughout the courses and supplements the college research core requirements. The program features seminar courses that provide opportunities to conduct research and develop instructional interventions, including technological integration of tools. Teaching opportunities may be found working with faculty members, the college's Teaching and Learning Technologies Center (TLTC), and internships in corporate settings in the Morgantown / Fairmont area.

FACULTY

IDT PROGRAM COORDINATOR AND PROFESSOR

- William Beasley - Ed.D. (University of Georgia)
  Instructor presence in online environments, integration of external technologies with learning management systems, elearning in cross-cultural contexts

ASSOCIATE PROFESSOR

- Ugur Kale - Ph.D. (Indiana University Bloomington)
  Instructional Design, Computational Thinking, Technology Integration, Online Learning, Professional Development, Teacher Education

ASSISTANT PROFESSOR

- Jiangmei (May) Yuan - Ph.D. (University of Georgia)
  Learning, Design, and Technology; Formative Assessment, Feedback Design, and Learner Engagement in Online Learning Environments; Robotics in STEM Teacher Education

PROFESSORS EMERITI

- Paul W. DeVore
- David L. McCrory - Ph.D. (Case Western Reserve University)
- Edward C. Pytlik - Ph.D. (Iowa State University)
- R. Neal Shambaugh - Ph.D. (Virginia Polytechnic Institute and State University)

Admissions

ADMISSIONS REQUIREMENTS - MASTER'S

- A cumulative GPA of 3.0 or higher
- An undergraduate degree from an accredited university
- Cover letter describing past work experience and goals for graduate study
- Transcript(s) of completed undergraduate program
- Resume or Vitae

- GRE or GMAT scores ***OR*** a narrative describing two years of professional work experience (individuals with 2+ years work experience can ask to have the testing requirement waived)
- Three letters of reference commenting on professional background and plans for graduate study
- Given the online nature of the majority of the courses, the enrollment in this program is not sufficient to satisfy visa requirements for international students in the United States

ADMISSIONS REQUIREMENTS - DOCTORATE - ED.D.

- Undergraduate GPA of at least 3.0
- Master's Degree
- Total GRE scores of 302 (on the verbal and quantitative combined) or MAT score of 418-423
- Letter of application explaining purpose, motivation, and research interests for an IDT Ed.D. degree
- Three letters of references
- Scholarly writing sample
- Curriculum Vita
- Given the online nature of the majority of the courses, the enrollment in this program is not sufficient to satisfy visa requirements for international students in the United States

Please note that the Instructional Design and Technology program does not grant conditional or provisional admissions into the degree. The program faculty will not review incomplete applications.

Admissions materials for the Instructional Design and Technology master and doctoral program should be uploaded to the online application. For answers to questions about application materials contact:

Dana Musick (dmusick2@mail.wvu.edu)
c/o The Department of Learning Sciences and Human Development
West Virginia University
PO Box 6122
Morgantown, West Virginia 26506-6122.

Master of Arts

MAJOR REQUIREMENTS

EDP 612	Introduction to Research	3
EDP 617	Program Evaluation	3
EDP 640	Instructional Design	3
IDT 600	Instructional Design and Technology Theories and Models	3
IDT 610	Distance Education	3
Competency Courses		15
IDT 620	Social Network Media	
IDT 630	Instructional Delivery System	
IDT 640	Visual Literacy	
IDT 650	Multimedia Learning	
IDT 660	Instructional Design and Technology Authoring Systems	
IDT 670	Digital Tools and Web	
IDT 693	Special Topics	
IDT 720	Instructional Systems Design	
IDT 735	Technology Integration	
IDT 740	Design Studio	
IDT 750	Prototype Studio	
IDT 655	Technology for Teachers	
IDT 665	Game & Simulation Design for Instruction	
IDT 715	School Networks	
Total Hours		30

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours	Summer	Hours
IDT 610		3 IDT 620		3 EDP 612	3
IDT 600		3 IDT 660		3 IDT 630	3
		6		6	6

Second Year

Fall	Hours	Spring	Hours		
IDT 735		3 EDP 617		3	
EDP 640		3 IDT 650		3	
		6		6	

Total credit hours: 30

- Any IDT courses at the 600-level may be substituted with advisor approval.

Doctor of Education

MAJOR REQUIREMENTS

Common Core		
EDP 740	Principles of Instruction	3
EDP 600	Educational Psychology	3
IDT 696	Graduate Seminar	6
College Research Core		
EDP 612	Introduction to Research	3
EDP 613	Statistical Methods 1	3
EDP 614	Statistical Methods 2	3
SCFD 615	Qualitative Research Methods	3
Research Elective		3
Competency Areas		**27**
Interconnectivity		
IDT 620	Social Network Media	
IDT 630	Instructional Delivery System	
IDT 715	School Networks	
IDT 655	Technology for Teachers	
Instructional Design		
EDP 640	Instructional Design	
IDT 720	Instructional Systems Design	
IDT 740	Design Studio	
Software and Multimedia		
IDT 650	Multimedia Learning	
IDT 665	Game & Simulation Design for Instruction	
IDT 640	Visual Literacy	
IDT 660	Instructional Design and Technology Authoring Systems	
IDT 750	Prototype Studio	
IDT 693	Special Topics	
Specialization Electives		**18**
Other IDT courses		
Courses from Master's program		
Courses from other programs		
Dissertation		**6**
IDT 797	Research	
Total Hours		78

*   IDT master's program requires 5 competency courses and 5 foundational courses, that can be categorized under two practical skills sets: 1-Analysis & Design and 2-Development& Evaluation. On the other hand, IDT doctoral program requires 9 competency courses (in addition to research core, common core, dissertation hours and specialization). Competencies are abilities, skills, and to some extent dispositions, attitudes, and motivations. Desires to work together and efforts for continuous improvement are just as important as solo skills. With additional competency course requirements, IDT doctoral students are prepared to gain deeper knowledge and skills in these areas, which would benefit their research and development efforts in IDT. Knowledge and skill-building regarding research and development are designed into the competency courses and address three areas of competency: 1-interconnectivity, 2-instructional design, and 3-software-multimedia design.

Major Learning Outcomes

INSTRUCTIONAL DESIGN AND TECHNOLOGY

Major features of the Instructional Design and Technology (IDT) program include course preparation in educational psychology, instructional design, multimedia, and research methods. Three areas of competencies are featured: networks, instructional design and development, and use of software and multimedia.

The IDT program is designed to address the following learning goals:

- *Understand* the context for technology use, history of the field, theoretical foundations, trends and issues, and ethical uses of technology in educational settings.
- *Develop an awareness* of current IT tools and practices.
- *Apply* learning principles to instruction.
- *Design, implement, and evaluate* the use of technology and media in instruction and to support learning.
- *Conduct research on* the design, use, and evaluation of technology, teaching, and educational programs.

Special Education. Ed.D.

Degrees Offered

- Doctor of Education with a major in Special Education

Doctor of Education/Major in Special Education

OVERVIEW

The doctoral program in Special Education at WVU is designed to develop knowledge and skills related to leadership roles and responsibilities in personnel preparation at colleges and universities or in professional development at pubic schools or community agencies to prepare professionals who will work with children, adolescents and adults with exceptionalities in special education or disability services.

PROGRAM DELIVERY FORMAT

This program is offered entirely ONLINE throughout the United States and in approved international locations.

RETENTION REQUIREMENTS

To maintain ACTIVE student status, students must enroll in at least one (1) course during the effective term of admission and also at least two (2) courses every year. Students who fail to sustain enrollment each year will be converted to inactive status and will be required to reapply to the university and program and meet any additional new requirements in effect at that time. Students are expected to comply with all academic and conduct policies as outlined in the WVU Graduate Catalog, in the WVU Student Handbook, and on the Department of Special Education website.

Retention in the program and/or graduation in ANY doctoral program in the College of Education and Human Services is based on SATISFACTORY PROGRESS or maintaining a GPA of 3.25 with a grade of A or B in ALL required courses. A grade of Incomplete is only approved for emergency situations; all requirements must be completed BEFORE the end of the next academic semester. Students who DO NOT clear the grade of Incomplete by the deadline will be assigned a grade of FAIL by the instructor immediately after the due date.

Students who do NOT maintain a GPA of 3.25 (includes courses with grade of Incomplete) in a given semester MAY be placed on PROBATION and permitted one (1) additional semester to increase the GPA to 3.0. Students whose GPA is too low to be raised by a probationary period OR who do NOT obtain a GPA of 3.25 after the probationary period will be subject to DISMISSAL from the program. Students who engage in academic dishonesty will be assigned an F for the course for the first offense and dismissed from the program for the second offense. Students dismissed from a program will NOT be permitted to re-apply to ANY special education program.

RESIDENCY REQUIREMENT

WVU requires ALL students to complete one (1) academic year in residency as part of the requirements for any doctoral degree. In this online program, an alternative residency requirement will be satisfied by completing the professional practice experiences in local public schools and colleges/universities over a three (3) year period.

Admissions

Admissions to the Doctoral Degree in Special Education -- CLOSED TO ADMISSIONS

Doctor of Education

MAJOR REQUIREMENTS

Area of emphasis coursework	73
Dissertation Proposal	
Dissertation	
Dissertation Defense	
Total Hours	73

PROGRAM OF STUDY

Programs are designed by the doctoral student, the student's advisor, and the doctoral committee to meet the student's career goals. Programs of study comply with all applicable institutional requirements, but typically they include coursework in excess of the minimum college requirements to meet these goals. The leadership training provided through this program draws on the many available strengths and resources of a major university. Development of research skills is a major focus of the program, along with advanced training related to the development, education, and rehabilitation of persons with exceptionalities. Students may complete coursework in a number of programs and colleges in order to take advantage of available interdisciplinary resources. The program encourages study and involvement with faculty from a broad range of disciplines in order to best prepare doctoral students to meet their individual career aspirations as leaders in special education and disability services.

RETENTION

Retention in any program requires completion of all required courses with a grade of A or B in all required courses, a passing score on all required performance assessments, and maintenance of an overall 3.25 GPA. Students who fail to maintain that average will be placed on academic probation and must achieve that average within the next semester or risk being dismissed from the program.

All students are expected to pass a comprehensive examination designed in cooperation with doctoral program committee members and administered after they have completed all required courses to be admitted to candidacy for the doctoral degree.

All students are expected to propose, conduct, and defend original research approved by the doctoral program committee to satisfy the requirements for the doctoral degree.

PERSONNEL PREPARATION IN SPECIAL EDUCATION AREA OF EMPHASIS

A minimum cumulative GPA of 3.25 is required

A grade of C or higher is required in all graduate coursework		
SPED 770	Policy Analysis and Development	3
SPED 771	Personnel Preparation Strategies	3
SPED 772	Professional Writing and Grant Writing	3
SPED 773	Professional Development Models	3
SPED 774	Analysis and Design of Research	3
SPED 779	Contemporary Issues and Trends	3
SPED 781	Orientation to Doctoral Study	1
SPED 782	Professional Practice in Systems Advocacy	1
SPED 783	Professional Practice in College Instruction	1
SPED 784	Professional Practice in Clinical Supervision	1
SPED 785	Professional Practice in Empirical Research	1
SPED 786	Professional Practice in Service Activities	1
SPED 769	Faculty Career Development	1
Research Core		15
Educational Foundations		6

Minor Area Courses		18
SPED 767	Professional Product Preparation	1
SPED 768	Prospectus Development	1-6
SPED 797	Research	7-12
Total Hours		73-83

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours	Summer	Hours
SPED 771		3 SPED 779		3 SPED 782	1
SPED 781		1 SPED 786		1 EDP 613	3
EDP 612		3 EDP 700		3 SCFD 615	3
		7		7	7

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
SPED 770		3 SPED 773		3 SPED 783	1
SPED 783		1 SPED 784		1 EDP 618	3
SPED 713		3 EDP 703		3 EDP 600	3
		7		7	7

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
SPED 774		3 SPED 772		3 SPED 768	1-6
SPED 785		1 SPED 785		1 SPED 767	1
Elective		4 Elective		3	
		8		7	2-7

Fourth Year

Fall	Hours	Spring	Hours		
SPED 797		6 SPED 797		7-12	
SPED 769		1			
		7		7-12	

Total credit hours: 73-83

NOTE: Courses may be completed in any order (except SPED 767, 768, and 797, which must be completed after all other required courses are completed).

Major Learning Outcomes

MASTER'S DEGREE

The Department of Special Education believes that children, adolescents, and adults with exceptionalities deserve high quality programs and serves provided by master professionals who are well trained in legal, ethical, social and practical aspects of program development and delivery.

This program has been designed so that program graduates can accomplish the following learning outcomes:

1. to recognize applications of federal and state laws and policies that govern services to individuals with exceptionalities in school and community programs;
2. acquire knowledge and skills to provide effective educational programs and other support services to children, adolescents and adults with exceptionalities at the preschool, elementary, secondary, and post-secondary level in or community settings;
3. to design, implement and evaluate accommodations, adaptations, and interventions that are grounded in current evidence-based practices documented to be successful in the professional literature; and
4. reflect in and on practice and respond responsibly to the legal, ethical, social, and cultural issues encountered when working with young children, children, adolescents and adults with an autism spectrum disorder in today's world.

DOCTORAL DEGREE

The Department of Special Education believes that future faculty who plan to work in professional preparation programs that prepare prospective and practicing special educators to work with children and adults with exceptionalities should be well-prepared to perform at a high level to succeed in the roles and responsibilities associated with the teaching, research, and service missions at colleges and universities.

This program has been designed so that program graduates can accomplish the following learning outcomes:

1. to provide effective and effective instruction and supervision for special education personnel in professional preparation programs at the preservice and inservice levels;
2. to design, conduct and disseminate experimental and applied research, engage in program development and evaluation, and participate in other scholarly activities;
3. to provide professional service to colleges and universities, local schools and community agencies, regional and state education and human services agencies, and national professional and advocacy organizations.
4. to interpret and apply the knowledge base in special education with respect to polices, practices, issues and trends in special education and/or disability services.

Learning Sciences and Human Development, Ph.D.

Degrees Offered

- Doctor of Philosophy

Nature of the Program

Scholars in the Learning Sciences and Human Development (LSHD) study learning and development where it happens: in classrooms and on playgrounds, in community centers and on street corners, at kitchen tables and in barber shops, in forests and in fields. Our empirical inquiries are guided by theories of cognition, development, culture, and design. Our program includes a diverse range of faculty from the LSHD department - as well as many faculty affiliates from departments across the college and university - to support innovative and interdisciplinary projects.

Our PhD program positions students for success through extensive research and teaching apprenticeships; support to accomplish authentic research milestones, including published journal articles and national conference presentations; funding for at least three years; and carefully scaffolded coursework designed to guide doctoral work at each stage of the process. Each cohort travels through core courses and milestones together, providing a peer network to complement faculty support.

In addition to the PhD in Learning Sciences and Human Development, students will select a specialization track in Cognition & Learning; Human Development & Family Sciences; Instructional Design & Technology; Research, Evaluation, & Analysis; or an individually-designed track in consultation with advisors.

FACULTY

PROGRAM DIRECTOR

- Malayna Berstein - PhD (Northwestern University)
  Research & Teaching Interests: Teacher Cognition, Professional Development, Reading, Qualitative Research Methods

PROGRAM FACULTY

- William Beasley - Ed.D. (University of Georgia)
  Research & Teaching Interests: Instructor presence in online environments, integration of external technologies with learning management systems, elearning in cross-cultural contexts
- Carla Brigandi - Ph.D. (University of Connecticut)
  Research & Teaching Interests: Gifted Education and Talent Development, Educational Psychology
- Reagan Curtis - Ph.D. (University of California at Santa Barbara)
  Research & Teaching Interests: Educational Psychology, Interdisciplinary Human Development, Cognitive Science, Program Evaluation and Research Methodologies
- Kimberly Floyd - Ph.D. (Old Dominion University)
  Research & Teaching Interests: Assistive Technologies, Special Education
- D. Jake Follmer - Ph.D. (Pennsylvania State University)
  Research & Teaching Interests: Readers' strategic processing and comprehension of expository text; self-regulated learning; Program evaluation and assessment
- Ugur Kale - Ph.D. (Indiana University Bloomington)

Research & Teaching Interests: Instructional Design, Computational Thinking, Technology Integration, Online Learning, Professional Development, Teacher Education

- Kristin Moilanen - Ph.D. (University of Nebraska)
Research & Teaching Interests: Adolescent Development, Self Regulation, Risk Behavior, Family Relationships
- Melissa Patchan - Ph.D. (University of Pittsburgh)
Research & Teaching Interests: Mechanisms of Peer Assessment of Writing, Effectiveness and Validity of Peer Feedback, Issues of Measurement, Multiple Sources, and Validity of Peer Ratings
- Amy Root - Ph.D. (University of Maryland, College Park)
Research & Teaching Interests: Parenting and the Development of Emotional Competence, Individual Differences, Development of Shy/Wary Behavior
- Abhik Roy - Ph.D. (Western Michigan University)
Research & Teaching Interests: Program Evaluation, Unification of Evaluation Practice and Theory (Grand Theory), Research on Evaluation (ROE), Evaluation of Non Academic Units within Academia
- M Cecil Smith - Ph.D. (University of Wisconsin)
Research & Teaching Interests: Adult Literacy, Adult Development & Learning, Identity Development, Educational Psychology
- Jessica Troilo - Ph.D. (University of Missouri)
Research & Teaching Interests: Cultural Conceptions of Fathers, Divorced Fatherhood, Influence of Social Media on Relationships, Opioid Impact on Teachers
- Jiangmei Yuan - Ph.D. (University of Georgia)
Research & Teaching Interests: Learning, Design, and Technology; Formative Assessment, Feedback Design, and Learner Engagement in Online Learning Environments; Robotics in STEM Teacher Education

PROGRAM AFFILIATES

- Johnna Bolyard - Ph.D. (George Mason University)
Research & Teaching Interests: Mathematics Education, STEM Education, Teacher Education, Professional Development
- Matthew Campbell - Ph.D. (Oregon State University)
Research & Teaching Interests: Secondary Mathematics Education, Professional Development, Video Analysis
- Alexandra Hollo - Ph.D. (Vanderbilt University)
Research & Teaching Interests: Language and Communication Disorders, Emotional and Behavioral Disorders, Multicategorical Special Education
- Rodney Hughes - Ph.D. (Pennsylvania State University)
Research & Teaching Interests: Higher Education Administration, Rural Higher Education, Economics in Higher Education
- Melissa Luna - Ph.D. (Northwestern University)
Research & Teaching Interests: Science Education, Teacher Noticing, Garden-based Learning, Elementary Education
- Kimberly Meigh - Ph.D. (University of Pittsburgh)
Research & Teaching Interests: Memory, Motor Learning, Neurogenics, Speech
- Michelle Moore - Ph.D. (University of Pittsburgh)
Research & Teaching Interests: Hearing, Phonological Processing; Language and Literacy Disorders; Language, Acquisition; Phonological Processing, Reading Disabilities
- Natasha Murray-Everett - Ph.D. (University of Illinois-Urbana Champaign)
Research & Teaching Interests: Social Studies Education, Cultural Diversity
- Tiffany Mitchell Patterson - Ph.D. (George Mason University)
Research & Teaching Interests: Secondary Social Studies, Multilingual/multicultural education, Education Policy, Curriculum and Instruction
- Lisa Platt - Ph.D. (Pennsylvania State University)
Research & Teaching Interests: Transgender/Gender Diversity, LGBTQ Populations
- Audra Slocum - Ph.D. (Ohio State University)
Research & Teaching Interests: English Education, Diversity in Appalachia, Critical Literacy, Writing, Language, Teacher Education
- Keri Valentine - Ph.D. (University of Georgia)
Research & Teaching Interests: Learning, Design, and Technology; Mathematics Education, Game Design, Informal Learning Environments

Admissions

Admissions Guidelines: Admissions are guided by a holistic and individualized assessment of each applicant, in tandem with an evaluation of how their interests and experience align with our faculty, courses, and funding opportunities. Our admissions standards are designed to help ensure that students who enter the program can successfully complete the degree and be competitive for subsequent employment opportunities.

Application Materials:

Online applications can be found here [LINK to https://graduateadmissions.wvu.edu/how-to-apply (https://graduateadmissions.wvu.edu/how-to-apply/)]. When given the opportunity to select a program, choose "Learning Sciences & Human Development. Applications should include:

- Letter of intent explaining purpose and motivation for a Ph.D. in Learning Sciences and Human Development. In this letter, applicants should briefly describe their scholarly interests, 1-3 faculty with whom they would like to work, how their interests align with those faculty members, and how they envision completing this program will further their long-term professional goals. Information about LSHD faculty can be found at lshd.wvu.edu/faculty-staff

- Transcripts from all previous degree programs*

- Three letters of recommendation from referees who can speak to your scholarly potential

- Scholarly writing sample (e.g., course paper)

- Curriculum Vita

- GRE, MAT or TOEFL scores, taken within five years of application*

- An interview may be included in the review process at the discretion of the admissions committee

Application Deadline:

Applications will be reviewed on a rolling basis until April 1. Applicants who submit their files by December 15 will have a greater chance of securing funding.

*In line with best practices for evaluation and assessment, set cutoff scores for tests and GPA are not used to make unidimensional admissions decisions. Instead, applicant materials are reviewed as a total package and admissions decisions are based on multidimensional factors. That said, successful applicants tend to be at or above the 75th percentile on the GRE or MAT, have undergraduate GPAs at or above 3.5, and graduate GPAs (if any) at or above 3.75.

Questions: Please do not hesitate to get in touch with questions.

Malayna Bernstein, Ph.D.
Director, Learning Sciences Programs
Allen Hall 604O
304.293.3202
malayna.bernstein@mail.wvu.edu

Reagan Curtis, Ph.D.
Professor and Chair
Department of Learning Sciences & Human Development
Allen Hall 506E
304.293.2098
reagan.curtis@mail.wvu.edu

Dana Musick
Administrative Secretary Senior
Department of Learning Sciences & Human Development
Allen Hall 506B
phone: 304.293.3879
fax: 304.293.9424
dmusick2@mail.wvu.edu

Doctor of Philosophy
MAJOR REQUIREMENTS

A minimum GPA of 3.00 is required of all coursework

Conceptual Core		
LSHD 701	Theoretical Foundations of LSHD	3
LSHD 702	Major Topics of Inquiry across LSHD	3
LSHD 703	Empirical Design in LSHD	3
LSHD 704	New Directions in LSHD	3
Specialization Tracks		**12**

Select from one of the following specializations:		
Cognition and Learning		
Human Development and Family Sciences		
Instructional Design and Technology		
Measurement, Evaluation, and Research		
Individualized Plan to be developed with advisor and program coordinator		
Research Core		**12**
EDP 614	Statistical Methods 2	
EDP 618	Mixing Research Methodologies	
SCFD 715	Advanced Qualitative Research	
Advanced Methods Elective		
Apprenticeships		
Teaching Practicum		**6**
EDP 790	Teaching Practicum	
Research		**18**
EDP 797	Research	
Seminars		**4**
EDP 796	Graduate Seminar	
Total Hours		64

Major Learning Outcomes

LEARNING SCIENCES

Objective 1: Students will demonstrate a depth and breadth of knowledge in research, theory, and scholarship in Learning Sciences as the basis for growth over a professional career.

Objective 2: Students will conduct rigorous theory development and research using multiple and mixed methodologies to understand how people develop and learn in an array of formal and informal educational settings.

Objective 3: Students will design instructional events, environments, contexts, curricula, and interventions that facilitate deep learning and healthy development in an array of formal and informal educational settings.

Objective 4: Students will develop an understanding and appreciation of diverse cultures and contexts for human development and learning.

Objective 5: Students will model professional participation in an interdisciplinary community of scholars focused on promoting deep learning and healthy development of children and adults across a wide range of formal and informal educational settings.

Engineering and Mineral Resources- Benjamin M. Statler College of

Contact Information

Website: http://www.statler.wvu.edu
E-mail: statler-info@mail.wvu.edu
Phone: (304) 293-4821

Degrees Offered

- Master of Science, Aerospace Engineering (M.S.A.E.)
- Master of Science, Biomedical Engineering (M.S.Bm.E.)
- Master of Science, Chemical Engineering (M.S.Ch.E.)
- Master of Science, Civil Engineering (M.S.C.E.)
- Master of Science, Computer Science (M.S.C.S.)
- Master of Science, Electrical Engineering (M.S.E.E.)
- Master of Science, Energy Systems Engineering (M.S.E.S.E.)
- Master of Science, Engineering (M.S.E.)
- Master of Science, Industrial Engineering (M.S.I.E.)
- Master of Science, Industrial Hygiene (M.S.)*
- Master of Science, Materials Science and Engineering (M.S.M.S.E)
- Master of Science, Mechanical Engineering (M.S.M.E.)
- Master of Science, Mining Engineering (M.S.Min.E.)
- Master of Science, Petroleum and Natural Gas Engineering (M.S.P.N.G.E.)
- Master of Science, Safety Management (M.S.)*
- Master of Science, Software Engineering (M.S.S.E)
- Doctor of Philosophy, Aerospace Engineering (Ph.D.)
- Doctor of Philosophy, Biomedical Engineering (Ph.D.)
- Doctor of Philosophy, Chemical Engineering (Ph.D.)
- Doctor of Philosophy, Civil Engineering (Ph.D.)
- Doctor of Philosophy, Computer Science (Ph.D.)
- Doctor of Philosophy, Computer Engineering (Ph.D.)
- Doctor of Philosophy, Electrical Engineering (Ph.D.)
- Doctor of Philosophy, Industrial Engineering (Ph.D.)
- Doctor of Philosophy, Materials Science and Engineering (Ph.D.)
- Doctor of Philosophy, Mechanical Engineering (Ph.D.)
- Doctor of Philosophy, Mining Engineering (Ph.D.)
- Doctor of Philosophy, Occupational Safety and Health (Ph.D.)
- Doctor of Philosophy, Petroleum and Natural Gas Engineering (Ph.D.)

*Accredited by the Applied and Natural Sciences Accreditation Commission of ABET, http://www.abet.org.

Degree Programs

The Benjamin M. Statler College of Engineering and Mineral Resources (Statler College) graduate programs are administered through seven academic departments:

- Chemical and Biomedical Engineering
- Wadsworth Department of Civil and Environmental Engineering
- Lane Department of Computer Science and Electrical Engineering
- Industrial and Management Systems Engineering
- Mechanical and Aerospace Engineering

- Mining Engineering
- Petroleum and Natural Gas Engineering

The M.S. in Energy Systems Engineering and the M.S. in Engineering degrees are administered by the Statler College.

Statler College facilities are primarily housed on the Evansdale campus in the Engineering Sciences Building, the Mineral Resources Building, the Engineering Research Building, and the Advanced Engineering Research Building. These buildings house state-of-the-art research facilities, well-equipped teaching laboratories, computer classrooms, and offices for the faculty and administration of the graduate programs.

The Ph.D. program prepares graduates for leadership in industrial, government or academic fields. The college offers a doctor of philosophy with areas of specialization in aerospace, chemical, civil, computer, electrical, industrial, mining, and petroleum and natural engineering, as well as computer science, materials science and engineering and occupational safety and health.

Designated master's degree programs in engineering are offered in aerospace, chemical, civil, electrical, industrial, mechanical, mining, petroleum and natural gas, and software engineering, as well as computer science, energy systems engineering, and material science and engineering. The college offers two accredited master of science degrees in industrial hygiene and safety management that are accredited by the Applied and Natural Sciences Accreditation Commission of ABET, http://www.abet.org. The Master of Science in Engineering (M.S.E.) degree can be pursued by students seeking a broad or more diverse advanced degree in engineering, or who may not have the in-depth background required for the designated master's degree programs.

Currently, the college offers graduate certificate programs in computer forensics and software engineering. For specific information about a program, students should review research and graduate studies information on the specific department section.

ADMINISTRATION
DEAN
- Pedro J. Mago - Ph.D. (University of Florida)

ASSOCIATE DEAN FOR ACADEMIC AFFAIRS
- David A. Wyrick - Ph.D. (University of Missouri-Rolla)

ASSOCIATE DEAN FOR RESEARCH
- Xingbo Liu - Ph.D. (University of Science & Technology, Beijing)

ASSISTANT DEAN FOR ADMINISTRATION
- R. Jason Dean - M.A. (West Virginia University)

Degree Designation Learning Outcomes
MASTER OF SCIENCE (MS)

Industrial Hygiene

The M.S. in Industrial Hygiene is accredited by the Applied and Natural Sciences Accreditation Commission of ABET, http://www.abet.org. Upon graduation with a Master of Science degree in Industrial Hygiene, students will have:

- An ability to identify, formulate, and solve broadly defined technical or scientific problems by applying knowledge of mathematics and science and/or technical topics to areas relevant to the discipline.
- An ability to formulate or design a system, process, procedure or program to meet desired needs.
- An ability to develop and conduct experiments or test hypotheses, analyze and interpret data and use scientific judgment to draw conclusions.
- An ability to communicate effectively with a range of audiences.
- An ability to understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts.
- An ability to function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.

Safety Management

The M.S. in Safety Management is accredited by the Applied and Natural Sciences Commission of ABET, http://www.abet.org. Upon graduation with a Master of Science degree in Safety Management, students will have:

- An ability to identify, formulate, and solve broadly defined technical or scientific problems by applying knowledge of mathematics and science and/or technical topics to areas relevant to the discipline.

- An ability to formulate or design a system, process, procedure or program to meet desired needs.
- An ability to develop and conduct experiments or test hypotheses, analyze and interpret data and use scientific judgment to draw conclusions.
- An ability to communicate effectively with a range of audiences.
- An ability to understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts.
- An ability to function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.

MASTER OF SCIENCE IN AEROSPACE ENGINEERING (MSAE)

Upon graduation with a Masters of Science degree in Aerospace Engineering, students will have:

- Expert-level understanding of the advanced principles of aerospace engineering, which include aerospace systems design, aircraft or spacecraft dynamics, stability and control, flight mechanics and simulation, advanced materials, vehicle propulsion, aerodynamics, aeroelasticity, and computational mechanics.
- Ability to complete on time specific research tasks
- Strong oral and written communication skills
- Ability to work independently in a collaborative environment
- Understanding for holding the highest standards of ethical and professional responsibility in the practice of their profession to contribute to the well-being of society and to the advancement of the aerospace engineering profession.

MASTER OF SCIENCE IN CHEMICAL ENGINEERING (MSCHE)

Upon graduation, with a Masters of Science degree in Chemical Engineering, students will have:

- Understanding of advanced principles of chemical engineering, which include reaction engineering, transport phenomena, and thermodynamics
- Expert-level understanding of the background and theory/principles of their research topics.
- Ability to plan research projects, to perform the tasks, and to draw conclusions based on sound scientific and engineering principles.
- Ability to write technical articles for publication in refereed journals and to make oral and poster presentations at technical meetings.
- Demonstrated initiative in research planning and management, including safety and environmental issues.
- Been technically prepared for a lifetime of continuing education.
- Understanding of professional and ethical responsibilities.

MASTER OF SCIENCE IN CIVIL ENGINEERING (MSCE)

Upon graduation, with a Masters of Science degree in Civil Engineering, students will have:

- Ability to function on teams involving multiple civil engineering specialties.
- Ability to apply advanced methodologies in their specialty area.
- Ability to effectively communicate technical information.
- Ability to design and conduct experiments, analyze and interpret data, and develop recommendations.
- An understanding of professional and ethical responsibility.
- An ability to understand the impact of engineering solutions in global and societal context.
- Recognition of the need to engage in life-long learning.
- Ability to use contemporary techniques, skills, and tools necessary for engineering practice in education, industry, and/or government.

MASTER OF SCIENCE IN COMPUTER SCIENCE (MSCS)

Upon graduation, with a Masters of Science degree in Computer Science, students will:

- Have obtained knowledge, skills, and attitudes that will ensure success in professional positions in business, industry, research, government service, or in further graduate or professional study
- Achieve a depth of proficiency in a specific field of Computer Science by completing major courses in one of three areas: computer systems, software and knowledge engineering, or the theory of computation.
- Achieve a breadth of understanding of Computer Science by completing minor coursework requirements in other areas, and by participation in graduate seminar requirements.
- Demonstrate professionalism and communication skills through completion of coursework, project, or thesis defense.

MASTER OF SCIENCE IN ELECTRICAL ENGINEERING (MSEE)

Upon graduation, with a Masters of Science degree in Electrical Engineering, students will:

- Have obtained knowledge, skills, and attitudes that will ensure success in professional positions in business, industry, research, government service, or in further graduate or professional study
- Achieve a depth of proficiency in a specific field of electrical engineering by completing major courses in one of four areas: electronics and photononics; systems and signals; computer systems; or software and knowledge engineering.
- Achieve a breadth of understanding of electrical engineering by completing minor coursework requirements in another area, and by participation in graduate seminar requirements.
- Demonstrate professionalism and communication skills through completion of coursework, project or thesis defense.

MASTER OF SCIENCE IN ENERGY SYSTEMS ENGINEERING (MSESE)

Upon graduation, with a Masters of Science degree in Energy Systems Engineering, students will have:

- Understanding of the supply chain for carbon based and "green" energy, for production, conversion or processing, transmission, and point of utilization;
- Advanced training in specialized areas of energy systems engineering;
- Ability to function at the highest levels of expertise in their chosen sub-discipline of energy, and who are well versed in the overall concepts of getting energy to consumers;
- Ability to complete on time specific professional-paper tasks
- Strong oral and written communication skills
- Ability to work independently in a collaborative environment
- Understanding of professional and ethical responsibility
- Ability to understand the impact of engineering solutions in global and societal context
- Recognition of the need to engage in life-long learning

MASTER OF SCIENCE IN ENGINEERING (MSE)

Upon graduation, with a Masters of Science degree in Engineering, students will have:

- An expert level understanding of the advanced principles of their engineering specialty
- Ability to apply advanced methodologies in their specialty area
- Ability to design and conduct original experiments, analyze and interpret data, and develop recommendations with a high degree of independence
- Advanced ability to use contemporary techniques, skills, and tools necessary for engineering practice in education, industry, and/or government
- Ability to effectively communicate technical information in the form of a thesis, scientific publication or presentation
- Understanding of professional and ethical responsibility
- Ability to understand the impact of engineering solutions in global and societal context
- Recognition of the need to engage in life-long learning
- Foundational preparation to pursue doctoral studies

MASTER OF SCIENCE IN INDUSTRIAL ENGINEERING (MSIE)

Upon graduation, with a Masters of Science degree in Industrial Engineering, students will have:

- Ability to use and master modern and classical industrial engineering methodologies in their area of concentration
- Ability to apply knowledge of math, science, and engineering
- Ability to do research, and to design and conduct experiments, analyze and interpret data, develop implementation strategies, and shape recommendations so that results will be achieved and findings will be communicated effectively
- Ability to work individually, on teams, and/or on multi-disciplinary teams to identify, formulate, and solve problems using industrial engineering knowledge, skills, and tools
- Ability to design and implement or improve integrated systems that include people, materials, information, equipment, and energy using appropriate analytical, computational, and experimental practices
- Understanding of professional and ethical responsibility and the broad education and knowledge of contemporary issues necessary to understand the impact of solutions in a global and societal context
- Recognition of the need for and an ability to engage in life-long learning
- Professional characteristics expected of a successful industrial engineer

MASTER OF SCIENCE IN MATERIAL SCIENCE AND ENGINEERING (MSMSE)

Upon graduation, with a Masters of Science degree in Material Science and Engineering, students will have:

- An expert level understanding of the advanced principles of their engineering specialty
- Ability to apply advanced methodologies in their specialty area
- Ability to design and conduct original experiments, analyze and interpret data, and develop recommendations with a high degree of independence
- Advanced ability to use contemporary techniques, skills, and tools necessary for engineering practice in education, industry, and/or government
- Ability to effectively communicate technical information in the form of a thesis, scientific publication or presentation
- Understanding of professional and ethical responsibility
- Ability to understand the impact of engineering solutions in global and societal context
- Recognition of the need to engage in life-long learning
- Foundational preparation to pursue doctoral studies

MASTER OF SCIENCE IN MECHANICAL ENGINEERING (MSME)

Upon graduation, with a Masters of Science degree in Mechanical Engineering, students will have:

- Expert-level understanding of the advanced principles of mechanical engineering, which include mechanical systems design, system dynamics, solid mechanics, energy systems, engineering materials, automatic controls, mechatronics, and computational mechanics
- Ability to complete on time specific research tasks
- Strong oral and written communication skills
- Ability to work independently in a collaborative environment
- Understanding for holding the highest standards of ethical and professional responsibility in the practice of their profession to contribute to the well-being of society and to the advancement of the aerospace engineering profession.

MASTER OF SCIENCE IN MINING ENGINEERING (MSMINE)

Upon graduation, with a Masters of Science degree in Mining Engineering, students will have:

- Ability to investigate and develop solutions to advanced mining engineering problems
- Advanced technical knowledge and research experience needed to address the most challenging contemporary issues within a specialized area of study

MASTER OF SCIENCE IN PETROLEUM AND NATURAL GAS ENGINEERING (MSPNGE)

Upon graduation, with a Masters of Science degree in Petroleum and Natural Gas Engineering, students will have:

- Advanced technical knowledge and engineering skills needed by the oil and gas industry in the state, the nation, and the world
- In-depth knowledge of petroleum and natural gas engineering principles and applications to function effectively in their profession or continue their education
- Ability to perform independent research to solve engineering and scientific problems encountered in their profession
- In-depth petroleum and natural gas scientific and engineering knowledge to provide high quality education in petroleum and natural gas engineering

MASTER OF SCIENCE IN SOFTWARE ENGINEERING (MSSE)

Upon graduation, with a Masters of Science degree in Software Engineering, students will have:

- Knowledge, skills, and attitudes that will ensure success in professional positions in business, industry, research, or governmental service
- Achieved proficiency in the area of Software Project Management.
- Achieved proficiency in Software Analysis and Design.
- Understanding of the process of software Validation and Verification.
- Understanding of the process of Software Evolution.
- Achieved proficiency in Object-Oriented Design of software.

DOCTOR OF PHILOSOPHY (PHD)

Upon graduation with a Ph.D. degree from the Statler College of Engineering and Mineral Resources students will have:

- Ability to initiate research ideas in order to solve specific problems and to write research proposals on these ideas
- Have an expert-level understanding of the advanced principles of their fields of study
- Furthered a novel research idea which has contributed to the state of the art in their specific areas of expertise
- Ability to plan original research projects, to perform laboratory or field based experimental tasks, generate data from those tasks, and draw conclusions based on sound scientific and engineering principles
- Ability to develop innovative research in order to advance the frontiers of knowledge and secure sponsored research

- Ability to write technical articles for dissemination through peer-reviewed, refereed journals or other venues
- Ability to make oral and poster presentations at technical meetings
- Understanding of professional and ethical responsibilities in the practice of their profession to contribute to the well-being of society and to the advancement of their profession
- Demonstrated initiative in research planning and management, including safety and environmental issues
- Technical preparation for and an awareness of the need for life-long learning and continuing education

Admissions

A student desiring to take courses for graduate credit in the college must comply with the appropriate university regulations for graduate study. To become enrolled in a Statler College graduate program, a prospective student must apply for admission through the Office of Admissions to the department housing the student's choice of major. Acceptance will depend upon review of the student's academic background and available facilities in the major program's department.

An applicant with a baccalaureate degree, or its equivalent, from a program accredited by ABET or an internationally recognized program in engineering or computer science will be admitted on the same basis as engineering or computer science graduates of WVU. Lacking these qualifications, an applicant must first fulfill any special requirements of the department in which the student is seeking an advanced degree.

To enter any of the degree programs, a prospective student must first submit to the WVU Office of Admissions a completed online application, and include:

- Original, official transcripts of all college work attempted
- English proficiency test scores, for international applicants, as required by WVU
- Graduate Record Exam (GRE) scores, if required by the program; the GRE is highly encouraged for all applicants

Depending on the requirements of specific programs, prospective students may also have to submit additional material, such as:

- A resume
- Statement of purpose (typically one page), providing any additional information that would help the Admissions Committee in determining the applicant's suitability
- Letters of reference, as specified by the program

Masters Programs

There are three types of degrees granted within the Statler College of Engineering and Mineral Resources:

1. *Master of Science in an engineering discipline* – The Master of Science degree in an engineering discipline requires an undergraduate degree in the same discipline, or closely allied discipline with appropriate preparatory course work determined by the department.
2. *Master of Science in Engineering* – The Master of Science in Engineering degree is intended for students who wish to earn an engineering master's degree but do not have an undergraduate degree in the same field or a closely aligned field. The MSE is also appropriate for students seeking a unique or interdisciplinary master's program.
3. *Master of Science in an Applied Science area* – The applied science master's programs are intended for students wishing to obtain a master's degree in one of these non-engineering disciplines (Industrial Hygiene, Safety Management, Software Engineering, and Computer Science).

For these degree programs, students will normally be required to obtain a baccalaureate level of proficiency in subjects directly related to their area of graduate study by taking undergraduate prerequisite courses, either prior to starting or as an integral part of their degree program. The degree designation and additional course requirements will be determined by the department admitting the student. The two types of engineering degrees both require a calculus-based undergraduate education in an accredited program or an internationally recognized program. The applied science areas do not.

Students who do not hold a correspondingly named bachelor's degree may be admitted into either a discipline-designated program or the undesignated Master of Science in engineering degree program, depending on their credentials.

Doctoral Program

Additionally, there are three types of doctoral degrees granted in the Statler College of Engineering and Mineral Resources:

1. Doctor of Philosophy in an Engineering discipline – To be eligible for admission into an engineering Doctorate of Philosophy program, a candidate is expected to hold or expect to have received, by the time of enrollment, a B.S. or an M.S. degree in:
   - Some discipline of Engineering from an institution which has an ABET-accredited program in that discipline, or which has an internationally recognized program in Engineering or Mineral Resources
   - Mathematics/Physical Sciences (as specified by individual programs)

2. Doctor of Philosophy in Computer Science – To be eligible for admission into the Computer Sciences Doctorate of Philosophy program, a candidate is expected to hold a B.S. or an M.S. degree in:
   - Computer Science, Engineering, or
   - Mathematics/Physical Sciences (as specified by the program

3. Doctor of Philosophy in Occupational Safety and Health – To be eligible for admission into the Occupational Safety and Health Doctorate of Philosophy program, a candidate is expected to hold a B.S. or an M.S. degree in:
   - Industrial Hygiene, Safety Management, Engineering, or
   - Mathematics/Physical/Life Sciences (as specified by the program)

For potential doctoral students, although a bachelor's degree is the minimum requirement, applicants are normally encouraged to hold a master's degree in a relevant discipline.

ENTRANCE AND CLASSIFICATION

Not all students who meet minimum college and program requirements will necessarily be accepted. Faculty members in a given graduate program have the right to set standards and conditions more restrictive than those set forth in these guidelines and the right to limit enrollment. For example, a program may choose to reject an applicant because his or her goals are not perceived to match the current needs and resources of the program. Similarly, although a student may be admitted solely for the purpose of enrolling in advanced coursework (e.g., non-degree students); program faculty may decline to allow that student to continue toward a degree even though the student has completed all required coursework successfully.

To be admitted as a regular graduate student, an applicant must have an equivalent grade point average (GPA) of 3.0/4.0 or better in all previous college work, and must meet all other requirements set by the department or program, including minimum GRE scores. Any exceptions to the stated requirements must be approved by the dean.

Any applicant with a GPA below the minimum in any previous college work cannot be admitted without special approval from the dean. Students are notified of their status by WVU's Office of Admissions.

A student who does not desire to pursue a degree, may be admitted as a *non-degree* student. Each department determines the minimum qualification requirements for admission as non-degree students. Such students are allowed to take graduate courses but are not allowed to pursue a graduate degree. A non-degree student seeking admission to a graduate program must apply to the specific program.

Admission to a Ph.D. program does not confer or guarantee candidacy for the Ph.D., which requires a separate decision.

Policies

The Benjamin M. Statler College of Engineering and Mineral Resources (Statler College) at West Virginia University (WVU) is authorized to admit qualified students to graduate programs that lead to successful completion of the degrees of master's of science (M.S.) and doctor of philosophy (Ph.D.). The guidelines presented here and departmental guidelines, describe in detail the minimum College requirements for the above mentioned degrees. Each department and program within a department may impose stricter requirements than those required by the College. These requirements are listed in the department guidelines and procedures, and are available on the department website/catalog to prospective and current students.

Roles of the Faculty, College, and University

The research and course work requirements of students are administered through research advisors, Advisory and Examining Committees, academic advisors, and graduate program coordinators in the various departments.

- The academic advisor is the faculty member that approves the student's course selections each semester, approves registration and add/drop forms, and maintains the student's files.
- The Advisory and Examining Committee (AEC) advises the student in the selection of courses and in the conduct of the student's research program. The AEC also evaluates the technical quality of the student's research, decides whether to admit the student to candidacy (Ph.D. only), and evaluates the final thesis or dissertation. Normally, the chairman of the AEC is also the director of the student's research (Research Advisor).
- The graduate program coordinator is the person designated by the department chair to assure that the regulations governing the student's graduate program have been fulfilled.

The roles of the research advisor, academic advisor, AEC chair, and graduate program coordinator may be vested in one to four individuals, depending on the policies of the individual department. The administration and oversight of the departments and programs are guided through the department chair, college dean, Office of Student Services, Office of the University Registrar, and Office of Admissions.

- The Department Chair and the College Dean are responsible for ensuring that the guidelines are followed by all parties. The Dean may delegate certain tasks to the Associate Dean for Academic Affairs or to a specified faculty member if there is a special need.
- The Statler College Office of Student Services is the unit the College dean delegate's responsibility to ensuring that the guidelines are followed by student and faculty.
- The Office of the University Registrar (OUR) oversees graduation/degree audits, registration, grading, and all academic record-keeping for the University.

- The University's Office of Admissions manages all applications for the University. Applications, transcripts, and standardized test scores will be submitted to WVU Admissions.

Course Load

A full-time graduate student must register for at least nine, but no more than fifteen, credit hours during each regular semester, or at least six, but no more than twelve, credit hours in the summer session. A student wishing to carry more than the maximum course load must file a Course Overload Request.

Student Petition to Resolve Controversies

Attempts to resolve controversies regarding a graduate student's academic progress should first be between the student and the chairperson of the AEC, followed by the graduate program coordinator, the department chair, and the Dean, in that order. If no satisfactory solution of problems can be achieved by the above procedure, the student may then follow the formal University Policies and Procedures for appeals.

The Student Conduct Code addresses both academic and non-academic rights and responsibilities, sanctions, and procedural due process, and includes procedures for undergraduate, graduate, and professional students. The code outlines the procedures to be followed in handling graduate student grievances and appeals.

Degree Options and Hours

For master's students, the College faculty believes that the desirable characteristics of graduate education are the experience gained in advanced coursework and performing and reporting on a research endeavor. Consistent with that philosophy, the College is authorized to grant master's degrees under each of the following three options:

1. Thesis Option – This option requires a minimum of 24 credit hours of course work and at least 6 credit hours of research leading to the thesis.
2. Problem Report Option – This option requires a minimum of 30 credit hours of course work and at least 3 credit hours of a research or design project leading to a formal written report.
3. Course Work Option – This option requires a minimum of 33 credit hours of course work. In addition, the department may require successful completion of a written or oral comprehensive examination. The department or program can choose to offer students within a designated program the course work only option, where courses are determined by the program or the AEC.

For Ph.D. students, the College, consistent with its philosophy, believes that one of the required characteristics of doctoral education are the experiences gained in performing and reporting in an original research endeavor. For this reason, all doctoral programs require a research track culminating in an original research project.

Course Requirements

Specific course requirements are determined by the student's program and AEC. For master's students, no more than 40 percent of course work at the 400 level can count toward meeting degree requirements.

The College requires Ph.D. programs to have a minimum of 18 semester hours of course work, beyond the course credit required for a master's degree, at the 500 and higher levels with an average of 3.0 or better.

Only courses with grades of "A", "B" or "C" (not "S") can be used to meet the minimum coursework requirements. Grades of "S" or "U" will only be recorded for research credits and select seminar courses. The college normally will not issue a grade of "I" (incomplete) for research courses.

Departments may establish more stringent requirements than those adopted for the college as a whole.

Research Requirements

The faculty of the college believes that the experience gained in performing and reporting a research endeavor should be over a prolonged period. Therefore, a significant portion of doctoral credit is research based.

- Ph.D. in engineering and the Ph.D. in occupational safety and health degrees require a minimum of 24 credit hours of research at the Ph.D. level (797) leading to a dissertation .
- Ph.D. in computer science degree requires a minimum of 18 credit hours of research at the Ph.D. level (797) leading to a dissertation.

Additionally, master's students (except coursework only students) are also required by their AEC to perform basic research.

- Master's students under the thesis option are required to complete a minimum of 6 credit hours of research at the M.S. level (697).
- Master's students under the problem report options are required to complete a minimum of 3 credit hours of research at the M.S. level (697).

Plan of Study

A Plan of Study must be prepared by the student and the Advisory and Examining Committee (AEC, see below), which outlines the coursework the student must finish and its timeline, the research topic (if applicable for Master's students and required for Ph.D. students), and the composition of the AEC . This plan must be approved by the student, all members of the AEC, the graduate program coordinator, the department chair, and the college dean by the end of the second semester of the student's attendance or by the completion of the 12th credit hour applicable to the degree requirements, whichever is later. Otherwise the student may be refused permission to register for the following semester. All students:

1. The AEC may add course requirements to the Plan of Study.
2. The plan of study for a student admitted to a Ph.D. program with only a B.S. degree normally will require sufficient coursework to attain the competencies expected of graduates of that master's program as well as the competencies expected for the Ph.D. program.
3. The plan of study must include courses to remove deficiencies as well as courses required by the program curriculum. Deficiency courses requirements are determined by the graduate program coordinator at the time of enrollment.
4. The Plan should schedule deficiency courses in a timely manner such that a decision regarding qualification for change of status to regular status can be made at the end of the semester in which the 18th credit hour is completed.

The college provides templates for M.S. Plan of Study and Ph.D. Plan of Study. Any revisions to a plan of study necessitate submission of a complete, revised plan which incorporates all approval signatures.

Advisory and Examining Committee

Each graduate student will form an Advisory and Examining Committee (AEC), with:

- M.S. committees consisting of a minimum of three members.
- Ph.D. committees consisting of a minimum of five members.
- For Ph.D. students, at least one of the five members of the committee must be from outside the degree-granting department.
- The majority of the members of the AEC must be regular members of the graduate faculty.
- A minimum of two members for M.S. and four member for Ph.D. committees must be members of the College Graduate Faculty

Additionally, each department can impose stricter rules on the AEC selection process.

The AEC Chair should be selected by the student in consultation with the Graduate Program Coordinator or the Department Chair. Normally, the AEC Chair should be a member of the degree-granting program. The Chair must be a regular member of the College Graduate Faculty. Non-tenure track faculty may serve as Chair if they are a regular member of the College Graduate Faculty.

Members should be selected by the student in consultation with the AEC Chair. All members should be selected based on their perceived ability to contribute to the progress and evaluation of the student's research and their ability to work cooperatively with other members and the student. The College Dean and the Department Chair each has the right to appoint one member to this committee.

Members, including the Chair, may resign from the committee after providing a written explanation to the graduate program coordinator and to the chair of the department. Any changes to the AEC must be signed by the previous and new members of the committee, to the extent that a previous committee member is available on campus. The resigning member must complete an AEC Membership Modification Form.

Transfer Credit

A student wishing to apply graduate course credit earned at another institution to a master's or Ph.D. degree at WVU must complete an Application for Transfer of Graduate Credit to WVU. This form requires the signature of the appropriate department chair or graduate program coordinator. An official transcript from the institution where the course credit was taken must be on file with the WVU Office of Admissions.

For M.S. students, a maximum of 12 semester (vs. quarter) credit hours from other institutions may be transferred for credit at WVU in master's programs in the college. Individual graduate programs can choose to accept fewer transfer credit hours. Only courses with grades of "A" or "B" may be considered for transfer. For Ph.D. students, appropriateness of accepting transfer credit is left to the discretion of the student's AEC and department with the restrictions that only courses with grades of "A" or "B" may be considered for transfer and no more than one-third of the minimum semester course credit hours required by the program may be transferred.

After the student completes the appropriate section of the Application for Transfer of Graduate Credit form, the department chair or graduate program coordinator will perform the following tasks:

- Verify that courses from other institutions qualify as valid graduate level work.
- Verify that the request is within the maximum number of allowable credit hours.
- Verify that the credit has been earned within the acceptable time limit.

When the completed application form is returned to the Statler College Office of Student Services, it will then be forwarded to the WVU Office of the University Registrar; they will match forms with transcripts and enter the credit on the student's permanent record.

Requirements for Ph.D. Candidacy

Programs that admit students with only a B.S. degree are encouraged to require such students to demonstrate the competencies expected of a master's graduate in addition to the competencies required by the doctoral program before achieving candidacy.

Each major under the doctoral program will specify in writing its own requirements and standards for a student to be admitted to candidacy. At a minimum, these requirements will include one written examination, completion of all course requirements and an oral defense of a written research proposal. The AEC may approve the research proposal conditioned upon stipulated changes to the proposal. In such cases, the AEC Chair should ensure that the required changes to the proposal are made by the student before signing the Approval of Candidacy. The AEC Chair must provide a copy of the revised research proposal to all members of the AEC before signing his or her approval.

At the completion of the candidacy requirements, the results must be reported to the dean by the student's AEC using the Admission to Candidacy for the Ph.D. form. For a positive recommendation for admission to candidacy, no more than one negative vote may be cast. A minimum of one opportunity for reexamination must be available for each student. Students who fail to receive a positive recommendation on re-examination for admission to candidacy are terminated at the end of that semester and may not re-enter the program.

Maximum Time For Completion

All requirements for master's degrees must be completed within eight years preceding the student's graduation. This is a WVU requirement. Courses taken more than eight years previously must be revalidated for master's degree credit and procedures to revalidate are outlined in the policy on Revalidation of MS Course Work.

All requirements for Ph.D. degrees must be completed within five years after the student has been admitted to candidacy.

Second Degree Masters Students

A student desiring to obtain more than one master's degree, either enrolled concurrently or returning after earning a master's degree at WVU, may use up to 25 percent of previous graduate level coursework toward the second degree. The approval for second/concurrent WVU master degree form must be completed for this coursework and needs to be approved by the degree-granting unit. The student must successfully complete additional credit hours so as to constitute the remaining 75 percent of the credit hours required by the additional master's degree. Individual departments or programs may require higher percentages of original coursework to be earned for a second degree.

Academic Status

There are two categories of status: regular/non-degree and provisional.

REQUIREMENTS FOR EACH STATUS

The minimum academic standards for students are as follows:

- Regular and non-degree – To be in good standing, a regular or non-degree student must maintain at least cumulative GPA of 3.0/4.0 grade point average throughout the time enrolled in graduate work. A student failing to achieve this standard will be placed on probation.
- Provisional – A student not admitted as a regular or non-degree will be admitted as provisional. A provisional student must obtain and maintain a minimum cumulative GPA of 3.0/4.0 after the completion of the first 9 credit hours of graduate study or he/she will become eligible for suspension.

CHANGE OF STATUS

Change of status from provisional to regular may be made for a student with a cumulative GPA of 3.0/4.0 or higher for graduate courses when the student has met the conditions outlined in his/her conditions for acceptance as a provisional student.

For provisional students, by the end of the semester in which the 18th credit hour is completed, the student must be elevated to regular student status, and then the regulations governing good standing for regular students will apply. Failure to meet the provisions of admission, or failure to achieve the required grade point average, will result in suspension.

A non-degree student seeking admission to a graduate program must apply to the specific program. A maximum of 12 credit hours of coursework can be applied toward fulfilling a degree requirement if approved by the graduate program coordinator for that program.

INTRA-UNIVERSITY TRANSFER

A student may initiate a transfer to another department within the college or another program within the University by contacting the graduate program coordinator in the department in which the student is currently enrolled and the Dean's Office. The department's graduate program coordinator will then send the student's departmental file, along with an Academic Status Update form to the program that the student is interested in transferring to.

After a decision is made by the new department to accept the transfer, the Academic Status Update form is returned to the Statler College Office of Student Services and the departmental file is transferred to the new academic unit. If not, the departmental file is returned to the department originating the request, and the student may remain in that department.

Smart Device Policy

The use of programmable calculators or smart devices (including smart-phones, smart watches, tablets, cameras, wearable devices, etc.) on exams and quizzes prohibited unless specifically indicated by the instructor. Students are expected to have webcams for their laptops or desktop computers.

Sanction Policy for Academic Integrity Offenses

Graduates of the Statler College have the obligation to serve humanity with integrity, fairness, tolerance, and respect. Computing and engineering professionals are held to the highest standard of conduct. Academic integrity is fundamental to meeting this obligation and standard of conduct.

1. Cheating or plagiarism on minor course element (e.g., quiz, weekly lab report, homework as specified in the syllabus). The instructor reports academic dishonesty and assigns a grade of zero on the entire minor course element, and may reduce the course grade by one full letter grade. The student may receive an education supplement from the Office of Student Conduct and may face possible dismissal from Statler College if there are previous major or repeated minor offenses.
2. Cheating or plagiarism on a major course element (e.g., exam, project). The instructor reports academic dishonesty and assigns a grade of zero on the entire major course element, and may reduce the course grade to F, recommend a UF, and/or recommend the student be excluded from further participation in the course. The student may receive an education supplement from the Office of Student Conduct, dismissal from Statler College and/or recommendation for suspension or expulsion from WVU for a second AI offense.
3. Collusion on major course element. The instructor reports academic dishonesty and assigns a course grade of F, recommends a UF, and recommend the student be excluded from further participation in the course. The student will be recommended for dismissal from Statler College and expulsion from WVU.
4. Other (document alteration, tampering with records, and cases outside of cases 1-3). The instructor reports academic dishonesty and assigns a grade of zero on the course element (if applicable), and may impose a further grade reduction, recommend a UF, and/or recommend the student be excluded from further participation in the course. The student may receive an education supplement from the Office of Student Conduct, dismissal from Statler College and/or recommendation for suspension or expulsion from WVU for a second AI offense.

Student conduct violations can also be considered in dismissal cases. Dismissal from Statler College for academic integrity offenses is permanent.

Probation, Dismissal and Readmission Policy

UNIVERSITY PROBATION AND SUSPENSION

Students with a cumulative grade point average below 2.00 in all University coursework will be subject to probation and suspension by the University. Please refer to the Undergraduate Academic Probation and Suspension Policy found in the Undergraduate Information section of this catalog for further information on WVU probation and suspension.

Probation and Suspension

Graduate students are placed on probation the semester after their cumulative GPA falls below 3.0/4.0. Additionally, a grade of unsatisfactory ("U") in graduate-level research (697 or 797) makes the student eligible for probation. Two consecutive grades of "U" in research make the student eligible for suspension. Otherwise, college policies regarding probation and suspension mirror those set by the University.

Graduation

THESIS, PROBLEM REPORT AND DISSERTATION APPROVAL PROCEDURES

The AEC must approve the thesis/problem report or dissertation, with no more than one member not signing the approval sheet, before this requirement for degree completion can be considered completed. The thesis/problem report or dissertation must be produced according to the University's regulations governing the preparation of theses and dissertations. An electronic version of the approved thesis/problem report or dissertation must be submitted to the University library along with the ETD packet. Approval must be obtained from the library.

The student shall furnish each member of the AEC and the department with a copy of the thesis/problem report or dissertation. The copy may be bound, electronic or both, at the discretion of the department.

GRADE POINT AVERAGES REQUIRED FOR GRADUATION

The college requires an overall GPA of at least 3.0/4.0 GPA for (1) all courses taken as a graduate student (graduate or undergraduate level) at WVU; and (2) all courses taken as required for a degree by the Plan of Study. Individual programs and departments may set higher minimum requirements in their written guidelines.

FINAL EXAMINATION FOR THESIS/PROBLEM REPORT OR DISSERTATION

A student should schedule the final oral and/or written examination upon completion of a draft of the thesis/problem report or dissertation, and/or completed coursework, and after fulfilling all requirements set by the AEC. The student will initiate the formal request by the department for the final examination using the Request for Examination form.

The examination is conducted by the AEC. The AEC chair must indicate in advance the time and place of the final examination on the Request for Final Examination form sent to the dean before the examination can be scheduled. Final examinations are open to the public. The final examination must be given:

- No sooner than three weeks after the form is submitted and no later than three weeks before commencement for Ph.D. candidates. This lead time is required for public notice to the University community.
- No sooner than one week after the form is submitted and no later than three weeks before commencement for master's students.

The AEC may vote to:

1. Pass unconditionally
2. Pass conditionally with minor modifications to the problem report, thesis or dissertation
3. Defer with recommendations for additional work to satisfactorily complete the research and/or the problem report, thesis or dissertation.
4. Fail

If the vote is to pass with minor modifications, the chair should withhold his or her approval until the student has made all stipulated modifications. A vote to defer is not counted as a "fail," but only one deferral is allowed. More than one negative vote of the committee members will constitute a failure of this examination. The department or program will report the results of the final examination to the Dean's Office. The student must be given at least one opportunity for re¬examination. The department or program may establish guidelines to determine how many opportunities are given for reexamination and whether the student is re-examined on the portions failed. Students who fail the additional opportunities for re-examination are terminated at the end of that semester and may not re-enter the program.

All students must pass a final oral and/or written examination to be certified for graduation. The department or program will report the results of the final examination to the Dean's Office.

GRADUATION REQUEST

After successful completion of the final examination, students must complete the Final Approval for Graduation form and submit it to the Statler College Office of Student Services, along with other college and departmental requirements.

Students must be active and enrolled at WVU in the semester they plan to graduate. Students in their final semester, who have no course work or research to complete, can register for 1 credit hour, usually research, to satisfy the University enrollment requirement.

Students must apply for graduation in the semester in which they plan to graduate. Students failing to graduate in the semester that they applied will be required to enroll again and apply for graduation in the following semester.

QUALITY

The quality control of each program will be the joint responsibility of the AEC, graduate program coordinator, department chair, and the college dean.

DEADLINES

The graduation date for each semester can be obtained from the Statler College Office of Student Services. It is the student's responsibility to see that all deadlines are met. Failure to meet the specified deadlines may result in delay of graduation to the following semester.

- Application for Graduation and Diploma - An application for graduation and diploma must be submitted online through the student's MIX/STAR account.
- Request for Final Examination - Requests to the dean's office using the Request for Final Exam No examination is to be given until the approval is received. A new form must be filed each time the examination is re-scheduled or repeated. Early scheduling of the final examination is recommended. Timelines (one week for M.S. and three weeks for Ph.D.) will be strictly adhered.
- Final Examination for Thesis/Problem Report or Dissertation – Final examinations, or oral defense, must be given according to the suggested deadlines set by the University Library for a given semester. Final examination material will be given to the AEC chair after the Request for Final Examination has been made. The results, through the return of the signed shuttle sheet, must be delivered to the Statler College Office of Student Services within 24 hours of the defense.
- Thesis, Problem Report or Dissertation Submission - The student must submit to the University Library an electronic copy of the approved problem report, thesis or dissertation with the ETD packet, according to the deadline set by the library. The library will notify the Statler College Office of Student Services upon the initial submission and again when approval has been given.

- Final Deadlines - The Alumni Data Form must be completed and delivered to the departmental graduate program coordinator at least one week before the graduation date. The Final Approval for Graduation form for must be completed and delivered to the dean's office at least one week before the graduation date. If this form is not submitted, the student will not graduate.

Certificate Programs

- Computer Forensics (p. 48)
- Software Engineering (p. 66)

Accreditation

The following programs are accredited by the Applied and Natural Sciences Accreditation Commission (ANSAC) of ABET, http://www.abet.org:

- Industrial Hygiene
- Safety Management

Department of Chemical and Biomedical Engineering

Degrees Offered

- Masters of Science, Biomedical Engineering (M.S.Bm.E.)
- Masters of Science, Chemical Engineering (M.S.Ch.E.)
- Masters of Science, Engineering (M.S.E.)
- Doctor of Philosophy, Chemical Engineering (Ph.D.)

The Department of Chemical and Biomedical Engineering, with fourteen active tenure-track faculty members, approximately 300 undergraduates, and more than fifty graduate students, has one of the oldest doctoral-granting programs in the university. From the initial doctoral degree in 1932, the graduate academic program has been based on advanced chemical engineering fundamentals, while the research program has reflected a balance of fundamental research areas and their application to relevant technological areas such as biomedical, bioengineering, catalysis, energy, fuels, materials, polymer processing, systems control, and dynamic simulation.

Areas of Research

The Chemical and Biomedical Engineering faculty are presently involved in a broad spectrum of research areas which include biomedical and biochemical engineering, systems biology, cancer, bionanotechnology, biomaterials, stem cell technology, dynamic simulation, control systems, molecular dynamics, polymers and biopolymers, catalysis, energy, hydrates, fuels, fuel cells, low-dimensional and high-temperature electronic materials, and reaction engineering. These research activities impact economic development, national security, the stability and sustainability of the energy supply, and many quality-of-life issues.

Faculty members possess a wide spectrum of industrial experience and are routinely in contact with their counterparts in industry. This contact with real engineering problems enables them to convey a practical experience to students while keeping in perspective many of the fundamental concepts involved in graduate study. The faculty is nationally and internationally recognized through the publication of text books, monograph series, and technical papers. They routinely participate in national and international conferences and advisory meetings. In addition, faculty members have taught short courses throughout the United States and abroad.

FACULTY

CHAIR

- Richard Turton - Ph.D. (Oregon State University)
  WVU Bolton Professor, P.E.; Process systems engineering, Particle and powder technology, Chemical process design

PROFESSORS

- Debangsu Bhattacharyya - Ph.D. (Clarkson University)
  GE Plastics Material Engineering Professor; Integrated gasification combined cycle (IGCC), Chemical looping, Fuel cells (SOFC & PEM), Optimization, Dynamic modeling of process systems, Process control
- Eugene V. Cilento - Ph.D. (University of Cincinnati)
  Physiological Transport Phenomena, Biomedical Engineering, Image Analysis, Mathematical Modeling
- Zoica Cerasela Dinu - Ph.D. (Max Planck Inst of Molecular Cell Biology & Genetics & Dresden University of Technology)
  Associate Chair, BMEG. Nanomaterials, Bionanotechnology, Biomimetics, Catalysis
- Pradeep Fulay - Ph.D. (University of Arizona)
  Advanced Electronics, Magnetic Materials and Devices, Flexible Electronics, Synthesis and Processing of Nanomaterials

- Rakesh Gupta - Ph.D. (University of Delaware)
  Berry Professor. Polymer processing, Rheology, Non-Newtonian fluid mechanics, Composite materials
- John (Jianli) Hu - Ph.D. (Tsinghua University)
  Statler Energy Chair. Shale Gas Utilization, Catalysis in Refining Processes, Coal and Biomass Conversion
- John W. Zondlo - Ph.D. (Carnegie Mellon University)
  Coal Enhancement and Utilization, Carbon Science, Fuel Cells

ASSOCIATE PROFESSOR

- David J. Klinke - Ph.D. (Northwestern University)
  Systems Biology, Kinetics, Cellular Signal Transduction Pathways, Immunology, Mathematical Modeling, Bioengineering
- Fernando V. Lima - Ph.D. (Tufts University)
  Process design and operability, Model-based control and Optimization, State estimation and process identification, Modular energy systems and sustainability
- Charter D. Stinespring - Ph.D. (West Virginia University)
  Semiconductor Growth and Etching, Surface Kinetics, Thin Films, Electronic Materials

ASSISTANT PROFESSOR

- Jessica L. Allen - Ph.D. (University of Texas at Austin)
  Neuromuscular biomechanics; Aging, injury, and disease-related mobility impairments; Rehabilitation engineering; Musculoskeletal modeling and simulation
- Margaret F. Bennewitz - Ph.D. (Yale University)
  Biomedical imaging, Fluorescence intravital lung microscopy, MRI contrast agents, Micro/nano drug delivery systems, Microfluidics, Tumor microenvironment, Cancer metastasis, Stem Cells
- Hanjing Tian - Ph.D. (Lehigh University)
  Chemical looping combustion, CO_2 capture, Shale gas utilization, Biomass gasification and refinery
- Shuo Wang - Ph.D. (California Institute of Technology)
  Human intracranial electrophysiology, Cognitive and social neuroscience

TEACHING ASSOCIATE PROFESSOR

- Robin S. Hissam - Ph.D. (University of Delaware)
  Director of Undergradaute Education. Biomaterials, Polypeptides, Drug delivery, Bioengineering and materials science

TEACHING INSTRUCTOR

- Jeremy S. Hardinger - Ph.D. (West Virginia University)

RESEARCH ASSISTANT PROFESSOR

- Nasagree Garapati - Ph.D. (West Virginia University)
  Carbon dioxide capture and storage (CCS) in various geologic media, utilizing carbon dioxide in gas hydrate reservoirs, petroleum reservoirs and geothermal reservoirs for enhanced gas, oil and heat recovery

RESEARCH ASSOCIATE

- Sushant Agarwal - Ph.D. (West Virginia University)
  Polymer Processing, Rheology, Nano-composites, Dispersions

ADJUNCT PROFESSORS

- Scott M. Galster - Ph.D. (The Catholic University of America)
  Applied Experimental Psychology
- Laura F. Gibson - Ph.D. (West Virginia University)
  Professor and Senior Associate VP for Research and Graduate Education; Genetics and Developmental Biology
- Joseph D. Henry - Ph.D. (University of Michigan)
  Energy Management, Science and Technology Policy
- Charles M. Jaffe - Ph.D. (University of Colorado)
  Theoretical Chemistry, Molecular and Atomic Physics, Nonlinear Dynamics, Astrodynamics, Forensics
- Mahesh Padmanabhan - Ph.D. (University of Minnesota)
  Foods, Polymer Science, Rheology
- Yon Rojanasakul - Ph.D. (University of Wisconsin, Madison)
  Pharmaceutical Sciences
- George A. Spirou - Ph.D. (University of Florida, Gainesville)

Neuroscience

- Stephen Zitney - Ph.D. (University of Illinois at Urbana-Champaign)
Dynamics, Control and optimizationof energy systems; Computational fluid dynamics (CFD) and Process Co-simulation; Pulverized coal combustion; Integrated gasification combined cycle (IGCC); Chemical looping; Supercritical CO_2 power cycles; CO_2 capture

ADJUNCT ASSOCIATE PROFESOR

- Thirimachos Bourlai - Ph.D. (University of Surrey, U.K.)
Electrical and Electronic Engineering
- Valeriya Gritseniko - Ph.D. (University of Alberta)
Neuroscience
- Yuxin Liu - Ph.D. (Louisiana Tech University)
Microelectronics
- Sam M. Mukdadi - Ph.D. (University of Colorado, Boulder)
Mechanical Engineering
- Sergiy Yakovenko - Ph.D. (University of Alberta)
Neuroscience

ADJUNCT ASSISTANT PROFESSOR

- Joshua A. Hagen - Ph,.D. (University of Cincinnati)
Materials Science and Engineering
- Victor S. Finomore, Jr. - Ph.D. (University of Cincinnati)
Applied Experimental Psychology (Human Factors)
- Jeffrey S. Reynolds - Ph.D. (West Virginia University)
Electrical Engineering
- Alexander Stolin - Ph.D. (University of Virginia)
Physics
- John Twist - Ph.D. (Rutgers University)
Pharmaceutical Sciences

PROFESSORS EMERITUS

- Eung H. Cho - Ph.D. (University of Utah)
Mineral Processing, Leaching, Solvent Extraction, Environmental Science
- Dady B. Dadyburjor - Ph.D.(Delaware)
Catalysis, Reaction Engineering
- Edwin L. Kugler - Ph.D. (Johns Hopkins)
Catalysis, Adsorption, Coal Liquefaction
- Joseph A. Shaeiwitz - Ph.D. (Carnegie-Mellon University)
Design, Design Education, Outcomes Assessment
- Alfred H. Stiller - Ph.D. (University of Cincinnati)
Physical/Inorganic/Solution Chemistry, Coal Liquefaction, Carbon Science
- Ray Y.K. Yang - Ph.D. (Princeton)
Biochemical and Chemical Engineering, Nonlinear Dynamics

For specific information on the following programs, please see the links to the right:

- **Biomedical Engineering**
- **Chemical Engineering**

Biomedical Engineering, M.S.Bm.E., Ph.D.

Degrees Offered

- Masters of Science in Biomedical Engineering (M.S.Bm.E.)
- Doctor of Philosophy, Biomedical Engineering (Ph.D.)

Nature of the Program

The focus of the graduate program will be to prepare students to be skilled in learning and discovering of processes that aim to integrate engineering and life sciences for the advancement of human health and medical technologies. Just as importantly, the program will build upon current collaborative

efforts with local and regional clinicians, industry and academic leaders engaged in state-of-the-art biomedical engineering research. Lastly, the program will foster the production and application of new knowledge in areas that impacts the health and well-being of all West Virginia (WV) citizens, as well as contribute to the providing skilled local workers in biomedical engineering (BMEG), thus driving development of the WV's economy in this exciting area.

Student Learning Outcomes

The learning outcomes of students graduating in BMEG will be defined and measured as follows:

1. Mastery of basic and advanced graduate level knowledge in their chosen areas of specialty as related to BMEG. This outcome will be measured through the grades that the students earn in their coursework;
2. Ability to complete on time specific research tasks. This outcome will be measured through the grade (Satisfactory, Incomplete, or Unsatisfactory) that the student receives every semester from his/her major research advisor for the appropriate research course (700 level);
3. Strong oral communication skills. This outcome will be measured through the quality and number of oral presentations and reports given by the student to his/her Advising and Examining Committee (AEC), at technical meetings or conferences, as well as meetings of his/her research team;
4. Strong communication skills in writing. This outcome will be measured through the quality and number of technical reports, articles or reviews that the student may write during his/her graduate studies. Additionally, the quality of student's communication skills in writing will be measured through the dissertation;
5. Ability to work independently in a collaborative environment – This outcome will be measured through feedback solicited from the members of student's AEC, his/her peers, as well as the length of time the student needs to complete his/her graduate studies.

Admissions

Students applying for admission to the graduate program in biomedical engineering (BMEG) must meet the general requirements of admission of the WVU graduate school. Admission is expected to be competitive and students will be selected on the basis of their scholastic preparation and intellectual capacity as demonstrated in the application. Further, in addition to the university requirements, the CBE department where the student is to be enrolled will request the following proofs as part of the application:

- Applicant has a bachelor's degree from a recognized 4-year university, in engineering, or engineering-related disciplines including life science, physical science, computer science, biological science, physics, chemistry, mathematics, or applied mathematics;
- Applicants have a minimum 3.0/4.0 grade point average overall, in the last 2 years of undergraduate study, and in their major field;
- Applicants should have the General Graduate Record Examination (GRE);
- Strong quantitative skills and background in life sciences, as evidenced by coursework or research experience should be demonstrated;
- Transcripts from all the universities attended. Applicants are required to upload the academic records from each academic institution (undergraduate and/or graduate) attended. Official, original academic credentials that are issued in a language other than English must be accompanied by a certified English translation;
- International applicants must submit proof of English language proficiency;
- Three letters of recommendation, submitted online directly by the referees;
- Student CV;
- Statement of purpose, as part of the online application; this should not be more than two pages. The Statement of purpose should describe the motivation for graduate study and how it relates to their professional goals, area of research interest, as well as the potential supervising professor (if identified). The student should also identify the primary areas of research interests and the most likely BMEG faculty member the applicant would like to work with. The applicant could also indicate up to 3 areas of research interests as appropriate from the research directions in the CBE and at WVU respectively. Students are encouraged to directly contact faculty about research opportunities and their willingness to serve as their supervising professor.
- Non-refundable fee.

Curriculum in Master of Science in Biomedical Engineering

A candidate for the M.S. degree in biomedical engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Chemical Engineering Department.

Program Requirements

All M.S. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum GPA of 3.0 is required in all courses

A minimum of 60% of courses must be from 500 level or above

A grade of C- or higher must be earned in all required courses

BMEG 501	Principles and Applications of Biomedical Engineering	3
BMEG 601	Numerical and Statistical Methods for Biomedical Engineering	3
BMEG 602	Interfacial Phenomena in Living and Non-Living Systems	3
Advisor Approved Coursework [*]		15
CHE 796	Graduate Seminar	1
BMEG 697	Research	6
Written Proposal/Oral Presentation		
Final Oral or Written Examination		
Thesis		
Total Hours		31

[*]   All elective courses must be approved by the Statler College Graduate Admissions and Curriculum Committee and student's AEC.

Further:

- The student should form a 5 member AEC and file a draft plan of study by the end of their 2nd semester of enrollment in the graduate program. At least one member of the graduate faculty from outside the student's home Department is required to serve on the AEC;
- The student's research advisor, in conjunction with the student's AEC will be responsible for determining the plan of study appropriate to the student's interests/needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their future career;
- All students pursuing a graduate degree are expected to engage in research and complete and successfully defend a dissertation. The dissertation must show a high degree of originality, i.e. be an original contribution to BMEG-related areas;
- The integrity of the research conduct is the outmost importance to the institution and our department. We are committed to promoting and supporting the ethical and responsible conduct of research across all disciplines. As a result, all students are required to take an online Responsible Conduct of Research (RCR) training in their first year;
- The graduate degree signifies that the holder has the competence to function independently in the chosen field. Hence, the number of years involved in attaining or retaining competency cannot be readily specified, nor can the exact program of study be defined. However, one has a maximum of 3.5 years for to complete all the requirements for the M.S program from the date of admission respectively.

Final Examination

At the completion of the research, candidates must prepare a dissertation and pass the final oral examination (defense) administered by their AEC. Candidates should be demonstrating an original contribution to scientific knowledge and engineering practice in BMEG. The defense examination is open to the public and, in order to evaluate critically the student's competency, may include testing on material in related fields, as deemed necessary by the AEC. In addition, since the M.S, degree is a research degree that embodies the results of an original research proposal and represents a significant contribution to scientific literature, the student must submit a manuscript on this research to the AEC. The rules for this defense and the timing for the manuscript submission are specified by the Office of Graduate Studies at WVU and the Statler College; neither a foreign language nor a minor is required for the PhD

Curriculum in Doctor of Philosophy – Biomedical Engineering

A candidate for the Ph.D. degree with a major in biomedical engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Chemical Engineering Department.

Program Requirements

The doctor of philosophy degree with a major in biomedical engineering is administered through the college's interdisciplinary Ph.D. program. The research work for the doctoral dissertation must show a high degree of originality on the part of the student and must constitute an original contribution to the art and science of chemical engineering.

All Ph.D. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

The College requires Ph.D. programs to have a minimum of 18 semester hours of course work, beyond the course credit required for a master's degree, at the 500 and higher levels with an average of 3.0 or better. The faculty of the college believes that the experience gained in performing and reporting a research endeavor should be over a prolonged period. Therefore, a significant portion of doctoral credit is research based. Specifically, beside the accumulation of a minimum of 18 credit hours of coursework taken at WVU, there are also required 2 credit hours of seminar and a minimum of 24 credit hours of research, also taken at WVU. The remaining requirements for this graduate degree are as follows: (1) passing the qualifying examination, (2)

admission to candidacy, (3) completion of dissertation research, and (4) defense of a research dissertation; these requirements are well detailed below. Briefly:

- The student should form a 5 member AEC and file a draft plan of study by the end of their 2nd semester of enrollment in the graduate program. At least one member of the graduate faculty from outside the student's home Department is required to serve on the AEC;
- The student's research advisor, in conjunction with the student's AEC will be responsible for determining the plan of study appropriate to the student's interests/needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their future career in BMEG-related areas;
- All students pursuing a Ph.D. degree are expected to engage in research and complete and successfully defend a Ph.D. dissertation. The doctoral dissertation must show a high degree of originality, i.e. be an original contribution to BMEG-related areas;
- The integrity of the research conduct is the utmost importance to the institution and our department. We are committed to promoting and supporting the ethical and responsible conduct of research across all disciplines. As a result, all students are required to take an online RCR training in their first year;
- The Ph.D. degree signifies that the holder has the competence to function independently at the highest level in the chosen field. Hence, the number of years involved in attaining or retaining competency cannot be readily specified, nor can the exact program of study be defined. However, one has a maximum of 5 years to complete all the requirements for Ph.D. from the date of admission to candidacy.

Curriculum Requirements

A minimum GPA of 3.0 is required in all courses		
A minimum of 60% of courses must be from 500 level or above		
A grade of C- or higher must be earned in all required courses		
BMEG 501	Principles and Applications of Biomedical Engineering	3
BMEG 601	Numerical and Statistical Methods for Biomedical Engineering	3
BMEG 602	Interfacial Phenomena in Living and Non-Living Systems	3
Advisor Approved Coursework *		18
Graduate Seminar		2
CHE 796	Graduate Seminar	
Research		24
BMEG 797	Research	
Examinations		
Qualifying Examination		
Candidacy Examination		
Final Examination		
Total Hours		53

* All elective courses must be approved by the Statler College Graduate Admissions and Curriculum Committee and student's AEC.

Examinations
QUALIFYING EXAMINATION

All Ph.D. students must pass a Ph.D. qualifying examination. This examination is designed to assess the basic competency in BMEG-related fields and determine whether or not students have sufficient knowledge to undertake independent research. Students are required to pass such qualifying examination by the end of their 2nd semester of enrollment in the program; however, it is normally required that full-time students pass the qualifying examination no later than the end of the 3rd semester of enrollment.

The structure of the Ph.D. qualifying examination for all students pursuing the Ph.D. degree in BMEG will be comprised of two components: a written examination that will test on the student's knowledge in the 3 core areas studied in BMEG 501, Principles and Applications of Biomedical Engineering, BMEG 601 Numerical and Statistical Methods for Biomedical Engineering and BMEG 602 Interfacial phenomena in living and non-living systems respectively, or their equivalent. Students who do not pass this examination on their initial attempt will be allowed a 2nd attempt which should be scheduled in the follow up semester. If they are not successful on their 2nd attempt, then they will be dismissed from the program.

CANDIDACY EXAMINATION

In order to be admitted to candidacy, the student must pass a candidacy exam, which is designed to evaluate student's overall ability to engage in high-level research. Admission to candidacy can be assessed by a dissertation proposal and/or additional examination. Within a maximum of one semester after passing the PhD qualifying examination or entering the Ph.D. program, whichever is later, a student must successfully defend his/her dissertation research proposal. This proposal is a written document which must be reviewed and accepted by their AEC and subsequently defended in an oral presentation; the proposed research work should show a high degree of originality in the field. A student who has successfully completed all coursework,

passed the qualifying examination, and successfully defended the research proposal is defined as one who is a candidate for the Ph.D. degree in BMEG at WVU.

Doctoral candidates are allowed no more than 5 years to complete the remaining degree requirements after formal admission to candidacy. An extension of time can be obtained only by repeating the qualifying and candidacy examinations and meeting any other requirements specified by the student's advisory and examining committee.

FINAL EXAMINATION

At the completion of the dissertation research, candidates must prepare a dissertation and pass the final oral examination (defense) administered by their AEC. Candidates should be demonstrating an original contribution to scientific knowledge and engineering practice in BMEG. The defense examination is open to the public and, in order to evaluate critically the student's competency, may include testing on material in related fields, as deemed necessary by the AEC. In addition, since the Ph.D. degree is primarily a research degree that embodies the results of an original research proposal and represents a significant contribution to scientific literature, the student must submit a manuscript on this research to the AEC. The rules for this defense and the timing for the manuscript submission are specified by the Office of Graduate Studies at WVU and the Statler College; neither a foreign language nor a minor is required for the Ph.D.

Student Learning Outcomes

BIOMEDICAL ENGINEERING

The learning outcomes of students graduating in biomedical engineering (BMEG) will be defined and measured as follows:

1. Mastery of basic and advanced graduate level knowledge in their chosen areas of specialty as related to BMEG. This outcome will be measured through the grades that the students earn in their coursework;
2. Ability to complete on time specific research tasks. This outcome will be measured through the grade (Satisfactory, Incomplete, or Unsatisfactory) that the student receives every semester from his/her major research advisor for the appropriate research course (700 level);
3. Strong oral communication skills. This outcome will be measured through the quality and number of oral presentations and reports given by the student to his/her Advising and Examining Committee (AEC), at technical meetings or conferences, as well as meetings of his/her research team;
4. Strong communication skills in writing. This outcome will be measured through the quality and number of technical reports, articles or reviews that the student may write during his/her graduate studies. Additionally, the quality of student's communication skills in writing will be measured through the dissertation;
5. Ability to work independently in a collaborative environment – This outcome will be measured through feedback solicited from the members of student's AEC, his/her peers, as well as the length of time the student needs to complete his/her graduate studies.

Chemical Engineering, M.S.Ch.E., Ph.D.

Degrees Offered

- Masters of Science, Engineering (M.S.E.)
- Masters of Science, Chemical Engineering (M.S.Ch.E.)
- Doctor of Philosophy, Chemical Engineering (Ph.D.)

Nature of the Program

The department is authorized to admit students to the following degree programs: master's of science in chemical engineering (M.S. Ch.E.), master's of science in engineering (M.S.E.), and doctor of philosophy (Ph.D.). A problem report option is also available as an alternative to the traditional research based master's degree. Students in these programs must comply with the rules and regulations as presented in the general requirements for graduate work in the college and in the Department of Chemical and Biomedical Engineering. Students interested in pursuing work for a master's or doctoral degree in chemical engineering should contact the department for copies of the required guidelines and application information.

Program Outcomes

Holders of graduate degrees will understand the advanced principles of chemical engineering. These include reaction engineering, transport phenomena, and thermodynamics.

- Holders of graduate degrees will have an expert-level understanding of the background and theory/principles of their research topics.
- Holders of Ph.D. degrees will be able to initiate research ideas in order to solve specific problems and to write research proposals on these ideas.
- Holders of Ph.D. degrees will have furthered a novel research idea.
- Holders of graduate degrees will be able to plan research projects, to perform the tasks, and to draw conclusions based on sound scientific and engineering principles.
- Holders of graduate degrees will be able to write technical articles for publication in refereed journals and to make oral and poster presentations at technical meetings.

- Holders of graduate degrees will demonstrate initiative in research planning and management, including safety and environmental issues.
- Holders of graduate degrees will be technically prepared for a lifetime of continuing education.
- Holders of graduate degrees will understand professional and ethical responsibilities.

Admissions

CHEMICAL ENGINEERING MASTERS AND DOCTORAL ADMISSIONS REQUIREMENTS

All applicants for Chemical Engineering Masters and Doctoral Programs must satisfy the following criteria to qualify for admission.

- A minimum cumulative grade point average of 3.0, or equivalent, (on a 4.0 scale) in all previous college work.
- Three letters of reference.
- A personal statement.
- International applicants must submit proof of English language proficiency.
- International students must provide Graduate Record Examination scores. (This is recommended for all students and may be required of some students to assist in judging their chances for success in the program.)
- A baccalaureate degrees in chemical engineering, other engineering fields, mathematics, or basic sciences.

CHEMICAL ENGINEERING MASTERS AND DOCTORAL DEGREE PROGRAMS

- Students not holding a baccalaureate degree in chemical engineering are eligible for the Masters of Science in Engineering (M.S.E.) Program. These students must take an additional nine hours of junior level course work in the first two semesters. Alternatively, students taking a total of 18 hours at junior level in the first two semesters are eligible for the M.S.Ch.E. Program.
- Admitted students will receive a letter specifying the course work required in the first two semesters.
- Admission to the Ph.D. Program is open to all qualified students. Generally, students without a B.S. or M.S. in chemical engineering are not admitted directly to the Ph.D. Program.
- A maximum of twelve semester hours from other institutions may be accepted at WVU for credit toward either the masters or doctoral degrees.
- To remain in good standing, a regular student must achieve and maintain a minimum overall 3.0 GPA in all graduate level courses as well as in all junior level courses.

Curriculum in Master of Science in Chemical Engineering

A candidate for the M.S. degree in chemical engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Chemical Engineering Department.

Program Requirements

All M.S. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum GPA of 3.0 is required in all courses

Course Requirements [*]		
A minimum of 60% of courses must be from 500 level or above		
A grade of C or higher must be earned in all required courses		
CHE 615	Transport Phenomena	3
CHE 620	Thermodynamics	3
CHE 625	Chemical Reaction Engineering	3
Full-time Students are required to take a Seminar course each semester		4-10
CHE 796	Graduate Seminar	
Select courses from the following based on degree path:		15
Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, IH&S, MAE, MATH, MINE, PHGE, PHYS, SAFM, SENG, or STAT courses 400-799		
Complete 1 of the following options:		6-9
Thesis Option - 6 hours		
CHE 697	Research (6 hours)	
Written Proposal/Oral Presentation		
Oral Defense		

Thesis	
Final Oral or Written Examination	
Problem Report Option - 9 hours	
Complete 6 additional hours of coursework	
CHE 697	Research (3 hours)
Written Proposal/Oral Presentation	
Oral Defense	
Formal written report or professional report/paper	
Final Oral or Written Examination	

Total Hours	34-43

*   Students who do not hold a baccalaureate degree in chemical engineering are required to take a set of undergraduate chemical engineering courses above and beyond the minimum coursework requirements.
For students without a B.S.Ch.E., the junior level courses may include: CHE 310, CHE 311, CHE 312, CHE 315, CHE 320, and CHE 325. M.S.E. students take only CHE 315, CHE 320, and CHE 325.

EXAMINATION

M.S. students following the thesis or problem report option must prepare a written research proposal and oral presentation. The proposal must be approved by the student's AEC at least one semester prior to the final oral examination. This oral defense is administered by the student's AEC and must be completed by the end of the second semester after the student begins his/her research.

All students, regardless of option, are required to pass a final oral or written examination, administered by their AEC, covering the thesis or problem report and/or related course material.

Suggested Plan of Study

The plan below illustrates the Thesis Option. For students with a B.S.Ch.E., twenty-four months are typically required to complete the M.S.Ch.E. degree work. For students without a B.S.Ch.E., the time to complete the M.S.Ch.E. is typically thirty-six months, while the time to complete the M.S.E. is typically thirty months.

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical M.S.Ch.E degree program that completes degree requirements in two years is as follows.

First Year

Fall	Hours	Spring	Hours
CHE 796	1	CHE 796	1
CHE 615	3	CHE 625	3
CHE 620	3	Additional Course	3
Additional Course	3	CHE 697	3
	10		10

Second Year

Fall	Hours	Spring	Hours
CHE 796	1	CHE 796	1
CHE 697	3	CHE 697	6
Additional Course	3	Additional Course	3
Additional Course	3		
	10		10

Total credit hours: 40

Curriculum in Doctor of Philosophy – Chemical Engineering

A candidate for the Ph.D. degree with a major in chemical engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Chemical Engineering Department.

Program Requirements

The doctor of philosophy degree with a major in chemical engineering is administered through the college's interdisciplinary Ph.D. program. The research work for the doctoral dissertation must show a high degree of originality on the part of the student and must constitute an original contribution to the art and science of chemical engineering.

All Ph.D. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum GPA of 3.0 is required in all courses exclusive of research credits.

A minimum GPA of 3.0 is required in all CHE courses exclusive of research credits.

A grade of C or higher must be earned in all required courses

Course Requirements *		
CHE 615	Transport Phenomena	3
CHE 620	Thermodynamics	3
CHE 625	Chemical Reaction Engineering	3
Select from the following based on degree path: **		9
Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, IH&S, MAE, MATH, MINE, PNGE, PHYS, SAFM, SENG, or STAT courses 500-799 excluding courses numbered 785, 796, or 797		
Full-time Students are required to take one Seminar course each semester		4-10
CHE 796	Graduate Seminar	
Research		24
CHE 797	Research	
Examinations		
Qualifying Exam		
Candidacy Exam		
Final Exam		
Total Hours		46-52

*   Students who do not hold a baccalaureate degree in chemical engineering are required to take a set of undergraduate chemical engineering courses above and beyond the minimum coursework requirements.
A minimum of thirty-six hours of coursework and twenty-four hours of independent research beyond a bachelor's degree, or eighteen hours of coursework and twenty-four hours of independent research beyond an M.S. degree are required.

**   Students must complete a minimum of nine semester hours of a coherent set of courses taken outside of the department. These courses may be related to the major research area. Non-technical courses are considered only under exceptional circumstances. All courses must be approved by the AEC and the academic advisor.

Examinations

QUALIFYING EXAM

All Ph.D. students must pass a Ph.D. qualifying examination given in their first year at WVU. This examination is designed to assess the basic competency of students in the chemical engineering field to determine whether or not they have sufficient knowledge to undertake independent research.

CANDIDACY EXAMINATION

In order to be admitted to candidacy, the student must pass a candidacy exam, which is designed to evaluate the student's overall ability to engage in high-level research.

Within a maximum of one semester after passing the PhD qualifying examination or entering the Ph.D. program, whichever is later, a student must successfully defend his/her dissertation research proposal. This proposal is a written document which must be reviewed and accepted by their AEC and subsequently defended in an oral presentation. The research work for the doctoral dissertation should show a high order of originality on the part of the student and must offer an original contribution to the field of engineering science.

A student who has successfully completed all coursework, passed the qualifying examination, and successfully defended the research proposal is defined as one who is a candidate for the Ph.D. degree.

FINAL EXAMINATION

At the completion of the dissertation research, candidates must prepare a dissertation and pass the final oral examination (defense) administered by their AEC.

In order to complete the Ph.D. requirements, a student must pass a final oral examination on the results embodied in the dissertation. This examination is open to the public and, in order to evaluate critically the student's competency, may include testing on material in related fields, as deemed necessary by the AEC. In addition, since the Ph.D. degree is primarily a research degree that embodies the results of an original research proposal and represents a significant contribution to scientific literature, the student must submit a manuscript on this research to the AEC.

Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical doctoral degree program that completes degree requirements in three years is as follows.

First Year

Fall	Hours	Spring	Hours
CHE 796	1	CHE 796	1
CHE 615	3	CHE 625	3
CHE 620	3	Additional Course	3
Additional Course	3	CHE 797	3
	10		10

Second Year

Fall	Hours	Spring	Hours
CHE 796	1	CHE 796	1
CHE 797	6	CHE 797	9
Additional Course	3		
	10		10

Third Year

Fall	Hours	Spring	Hours
CHE 796	1	CHE 796	1
CHE 797	7	CHE 797	7
	8		8

Total credit hours: 56

Student Learning Outcomes

CHEMICAL ENGINEERING

Upon graduation, Chemical Engineering students will have:

- Understanding of advanced principles of chemical engineering, which include reaction engineering, transport phenomena, and thermodynamics
- Expert-level understanding of the background and theory/principles of their research topics.
- Ability to plan research projects, to perform the tasks, and to draw conclusions based on sound scientific and engineering principles.
- Ability to write technical articles for publication in refereed journals and to make oral and poster presentations at technical meetings.
- Demonstrated initiative in research planning and management, including safety and environmental issues.
- Been technically prepared for a lifetime of continuing education.
- Understanding of professional and ethical responsibilities.

Wadsworth Department of Civil and Environmental Engineering, M.S.C.E., M.S.E., Ph.D.

Degrees Offered

- Master of Science, Civil Engineering (M.S.C.E.)
- Master of Science, Engineering (M.S.E.)
- Doctor of Philosophy, Civil Engineering (Ph.D.)

The Wadsworth Department of Civil and Environmental Engineering offers the degree of master's of science in civil engineering (M.S.C.E.). In conjunction with the Benjamin M. Statler College of Engineering and Mineral Resources, the master's of science in engineering (M.S.E.) and the doctor of philosophy degrees are available with emphases in civil engineering.

Program Objectives

- Have the ability to work on multidisciplinary teams, have high technical competence, and have the ability to meet present and future challenges in a specialty area of civil and environmental engineering
- Have the ability to effectively plan and execute scientific research or other high-level investigations using the most current methods and techniques in the civil and environmental engineering fields
- Have the ability to effectively communicate the results of their research or investigations through writing and oral presentations
- Have the ability to contribute to the body of engineering knowledge and/or to economic growth by developing the science, the materials, and the technology necessary to deliver vital infrastructure services in the most cost effective manner while protecting the health, safety, and welfare of human society

Program Outcomes

- Graduates will have an ability to function on teams involving multiple civil engineering specialties.
- Graduates will have an ability to apply advanced methodologies in their specialty area.
- Graduates will have an ability to effectively communicate technical information.
- Graduates will have an ability to design and conduct experiments, analyze and interpret data, and develop recommendations.
- Graduates will have an understanding of professional and ethical responsibility.
- Graduates will have an ability to understand the impact of engineering solutions in global and societal context.
- Graduates will have a recognition of the need to engage in life-long learning.
- Graduates will have an ability to use contemporary techniques, skills, and tools necessary for engineering practice in education, industry, and/or government.

Student Learning Outcomes

- Graduates will meet the academic standards required by WVU for those in graduate school while completing courses pertinent to their specialty area and as specified in their plan of study.
- Graduates will conduct experimental or investigatory work necessary to satisfy the requirements of either the thesis option or report option for graduation.
- Graduates will write and orally defend a thesis, a report, or a dissertation.
- Graduates will serve in primary roles as graduate research assistants on research projects or on problem investigations sponsored by companies, associations, or government agencies looking for new methodology or science to resolve problems associated with the planning, design, construction, operation, and maintenance of the infrastructure or for related needs.

Areas of Concentration

There are five major areas of interest of the faculty and graduate studies:

- Construction engineering and management, which includes construction project planning and cost control; construction operations; construction safety and health; sensing, analytics, simulation, and visualization for construction and infrastructure practices; integrated and automated construction; building information modeling; infrastructure planning; construction profitability; asset management and risk control
- Environmental and water resources, which includes wetland and natural stream restoration; water, waste water, and industrial waste treatment; site remediation; groundwater hydraulics, hydrology, sediment transport, fluid mechanics, water and health, and satellite remote sensing of hydrological processes
- Geotechnical engineering, which includes soil mechanics, foundations engineering, soil-structure interaction, geomechanics, geoenvironmental, groundwater and seepage, geosynthetics, contaminant transport, earthwork design, and waste by-product utilization

- Transportation engineering, which includes planning, design, construction, operations, and maintenance of transportation facilities/systems (roadways, railroads, airports, and public transportation) as well as related areas of infrastructure management and expert systems
- Structural engineering, which includes advanced structural mechanics, structural dynamics, bridge engineering, building design for static and dynamic loads, advanced materials for civil infrastructure, and nondestructive testing and evaluation

Faculty

Faculty members in the Wadsworth Department of Civil and Environmental Engineering are active in teaching, research, and professional commitments. Many of the faculty members are licensed professional engineers registered in one or more states and are involved in state, regional, and national professional organizations, serving on numerous technical committees. They are successful researchers and have published extensively in technical journals. The Civil and Environmental Engineering faculty produces graduates who can assume the problem solving, decision-making, and technical leadership roles of a professional engineer and who have the sound educational background for the continuing professional development the field requires.

Students tailor their program of study to pursue individual topics of interests with guidance from a faculty advisor. Opportunities abound within the master's and doctoral tracks for a research experience in which the student tackles an engineering problem individually with guidance from a faculty advisor. The graduate program in civil engineering was established with the aim of developing its students' abilities to use today's contemporary methods of engineering analysis and design to solve tomorrow's engineering problems.

FACULTY

CHAIR

- Hema J. Siriwardane - Ph.D., P.E. (Virginia Polytechnic Institute and State University)
  Geomechanics/Geotechnical Engineering, Finite Element Method, Computer Applications

PROFESSORS

- Hung-Liang (Roger) Chen - Ph.D. (Northwestern University)
  Structural Dynamics, Structural Experimentation, Dynamic Soil-Structure Interaction, Damage in Reinforced Concrete Structures, Nondestructive Evaluation, Concrete
- Hota GangaRao - Ph.D., P.E. (North Carolina State University)
  Maurice A. and Jo Ann Wadsworth Distinguished Professor, Director of the Constructed Facilities Center, Director of the NSF Center for Integration of Composites into Infrastructure, Mathematical Modeling of Engineering Systems, Bridge Engineering, Composite Material Characterization and Implementation
- Udaya B. Halabe - Ph.D., P.E. (Massachusetts Institute of Technology)
  Nondestructive Evaluation and In-Situ Condition Assessment of Structures and Materials, Elastic and Electromagnetic (Radar) Wave Propagation, Structural Analysis and Design, Structural Dynamics and Wind/Earthquake Resistant Design
- Lian-Shin Lin - Ph.D., P.E. (Purdue University)
  Physiochemical and Biological Treatment, Innovative Wastewater Technologies, Emerging Coaminants, Sustainable Development, Watershed Pollution
- David R. Martinelli - Ph.D. (University of Maryland)
  Transportation Engineering, Traffic Operations, Systems Analysis, Infrastructure Management
- Radhey Sharma - Ph.D. (University of Oxford)
  Sustainable Infrastructure, Geotechnical Engineering and Geoenvironmental, Energy Engineering
- Hema J. Siriwardane - Ph.D., P.E. (Virginia Polytechnic Institute and State University)
  Geomechanics/Geotechnical Engineering, Finite Element Method, Computer Applications
- John P. Zaniewski - Ph.D., (University of Texas)
  Asphalt Technology Professor, Pavement Materials, Design, Construction, Maintenance, Infrastructure Management

ASSOCIATE PROFESSOR

- Omar I. Abdul-Aziz - Ph.D. (University of Minnesota, Twin Cities)
  Ecological-Water Resources Engineering; Scaling of Hydro-Ecological and Biochemical Variables; Modeling of Stream Water Quality and Ecosystem Carbon; Fluid Mechanics; Hydrology
- Karl Barth - Ph.D. (Purdue University)
  Jack H. Samples Distinguished Professor of Structures, Steel Structures, Bridge Design and Rehabilitation, Connections, Stability Analysis, Experimental Mechanics
- Fei Dai - Ph.D. (Hong Kong Polytechnic University)
  Construction Engineering, Construction Management, Construction Information Technologies
- Leslie Clark Hopkinson - Ph.D. (Virginia Polytechnic Institute and State University)
  Surface Hydrology, Environmental Hydraulics, Ecological Engineering, River Mechanics

- John D. Quaranta - Ph.D., P.E. (West Virginia University)
  Geotechnical/Geo-Environmental Engineering, Soil Testing and Characterization, Soil and Mine Waste Dewatering, Geo-Synthetics, Soil and Groundwater Remediation
- Yoojung Yoon - Ph.D. (Purdue University)
  Infrastructure Asset Management, Risk Management in Construction, Project Management and Control, Construction Equipment Management

ASSISTANT PROFESSORS

- Kakan Day - Ph.D. (Clemson University)
  Intelligent Transportation Infrastructure Design and Analysis; Connected and Automated Vehicle Technology; Traffic Operations; Big Data Analytics for Transportation Data Management; Artificial Intelligence in Transportation.
- Emily Garner - Ph.D. (Virginia Polytechnic Institute and State University)
  Environmental Engineering and Microbiology, Wastewater reuse and sustainable water treatment, Microbial ecology, Application of molecular tools and next generation sequencing technologies, Drinking water
- Seungho Hong - Ph.D. (Georgia Institute of Technology)
  Hydraulic engineering, Sediment transport, Erosion control
- P.V. Vijay - Ph.D. (West Virginia University)
  Concrete Structures; P Composite Structures for Bridges, Buildings, and Pavements; Aging of Structures and Rehabilitation, Recycled Polymers for Infrasture, Analytical Modeling
- Dimitra Pyrialakou - Ph.D. (Purdue University)
  Transportation Engineering, Transportation Planning and Evaluation, Public and Rail Transportation, Airport Operations, Transportation Econometrics, and Transportation Engineering Education.

RESEARCH ASSISTANT PROFESSORS

- Ruifeng (Ray) Liang - Ph.D. (Institute of Chemistry, Chinese Academy of Sciences)

PROFESSORS EMERITUS

- Ronald W. Eck - Ph.D. (Clemson University)
- W. Joseph Head - Ph.D. (Purdue University)
- Larry D. Luttrell - Ph.D. (Cornell University)
- William A. Sack - Ph.D. (Michigan State University)

ASSOCIATE PROFESSORS EMERITUS

- Robert N. Eli - Ph.D. (University of Iowa)
- Darrell R. Dean, Jr. - Ph.D. (Purdue University)

Masters Admissions

To be eligible for admission into the M.S.C.E. degree program, a candidate must fulfill either of the following:

- Hold or expect to receive a B.S.C.E. degree from either an accredited ABET curriculum or an internationally recognized program
- Have a superior academic record and a baccalaureate degree in another engineering field, mathematics, or science

Candidates with a baccalaureate degree in another field of engineering, mathematics, or science are also eligible for admission into the M.S.E. degree. Candidates are normally required to attain a baccalaureate level of proficiency in areas of emphasis of the department. An engineering technology (non-calculus based) degree is not sufficient qualification for admission into any of the graduate programs offered by the department.

Doctoral Admissions

To be eligible for admission into a doctorate of engineering program, a candidate is expected to hold or expect to receive a B.S. or an M.S. degree.

The requirements for admission into the graduate programs of the department are summarized as follows:

- A B.S. and/or M.S. degree in engineering from an institution which has an ABET accredited program in that discipline, or has an internationally recognized program in engineering, mathematics, or sciences (as specified by individual programs).
- Grade point average of 3.0 or better (out of a possible 4.0) in all previous college work and must meet all other requirements below.
- Three reference letters; at least two of the three references should be from the institution the applicant last attended.
- International applicants must submit proof of English language proficiency.
- All applicants are encouraged to submit GRE scores for fellowship and funding options. Applicants who have not received their undergraduate degree in the United States are required to submit GRE General Test scores with the Engineering Subject Test score being optional.

Curriculum in Masters of Science in Civil Engineering

A candidate for the M.S. degree in civil engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Civil and Environmental Engineering Department.

Program Requirements

All M.S. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required in all courses

Course Requirements [*]	
A minimum of 60% of courses must be from 500 level or above	
A minimum cumulative GPA of 3.0 is required in all coursework used for degree requirements	
Any CE courses 500-799	15
Select the following based on degree path:	9
Any AEM, AGBI, BIOC, BIOL, BIOM, BIOS, CE, CHE, CHEM, CPE, CS, EE, ENVP, GEOL, IENG, IH&S, MAE, MATH, MINE, PNGE, PHYS, SAFM, SENG, STAT, or WMAN courses 400-799	
Complete 1 of the following options:	6-12
Thesis Option - 6 hours	
CE 697 Research (6 hours)	
Written Research Proposal	
Thesis	
Final Oral or Written Examination	
Problem Report Option - 9 hours	
Complete 6 additional hours of coursework	
CE 697 Research (3 hours)	
Written Research Proposal	
Formal written report or professional report/paper	
Final Oral or Written Examination	
Coursework Option - 12 hours [**]	
Complete 12 additional hours of coursework	
Final Oral or Written Examination	
Total Hours	30-36

[*]   Students who do not hold a baccalaureate degree in civil engineering are required to take a set of undergraduate civil engineering courses above and beyond the minimum coursework requirements.

[**]   Although rarely permitted, this option is open to students with practical engineering experience or those who have demonstrated an ability to organize and develop a project and write a technical report. Approval to pursue this option must be obtained from the student's AEC, the graduate program coordinator, and the department chairperson.

Final Examination

M.S. students following the thesis or problem report option must prepare a written research proposal. The proposal must be approved by the student's AEC at least one semester prior to the final oral examination.

All students, regardless of option, are required to pass a final oral or written examination, administered by their AEC, covering the thesis or problem report and/or related course material.

Suggested Plan of Study

The plan below illustrates the Thesis Option. It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical M.S.C.E degree program that completes degree requirements in two years is as follows.

First Year

Fall	Hours	Spring	Hours
CE Course	3	CE Course	3
CE Course	3	Additional Course	6
Additional Course	3		
	9		9

Second Year

Fall	Hours	Spring	Hours
CE Course	3	CE Course	3
CE 697	3	CE 697	3
	6		6

Total credit hours: 30

Curriculum in Doctor of Philosophy – Civil Engineering

A candidate for the Ph.D. degree with a major in civil engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Civil and Environmental Engineering Department.

Program Requirements

The doctor of philosophy degree with a major in civil engineering is administered through the college's interdisciplinary Ph.D. program. The research work for the doctoral dissertation must show a high degree of originality on the part of the student and must constitute an original contribution to the art and science of civil engineering.

All Ph.D. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required in all courses	
A minimum cumulative GPA of 3.0 is required in all coursework used for degree requirements	
Course Requirements [*]	
Any AEM, AGBI, BIOC, BIOL, BIOM, BIOS, CE, CHE, CHEM, CPE, CS, EE, ENVP, GEOL, IENG, IH&S, MAE, MATH, MINE, PNGE, PHYS, SAFM, SENG, STAT, or WMAN courses 500-799	18
Research	24
CE 797 Research	
Examinations	
Qualifying Exam	
Candidacy Exam	
Final Exam	
Total Hours	42

[*]   Students who do not hold a baccalaureate degree in civil engineering are required to take a set of undergraduate civil engineering courses above and beyond the minimum coursework requirements.
A minimum of forty-two hours of coursework and thirty hours of independent research beyond a bachelor's degree, or eighteen hours of coursework and twenty-four hours of independent research beyond an M.S. degree are required.

Graduate Committee

For the Ph.D. program, the student, research advisor, academic advisor, and department chairperson appoint the student's AEC. Each committee must consist of at least five members, with at least three members from CEE, and at least one from outside the department. By the end of the Ph.D. student's second semester, the student, with the advice and consent of the academic advisor, graduate coordinator, and members of the student's AEC, submits a plan of study, initiated in CEE, to the dean.

Examinations

QUALIFYING EXAM

All students must take and pass a written qualifying examination. Normally, the qualifying examination is given no later than one semester after completion of eighteen credit hours toward the doctoral degree. This examination is designed to assess the basic competency of students in the civil engineering field to determine whether or not they have sufficient knowledge to undertake independent research.

CANDIDACY EXAMINATION

In order to be admitted to candidacy, the student must pass a candidacy exam, which is designed to evaluate the student's overall ability to engage in high-level research. After passing the qualifying examination, the student must submit to the AEC a written research proposal of his/her planned dissertation work and successfully defend it in an oral examination. The research proposal must be approved by the student's AEC. A student who has successfully completed all coursework, passed the qualifying examination, and successfully defended the research proposal, and receives the college's approval becomes a candidate for a Ph.D. degree in CE. Thereafter, the student will officially be engaged in dissertation research. At the completion of the dissertation research, the candidate must prepare a dissertation and defend it orally at the final defense conducted by the AEC.

A student who has successfully completed all coursework, passed the qualifying examination, and successfully defended the research proposal is defined as one who is a candidate for the Ph.D. degree.

FINAL EXAMINATION

At the completion of the dissertation research, candidates must prepare a dissertation and pass the final oral examination (defense) administered by their AEC.

In order to complete the Ph.D. requirements, a student must pass a final oral examination on the results embodied in the dissertation. This examination is open to the public and, in order to evaluate critically the student's competency, may include testing on material in related fields, as deemed necessary by the AEC. In addition, since the Ph.D. degree is primarily a research degree that embodies the results of an original research proposal and represents a significant contribution to scientific literature, the student must submit a manuscript on this research to the AEC.

Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical doctoral degree program that completes degree requirements in three years beyond an M.S. degree is as follows.

First Year

Fall	Hours	Spring	Hours
CE Course	3	Course	3
CE Course	3	Course	3
CE 797	3	CE 797	3
	9		9

Second Year

Fall	Hours	Spring	Hours
Course	3	Course	3
CE 797	6	CE 797	6
	9		9

Third Year

Fall	Hours	Spring	Hours
CE 797	9	CE 797	9
	9		9

Total credit hours: 54

Major Learning Outcomes

CIVIL ENGINEERING

PROGRAM OBJECTIVES

- Have the ability to work on multidisciplinary teams, have high technical competence, and have the ability to meet present and future challenges in a specialty area of civil and environmental engineering
- Have the ability to effectively plan and execute scientific research or other high-level investigations using the most current methods and techniques in the civil and environmental engineering fields

- Have the ability to effectively communicate the results of their research or investigations through writing and oral presentations
- Have the ability to contribute to the body of engineering knowledge and/or to economic growth by developing the science, the materials, and the technology necessary to deliver vital infrastructure services in the most cost effective manner while protecting the health, safety, and welfare of human society

PROGRAM OUTCOMES

- Graduates will have an ability to function on teams involving multiple civil engineering specialties.
- Graduates will have an ability to apply advanced methodologies in their specialty area.
- Graduates will have an ability to effectively communicate technical information.
- Graduates will have an ability to design and conduct experiments, analyze and interpret data, and develop recommendations.
- Graduates will have an understanding of professional and ethical responsibility.
- Graduates will have an ability to understand the impact of engineering solutions in global and societal context.
- Graduates will have a recognition of the need to engage in life-long learning.
- Graduates will have an ability to use contemporary techniques, skills, and tools necessary for engineering practice in education, industry, and/or government.

STUDENT LEARNING OUTCOMES

- Graduates will meet the academic standards required by WVU for those in graduate school while completing courses pertinent to their specialty area and as specified in their plan of study.
- Graduates will conduct experimental or investigatory work necessary to satisfy the requirements of either the thesis option or report option for graduation.
- Graduates will write and orally defend a thesis, a report, or a dissertation.
- Graduates will serve in primary roles as graduate research assistants on research projects or on problem investigations sponsored by companies, associations, or government agencies looking for new methodology or science to resolve problems associated with the planning, design, construction, operation, and maintenance of the infrastructure or for related needs.

Lane Department of Computer Science and Electrical Engineering

Degrees Offered

- Master of Science, Computer Science (M.S.C.S.)
- Master of Science, Electrical Engineering (M.S.E.E.)
- Master of Science, Software Engineering (M.S.S.E.)
- Doctor of Philosophy, Computer Engineering (Ph.D.)
- Doctor of Philosophy, Electrical Engineering (Ph.D.)
- Doctor of Philosophy, Computer Science (Ph.D.)

Graduate Certificates Offered

- Graduate certificate in software engineering
- Graduate certificate in computer forensics

Overview of Programs

The Lane Department of Computer Science and Electrical Engineering offers master's programs leading to a master of science in computer science (M.S.C.S.), a master of science in electrical engineering (M.S.E.E.), and a master of science in software engineering (M.S.S.E.). It also participates in the College of Engineering and Mineral Resources interdisciplinary program offering the master of science in engineering (M.S.E.). Master of science students must comply with the rules for master's degrees as set forth by the college in the Guidelines for Masters Degree Programs Offered in the College of Engineering and Mineral Resources and by the Department in the Masters of Science Program Guidelines.

The department also offers programs leading to the doctor of philosophy (Ph.D.) in computer science and the doctor of philosophy (Ph.D.) in engineering with specialization in electrical engineering or computer engineering. Ph.D. students must comply with the rules set forth by both the College's Doctor of Philosophy Program Guidelines and by the Department in the Doctor of Philosophy Program Guidelines.

The department also offers graduate certificates in computer forensics and software engineering, which may be completed as part of a degree program or as a certificate only.

Program Educational Objectives and Outcomes

The common educational objectives of all the graduate programs in the Lane Department is to produce graduates who have the knowledge, skills, and attitudes that will ensure success in professional positions in business, industry, research, government service, or in further graduate or professional study. The requirements and outcomes of specific degree and certificate programs are described in the catalog pages specific to those programs.

Facilities and Centers

The Lane Department of CSEE has its main office, instructional lab, and research lab space on the Evansdale campus occupying the Advanced Engineering Research Building along with resources in the Engineering Sciences Building and the Engineering Research Building. The department also has facilities located in Armstrong Halls on the downtown campus.

The department is home to two university research centers: the Center for Identification Technology Research (CITeR), which is designated an Industry/University Cooperative Research Center by the National Science Foundation; and the Center for Advanced Power & Energy Research (APERC). The Department and University are designated as a Center of Academic Excellence in Cyber Defense Education and Research by the National Security Agency and Department of Homeland Security.

The department and college host a modern 4,000 square foot clean room facility for device and sensor fabrication, under the management of the university's Shared Research Facilities. The university is also home to an outstanding set of faculty-led laboratory facilities, in areas that include electronic and photonic material, biometrics, communications, digital and analog signal processing, power electronics, robotics, high reliability software, computer security, computer forensics, artificial intelligence, virtual environments, theoretical computer science, and electric vehicles.

All graduate students have access to a broad variety of computing platforms for both classwork and research. The department operates and maintains a variety of dedicated computer systems, clusters, and networks supporting both the instructional and research activities of the department. These systems include numerous Windows workstations and a cluster of Linux Servers. Students have access to a rich set of software packages and tool suites available either on department systems or the College of Engineering and Mineral Resources systems. All computing systems have internet access enabling worldwide connectivity and access to several additional computing services via the Pittsburgh Supercomputing Center. The university is also a member of Internet2, of which faculty in the department are active participants.

Areas of Research

The department is enthusiastically and vigorously involved in research, technical publication, and graduate instruction at the forefront of the field. Academic and research activity is organized into five areas:

- Electronics and photonics
- Systems and signals
- Computer systems
- Software and knowledge engineering
- Theory of computation

FACULTY

CHAIR

- Matthew Valenti - Ph.D., P.E. (Virginia Tech)
  Communication Theory, Wireless Systems, Error Control Coding

PROFESSORS

- Donald Adjeroh - Ph.D. (Chinese University of Hong Kong)
  Associate Department Chair and Graduate Coordinator for Computer Science. Multimedia information systems (image, video, and audio), Distributed multimedia systems, Data analytics
- Muhammad Choudhry - Ph.D. (Purdue University)
  Graduate Coordinator for Computer Engineering and Electrical Engineering. Power system control, DC transmission, Stability, Power electronics
- Parviz Famouri - Ph.D. (University of Kentucky)
  Associate Department Chair. Analysis and control of electrical machines, Motor drives, Power electronics, Electric vehicles
- Ali Feliachi - Ph.D. (Georgia Institute of Technology)
  Power systems, Large-scale systems, Control
- Katerina Goseva-Popstojanova - Ph.D. (Ss. Cyril and Methodius University)
  Software engineering, Cybersecurity, Empirical studies, Data analytics
- Powsiri Klinkhachorn - Ph.D. (West Virginia University)
  Microprocessor applications, Computer architecture, Binary and non-binary logic
- Dimitris Korakakis - Ph.D. (Boston University)

Semiconductor growth, Nanotechnology, Photonic devices, Biosensors

- Xin Li - Ph.D. (Princeton University)
Image processing, Computer vision, Pattern recognition
- Nasser Nasrabadi - Ph.D. (Imperial College, London)
Image and video processing, Biometrics, Video analytics
- Roy Nutter Jr. - Ph.D., P.E. (West Virginia University)
Neural networks, Microprocessor systems, Computer architecture, Computer forensics
- Y.V. Ramana Reddy - Ph.D. (West Virginia University)
Artificial intelligence, Knowledge-based simulation, Computer graphics
- Natalia Schmid - Ph.D. (Washington University)
Detection and estimation, Statistical signal and image processing, Biometrics, Information theory, Wireless sensor networks, Signal processing for radio astronomy
- K. Subramani - Ph.D. (University of Maryland)
Scheduling, Computational biology, Computational complexity, Polyhedral combinatorics
- Brian Woerner - Ph.D. (University of Michigan)
Wirelesss communications, Networking, Cybersecurity

ASSOCIATE PROFESSORS

- Thirimachos Bourlai - Ph.D. (University of Surrey)
Biomedical image processing, Pattern recognition
- Xian-An Cao - Ph.D. (University of Florida)
Nanofabrication, Opto-electronic devices
- Jeremy Dawson - Ph.D. (WVU)
Photonics, Nanofabrication, Biometrics data sensing and Rapid DNA analysis
- Gianfranco Doretto - Ph.D. (University of California - Los Angeles)
Computer vision, Statistical pattern recognition, Biometrics, Image processing, Computer graphics
- Elaine Eschen - Ph.D. (Vanderbilt University)
CCDM Program Director, Design and analysis of algorithms, Graph theory, Combinatorics
- David Graham - Ph.D. (Georgia Institute of Technology)
Analog signal processing
- Guodong Guo - Ph.D. (University of Wisconsin, Madison)
Computer vision, Biometrics, Human computer interaction
- Sarika Khushalani-Solanki - Ph.D. (Mississippi State University)
Power/energyconversion, Power systems, Controls, Signals and systems
- Yuxin Liu - Ph.D. (Louisiana Tech University)
Biotechnology/bioengineering, BioMEMS and microfluidics, Cellular senor, Tissue engineering
- Daryl Reynolds - Ph.D. (Texas A&M)
Statistical signal processing for communications, Iterative (turbo) processing, Transmitter pre-coding, Space-time coding and processing
- Frances VanScoy - Ph.D. (University of Virginia)
Programming languages and compilers, Multisensory computing, High performance computing

ASSISTANT PROFESSOR

- Kevin Bandura - Ph.D. (Carnegie Mellon University)
Radio astronomy, Digital signal processing, Antennas

RESEARCH ASSISTANT PROFESSORS

- Saiph Savage - Ph.D. (University of California - Santa Barbara)
Machine learning, Human computer interaction, Data analytics for social networks
- Jignesh Solanki - Ph.D. (Pennsylvania State University)
Power engineering, Smart grids, Decentralized control of power systems, Control and automation of distribution and transmission systems

TEACHING ASSISTANT PROFESSOR

- Brian Powell - Ph.D. (West Virginia University)
Software engineering, Programming, Image processing

TEACHING INSTRUCTORS

- Camille Hayhurst - M.S. (West Virginia University)
- Ron Reaser - M.S. (West Virginia University)

RESEARCH ASSOCIATES

- Dale Dzielski - M.B.A., C.M.A., P.M.P. (Regent University)
  Graduate Coordinator for Software Engineering. Software project management, Business process management/supply chain, Enterprise architecture, Architecture technical debt
- David Krovich - M.S. (West Virginia University)
  Cybersecurity, Networking, Operating systems, Open-source software
- Don McLaughlin - M.A. (West Virginia University)
  Artificial intelligence, High performance computing, Data science, Computer graphics

LECTURERS

- Kenneth Costello - M.S. (West Virginia University)
- Martin Dombrowski - M.S. (West Virginia University)
- Jeffrey Edgell - M.S. (Stephens Institute of Technology)
- Lawrence Jacowitz - Ph.D. (Ohio State University)
- Gregory Mundy - M.Sc. (West Virginia University)
- Cynthia Tanner - M.S. (West Virginia University)
- Scott Warden - M.S. (West Virginia University)

ADJUNCT PROFESSORS

- Omid Dehzangi - Ph.D. (Nanyang Technological University)
  Data structures, Expert and decision support systems, Big data, Data mining, Artificial intelligence
- Victor Fragoso - Ph.D. (University of California - Santa Barbara)
  Computer vision, Machine learning
- Yu Gu - Ph.D. (West Virginia University)
  Robotics, Design, Automatic controls, Mechatronics
- Lawrence Hornak - Ph.D. (Rutgers University)
  Optics, Integrated Optics, Micro/Nano Structures and Devices, Biosensors, Biometrics
- V. Jagannathan - Ph.D. (Vanderbilt University)
  Distributed intelligent systems, Internet and security technologies, Natural language processing
- V. Kulathumani - Ph.D. (Ohio State University)
  Wireless sensor actuator networks, Scalable and fault tolerant distributed systems
- Guiherme Pereira - Ph.D. (Federal University of Minas Gerais, Brazil)
  Field robotics, Autonomous vehicles, Sensor fusion, Multi-robot systems
- Sumitra Reddy - Ph.D. (West Virginia University)
  Healthcare Informatics, Componentware, Intelligent Systems, Information Technology Evolution
- Yanfang Ye - Ph.D. (Xiamen University)
  Computer security, Malware detection, Machine learning

PROFESSORS EMERITI

- Hany Ammar - Ph.D. (University of Notre Dame)
- John Atkins - Ph.D. (University of Pittsburgh)
- Wils Cooley - Ph.D., P.E. (Carnegie Mellon University)
- William Dodrill - M.S. (Columbia University)
- Mark Jerabek - Ph.D., P.E. (Purdue University)
- Ronald Klein - Ph.D. (University of Illinois)
- Robert McConnell - Ph.D. (University of Kentucky)
- James Mooney - Ph.D. (Ohio State University)
- George Trapp - Ph.D. (Carnegie Mellon University)

Computer Engineering, Ph.D.

Degree Offered

- Doctor of Philosophy, Computer Engineering (Ph.D.)

Nature of the Program

The Doctor of Philosophy program should be considered by those with superior academic achievement and who desire to pursue a career of research or teaching. Students interested in the Ph.D. program in computer engineering should see our web page at http://www.csee.wvu.edu (http://www.csee.wvu.edu/) for information. If additional information is needed, contact the graduate coordinator of electrical and computer engineering.

Program Educational Objectives & Outcomes

The educational objective of the Ph.D. program in Computer Engineering is to produce graduates who have the knowledge, skills, and attitudes that will ensure success in professional positions in business, industry, research, government service, or in further graduate or professional study.

Specific outcomes of the program are:

1. Achieve a depth of knowledge in core computer engineering subjects, as demonstrated by completion of core Ph.D. courses and examination on those subjects through the Qualifying Examination process.
2. Achieve a breadth of advanced knowledge to support research, as demonstrated by completion of doctoral level coursework and graduate seminar participation.
3. Achieve an ability to carry out independent research, as demonstrated by successful completion and defense of a dissertation.

Admissions

All applicants must provide the items below to be considered for admission:

- A minimum cumulative grade point average of 3.0 or equivalent, based on a 4.0 system.
- Three letters of reference.
- Statement of purpose.
- International applicants must submit proof of English language proficiency.
- All graduate degree programs require the GRE general test, with a suggested score of either the 80th percentile on the quantitative part or 80th percentile total (verbal + quantitative + analytical).
- All graduate degree programs require an appropriate bachelors or master's degree for entry.   Students lacking some foundation courses appropriate to a particular degree program may be assigned some remedial coursework as a condition of admission.

Students who hold a M.S. degree in Electrical Engineering or Computer Engineering (or equivalent degree) will be considered for admission with regular status into the Ph.D. program. Students who hold a Masters degree in the sciences or engineering, excluding M.S.E.E. or M.S.E., will be considered for admission with provisional status and will likely have coursework deficiencies to remove. All other students must apply for admission into a master's program as the first stage in attaining the Ph.D.

FOUNDATION ASSESSMENT

Prior to the first week of classes, new Ph.D. students must meet with the graduate coordinator to select classes. This interview determines if the student needs remedial work in order to pursue a graduate degree. Students with deficiencies may be required to take courses as prerequisites for graduate courses. Deficiencies are usually noted as a condition for admission. However, they may also be specified during the interview or later.

During the second semester, students must form their Advisory and Examining Committee (AEC) and write a plan of study. The AEC may also identify additional deficiencies to be removed, but this is rare since deficiencies should have been identified earlier in the student's career.

Curriculum in Doctor of Philosophy –Computer Engineering

A candidate for the Ph.D. degree with a major in computer engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Lane Department of Computer Science and Electrical Engineering.

Program Requirements

The doctor of philosophy degree with a major in computer engineering is administered through the college's interdisciplinary Ph.D. program. The research work for the doctoral dissertation must show a high degree of originality on the part of the student and must constitute an original contribution to the art and science of computer engineering.

All Ph.D. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The

underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Research work for the doctoral dissertation must represent a significant contribution to engineering or computer science. It may entail a fundamental investigation into a specialized area.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required

Course Requirements *		
A minimum of six credit hours of 600 or higher level courses		
A maximum of six credit hours may be in directed study (CPE 795)		
Select from the following based on degree path:		18
Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, IH&S, MAE, MATH, MINE, PNGE, PHYS, SAFM, SENG, or STAT courses 500-799		
Research		24
CPE 797	Research	
Examinations		
Qualifying Exam		
Candidacy Exam		
Final Exam		
Total Hours		42

*   Students who do not hold a baccalaureate degree in computer engineering are required to take a set of undergraduate computer engineering courses above and beyond the minimum coursework requirements.

Doctoral students who do not have an M.S.C.S. or M.S.E.E. degree must either earn this degree, or complete coursework as required for the master's degree with thesis option. It is not necessary to actually write a thesis. A minimum of twenty-four hours of coursework is required. Up to twelve hours may be transferred from work done at another institution.

A minimum of forty-two hours of coursework and thirty hours of independent research beyond a bachelor's degree, or eighteen hours of coursework and twenty-four hours of independent research beyond an M.S. degree are required.

Examinations

QUALIFYING EXAM

All students must take and pass a written qualifying examination. Normally, the qualifying examination is given no later than one semester after completion of eighteen credit hours toward the doctoral degree. This examination is designed to assess the basic competency of students in the computer engineering field to determine whether or not they have sufficient knowledge to undertake independent research.

The Lane Department of Computer Science and Electrical Engineering is organized in the following five Areas of Concentration. All Ph.D. degree programs use these Areas to provide organizational structure to the educational process as delineated under specific Ph.D. requirements. The significance of these Areas will be of particular importance in preparation for the Qualifying Exam as each area has designated Ph.D. Qualifier Core Courses as follows:

1. Electronics and Photonics Area	
EE 550	Advanced Semiconductor Electronics
EE 551	Linear Integrated Circuits
EE 650	Optoeletronics
2. Signals and Systems Area	
EE 513	Stochastic Systems Theory
EE 515	Linear Control Systems
EE 533	Computer Applications in Power System Analysis
3. Computer Systems	
CPE 670	Switching Circuit Theory 1
CS 550	Theory of Operating Systems
4. Software/Knowledge Engineering	
CPE 684	Advanced Real-Time Systems
CS 573	Advanced Data Mining
CS 677	Pattern Recognition

5. Theory of Computing

CS 510	Formal Specification of Language
CS 520	Advanced Analysis of Algorithms
CS 525	Computational Complexity

Ph.D. students must make the first attempt to pass the qualifying exam within fourteen months of their enrollment if they already have a M.S. degree from the Lane Department of CSEE or within twenty-six months otherwise. The Ph.D. qualifying process consists of completion of a research project and oral examination. The project is intended to demonstrate the student's ability to assemble and analyze the relevant literature for a given research problem and to make preliminary steps towards his/her own contribution.

The oral exam will include:

1. Presentation by the student of his/her research project
2. Questions about the work, its context, and relevant literature
3. Questions about course work, focusing specifically on the three core courses for which the student has earned credit

The possible outcomes of the first year exam are: "Pass" which means the student is qualified to begin work towards the candidacy exam; "Pass with Recommended Coursework" which means the student is qualified to begin work towards a candidacy exam but certain courses must be taken; or "Fail". Any student failing the qualifying exam on the initial attempt will have one additional attempt within six months. Failure of the exam on the second attempt will disqualify the student from further doctoral studies in the LCSEE program.

CANDIDACY EXAMINATION

In order to be admitted to candidacy, the student must pass a candidacy exam, which is designed to evaluate the student's overall ability to engage in high-level research.

When all requirements are completed, the qualifying and candidacy examinations are passed, and the research proposal is successfully defended, the student is formally admitted to candidacy for the Ph.D. degree. For full-time students, admission to candidacy must normally occur within three years of entering the Ph.D. program.

FINAL EXAMINATION

At the completion of the dissertation research, candidates must prepare a dissertation and pass the final oral examination (defense) administered by their AEC.

In order to complete the Ph.D. requirements, a student must pass a final oral examination on the results embodied in the dissertation. This examination is open to the public and, in order to evaluate critically the student's competency, may include testing on material in related fields, as deemed necessary by the AEC. All requirements for the degree must be completed within five years after the student has been admitted to candidacy.

Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical doctoral degree program that completes degree requirements in three years is as follows. A typical Ph.D. program requires four to five years beyond the baccalaureate degree, although scholarly achievements are more important than length of program.

First Year

Fall	Hours	Spring	Hours
Course	3	Course	3
Course	3	Course	3
CPE 797	3	CPE 797	3
	9		9

Second Year

Fall	Hours	Spring	Hours
CPE 797	6	CPE 797	6
Course	3	Course	3
	9		9

Third Year

Fall	Hours	Spring	Hours
CPE 797	9	CPE 797	9
	9		9

Total credit hours: 54

Major Learning Outcomes

COMPUTER ENGINEERING

It is our goal that in the first five years after graduation our students will:

1. Achieve success and proficiency in the Computer Engineering profession.
2. Be recognized as leaders.
3. Contribute to the well-being of society.

Computer Science, M.S.C.S., Ph.D.

Degrees Offered

- Master of Science in Computer Science (M.S.C.S)
- Doctor of Philosophy in Computer Science (Ph.D.)

Nature of the Program

The Masters of Science in Computer Science (M.S.C.S.) degree program qualifies a student to assume a professional role in industry or government, teach in a junior or senior college, or undertake advanced training toward a doctorate in computer science. The following sections describe the general procedures to be followed in completing the M.S.C.S. degree. Note that steps are intended to be carried out in a specific order.

Program Educational Objectives & Outcomes

The objective of the Masters of Science in Computer Science (M.S.C.S.) degree program is to produce graduates who have the knowledge, skills, and attitudes that will ensure success in professional positions in business, industry, research, government service, or in further graduate or professional study.

Specific outcomes that will be achieved by graduates of the program are:

- Achieve a depth of proficiency in a specific field of Computer Science by completing major courses in one of three areas: computer systems, software and knowledge engineering, or the theory of computation.
- Achieve a breadth of understanding of Computer Science by completing minor coursework requirements in other areas, and by participation in graduate seminar requirements.
- Demonstrate professionalism and communication skills through completion of coursework, project, or thesis defense.

Admissions

All Masters and Ph.D. programs require applicants to provide the items below to be considered for admission.

- A minimum cumulative grade point average of 3.0 or equivalent, based on a 4.0 system.
- Three letters of reference.
- International applicants must submit proof of English language proficiency.
- All graduate degree programs require the GRE general test, with an expected score of 3.5 or better in analytical writing, and either the 80th percentile or better on the quantitative part, or a combined score of 300 or better in (verbal + quantitative).
- All graduate degree programs require an appropriate bachelors or master's degree for entry.   Students lacking some foundation courses appropriate to a particular degree program may be assigned some remedial coursework as a condition of admission.

FOUNDATION ASSESSMENT

The minimum background expected of any student entering the M.S.C.S. program is coursework equivalent to the following:

- One year of calculus (MATH 155 (http://catalog.wvu.edu/search/?P=MATH%20155) and MATH 156 (http://catalog.wvu.edu/search/?P=MATH%20156)).

- One course in probability and statistics (STAT 215 (http://catalog.wvu.edu/search/?P=STAT%20215)).
- Knowledge of introductory programming in a high-level programming language (CS 110 (http://catalog.wvu.edu/search/?P=CS%20110)).

Students not meeting these minimum requirements will be required to take the equivalent coursework before applying to the M.S.C.S. program.

Students entering without a four-year Bachelors degree in Computer Science may have additional deficiencies in their coursework which must be addressed before beginning the regular M.S.C.S. program. These students will be initially admitted with provisional status and required to remove these deficiencies during their first eighteen hours of coursework.

Possible deficiency areas for students having a Bachelors degree in other disciplines represent the following core areas required of all undergraduate CS students:

CS 111	Introduction to Data Structures	4
CS 220	Discrete Mathematics	3
CS 230	Introduction to Software Engineering	4
CS 310	Principles of Programming Languages	3
CS 320	Analysis of Algorithms	3
CS 350	Computer System Concepts	3

As demand justifies and resources permit, the department will offer accelerated courses to assist graduate students in satisfying deficiencies.

Curriculum in Masters of Science in Computer Science

A candidate for the M.S. degree in computer science must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Lane Department of Computer Science and Electrical Engineering.

Program Requirements

All M.S. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required

Course Requirements [*]		
No more than 9 credit hours may be at the 400 level.		
CS 796	Graduate Seminar	1
Area of Concentration		
Complete one Area of Concentration in any area:		9
One Core course		
Two Elective courses		
Complete 6 additional credit hours core courses from the other two areas that are not the area of concentration.		6
Elective Courses		**9**
Choose 9 additional credit hours from the courses listed in any CS area of concentration		
Complete 1 of the following options:		**7-9**
Thesis Option - 7 hours		
CS 796	Graduate Seminar (1 hour)	
CS 697	Research (6 hours)	
Thesis		
Final Oral or Written Examination		
Problem Report Option - 9 hours		
Complete a minimum 6 additional hours of coursework, at least 3 hours of which must be from the completed area of concentration.		
CS 697	Research (3 hours)	
Formal written report or professional report/paper		
Final Oral or Written Examination		
Coursework Option - 9 hours		

Complete a minimum of 9 additional hours of coursework, at least 6 hours of which must be from the completed area of concentration.	
Total Hours	32-34

*   Students who do not hold a baccalaureate degree in computer science are required to take a set of undergraduate computer science courses above and beyond the minimum coursework requirements.

Areas of Concentration

COMPUTER SYSTEMS

Core Courses

CPE 553	Advanced Networking Concepts
CPE 670	Switching Circuit Theory 1

Elective Courses

CPE 435	Computer Incident Response
CPE 520	Application of Neural Networks
CPE 521	Applied Fuzzy Logic
CPE 536	Computer Data Forensics
CPE 538	Intro Computer Security Management
CPE 664	Sensor Actuator Networks
CS 453	Data and Computer Communications
CS 533	Developing Portable Software
CS 539	Computer Forensics and the Law
CS 555	Advanced Computer Systems Architecture
CS 556	Distributed and Pervasive Compt
CS 568	Computer Network Forensics

SOFTWARE/KNOWLEDGE ENGINEERING

Core Courses

CPE 684	Advanced Real-Time Systems
CS 573	Advanced Data Mining
CS 630	Empirical Methods in Software Engineering and Computer Science
CS 677	Pattern Recognition

Elective Courses

BIOM 693	Special Topics (Advanced Biometrics)
CS 533	Developing Portable Software
CS 558	Multimedia Systems
CS 572	Advanced Artificial Intelligence Techniques
CS 665	Computer System Security
CS 674	Computational Photography
CS 676	Machine Learning
CS 678	Computer Vision
CS 757	Distributed Systems and Algorithms
CS 793	Special Topics (Search-based Software Engineering, Software Reliability)
EE 565	Advanced Image Processing
SENG 530	Software Verification and Validation

THEORY OF COMPUTING

Core Courses

CS 510	Formal Specification of Language
CS 520	Advanced Analysis of Algorithms
CS 525	Computational Complexity

Elective Courses

CS 410	Compiler Construction

CS 420	Design of Algorithms
CS 422	Automata Theory
CS 426	Discrete Mathematics 2
CS 593	Special Topics (Network Optimization)
CS 623	String Algorithms
CS 693	Special Topics (Fixed Parameter Algorithms)
CS 677	Pattern Recognition
CS 726	Algorithmic Graph Theory
CS 727	Information Dissemination
CS 793	Special Topics (Approximation Algorithms)
CS 793	Special Topics (Randomized Algorithms)

Final Examination

M.S. students following the thesis or problem report option must prepare a written research proposal. The proposal must be approved by the student's AEC at least one semester prior to the final oral examination.

All students following the thesis or problem report option are required to pass a final oral or written examination, administered by their AEC, covering the thesis or problem report and/or related course material.

All master's students must defend their thesis or problem report at an oral exam, attended by all members of the committee.

A student who fails the research defense may repeat the defense at most once, at a time determined by the AEC but not necessarily during the same semester.

Suggested Plan of Study

The plan below illustrates the Thesis Option. It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical M.S.C.S degree program that completes degree requirements in one and half years is as follows. Those students who lack course prerequisites may require more than three semesters of full-time study to complete the degree. Students with research assistantships may also require more than three semesters to complete the degree.

First Year

Fall	Hours	Spring	Hours
Area of Concentration 1 Core Course	3	Area of Concentration 1 Elective Course	3
Area of Concentration 1 Elective Course	3	Area of Concentration 2 Core Course	3
Elective Course	3	Elective Course	3
CS 796	1	CS 796	1
	10		10

Second Year

Fall	Hours
Area of Concentration 3 Core Course	3
Elective Course	3
CS 697	6
	12

Total credit hours: 32

AREA OF EMPHASIS IN COMPUTATIONAL DATA SCIENCE

Data Science Core *		
CS 560	Big Data Engineering	3
Select one of the following:		3
CS 573	Advanced Data Mining	
CS 676	Machine Learning	
CS 677	Pattern Recognition	
Data Science Electives ** *		**6**
Cyber-Security:		
CS 568	Computer Network Forensics	

CS 569	Cybersecurity and Big Data Analytics	
Theoretical Foundations:		
CS 520	Advanced Analysis of Algorithms	
CS 540	Theory of Database Systems	
CS 623	String Algorithms	
Image and Video Analytics:		
CPE 520	Application of Neural Networks	
CS 593	Special Topics (3-D Computer Vision)	
CS 678	Computer Vision	
CS 674	Computational Photography	
Software Engineering:		
CS 630	Empirical Methods in Software Engineering and Computer Science	
Total Hours		12

*   Students pursuing this area of emphasis must successfully complete a total of 12 hours in identified data science courses. To fulfill the requirements for the Area of Emphasis in Computational Data Science graduate students must successfully complete the following set of courses: two courses from the Data Science core, one of which must be CS 560 – Big Data Engineering, plus one other course from the Data Science core; and two courses (6 credit hours) from the Data Science electives listed in the accompanying table. Students are encouraged but not required to choose Data Science elective courses from the same topic area. This is intended to foster a more concentrated focus in the student's data science expertise. Students may also, if they choose, take one of the Data Science core courses, not already taken, as a data science elective.

**   Students may choose to take one optional elective course from a department other than the Lane Department of Computer Science and Electrical Engineering. Courses outside of the Lane Department to satisfy the elective requirements of this area of emphasis must be approved by the Lane Department's Computational Data Science coordinator.

AREA OF EMPHASIS IN CYBERSECURITY

A 3.0 GPA is required in AOE coursework.

Required Courses		
CPE 536	Computer Data Forensics	3
CPE 568	Computer Network Forensics	3
CS 539	Computer Forensics and the Law	3
Select one of the following:		**3**
CPE 538	Intro Computer Security Management	
CS 569	Cybersecurity and Big Data Analytics	
Total Hours		12

Curriculum in Doctor of Philosophy –Computer Science Requirements

A candidate for the Ph.D. degree with a major in computer science must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Lane Department of Computer Science and Electrical Engineering.

Program Requirements

The doctor of philosophy degree with a major in computer science is administered through the college's interdisciplinary Ph.D. program. The research work for the doctoral dissertation must show a high degree of originality on the part of the student and must constitute an original contribution to the art and science of computer science.

All Ph.D. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Research work for the doctoral dissertation must represent a significant contribution to engineering or computer science. It may entail a fundamental investigation into a specialized area.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required

Course Requirements [*]		
A minimum of six credit hours of 600 or higher level courses		
A maximum of six credit hours may be in directed study (CS 795)		
Research		24
CS 797	Research	
Select from the following based on degree path:		18
Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, IH&S, MAE, MATH, MINE, PNGE, PHYS, SAFM, SENG, or STAT courses 500-799		
Examinations		
Qualifying Exam		
Candidacy Exam		
Final Exam		
Total Hours		42

[*] Students who do not hold a baccalaureate degree in computer science are required to take a set of undergraduate computer science courses above and beyond the minimum coursework requirements.

Doctoral students who do not have an M.S.C.S. degree must either earn this degree or complete coursework as required for the M.S.C.S. with thesis option. It is not necessary to actually write a thesis. A minimum of twenty-four hours of coursework is required. Up to twelve hours may be transferred from work done at another institution.

A minimum of forty-two hours of coursework and thirty hours of independent research beyond a bachelor's degree, or eighteen hours of coursework and twenty-four hours of independent research beyond an M.S. degree are required.

Examinations

QUALIFYING EXAM

All students must take and pass a written qualifying examination. Normally, the qualifying examination is given no later than one semester after completion of eighteen credit hours toward the doctoral degree. This examination is designed to assess the basic competency of students in the computer science field to determine whether or not they have sufficient knowledge to undertake independent research.

The Lane Department of Computer Science and Electrical Engineering is organized in the following five Areas of Concentration. All Ph.D. degree programs use these Areas to provide organizational structure to the educational process as delineated under specific Ph.D. requirements. The significance of these Areas will be of particular importance in preparation for the Qualifying Exam as each area has designated Ph.D. Qualifier Core Courses as follows:

1. Electronics and Photonics Area	
EE 550	Advanced Semiconductor Electronics
EE 551	Linear Integrated Circuits
EE 650	Optoeletronics
2. Signals and Systems Area	
EE 513	Stochastic Systems Theory
EE 515	Linear Control Systems
EE 533	Computer Applications in Power System Analysis
3. Computer Systems	
CPE 670	Switching Circuit Theory 1
CS 550	Theory of Operating Systems
4. Software/Knowledge Engineering	
CPE 684	Advanced Real-Time Systems
CS 573	Advanced Data Mining
CS 677	Pattern Recognition
5. Theory of Computing	
CS 510	Formal Specification of Language
CS 520	Advanced Analysis of Algorithms
CS 525	Computational Complexity

Ph.D. students must make the first attempt to pass the qualifying exam within fourteen months of their enrollment if they already have a M.S. degree from the Lane Department of CSEE or within twenty-six months otherwise. The Ph.D. qualifying process consists of completion of a research project and oral examination. The project is intended to demonstrate the student's ability to assemble and analyze the relevant literature for a given research problem and to make preliminary steps towards his/her own contribution.

The oral exam will include:

1. Presentation by the student of his/her research project
2. Questions about the work, its context, and relevant literature
3. Questions about course work, focusing specifically on the three core courses for which the student has earned credit

The possible outcomes of the first year exam are: "Pass" which means the student is qualified to begin work towards the candidacy exam; "Pass with Recommended Coursework" which means the student is qualified to begin work towards a candidacy exam but certain courses must be taken; or "Fail". Any student failing the qualifying exam on the initial attempt will have one additional attempt within six months. Failure of the exam on the second attempt will disqualify the student from further doctoral studies in the LCSEE program.

CANDIDACY EXAMINATION

In order to be admitted to candidacy, the student must pass a candidacy exam, which is designed to evaluate the student's overall ability to engage in high-level research.

When all requirements are completed, the qualifying and candidacy examinations are passed, and the research proposal is successfully defended, the student is formally admitted to candidacy for the Ph.D. degree. For full-time students, admission to candidacy must normally occur within three years of entering the Ph.D. program.

FINAL EXAMINATION

At the completion of the dissertation research, candidates must prepare a dissertation and pass the final oral examination (defense) administered by their AEC.

In order to complete the Ph.D. requirements, a student must pass a final oral examination on the results embodied in the dissertation. This examination is open to the public and, in order to evaluate critically the student's competency, may include testing on material in related fields, as deemed necessary by the AEC. All requirements for the degree must be completed within five years after the student has been admitted to candidacy.

Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical doctoral degree program that completes degree requirements in three years is as follows. A typical Ph.D. program requires four to five years beyond the Baccalaureate degree, although scholarly achievements are more important than length of program.

First Year

Fall	Hours	Spring	Hours
Course	3	Course	3
Course	3	Course	3
CS 797	3	CS 797	3
	9		9

Second Year

Fall	Hours	Spring	Hours
CS 797	6	CS 797	6
Course	3	Course	3
	9		9

Third Year

Fall	Hours	Spring	Hours
CS 797	9	CS 797	9
	9		9

Total credit hours: 54

Major Learning Outcomes

COMPUTER SCIENCE

It is our goal that in the first five years after graduation our students will:

1. Achieve success and proficiency in the Computer Science profession.
2. Be recognized as leaders.
3. Contribute to the well-being of society.

Electrical Engineering, M.S.E.E., Ph.D.

Degrees Offered

- Masters of Science, Electrical Engineering (M.S.E.E.)
- Doctor of Philosophy, Electrical Engineering (Ph.D.)

Nature of the Program

The Masters of Science in Electrical Engineering (M.S.E.E.) degree program is intended for students who have an undergraduate degree in Electrical Engineering, Computer Engineering, or a closely related discipline, and wish to broaden their depth of understanding in one or more areas of the field. Program graduates will be qualified to pursue careers in industry, government, or further academic study. The Doctor of Philosophy program should be considered by those with superior academic achievement and who desire to pursue a career of research or teaching.

Masters Program Educational Objectives & Outcomes

The objective of the Master of Science in Electrical Engineering (M.S.E.E.) degree program is to produce graduates who have the knowledge, skills, and attitudes that will ensure success in professional positions in business, industry, research, government service, or in further graduate or professional study.

Specific outcomes that will be achieved by graduates of the program are:

1. Achieve a depth of proficiency in a specific field of Electrical Engineering by completing major courses in one of four areas: electronics and photononics; systems and signals; computer systems; or software and knowledge engineering.
2. Achieve a breadth of understanding of Electrical Engineering by completing minor coursework requirements in another area, and by participation in graduate seminar requirements.
3. Demonstrate professionalism and communication skills through completion of coursework, project or thesis defense.

Doctoral Program Educational Objectives & Outcomes

The objective of the Ph.D. Program in Electrical Engineering degree program is to produce graduates who have the knowledge, skills, and attitudes that will ensure success in professional positions in business, industry, research, government service, or in further graduate or professional study.

Specific outcomes that will be achieved by graduates of the program are:

1. Achieve a depth of understanding in Electrical Engineering, as demonstrated by completion of core Ph.D. courses and examination on that material through the Qualifying Examination process.
2. Achieve a breadth of understanding of the Electrical Engineering discipline, as demonstrated by completion of remaining doctoral coursework and participation in graduate seminar.
3. Demonstrate the ability to conduct independent research by completion and defense of a dissertation.

Admissions

All Masters and Ph.D. programs require applicants to provide the items below to be considered for admission:

- A minimum cumulative grade point average of 3.0 or equivalent, based on a 4.0 system.
- Three letters of reference.
- International applicants must submit proof of English language proficiency.
- All graduate degree programs require the GRE general test, with a suggested score of either the 80th percentile on the quantitative part or 80th percentile total (verbal + quantitative + analytical).
- All graduate degree programs require an appropriate bachelors or master's degree for entry.   Students lacking some foundation courses appropriate to a particular degree program may be assigned some remedial coursework as a condition of admission.

FOUNDATION ASSESSMENT

Prior to the first week of classes, new Ph.D. students must meet with the graduate coordinator to select classes. This interview determines if the student needs remedial work in order to pursue a graduate degree. Students with deficiencies may be required to take courses as prerequisites for graduate courses. Deficiencies are usually noted as a condition for admission. However, they may also be specified during the interview or later.

During the second semester, students must form their Advisory and Examining Committee (AEC) and write a plan of study. The AEC may also identify additional deficiencies to be removed, but this is rare since deficiencies should have been identified earlier in the student's career.

Curriculum in Master of Science in Electrical Engineering Masters

A candidate for the M.S. degree in electrical engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Lane Department of Computer Science and Electrical Engineering.

Program Requirements

All M.S. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required

Course Requirements *		
No more than 9 credit hours may be at the 400 level.		
EE 796	Graduate Seminar	1
Area of Concentration		
Complete one Area of Concentration:		9
One Core course		
Two Elective courses		
Complete one additional core course from a second area of concentration.		3
Choose 12 additional credit hours from the courses listed in any EE area of concentration		12
Complete 1 of the following options:		**7-9**
Thesis Option - 7 hours		
EE 796	Graduate Seminar (1 hour)	
EE 697	Research (6 hours)	
Thesis		
Final Oral or Written Examination		
Problem Report Option - 9 hours		
Complete a minimum 6 additional hours of coursework, at least 3 hours of which must be from the completed area of concentration.		
EE 697	Research (3 hours)	
Formal written report or professional report/paper		
Final Oral or Written Examination		
Coursework Option - 9 hours		
Complete a minimum of 9 additional hours of coursework, at least 6 hours of which must be from the completed area of concentration.		
Total Hours		32-34

*   Students who do not hold a baccalaureate degree in electrical engineering are required to take a set of undergraduate electrical engineering courses above and beyond the minimum coursework requirements.

Areas of Concentration

ELECTRONIC AND PHOTONICS

Core Courses		
EE 550	Advanced Semiconductor Electronics	3
EE 551	Linear Integrated Circuits	3
Elective Courses		
EE 435	Introduction to Power Electronics	3
EE 437	Fiber Optics Communications	3
EE 455	Introduction to Microfabrication	3
EE 457	Fundamentals of Photonics	3

EE 528	Biomedial Microdevices	3
EE 650	Optoeletronics	3
PHYS 771	Introduction to Solid State Physics	3
PHYS 772	Semiconductor Physics	3
PHYS 773	Collective Phenomena in Solids	3
CHE 466	Electronic Materials Processing	3

SIGNALS AND SYSTEMS

Core Courses

EE 513	Stochastic Systems Theory	3
EE 515	Linear Control Systems	3

Elective Courses

EE 461	Introduction to Communications Systems	3
EE 465	Introduction to Digital Image Processing	3
EE 517	Optimal Control	3
EE 531	Advanced Electrical Machinery	3
EE 533	Computer Applications in Power System Analysis	3
EE 535	Power System Control and Stability	3
EE 561	Communication Theory	3
EE 562	Wireless Communication System	3
EE 565	Advanced Image Processing	3
EE 567	Coding Theory	3
EE 569	Digital Video Processing	3
EE 613	Detection and Estimation Theory	3
EE 668	Information Theory	3
EE 713	Large-Scale System Modeling	3
EE 731	Real Time Control of Power System	3
EE 733	Protection of Power Systems	3
EE 735	HVDC Transmission	3

COMPUTER SYSTEMS

Core Courses

CPE 553	Advanced Networking Concepts	3
CPE 670	Switching Circuit Theory 1	3

Elective Courses

CPE 435	Computer Incident Response	3
CPE 520	Application of Neural Networks	3
CPE 521	Applied Fuzzy Logic	3
CPE 536	Computer Data Forensics	3
CPE 538	Intro Computer Security Management	3
CPE 664	Sensor Actuator Networks	3
CS 453	Data and Computer Communications	3
CS 539	Computer Forensics and the Law	3
CS 572	Advanced Artificial Intelligence Techniques	3
CS 665	Computer System Security	3
CS 676	Machine Learning	3
CS 677	Pattern Recognition	3
CS 678	Computer Vision	3
CS 555	Advanced Computer Systems Architecture	3
CS 556	Distributed and Pervasive Compt	3
CS 568	Computer Network Forensics	3
CPE 684	Advanced Real-Time Systems	3

| EE 565 | Advanced Image Processing | 3 |
| EE 569 | Digital Video Processing | 3 |

SOFTWARE/KNOWLEDGE ENGINEERING

Core Courses

CPE 684	Advanced Real-Time Systems	3
CS 573	Advanced Data Mining	3
CS 630	Empirical Methods in Software Engineering and Computer Science	3
CS 677	Pattern Recognition	3

Elective Courses

BIOM 693	Special Topics (Advanced Biometrics)	3
CS 533	Developing Portable Software	3
CS 558	Multimedia Systems	3
CS 572	Advanced Artificial Intelligence Techniques	3
CS 665	Computer System Security	3
CS 674	Computational Photography	3
CS 676	Machine Learning	3
CS 757	Distributed Systems and Algorithms	3
EE 565	Advanced Image Processing	3
SENG 550	Object Oriented Design	3

Final Examination

M.S. students following the thesis or problem report option must prepare a written research proposal. The proposal must be approved by the student's AEC at least one semester prior to the final oral examination.

All students following the thesis or problem report option are required to pass a final oral or written examination, administered by their AEC, covering the thesis or problem report and/or related course material.

All master's students must defend their thesis or problem report at an oral exam, attended by all members of the committee.

A student who fails the research defense may repeat the defense at most once, at a time determined by the AEC but not necessarily during the same semester.

Suggested Plan of Study

The plan below illustrates the Thesis Option. It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical M.S.E.E degree program that completes degree requirements in one and half years is as follows. Those students who lack course prerequisites may require more than three semesters of full-time study to complete the degree. Students with research assistantships may also require more than three semesters to complete the degree.

First Year

Fall	Hours	Spring	Hours
Field of Study 1 Core Course		3 Field of Study 1 Elective Course	3
Field of Study 1 Elective Course		3 Field of Study 2 Core Course	3
Elective Course		3 Elective Course	3
EE 796		1 EE 796	1
		10	10

Second Year

Fall	Hours		
Field of Study 3 Core Course	3		
Elective Course	3		
EE 697	6		
	12		

Total credit hours: 32

AREA OF EMPHASIS IN CYBERSECURITY

A 3.0 GPA is required in AOE coursework.

Required Courses		
CPE 536	Computer Data Forensics	3
CPE 568	Computer Network Forensics	3
CS 539	Computer Forensics and the Law	3
Select one of the following:		**3**
CPE 538	Intro Computer Security Management	
CS 569	Cybersecurity and Big Data Analytics	
Total Hours		12

Curriculum in Doctor of Philosophy – Electrical Engineering Requirements

A candidate for the Ph.D. degree with a major in electrical engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Lane Department of Computer Science and Electrical Engineering.

Program Requirements

The doctor of philosophy degree with a major in electrical engineering is administered through the college's interdisciplinary Ph.D. program. The research work for the doctoral dissertation must show a high degree of originality on the part of the student and must constitute an original contribution to the art and science of electrical engineering.

All Ph.D. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Research work for the doctoral dissertation must represent a significant contribution to engineering or computer science. It may entail a fundamental investigation into a specialized area. A minimum of twenty-four credit hours of research (EE 797 (http://catalog.wvu.edu/graduate/collegeofengineeringandmineralresources/thelanedepartmentofcomputerscienceandelectricalengineering/computer_engineering/)) is required.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required

Course Requirements [*]		
A minimum of six credit hours of 600 or higher level courses		
A maximum of six credit hours may be in directed study (EE 795)		
Research		24
EE 797	Research	
Select from the following based on degree path:		18
Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, IH&S, MAE, MATH, MINE, PNGE, PHYS, SAFM, SENG, or STAT courses 500-799		
Examinations		
Qualifying Exam		
Candidacy Exam		
Final Exam		
Total Hours		42

[*] Students who do not hold a baccalaureate degree in electrical engineering are required to take a set of undergraduate electrical engineering courses above and beyond the minimum coursework requirements.

Doctoral students who do not have an M.S.E.E. degree must either earn this degree, or complete coursework as required for the Master's degree with thesis option. It is not necessary to actually write a thesis. A minimum of twenty-four hours of coursework is required. Up to twelve hours may be transferred from work done at another institution.

A minimum of forty-two hours of coursework and thirty hours of independent research beyond a bachelor's degree, or eighteen hours of coursework and twenty-four hours of independent research beyond an M.S. degree are required.

Examinations

QUALIFYING EXAM

All students must take and pass a written qualifying examination. Normally, the qualifying examination is given no later than one semester after completion of eighteen credit hours toward the doctoral degree. This examination is designed to assess the basic competency of students in the electrical engineering field to determine whether or not they have sufficient knowledge to undertake independent research.

The Lane Department of Computer Science and Electrical Engineering is organized in the following five Areas of Concentration. All Ph.D. degree programs use these Areas to provide organizational structure to the educational process as delineated under specific Ph.D. requirements. The significance of these Areas will be of particular importance in preparation for the Qualifying Exam as each area has designated Ph.D. Qualifier Core Courses as follows:

1. Electronics and Photonics Area

EE 550	Advanced Semiconductor Electronics
EE 551	Linear Integrated Circuits
EE 650	Optoeletronics

2. Signals and Systems Area

EE 513	Stochastic Systems Theory
EE 515	Linear Control Systems
EE 533	Computer Applications in Power System Analysis

3. Computer Systems

CPE 670	Switching Circuit Theory 1
CS 550	Theory of Operating Systems

4. Software/Knolwedge Engineering

CPE 684	Advanced Real-Time Systems
CS 573	Advanced Data Mining
CS 677	Pattern Recognition

5. Theory of Computing

CS 510	Formal Specification of Language
CS 520	Advanced Analysis of Algorithms
CS 525	Computational Complexity

Ph.D. students must make the first attempt to pass the qualifying exam within fourteen months of their enrollment if they already have a M.S. degree from the Lane Department of CSEE or within twenty-six months otherwise. The Ph.D. qualifying process consists of completion of a research project and oral examination. The project is intended to demonstrate the student's ability to assemble and analyze the relevant literature for a given research problem and to make preliminary steps towards his/her own contribution.

The oral exam will include:

1. Presentation by the student of his/her research project
2. Questions about the work, its context, and relevant literature
3. Questions about course work, focusing specifically on the three core courses for which the student has earned credit

The possible outcomes of the first year exam are: "Pass" which means the student is qualified to begin work towards the candidacy exam; "Pass with Recommended Coursework" which means the student is qualified to begin work towards a candidacy exam but certain courses must be taken; or "Fail". Any student failing the qualifying exam on the initial attempt will have one additional attempt within six months. Failure of the exam on the second attempt will disqualify the student from further doctoral studies in the LCSEE program.

CANDIDACY EXAMINATION

In order to be admitted to candidacy, the student must pass a candidacy exam, which is designed to evaluate the student's overall ability to engage in high-level research.

When all requirements are completed, the qualifying and candidacy examinations are passed, and the research proposal is successfully defended, the student is formally admitted to candidacy for the Ph.D. degree. For full-time students, admission to candidacy must occur within three years of entering the Ph.D. program.

FINAL EXAMINATION

At the completion of the dissertation research, candidates must prepare a dissertation and pass the final oral examination (defense) administered by their AEC.

In order to complete the Ph.D. requirements, a student must pass a final oral examination on the results embodied in the dissertation. This examination is open to the public and, in order to evaluate critically the student's competency, may include testing on material in related fields, as deemed necessary by the AEC. All requirements for the degree must be completed within five years after the student has been admitted to candidacy.

Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical doctoral degree program that completes degree requirements in three years is as follows. A typical Ph.D. program requires four to five years beyond the baccalaureate degree, although scholarly achievements are more important than length of program.

First Year

Fall	Hours	Spring	Hours
Course	3	Course	3
Course	3	Course	3
EE 797	3	EE 797	3
	9		9

Second Year

Fall	Hours	Spring	Hours
EE 797	9	EE 797	9
	9		9

Third Year

Fall	Hours	Spring	Hours
Course	3	Course	3
EE 797	6	EE 797	6
	9		9

Total credit hours: 54

Major Learning Outcomes

ELECTRICAL ENGINEERING

It is our goal that in the first five years after graduation our students will:

1. Achieve success and proficiency in the Electrical Engineering profession.
2. Be recognized as leaders.
3. Contribute to the well-being of society.

Software Engineering, M.S.S.E.

Degrees Offered

- Masters of Science, Software Engineering (M.S.S.E.)

Program Description

The Lane Department of Computer Science and Electrical Engineering offers the professionally oriented and applied Masters of Science in Software Engineering (M.S.S.E.) degree program, as well as a graduate Certificate in Software Engineering. The M.S.S.E. provides graduate educational opportunities to working professionals. The M.S.S.E. degree is a unique fully-online program that provides graduate level software engineering expertise to individuals who are currently working in software engineering or the information technology industry. The program aspires to serve full-time software engineering professions with a background in computer science or similar fields seeking an applied masters program who want the flexibility of an online format.

Under the coursework-only option, students will complete their degree requirements with five core courses and six advanced elective courses that deepen their understanding of aspects of software engineering relevant to their careers. Problem Report and Thesis Options are also available.

Program Educational Objectives & Outcomes

The objective of the program is to produce graduates who have the knowledge, skills, and attitudes that will ensure success in professional positions in business, industry, research, or governmental service.

After completing five core courses, students will achieve the following outcomes:

- Proficiency in Software Project Management.
- Proficiency in Software Analysis and Design.
- Proficiency in Object-Oriented Design of Software.
- Proficiency in Software Verification and Validation.
- Proficiency in Software Evolution.

Admissions to the M.S.S.E. Program

Students seeking admission to the M.S.S.E. program must satisfy the following requirements to be considered.

All International applicants must submit proof of English language proficiency.

All students must satisfy **EITHER**

- Submit official transcripts showing degree completion of a Bachelor degree in Computer Science, Computer Engineering, Software Engineering, or a closely related field from an accredited University, with a minimum cumulative grade point average of 3.00 (on a 4-point scale) or better.
- Submit satisfactory scores in quantitative reasoning for the GRE General Test or Revised General Test OR submit a resume reflecting one year of software engineering experience in any industry with no GRE required.
- Submit a resume, personal statement, and three academic or work-related references.

OR

- Submit official transcripts showing degree completion of a Bachelor degree in any field of study from an accredited University with a minimum cumulative grade point average of 3.00 (on a 4-point scale) or better.
- Submit a personal statement and a resume along with 3 letters of reference that demonstrate 3 years or more of software engineering experience in any industry. No GRE is required.
- Upon entry into the program, complete SENG 505 Programming Applications with JAVA with a letter grade of 'B' or above. (note: the credit earned for this course does not go toward the required hours for the MSSE Degree).

Admission to Certificate in Software Engineering

Students seeking admission to the Certificate in Software Engineering program must meet the following requirements to be admitted:

- Submit an official transcript showing completion of a Bachelor's degree in Computer Science, Computer Engineering, Software Engineering, or a closely related field from an accredited University with a minimum cumulative grade point average of 3.00 (on a 4-point scale).
- Submit a resume, three professional/academic letters of recommendation and a personal statement.
- International applicants must submit proof of English language proficiency.
- The GRE is not required.

Students may enroll in core courses in the M.S.S.E. program to complete the certificate. They may apply to the M.S.S.E. program; WVU policies on residency and credit sharing by programs should be considered for planning multiple programs.

Curriculum in Master of Science in Software Engineering

A candidate for the M.S. degree in software engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Lane Department of Computer Science and Electrical Engineering.

Program Requirements

All M.S. degree candidates are required to follow a planned program of study. The student's faculty advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the student with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum cumulative GPA of 3.0, based upon a 4.0 system is required for all applicants.

Course Requirements

The following five core courses are required.

SENG 510	Software Project Management	3
SENG 520	Software Analysis and Design	3
SENG 530	Software Verification and Validation	3
SENG 540	Software Evolution	3
SENG 550	Object Oriented Design	3
Advanced Elective Course ****		9
Select from the following:		
CPE 538	Intro Computer Security Management	
CS 533	Developing Portable Software	
SENG 560	Software Reuse	
CYBR 535	Business Network Security	
CYBR 540	Information Ethics and Legal Procedures	
SENG 561	Agile Software Development	
SENG 564	Software Engineering of Mobile Applications	
SENG 581	Quality Software Process Management	
SENG 582	Enterprise Architecture Framework	
SENG 670	Data Analytics with Applications in Software Engineering	
SENG 695	Independent Study (Experiential Learning)	
SENG 650	Cloud Computing for the Internet of Things	
STAT 511	Statistical Methods 1	
STAT 521	Statistical Analysis System Programming	
STAT 522	Advanced Statistical Analysis System Programming (upon request to Advisor)	
Any SENG Courses 510-699 may be taken as an advanced elective.		
Complete 1 of the following options:		6-9
Thesis Option - 6 hours		
SENG 697	Research (6 hours)	
Written Research Proposal		
Thesis		
Final Oral or Written Examination		
Problem Report Option - 9 hours		
Complete 6 additional hours of advanced elective coursework		
SENG 697	Research (3 hours)	
Written Research Proposal		
Formal written report or professional report/paper		
Final Oral or Written Examination		
Coursework Option - 9 hours		
Complete 9 additional hours of advanced electives		
Total Hours		30-33

*   SENG 505 is only offered as a Preparatory Course, required only for specified Provisional Graduate Student and no credit can be earned toward the degree or certificate.

**   A maximum of 12 semester credit hours taken elsewhere may be transferred into the program.

***   No more than 9 semester credit hours of 400-level (senior undergraduate) LCSEE department courses (or equivalent courses transferred from outside the university) may be included in your program if they were not counted for another degree.

****   All of these options noted require approval by the software engineering curriculum committee.

Final Examination

M.S. students following the thesis or problem report option must prepare a written research proposal. The proposal must be approved by the student's AEC at least one semester prior to the final oral examination. These students are required to pass a final oral examination, administered by their AEC, covering the thesis or problem report.

Suggested Plan of Study

The plan below illustrates the Coursework Option. It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical M.S.S.E degree program that completes degree requirements in two years is as follows.

First Year

Fall	Hours	Spring	Hours	Summer	Hours	
SENG 520		3 SENG 510		3 SENG 540		3
SENG 550		3 SENG 530		3 Adv. Elective Course		3
		6		6		6
Second Year						
Fall	Hours	Spring	Hours	Summer	Hours	
Adv Elective Course		3 Adv Elective Course		3 Adv Elective Course		3
Adv Elective Course		3 Adv Elective Course		3		
		6		6		3

Total credit hours: 33

Major Learning Outcomes

SOFTWARE ENGINEERING

It is our goal that in the first five years after graduation our students will:

1. Achieve success and proficiency in the Software Engineering profession.
2. Be recognized as leaders.
3. Contribute to the well-being of society.

Department of Industrial and Management Systems Engineering

Degrees Offered

- Masters of Science, Industrial Engineering (M.S.I.E.)
- Masters of Science, Industrial Hygiene (M.S.)
- Masters of Science, Safety Management (M.S.)
- Doctor of Philosophy, Industrial Engineering (Ph.D.)
- Doctor of Philosophy, Occupational Safety and Health (Ph.D.)

One of the defining attributes in the success of the department is the dedication and talent of its fifteen faculty and three staff members. The aggregate careers of our faculty and staff represent over 250 years of service to students at WVU. In these 250 years of service is embodied the wisdom and experience to successfully prepare industrial engineers and occupational health and safety professionals to address ever-changing societal needs. The faculty and staff typically educate nearly 300 undergraduate, 100 to 120 M.S., and fifteen to twenty-five Ph.D. students. The department is unique in the United States for having two closely related graduate programs in industrial hygiene (M.S.) and safety management (M.S.) that are accredited by the Applied and Natural Sciences Accreditation Commission of ABET, http://www.abet.org. The combined resources and faculty talents of these two programs create synergies that provide our students with outstanding academic and research experiences in the field of occupational safety and health. Excellent academic and research opportunities are also available for students in the areas of healthcare systems, supply chain optimization, energy systems, smart manufacturing, occupational safety/health, and ergonomics.

Faculty Research

The department has quality research laboratories in smart manufacturing, operations research, production planning and control, data analytics and visualization, ergonomics, industrial hygiene, and safety. Graduate students are encouraged to utilize these resources to explore and develop their capabilities.

FACULTY

CHAIR

- Kenneth R. Currie - Ph.D. P.E., (West Virginia University)
  Manufacturing systems design, Optimization, Automation & Controls, Healthcare Systems Engineering

PROFESSORS

- Rashpal Ahluwalia - Ph.D., P.E. (Western Ontario University)
  Manufacturing Systems, Quality and Reliability Engineering, Robotics and Automation
- Jack Byrd Jr. - Ph.D., P.E. (West Virginia University)
  Operations Research, Workforce Development, Work Design, Integrated Product Development
- Bhaskaran Gopalakrishnan - Ph.D., P.E., CEM. (Virginia Polytechnic Institute and State University)
  Manufacturing Processes and Production Systems, Artificial Intelligence Applications, Expert Systems Development, Industrial Energy Efficiency, Building's Energy Efficiency, Industrial Energy and Waste Minimization, Productivity Improvement
- Steven Guffey - Ph.D., C.I.H. (North Carolina State University)
  Ventilation Systems Theory and Design, Noise Measurement and Control, Exposure Assessment
- Majid Jaridi - Ph.D. (University of Michigan)
  Statistics, Quality Control, Forecasting and Transportation Research
- Gary Winn - Ph.D. (Ohio State University)
  Construction Safety, Transportation Safety and Program Evaluation, Total Quality Management, Theory of Paradigm Shifts
- David A. Wyrick - Ph.D., P.E., P.E.M. (University of Missouri-Rolla)
  Engineering Management, Engineering Education, Effective Management of Technology in SMEs

ASSOCIATE PROFESSORS

- Elyce Biddle - Ph.D. (West Virginia University)
  Business economics; Behavioral economics; Healthcare safety; Data Surveillance: classification systems, data and system quality
- Alan McKendall, Jr. - Ph.D. (University of Missouri, Columbia)
  Operations Research, Meta-heuristics, Facilities Layout and Materials Handling, Project Scheduling, Integrated Production Systems
- Ashish Nimbarte - Ph.D. (Louisiana State University)
  Work Related Musculoskeletal Disorders, Occupational Biomechanics and Biomechanical Modeling
- Feng Yang - Ph.D. (Northwestern University)
  Simulation, Applied Statistics, Stochastic Processes

ASSISTANT PROFESSORS

- Leily Farrokhvar - Ph.D. (Virginia Tech)
  Supply Chain Optimization, Large Scale Optimization, Transportation & Logistics
- Xinjian "Kevin" He - Ph.D., (University of Cincinnati)
  Respiratory protection, air purification and filtration, aerosol measurement, characterization of particles in indoor and outdoor air, occupational exposure assessment
- Xiaopeng Ning - Ph.D. (Iowa State University)
  Safety Engineering, Biomechanics, Ergonomics, Human Factors Engineering
- Thorsten Wuest - Ph.D. (University of Bremen)
  Smart Manufacturing, Machine Learning/Artificial Intelligence, Conceptual Design, Process and Information/Data Management

PROFESSORS EMERITI

- Robert C. Creese - Ph.D., P.E. (Pennsylvania State University)
  Manufacturing processes/systems, Foundry engineering, Cost engineering, Engineering economics
- Daniel E. Della-Giustina - Ph.D. (Michigan State University)
  Playground and recreation safety, Sport safety, Highway and traffic management, Safety, fire, and emergency response
- Wafik H. Iskander - Ph.D., P.E. (Texas Tech University)
  Operations research and optimization, Simulation modeling and analysis, Production planning and control, Applied statistics, Energy effeciency
- Warren Myers - Ph.D. (West Virginia University)
  Exposure Assessment and Modeling, Aerosol Filtration, Occupational Respiratory Protection Design and Testing
- Ralph Plummer - Ph.D., P.E. (West Virginia University)
  Systems Safety Engineering, Energy Conservation, Human Factors, Ergonomics

ASSOCIATE PROFESSOR EMERITUS

- Andrew J. Sorine - Ed.D. (West Virginia University)
  Benchmarking, Safety and Health Programs, Safety Management Information Systems

VISITING AND ADJUNCT PROFESSORS

- Christopher Coffey - Ph.D. (West Virginia University)
  Occupational Safety and Health, Assessment, Evaluation of Respiratory Protective Equipment

- John R. Etherton - Ph.D. (West Virginia University)
  Safety Engineering, Human Factors
- Martin Harper - Ph.D. (London School of Hygiene and Tropical Medicine)
  Industrial Hygiene, Exposure Assessment
- James R. Harris - Ph.D., P.E. (West Virginia University)
  Safety Research, Human Factors
- Hongwei Hsiao - Ph.D. (University of Michigan)
  Safety Engineering, Human Factors
- Kevin Michael - Ph.D. (Pennsylvania State University)
  Acoustics, Hearing Protection, Industrial Hygiene
- Christopher Pan - Ph.D. (University of Cincinnati)
  Industrial Hygiene, Exposure Assessment
- Ju-Hyeong Park - Sc.D. M.P.H., C.I.H. (Harvard University)
  Industrial Hygiene, Exposure Assessment
- Ziqing Zhuang - Ph.D. (West Virginia University)
  Exposure Assessment, Assessment and Evaluation of Respiratory Protective Equipment

LECTURER

- Shanti Hamburg - M.S. (Aerospace Engineering)
  Design/Build/Fly UAV Design and Construction; Prototyping; Digital Manufacturing

Industrial Hygiene, M.S.

Degree Offered

- Masters of Science, Industrial Hygiene (M.S.)

The Master's of Science with a major in Industrial Hygiene is accredited by the Applied and Natural Sciences Accreditation Commission (ANSAC) of ABET, http://www.abet.org.

Program Educational Objectives

Drawing from the university's mission, the program mission, the needs of our constituents, and the Applied Science Accreditation Commission Criteria of ABET, the following educational objectives were developed for the Masters of Science program in Industrial Hygiene:

1. Practice Industrial Hygiene and to initiate and develop leadership roles in business, industry, and/or government.
2. Continue professional development and life-long learning.
3. Interact in society and business in a professional, ethical manner to promote occupational and environmental health.
4. Be proficient in written and oral communication and to utilize people-oriented skills in individual and team environments.
5. Apply the skills from Industrial Hygiene to be proficient in his or her chosen field or doctoral studies.

Student Outcomes

INDUSTRIAL HYGIENE

In order to meet the Program Educational Objectives of the Industrial Hygiene program, students must be able to meet the following educational outcomes at the time of their graduation:

1. An ability to identify, formulate, and solve broadly defined technical or scientific problems by applying knowledge of mathematics and science and/or technical topics to areas relevant to industrial hygiene
2. An ability to formulate or design a system, process, procedure or program to meet desired needs
3. An ability to develop and conduct experiments or test hypotheses, analyze and interpret data and use scientific judgment to draw conclusions
4. An ability to communicate effectively with a range of audiences
5. An ability to understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts.
6. An ability to function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.

Admissions

Applicants to graduate programs in the industrial hygiene program are required to provide the following:

- Applicants must have earned a grade point average (GPA) of 3.0 or better (out of a possible 4.0)
- International applicants must submit proof of English language proficiency
- A completed application submitted to the WVU Admissions Office
- Official transcripts of all previous college course work
- GRE General Test scores
- ABET-ANSAC prerequisite course requirements:
  - sixty-three credit hours of approved science, mathematics, and other technical courses. Of these, at least fifteen credit hours must be junior or senior level.
  - Specific pre/corequisite course requirements include two semesters of general/inorganic chemistry and two semesters of physics.
  - On an individual basis, the faculty may identify additional pre/corequisite coursework, often including organic chemistry and biology. Applicants will be advised about their specific requirements at the time of admission.

Curriculum in Masters of Science – Industrial Hygiene

A candidate for the M.S. degree with a major in industrial hygiene must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Industrial and Management Systems Engineering Department.

Program Requirements

All M.S. degree candidates follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. Students must select a track (thesis or coursework only) by the end of their second semester in the program. Changes in track may be made later as needed. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required in all courses

A minimum of 60% of courses must be from 500 level or above

Course Requirements [*]		
STAT 511	Statistical Methods 1	3
IH&S 460	Ergonomics	3
IH&S 527	Noise Measurement and Control	3
IH&S 528	Industrial Ventilation Design	3
IENG 561	Industrial Hygiene Engineering	3
IH&S 725	Industrial Hygiene Sampling and Analysis	4
OEHS 622	Public Health Toxicology	3
EPID 601	Public Health Epidemiology	3
Online short course : Basic Course in the Protection of Human Research Subjects - Biomedical Focus https://www.citiprogram.org/default.asp		
Complete 1 of the following options:		**9-11**
Thesis Option (9 Hours)		
IH&S 693	Special Topics (Aerosol Mechanisms)	
IH&S 697	Research (6 hours)	
Written Proposal/Oral Presentation		
Thesis		
Final Oral or Written Examination		
Coursework Option (11 Hours)		
IENG 662	Systems Safety Engineering	
OEHS 601	Environmental Health	
IH&S 685	Internship	
Environmental or Safety Elective: (choose one) [**]		
ENVP 515	Hazardous Waste Training	
ENVP 555	Environmental Sampling and Analysis	
SAFM 580	Fundamentals of Environmental Management	
SAFM 470	Managing Construction Safety	
SAFM 533	Disaster Preparedness	
SAFM 534	Fire Safety Management	

Final oral or written examination	
Total Hours	34-36

*   Students who do not hold a baccalaureate degree in industrial hygiene may be required to take a set of undergraduate courses above and beyond the minimum coursework requirements. Students must complete those courses and earn at least a "C" in each before completing the 18th credit hour in the industrial hygiene curriculum.

**   All courses contributing to Environmental or Safety Elective are three hours.

Final Examination

M.S. students following the thesis option must prepare a written research proposal. The proposal must be approved by the student's AEC at least one semester prior to the final oral examination.

All students, regardless of option, are required to pass a final oral or written examination, administered by their AEC, covering the thesis and/or related course material.

Suggested Plan of Study

The plan below illustrates the Thesis Option. It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical M.S.I.H. degree program that completes degree requirements in two years is as follows.

First Year

Fall	Hours	Spring	Hours
STAT 511	3	IH&S 725	4
IH&S 528	3	IH&S 527	3
IENG 561	3	IH&S 697	3
	9		10

Second Year

Fall	Hours	Spring	Hours
IH&S 460	3	OEHS 622	3
IH&S 693	3	EPID 601	3
IH&S 697	3		
	9		6

Total credit hours: 34

Student Outcomes

INDUSTRIAL HYGIENE

In order to meet the Program Educational Objectives of the Industrial Hygiene program, students must be able to meet the following educational outcomes at the time of their graduation:

1. An ability to identify, formulate, and solve broadly defined technical or scientific problems by applying knowledge of mathematics and science and/or technical topics to areas relevant to industrial hygiene
2. An ability to formulate or design a system, process, procedure or program to meet desired needs
3. An ability to develop and conduct experiments or test hypotheses, analyze and interpret data and use scientific judgment to draw conclusions
4. An ability to communicate effectively with a range of audiences
5. An ability to understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts.
6. An ability to function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.

Industrial Engineering, M.S.I.E., Ph.D.

Degrees Offered

- Masters of Science, Industrial Engineering (M.S.I.E.)
- Doctor of Philosophy, Industrial Engineering (Ph.D.)

Masters of Science in Industrial Engineering

A graduate of this master's program will be prepared to accomplish the following:

1. Practice industrial engineering and to initiate and develop leadership roles in business, industry and/or government
2. Continue professional development and life-long learning
3. Interact in society and business in a professional and ethical manner
4. Be proficient in written and oral communication and to utilize people-oriented skills in individual and team environments
5. Apply the skills from industrial engineering to be proficient in his/her chosen field or further advanced studies

In order to meet the educational objectives, students of this master's program must be able to meet the following educational outcomes at the time of their graduation. Students will have acquired:

1. The ability to use and master modern and classical industrial engineering methodologies in their area of concentration
2. The ability to apply knowledge of math, science, and engineering
3. The ability to do research, and to design and conduct experiments, analyze and interpret data, develop implementation strategies, and shape recommendations so that results will be achieved and findings will be communicated effectively
4. The ability to work individually, on teams, and/or on multi-disciplinary teams to identify, formulate, and solve problems using industrial engineering knowledge, skills, and tools
5. The ability to design and implement or improve integrated systems that include people, materials, information, equipment, and energy using appropriate analytical, computational, and experimental practices
6. An understanding of professional and ethical responsibility and the broad education and knowledge of contemporary issues necessary to understand the impact of solutions in a global and societal context
7. A recognition of the need for and an ability to engage in life-long learning
8. The professional characteristics expected of a successful industrial engineer

Doctor of Philosophy with a Major in Industrial Engineering

A graduate of the Industrial Engineering doctoral program will be prepared to:

1. Practice/teach Industrial Engineering and to initiate and develop leadership roles in education, business, industry and/or government.
2. Continue professional development and life-long learning.
3. Interact in society and business in a professional and ethical manner.
4. Be proficient in written and oral communication and to utilize people-oriented skills in individual and team environments.
5. Apply the skills from Industrial Engineering to be proficient in his/her chosen field.

In order to meet the educational objectives, students of the Industrial Engineering Doctoral program must be able to meet the following educational outcomes at the time of their graduation. Students will have acquired:

1. The ability to use, master, and teach modern and classical Industrial Engineering methodologies in their area of concentration.
2. The ability to apply knowledge of math, science, and engineering.
3. The ability to do research, and to design and conduct experiments, analyze and interpret data, develop implementation strategies, and shape recommendations so that results will be achieved and findings will be communicated effectively.
4. The ability to work individually, on teams, and/or on multi-disciplinary teams to identify, formulate, and solve problems using industrial engineering knowledge, skills, and tools.
5. The ability to design and implement or improve integrated systems that include people, materials, information, equipment, and energy using appropriate analytical, computational, and experimental practices.
6. A thorough understanding of professional and ethical responsibility and the broad education and knowledge of contemporary issues necessary to fully evaluate the impact of solutions in a global and societal context.
7. A recognition of the need for and an ability to engage in life-long learning.
8. The professional characteristics expected of a successful Industrial Engineer.

Admissions

Applicants to graduate programs in the industrial engineering program are required to provide the following:

- Applicants must have earned a grade point average (GPA) of 3.0 or better (out of a possible 4.0)
- A completed application submitted to the WVU Admissions Office
- Official transcripts of all previous college course work
- International applicants must submit proof of English language proficiency

- GRE General Test scores
- Three letters of recommendation (required for the Ph.D. programs only).

For admission into the M.S. Industrial Engineering programs, applicants must meet department admission standards and have a bachelor of science degree from an engineering department, or from physics, chemistry, computer sciences, mathematics, or a similar technical or science program. In general, a degree in one of the "hard" science programs is required with at least two years of calculus or equivalent mathematics.

For admission into the Ph.D. program, typically, a Masters degree is required. However, applicants with B.S. degree with exceptional academic record can also be considered for direct admission into the Ph.D. program. Applicants with a M.S. degree should have, at a minimum, a 3.4 GPA (or equivalent) in their graduate coursework. Applicants with a B.S. degree should have, at a minimum, a 3.5 GPA (or equivalent) in their undergraduate coursework. Ph.D. applicants with a M.S. degree, must also meet all the entrance requirements stated above for the Master's program.

Curriculum in Masters of Science in Industrial Engineering

A candidate for the M.S. degree in industrial engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Industrial and Management Systems Engineering Department.

Program Requirements

All M.S. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required in all courses

Course Requirements [*]		
A minimum of 60% of courses must be from 500 level or above		
Complete one of the following options:		31-34
Thesis Option - 31 total credit hours		
Complete one core course from each Area of Concentration (9 credit hours)		
Complete one Area of Concentration (15 credit hours) includes: (Core Courses - 9 credit hours and Elective Courses - 6 credit hours)		
IENG 697	Research (6 hours)	
IENG 796	Graduate Seminar (1 credit hour)	
Written Proposal		
Thesis		
Final Oral or Written Examination		
Problem Report Option - 34 total credit hours		
Complete one core course from each Area of Concentration (9 credit hours)		
Complete one Area of Concentration (15 credit hours) includes: (Core Courses - 9 credit hours and Elective Courses - 6 credit hours)		
Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, IH&S, MAE, MATH, MINE, PNGE, PHYS, SAFM, SENG, or STAT courses 400-799 as approved by the student's AEC (6 credit hours)		
IENG 697	Research (3 hours)	
IENG 796	Graduate Seminar (1 credit hour)	
Written Proposal		
Formal written report or professional report/paper		
Final Oral or Written Examination		
Coursework Option - 34 total credit hours		
Complete one core course from each Area of Concentration (9 credit hours)		
Complete one Area of Concentration (15 credit hours) includes: (Core Courses - 9 credit hours and Elective Courses - 6 credit hours)		
Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, IH&S, MAE, MATH, MINE, PNGE, PHYS, SAFM, SENG, or STAT courses 400-799 as approved by the student's AEC (9 credit hours)		
IENG 796	Graduate Seminar (1 credit hour)	
Final Oral or Written Examination		

Areas of Concentration

MANUFACTURING SYSTEM

Core Courses

IENG 514	Design of Industrial Experiments	3
IENG 542	Advanced Production Control	3
IENG 551	Quality and Reliability Engineering	3
IENG 577	Advanced Engineering Economy	3

Elective Courses

IENG 505	Computer Integrated Manufacturing	3
IENG 506	Computer Aided Process Planning	3
IENG 507	Robotics and Flexible Automation	3
IENG 518	Technology Forecasting	3
IENG 554	Applied Integer/Heuristic Programs	3
IENG 556	Supply Chain Management	3

ERGONOMICS

Core Courses

IENG 514	Design of Industrial Experiments	3
IENG 564	Industrial Ergonomics	3
IENG 577	Advanced Engineering Economy	3
IENG 660	Human Factors System Design	3

Elective Courses

IENG 461	System Safety Engineering	3
IENG 518	Technology Forecasting	3
IENG 561	Industrial Hygiene Engineering	0 or 3
IENG 662	Systems Safety Engineering	3

DECISION SCIENCES & PRODUCTION SYSTEMS

Core Courses

IENG 455	Simulation by Digital Methods	3
IENG 514	Design of Industrial Experiments	3
IENG 553	Applied Linear Programming	3
IENG 577	Advanced Engineering Economy	3

Elective Courses

IENG 518	Technology Forecasting	3
IENG 554	Applied Integer/Heuristic Programs	3
IENG 556	Supply Chain Management	3
IENG 754	Inventory Theory	3
IENG 756	Applied Stochastic Processes	3

*   Students who do not hold a baccalaureate degree in industrial engineering are required to take a set of undergraduate industrial engineering courses above and beyond the minimum coursework requirements.

Final Examination

M.S. students following the thesis or problem report option must prepare a written research proposal. The proposal must be approved by the student's AEC at least one semester prior to the final oral examination.

All students, regardless of option, are required to pass a final oral or written examination, administered by their AEC, covering the thesis or problem report and/or related course material.

Suggested Plan of Study

The plan below illustrates the Thesis Option. It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical M.S.I.E degree program that completes degree requirements in two years is as follows.

First Year

Fall	Hours	Spring	Hours
Core Course Area of Concentration 1	3	Core Course Area of Concentration 1	3
Core Course Area of Concentration 1	3	Core Course Area of Concentration 1	3
Elective Course Area of Concentration 1	3	Elective Course Area of Concentration 1	3
IENG 796	1	IENG 796	1
	10		10

Second Year

Fall	Hours	Spring	Hours
Core Course Area of Concentration 2	3	IENG 697	9
Core Course Area of Concentration 3	3		
IENG 697	3		
	9		9

Total credit hours: 38

Curriculum in Doctor of Philosophy – Industrial Engineering

A candidate for the Ph.D. degree with a major in industrial engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Industrial and Management Systems Engineering Department.

Program Requirements

The doctor of philosophy degree with a major in industrial engineering is administered through the college's interdisciplinary Ph.D. program. The research work for the doctoral dissertation must show a high degree of originality on the part of the student and must constitute an original contribution to the art and science of industrial engineering.

All Ph.D. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Required core courses for the Ph.D. program are determined by the student's area of emphasis. The research work for the doctoral dissertation may entail a fundamental investigation or a broad and comprehensive investigation into an area of specialization.

Curriculum Requirements

A minimum cumulative GPA of 3.4 is required in all courses

Course Requirements [*]	
Research	24
IENG 797 Research	
Select from the following based on degree path:	30
Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, IH&S, MAE, MATH, MINE, PNGE, PHYS, SAFM, SENG, or STAT courses 500-799	
Examinations	
Qualifying Exam	
Candidacy Exam	
Final Exam	
Total Hours	54

[*]   Students who do not hold a baccalaureate degree in industrial engineering are required to take a set of undergraduate industrial engineering courses above and beyond the minimum coursework requirements.
Required core courses for the Ph.D. program are determined by the student's area of emphasis. In general, Ph.D. students take approximately fifty-four hours of coursework beyond their baccalaureate degree, with a minimum of thirty hours in industrial engineering.

Examinations

QUALIFYING EXAM

All students must take and pass a written qualifying examination. Normally, the qualifying examination is given no later than one semester after completion of eighteen credit hours toward the doctoral degree. This examination is designed to assess the basic competency of students in the industrial engineering field to determine whether or not they have sufficient knowledge to undertake independent research.

CANDIDACY EXAMINATION

In order to be admitted to candidacy, the student must pass a candidacy exam, which is designed to evaluate the student's overall ability to engage in high-level research.

A student who has successfully completed all coursework, passed the qualifying examination, and successfully defended the research proposal is defined as one who is a candidate for the Ph.D. degree.

FINAL EXAMINATION

At the completion of the dissertation research, candidates must prepare a dissertation and pass the final oral examination (defense) administered by their AEC.

In order to complete the Ph.D. requirements, a student must pass a final oral examination on the results embodied in the dissertation. This examination is open to the public and, in order to evaluate critically the student's competency, may include testing on material in related fields, as deemed necessary by the AEC. In addition, since the Ph.D. degree is primarily a research degree that embodies the results of an original research proposal and represents a significant contribution to scientific literature, the student must submit a manuscript on this research to the AEC.

Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical doctoral degree program that completes degree requirements in three years is as follows

First Year

Fall	Hours	Spring	Hours
Course	3	Course	3
Course	3	Course	3
IENG 797	3	IENG 797	3
	9		9

Second Year

Fall	Hours	Spring	Hours
Course	3	Course	3
Course	3	Course	3
IENG 797	3	IENG 797	3
	9		9

Third Year

Fall	Hours	Spring	Hours
Course	3	Course	3
IENG 797	6	IENG 797	6
	9		9

Total credit hours: 54

Major Learning Outcomes

INDUSTRIAL ENGINEERING

MSIE

1. Practice industrial engineering and to initiate and develop leadership roles in business, industry and/or government.
2. Continue professional development and life-long learning.
3. Interact in society and business in a professional and ethical manner.
4. Be proficient in written and oral communication and to utilize people-oriented skills in individual and team environments.
5. Apply the skills from industrial engineering to be proficient in his/her chosen field or further advanced studies.

PHD

1. Practice/teach Industrial Engineering and to initiate and develop leadership roles in education, business, industry and/or government.
2. Continue professional development and life-long learning.
3. Interact in society and business in a professional and ethical manner.
4. Be proficient in written and oral communication and to utilize people-oriented skills in individual and team environments.
5. Apply the skills from Industrial Engineering to be proficient in his/her chosen field.

Occupational Safety and Health, Ph.D.

Degree Offered

- Doctor of Philosophy, Occupational Safety and Health (Ph.D.)

Program Educational Objectives

Drawing from the university's mission, the program mission, and the needs of our constituents, the following educational objectives were developed for the Doctor of Philosophy degree in Occupational Safety and Health:

1. Anticipate and recognize hazards and environmental cases requiring the application of safety and health methods in occupational settings.
2. Identify social and epidemiological trends in occupational safety and health issues at the national and international levels.
3. Identify methods of management in application of effective control techniques.
4. To demonstrate understanding of federal, state, and local regulatory agencies as they impact the practice of occupational safety and health.
5. Conduct, disseminate, and publish original research in occupational safety and health.
6. Be qualified to enter the profession as a professor, practitioner, or researcher in occupational safety and health.

Student Outcomes

In order to meet the Program Educational Objectives, students of the Occupational Safety and Health Doctoral program must be able to meet the following educational outcomes at the time of their graduation. Students will have acquired the ability:

1. To construct, manage, and evaluate a comprehensive safety and health program for large industry or government agencies.
2. To participate in the safety and health regulatory process as an individual or part of a corporation or university.
3. To critically evaluate research conducted by other individuals or corporations in occupational safety and health.
4. To provide excellent teaching at the University or corporate levels.
5. To participate in activities such as conferences or seminars for continued professional improvement.
6. To actively participate as a leader in the professional organizations that serve the occupational safety and health fields.
7. To demonstrate the highest possible ethical standards in the field of occupational safety and health.

Admissions

Applicants to the doctoral occupational safety and health program are required to provide the following:

- Applicants must have earned a grade point average (GPA) of 3.4 or better (out of a possible 4.0)
- A completed application submitted to the WVU Admissions Office
- Official transcripts of all previous college course work
- International applicants must submit proof of English language proficiency.
- GRE General Test scores
- Three letters of recommendation

Curriculum in Doctor of Philosophy – Occupational Safety and Health

A candidate for the Ph.D. degree with a major in occupational safety and health must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Industrial and Management Systems Engineering Department.

Program Requirements

The doctor of philosophy degree with a major in occupational safety and health is administered through the college's interdisciplinary Ph.D. program. The research work for the doctoral dissertation must show a high degree of originality on the part of the student and must constitute an original contribution to the art and science of occupational safety and health.

All Ph.D. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Required core courses for the Ph.D. program are determined by the student's area of emphasis. The research work for the doctoral dissertation may entail a fundamental investigation or a broad and comprehensive investigation into an area of specialization.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required in all courses

Course Requirements	
Research	24
IENG 797 Research	
Select from the following based on degree path:	18
Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, IH&S, MAE, MATH, MINE, PCOL, PNGE, PHYS, PUBH, SAFM, SENG, or STAT courses 500-799	
Examinations	
Qualifying Exam	
Candidacy Exam	
Final Exam	
Total Hours	42

Examinations

QUALIFYING EXAM

All students must take and pass a written qualifying examination. Normally, the qualifying examination is given no later than one semester after completion of eighteen credit hours toward the doctoral degree. This examination is designed to assess the basic competency of students in the occupational safety and health field to determine whether or not they have sufficient knowledge to undertake independent research.

CANDIDACY EXAMINATION

In order to be admitted to candidacy, the student must pass a candidacy exam, which is designed to evaluate the student's overall ability to engage in high-level research.

A student who has successfully completed all coursework, passed the qualifying examination, and successfully defended the research proposal is defined as one who is a candidate for the Ph.D. degree.

FINAL EXAMINATION

At the completion of the dissertation research, candidates must prepare a dissertation and pass the final oral examination (defense) administered by their AEC.

In order to complete the Ph.D. requirements, a student must pass a final oral examination on the results embodied in the dissertation. This examination is open to the public and, in order to evaluate critically the student's competency, may include testing on material in related fields, as deemed necessary by the AEC. In addition, since the Ph.D. degree is primarily a research degree that embodies the results of an original research proposal and represents a significant contribution to scientific literature, the student must submit a manuscript on this research to the AEC.

Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical doctoral degree program that completes degree requirements in three years is as follows.

First Year			
Fall	**Hours**	**Spring**	**Hours**
Course	3	Course	3
Course	3	Course	3
IENG 797	3	IENG 797	3
	9		9

Second Year			
Fall	**Hours**	**Spring**	**Hours**
Course	3	Course	3
IENG 797	9	IENG 797	9
	12		12
Third Year			
Fall	**Hours**	**Spring**	**Hours**
IENG 797	9	IENG 797	9
	9		9

Total credit hours: 60

Major Learning Outcomes

OCCUPATIONAL SAFETY AND HEALTH

1. To construct, manage, and evaluate a comprehensive safety and health program for large industry or government agencies.
2. To participate in the safety and health regulatory process as an individual or part of a corporation or university.
3. To critically evaluate research conducted by other individuals or corporations in occupational safety and health.
4. To provide excellent teaching at the University or corporate levels.
5. To participate in activities such as conferences or seminars for continued professional improvement.
6. To actively participate as a leader in the professional organizations that serve the occupational safety and health fields.
7. To demonstrate the highest possible ethical standards in the field of occupational safety and health.

Safety Management, M.S.

Degree Offered

- Masters of Science, Safety Management (M.S.)

Masters of Science, Safety Management

The mission of the safety management program is to prepare program graduates to meet the safety mission of any enterprise. This is stated simply as: The safety mission of an organization is to protect, conserve, and improve the resources—people, property, and efficacy—of the organization. The Master's of Science with a major in Safety Management is accredited by the Applied and Natural Sciences Accreditation Commission (ANSAC) of ABET, http://www.abet.org.

Program Educational Objectives

Drawing from the university's mission, the program mission, the needs of our constituents, and the criteria of the Applied and Natural Sciences Accreditation Commission of ABET, the following educational objectives were developed for the Masters of Science program in Safety Management:

A graduate of the Safety Management program will be able to:

1. Communicate effectively, orally and in writing, including the transmission of safety data to management and employees.
2. Demonstrate knowledge and skills in the area of safety management.
3. Demonstrate knowledge of ethical and professional responsibilities and knowledge of applicable legislation and regulations.
4. Demonstrate the ability to apply various research activities through the decision-making process used in safety management.

Student Outcomes

SAFETY MANAGEMENT

In order to meet Program Educational Objectives of the Safety Management program, students must be able to meet the following outcomes at the time of their graduation:

1. Mathematics and science and/or technical topics to areas relevant to safety management.
2. An ability to formulate or design a system, process, procedure or program to meet desired needs.
3. An ability to develop and conduct experiments or test hypotheses, analyze and interpret data and use scientific judgment to draw conclusions.
4. An ability to communicate effectively with a range of audiences.

5. An ability to understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts.

6. An ability to function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.

Admissions

Applicants to graduate programs in the safety management program are required to provide the following.

- A completed application submitted to the WVU Admissions Office
- Official transcripts of all previous college course work
- International applicants must submit proof of English language proficiency
- ABET-ANSAC prerequisite course requirements:
  - sixty-three credit hours of approved science, mathematics, and other technical courses. Of these, at least fifteen credit hours must be junior or senior level.
  - twenty-one hours of social sciences, humanities, and/or communications.
- Additional requirements maybe required on a case by case basis and will be determined at the time of admissions.

Curriculum in Masters of Science – Safety Management

A candidate for the M.S. degree with a major in safety management must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Industrial and Management Systems Engineering Department.

Program Requirements

All M.S. degree candidates are required to perform research (thesis or problem report option) and follow a planned program of study. The student's faculty advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Students who do not hold a baccalaureate degree in safety management may be required to take a set of undergraduate courses above and beyond the minimum coursework requirements.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required in all courses

Course Requirements [*]		
A minimum of 60% of courses must be from 500 level or above		
SAFM 501	Safety Management Integration	3
SAFM 502	Controlling Environmental and Personnel Hazards	3
SAFM 505	Safety Legislation and Compliance	3
SAFM 528	Economic Aspects of Safety	3
SAFM 534	Fire Safety Management	3
SAFM 550	Loss Control and Recovery	3
SAFM 552	Safety and Health Training	3
SAFM 640	Instrumentation for Safety Managers	3
SAFM 689	Professional Field Experience [**]	3
Electives		
Select three from the following:		9
SAFM 470	Managing Construction Safety	
SAFM 471	Motor Fleet Safety	
SAFM 533	Disaster Preparedness	
SAFM 539	Security Management	
SAFM 580	Fundamentals of Environmental Management	
IH&S 527	Noise Measurement and Control	
IH&S 528	Industrial Ventilation Design	
IH&S 725	Industrial Hygiene Sampling and Analysis	
IENG 461	System Safety Engineering	
IENG 561	Industrial Hygiene Engineering	

IENG 564	Industrial Ergonomics	
IENG 660	Human Factors System Design	
IENG 662	Systems Safety Engineering	
ENVP 515	Hazardous Waste Training	
ENVP 555	Environmental Sampling and Analysis	
MINE 471	Mine and Safety Management	
RESM 480	Environmental Regulation	
OEHS 601	Environmental Health	
OEHS 620	Occupational and Environmental Hazard Assessment	
OEHS 622	Public Health Toxicology	
OEHS 623	Occupational Injury Prevention	
OEHS 630	Public Health Biology	
OEHS 665	Worksite Evaluation	
SBHS 601	Social and Behavioral Theory	
FIN 455	Risk Management	
CHPR 614	Injury Prevention and Control	
Any IH, IENG, OEHS, EDIP, SAFM, SHBS, or PUBH courses 400-799		
Choose 1 of the following options: [***]		3-6
Thesis Option - 6 hours		
SAFM 697	Research (6 hours)	
Written Research Proposal		
Thesis		
Final Oral or Written Examination		
Problem Report Option - 3 hours		
SAFM 697	Research (3 hours)	
Written Research Proposal		
Formal written report or professional report/paper		
Final Oral or Written Examination		
Coursework Option		
Final Oral or Written Examination		
Total Hours		36

[*]   Students who do not hold a baccalaureate degree in safety management may be required to take a set of undergraduate courses above and beyond the minimum coursework requirements.

[**]   Students who have SHE work experience have the possibility to waive SAFM 689 and take an additional elective, please see your advisor for approval.

[***]   Credit hours may vary depending on option selected. The coursework option requires 36 hours.

Final Examination

M.S. students following the thesis or problem report option must prepare a written research proposal. The proposal must be approved by the student's AEC at least one semester prior to the final oral examination.

All students, regardless of option, are required to pass a final oral or written examination, administered by their AEC, covering the thesis or problem report and/or related course material.

Suggested Plan of Study

The plan below illustrates the Coursework Option. It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical M.S. degree program that completes degree requirements in one and half years is as follows.

First Year

Fall	Hours	Spring	Hours	Summer	Hours
SAFM 501		3 SAFM 528		3 SAFM 689	3
SAFM 502		3 SAFM 640		3	
SAFM 505		3 SAFM 550		3	

Elective		3 Elective	3	
		12	12	3
Second Year				
Fall	**Hours**			
SAFM 552	3			
SAFM 534	3			
Elective	3			
	9			

Total credit hours: 36

Student Outcomes

SAFETY MANAGEMENT

In order to meet Program Educational Objectives of the Safety Management program, students must be able to meet the following outcomes at the time of their graduation:

1. mathematics and science and/or technical topics to areas relevant to safety management.
2. An ability to formulate or design a system, process, procedure or program to meet desired needs.
3. An ability to develop and conduct experiments or test hypotheses, analyze and interpret data and use scientific judgment to draw conclusions.
4. An ability to communicate effectively with a range of audiences.
5. An ability to understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts.
6. An ability to function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.

Department of Mechanical and Aerospace Engineering

Degrees Offered

- Masters of Science, Aerospace Engineering (M.S.A.E.)
- Masters of Science, Mechanical Engineering (M.S.M.E.)
- Masters of Science, Materials Science and Engineering (M.S.M.S.E)
- Doctor of Philosophy, Aerospace Engineering (Ph.D.)
- Doctor of Philosophy, Mechanical Engineering (Ph.D.)
- Doctor of Philosophy, Materials Science and Engineering (Ph.D.)

Faculty

Faculty members in the department have extensive research, industrial, and teaching experience and have published widely. Their combined experience helps them assist students in selecting relevant courses and research topics to meet their educational goals. The Department has excellent laboratory facilities in the Engineering Sciences Building, the Engineering Research Building, and the new Advanced Engineering Research Building to provide support for both instructional and research activities. The Department has several special purpose laboratories located nearby, which include the Engine Research Center, the Advanced Combustion Laboratory, and the wind tunnel laboratory in the hangar at the Morgantown Municipal Airport (Hart Field). Funded research allows the Department to maintain up-to-date facilities that include modern instrumentation and computing and lab equipment, including simulation and computer-controlled data acquisition systems.

Educational Objectives of Graduate Programs

The objectives of the departmental graduate-level programs are as follows:

1. To provide high quality advanced master-level and Ph.D. level education to graduate engineering students to enable successful careers in technology development, innovation and research, with depth and breadth in one or several areas of the engineering discipline.
2. To develop the capacity of graduates to conduct independent research and/or technology development and innovation, through original contributions to the engineering discipline and to disseminate the results of their scholarly work.
3. To instill in graduates the drive for leadership in technology development, innovation and research and to contribute to the advancement of the profession in a societal and economic context.

Four master's degrees are offered in the department: master's of science in aerospace engineering (M.S.A.E.), master's of science in mechanical engineering (M.S.M.E.), master's of science in materials science and engineering (M.S.M.S.&E.), and master's of science in engineering (M.S.E.)

with a major in mechanical engineering or aerospace engineering. The department also offers the doctor of philosophy (Ph.D.) degree with majors in mechanical engineering, in aerospace engineering and in materials science and engineering.

Courses

Only courses with grades of C- or higher are acceptable for graduate credit, although all coursework taken will be counted in establishing the student's grade point average. No more than nine hours of 400-level credit can be counted toward meeting the coursework requirements for the M.S. degree. Only 400-level courses that are approved for math credit (see the following section) and only 400-level courses approved as technical electives for the B.S. degree in an engineering discipline are acceptable for course credit towards the M.S. degree. The technical elective(s) must not have been used to satisfy the B.S. degree. The absolute minimum requirement set by the department for coursework credit towards a Ph.D. degree is eighteen hours beyond the master's degree at the 500-level or higher taken at WVU. However, the actual minimum number of coursework credits is set by the student's advisory and examining committee and is based on the student's background and the area of his/her Ph.D. dissertation. No more than twenty percent of the coursework beyond the minimum of eighteen credit hours required by the college for a doctoral degree can be at the 400-level. A minimum of twenty-four semester hours of research credit at the Ph.D.-level is required to meet dissertation requirements. Two consecutive semesters of full-time attendance at the WVU campus in Morgantown are necessary to meet the residency requirements of the Ph.D. program.

Math Requirements

The Department requires that the graduate coursework include six hours of advanced mathematics for the M.S. programs of study and a minimum of six additional hours of mathematics for the Ph.D. programs. A list of mathematics courses approved for graduate credit for M.S. students and a list for Ph.D. students can be obtained from the graduate program director of the Department.

Time Limitations

All the requirements for thesis based master's degrees (M.S.A.E., M.S.M.E. and M.S.M.S.&E.) in the MAE Department must be completed within eight years preceding the student's graduation. All students in these programs are required to engage in research, and complete and defend successfully a master's thesis. They must identify a subject for their thesis research, form a three-member advisory and examining committee (AEC), and file a plan of study by the end of their second semester of enrollment in the graduate program. A minimum of twenty-four credit hours of coursework with a minimum overall GPA of 3.0/4.0 and six credit hours of M.S. thesis research are required for the thesis based master's degrees. Students must pass a final examination administered by their advisory and examining committee before being certified for the degree.

A course-only master's degree option is available in which students are required to complete thirty-three credit hours of coursework with a minimum overall GPA of 3.0/4.0 and pass a comprehensive examination administered by an advisory and examining committee. Students pursuing a course-only master's degree option are not eligible to receive financial support from WVU. All the requirements for this degree option must also be completed within eight years preceding the student's graduation.

All requirements for the Ph.D. program must be completed within eight years preceding the student's graduation. All students pursuing the Ph.D. program must take and pass the Ph.D. Qualifier Examination within the first two semesters in the program. A second and final attempt to pass the Ph.D. qualifier can be offered no later than the third semester. Students should identify a subject for their Ph.D. dissertation research, form a five-member advisory and examining committee, and file a plan of study by the end of their third semester of enrollment in the program. A minimum of eighteen credit hours of coursework with a minimum GPA of 3.3/4.0 and twenty-four credit hours of dissertation research are required for the Ph.D. degree. All Ph.D. students enrolled in their Ph.D. program on or after May 2016 must document that they have submitted a journal paper manuscript to an archival journal or have submitted a patent disclosure, prior to scheduling their dissertation defense. After the Ph.D. qualifying examination requirement and publication requirement are satisfied, students are required to produce and successfully defend a Research Proposal before the advisory and examining committee to attain Ph.D. candidacy. After at least one full semester of the Ph.D. proposal defense, candidates must produce and successfully defend a Ph.D. dissertation.

Academic Areas

Graduate courses in the MAE department are organized under six academic areas: fluids and aerodynamics, solid mechanics and structures, design and controls, thermal sciences, bioengineering, and materials science and engineering. Students who are pursuing an advanced degree in either mechanical or aerospace engineering and in materials science and engineering may perform their thesis or dissertation research and specialize in any one of these areas.

FLUID MECHANICS AND AERODYNAMICS

A variety of courses and facilities support graduate research in aerodynamics and fluid mechanics. Laboratories are located in college buildings and remote sites. Flow facilities include instrumented subsonic and supersonic wind tunnels, and several flow loops mainly used for research in gas-solid and density stratified flows. Available instrumentation includes eight channels of hot wire/film anemometry, two single-component and one three-component, laser Doppler velocimeter (LDV) systems, and a particle image velocimeter (PIV) system. The department owns two flight simulation facilities, one that simulates translational and rotational motion in six degrees of freedom, and the other that relies on D-six software to provide "joystick only" flight simulation. Furthermore, the department built and operates different types of Unmanned Airborne Vehicles (UAV's), as well as experimental aircraft and airborne systems that are housed in a hangar owned by the department at the Hart Field municipal airport in Morgantown. A significant portion of the current activity involves numerical solutions to flow problems and is supported by a computing facility dedicated to graduate research.

Although the faculty background and interests in the areas of aerodynamics and fluid mechanics are broad, recent research has been concentrated on applications of computational fluid dynamics (CFD) to investigate a wide variety of problems in fuel cell technology, fixed wing and rotorcraft aerodynamics, bioengineering, and combustion. The department's faculty have accumulated extensive research experience in multiphase and density-stratified flows, low-speed aerodynamics, shock phenomena in two-phase systems, flow in microgravity, boundary layer control, and high-speed aerodynamics. Previous and current research areas include topics such as fluidized bed combustion, aerosol sampling, flow metering, flow distribution systems, numerical solutions to gas-solid flows, and fluid-particle turbulence interactions, including deposition on solid surfaces. The low-speed aerodynamics work is related to the design of vertical axis wind turbines and STOL airfoils.

SOLID MECHANICS AND DESIGN

The solid mechanics and design area encompasses the theoretical, numerical, and experimental study of solid bodies, from concentration on local behavior of deformable bodies to the global response of structural elements. Hence, students may explore the mechanical behavior of materials in the neighborhood of micro-scale defects such as cracks, or investigate the behavior of large-scale bodies such as aerospace structures.

The faculty members specialized in this area carry out basic and applied research using state-of-the-art computational and experimental techniques. The areas of research include advanced metal alloys and composite materials, lightweight structures, safety and durability enhancements, real time monitoring and diagnosis of structural systems, aero elasticity, fracture mechanics, nonlinear dynamics and vibrations, biomechanics; and computational methods and experimental techniques, including optical and ultrasound methods. Furthermore, in cooperation with the Department of Civil and Environmental Engineering, MAE graduate students may pursue studies related to civil engineering. A large array of research facilities includes laboratories (materials, structures, vibrations, photo mechanics, biomechanics, fracture mechanics), computers (work stations, personal computers, computer-aided engineering), and mechanical and electronic shops.

DYNAMICS AND CONTROLS

The dynamics and controls area offers instructional and research opportunities for students who seek to attain the expertise required to control the behavior of an engineering system in a dynamic environment. Instructional offerings equip the students with a foundation for developing prototype systems and for improving the performance of existing systems. Selected examples of research areas include flight simulation and controls, automatic controls, advanced instrumentation, microprocessor applications and non-destructive testing; elastodynamic analysis, computer-aided design (CAD); and modeling, design, and analysis of energy management systems.

THERMAL SCIENCES AND SYSTEMS

The thermal sciences and systems area encompasses the fields of thermodynamics, combustion, heat transfer, and power and energy systems. Graduate course offerings cover a wide range of topics in this area with applications to both aerospace and mechanical engineering problems. Recent research efforts include topics such as alternative fuels testing, internal combustion engine performance and emissions, fuel cell technology, heat transfer, numerical analysis of thermal systems, the analysis of fluidized bed combustion, energy analysis of buildings, oscillating jet combustion, deposition on turbine blades, and reactor design.

Research facilities include a state-of-the-art engine research laboratory, three transportable emissions research laboratories, thermal analyzers, recording thermocouple data-acquisition systems, high-altitude simulation chamber for ablation and wear studies, a fluidized bed combustion laboratory, an electrically-heated, natural convection water facility, Schlieren systems for flows with varying density, and a water reservoir for thermal stratification studies.

BIOENGINEERING

Areas of research specialization related to bioengineering include ultrasound technology for imaging of body tissues and organs, respiratory and diseased tissue mechanics, orthopedic mechanics, bone growth and fracture, and the application to rehabilitation of computer-aided design and microprocessor-based instrumentation. Research facilities include a state-of-the-art ultrasound imaging laboratory, an aerosol inhalation exposure system, laser-based holographic and moire interferometric equipment, a lung acoustic impedance measurement system; and modern orthopedic, rehabilitation, and computer research laboratories.

MATERIALS SCIENCE AND ENGINEERING

The material science and engineering area allows for the study of processing, structure, and properties of materials for structural, functional, and device applications. Areas of research emphasized within this area include advanced microscopy, composite materials, materials for fuel cells, smart materials, super alloys, facilities incorporating electron microscopy, scanning probe microscopy, electro-chemical characterization, thermal analysis, and mechanical testing facilities.

FACULTY

CHAIR

- Jacky Prucz - Ph.D. (Georgia Institute of Technology)
  Structural Design, Composite Materials, Solid Mechanics

PROFESSORS

- Richard A. Bajura - Ph.D. (University of Notre Dame)
  Director NRCCE, Energy Sciences
- Ever J. Barbero - Ph.D. (Virginia Polytechnic Institute and State University)
  Materials, Experimental and Computational Mechanics
- Ismail Celik - Ph.D. (University of Iowa)
  Fluids Engineering, Fuel Cell Technology
- Russel K. Dean - Ph.D. (West Virginia University)
  Vice Provost, Engineering Mechanics, Eng. Education
- Bruce S. Kang - Ph.D. (University of Washington)
  Experimental Mechanics, Advanced Materials
- John M. Kuhlman - Ph.D. (Case Western Reserve University)
  Fluid Mechanics
- Xingbo Liu - Ph.D. (University of Science and Technology of China, Beijing)
  Materials Science
- Kenneth H. Means - Ph.D., P.E. (West Virginia University)
  Kinematics, Dynamics and Stability, Friction and Wear
- Gary J. Morris - Ph.D. (West Virginia University)
  Fluid Mechanics, Combustion, Aerodynamics
- Victor H. Mucino - Dr.Eng., P.E. (University of Wisconsin-Milwaukee)
  Mechanical Engineering Design, CAD, Finite Element Analysis
- Marcello R. Napolitano - Ph.D. (Oklahoma State University)
  Aircraft Stability and Control, Feedback Control, Unmanned Airborne Vehicles (UAVs)
- Samir N. Shoukry - Ph.D. (Aston University, Birmingham, U.K.)
  Pavement Modeling, Non-destructive Evaluation, Structural Dynamics, Neural nets, Instrumentation
- Nithi T. Sivaneri - Ph.D. (Stanford University)
  Structural Mechanics, Composite Materials, FEM, Numerical Methods
- James E. Smith - Ph.D. (West Virginia University)
  Mechanical and Aeronautical Design
- Nianqiang Wu - Ph.D. (Zhejiang University, China)
  Materials Science and Engineering

ASSOCIATE PROFESSORS

- Wade W. Huebsch - Ph.D. (Iowa State University)
  Fluid Mechanics, CFD, Numerical Methods
- Hailin Li - Ph.D. (University of Calgary, Canada)
  Combustion, Emissions, Fuel Efficiency of Vehicles and IC Engines
- Osama Mukdadi - Ph.D. (University of Colorado)
  Bioengineering, Acoustics, Solid Mecanics and Materials
- Mario G. Perhinschi - Ph.D. (Politehnica University of Bucharest, Romania)
  Aircraft Stability and Control, Flight Simulation
- Edward M. Sabolsky - Ph.D. (Pennsylvania State University)
  Materials, Ceramic Science
- Xueyan Song - Ph.D. (Zhejiang University, China)
  Materials Science, Electron Microscopy
- Gregory J. Thompson - Ph.D. (West Virginia University)
  Thermodynamics, Machine Design
- W. Scott Wayne - Ph.D. (West Virginia University)
  Machine Design, Alternative Fuels

ASSISTANT PROFESSORS

- V'yacheslav Akkerman - Ph.D. (Umea University, Sweden)
  Turbulent Combustion, Flame Turbulization, Propulsion Instabilities in Rocket Engines
- Patrick H. Browning - Ph.D. (West Virginia University)
  Aerodynamics, Aircraft Design
- Marvin H. Cheng - Ph.D. (Purdue University)
  Instrumentation, Mechatronics, Dynamic Systems and Control

- John A. Christian - Ph.D. (University of Texas, Austin)
  Spacecraft Design, Navigation, Estimation Theory
- Cosmin E. Dumitrescu - Ph.D. (University of Alabama)
  Combustion, Alternate Fuels, IC Engines
- Jason N. Gross - Ph.D. (West Virginia University)
  Unmanned Aerial Vehicles, Avionic Systems, Flight Testing
- Yu Gu - Ph.D. (West Virginia University)
  Robotic Systems, Sensor Fusion
- Alfred E. Lynam - Ph.D. (Purdue University)
  Space Mission Design, Orbital Perturbations
- David S. Mebane - Ph.D. (Georgia Institute of Technology)
  Fuel Cells, Multi-Scale Simulation of Chemical and Electrochemical Systems
- Terrance D. Musho - Ph.D. (Vanderbilt University)
  Nanoscale Thermal and Electrical Transport, Direct Energy Conversion
- Andrew C. Nix - Ph.D. (Virginia Polytechnic Institute and State University)
  Turbines, Engines and Emissions
- Konstantinos Sierros - Ph.D. (University of Birmingham, U. K.)
  Flexible Optoelectronic Devices, Tribology, Materials for Renewable Energy
- Arvind Thiruvengadam - Ph.D. (West Virginia University)
  Emissions of Heavy-Duty Internal Combustion Egines

TEACHING ASSISTANT PROFESSORS

- Pete Gall - Ph.D. (West Virginia University)
  Aerospace Systems Design

RESEARCH ASSOCIATE PROFESSORS

- David C. Lewellen - Ph.D. (Cornell University)
  Fluid Dynamics, Turbulence

RESEARCH ASSISTANT PROFESSORS

- Yun Chen - Ph.D. (Unuiversidade Tecnica de Lisboa)
  Material Science, Metal Hydrides, Cathode Material Development
- Thomas Evans - Ph.D. (West Virginia University)
  Solid Mechanics, Structures
- Derek Johnson - Ph.D. (West Virginia University)
  Alternative Fuels Engines and Emissions
- Eduardo Sosa - Ph.D. (University of Puerto Rico)
  Thin Wall Structures

VISITING AND ADJUNCT PROFESSORS

- Alberto Ayala - Ph.D. (University of California, Davis)
  Energy, Engine Emissions
- Dureid Azzouz - Ph.D. (University of Southampton, U.K.)
  Fluid Mechanics
- Albert Boretti - Ph.D. (University of Florence, Italy)
  Innovative Combustion Engines
- Mark Bright - Ph.D. (West Virginia University)
  Materials Engineering, Pyrotech Inc.
- Darran Cairns - Ph.D. (University of Birmingham, U.K.)
  Materials Science
- Weigiang Ding - Ph.D. (Northwestern University)
  Nanostructures
- Renguang Dong - Ph.D. (Concordia University)
  Biomechanics, Human Vibrations, NIOSH
- Renguang Dong - Ph.D. (Concordia University)
  Biomechanics, Human Vibrations, NIOSH
- Mridul Gautam - Ph.D. (West Virginia University)

Alternate Fuels, Engine and Emissions, VP for Research UNR

- Luis A. Godoy - Ph.D. (University of London, U.K.)
  Structural Stability
- Frank E. Goodwin - Sc.D. (Massachusetts Institute of Technology)
  Materials Engineering, ILZRO
- Valeriya Gritsenko - Ph.D. (University of Alberta, Canada)
  Neuroscience
- Huang Guo - Ph.D. (West Virginia University)
  Electro-Chemistry, Materials Science, Mechanical Engineering
- Srinkath Gururajan - Ph.D. (West Virginia University)
  Small Unmanned Aerial Vehicle Systems
- Nabil S. Hakim - Ph.D. (Wayne State University)
  Alternative Fuels Engines and Emissions
- Yiqun Huang - Ph.D. (University of Texas, Austin)
  Engine Emissions Control
- Paul E. King - Ph.D. (Oregon State University)
  Materials Engineering, NETL
- George Kiriakidis - Ph.D. (Salford University, U.K.)
  Physics, Mechanics
- Stephen Kukureka - Ph.D. (University of Birmingham, U.K.)
  Materials Science
- Andrew D. Lowery - Ph.D. (West Virginia University)
  Control Systems
- Alejandro Lozano-Guzman - Ph.D. (University of New Castle Upon Tyne, U.K.)
  Dynamic Systems (CICATA-IPN Mexico)
- Ayyakkannu Manivannan - Ph.D. (The University of Tokyo, Japan)
  Materials Chemistry Characterization
- Eugene A. McKenzie - Ph.D. (West Virginia University)
  Mechanical Engineering Design, NIOSH
- Chris Menchini - Ph.D. (West Virginia University)
  Computational Fluid Dynamics, Fire Modeling
- Vincenzo Mulone - Ph.D. (University of Rome, Tor Vergata)
  Engine Emissions, Fluid Mechanics
- John Nuzkowski - Ph.D. (West Virginia University)
  Alternative Fuels and Engine Emissions, UNF
- Ming Pei - M.D., Ph.D. (Beijing Medical University, China)
  Tissue Engineering, HSC-WVU
- Alber Alfonse Sadek - Ph.D. (Osaka University, Japan)
  Alloys
- Brad Senor - Ph.D. (West Virginia University)
  Control Systems
- Benjamin Shade - Ph.D. (West Virginia University)
  Engine Emissions, IAV Automotive
- Alberto Traverso - Ph.D. (University of Genoa, Italy)
  Energy Systems and Control, DIMSET - Italy
- Nathan Weiland - Ph.D. (Georgia Institute of Technology)
  Energy Systems, Experimental,Computational,Theoretical Methods
- Jay Wilhelm - Ph.D. (West Virginia UNiversity)
  Unmanned Aerial Vehicles, Wind Turbine Modeling
- Gergis William - Ph.D. (West Virginia University)
  Structural Engineering
- Steven Woodruff - Ph.D. (University of Michigan)
  Combustion Optical Phenomena
- David Wyrick - Ph.D. (University of Missouri-Rolla)
  Engineering Management, Engineering Education, SME's
- Sergiy Yakovenko - Ph.D. (University of Alberta, Canada)

Neuroscience
- Kirk Yerkes - Ph.D. (University of Dayton)
Energy Optimized Aircraft

PROFESSORS EMERITI

- Larry Banta - Ph.D. (Georgia Institute of Technology)
- Nigel N. Clark - Ph.D. (University of Natal, South Africa)
- Eric Johnson - Ph.D. (University of Wisconsin-Madison)
- John Loth - Ph.D. (University of Toronto, Canada)
- Michael G. Palmer - Ph.D. (West Virginia University)
- John E. Sneckenberger - Ph.D. (West Virginia University)
- Wallace S. Venable - Ed.D. (West Virginia University)
- Richard E. Walters - Ph.D. (West Virginia University)

Aerospace Engineering, M.S.A.E., Ph.D.

Degrees Offered

- Masters of Science, Aerospace Engineering (M.S.A.E.)
- Doctor of Philosophy, Aerospace Engineering (Ph.D.)

Educational Objectives of the Departmental Graduate-Level Programs:

1. To provide high quality advanced master-level and Ph.D. level education to graduate engineering students to enable successful careers in technology development, innovation and research, with depth and breadth in one or several areas of the aerospace engineering discipline.
2. To develop the capacity of graduates to conduct independent research and/or technology development and innovation, through original contributions to the aerospace engineering discipline and to disseminate the results of their scholarly work.
3. To instill in graduates the drive for leadership in technology development, innovation and research and to contribute to the advancement of the profession in a societal and economic context.

The outcomes of the graduate programs in Aerospace Engineering are as follows:

- Holders of graduate degrees will have an expert-level understanding of the advanced principles of aerospace engineering, which include aerospace systems design, aircraft or spacecraft dynamics, stability and control, flight mechanics and simulation, advanced materials, vehicle propulsion, aerodynamics, aeroelasticity, and computational mechanics.
- Holders of graduate degrees will hold paramount the highest standards of ethical and professional responsibility in the practice of their profession to contribute to the well-being of society and to the advancement of the aerospace engineering profession.
- Holders of Ph.D. degrees will have furthered original research contributions to the state of the art in their specific areas of expertise and will be able to develop innovative research in order to advance the frontiers of knowledge, secure sponsored research, and disseminate its findings through scholarly publications.

Admissions Requirements

Minimum requirements for admission as a regular student into the graduate programs of the department are summarized as follows:

- An applicant for admission into the M.S. or the Ph.D. degree program must have earned a grade point average (GPA) of 3.0 or better (out of a possible 4.0) in all previous college work if he/she holds a B.S. or M.S. degree, respectively, from an accredited or internationally recognized program.
- Applicants for admission into the B.S. to M.S. degree track must have a grade point average of 3.5 or higher at the end of the first semester in the junior year of the curriculum.
- Applicants for admission into the direct-track from B.S. to Ph.D. degree option must have a grade point average of 3.5 or higher if they commence their graduate studies in the department as Ph.D. students or must have a cumulative grade point average of 4.0 if they transfer from the M.S. degree program by the end of their first year of graduate studies in the department.
- International applicants must submit proof of English language proficiency.
- All international applicants who have not received their undergraduate degree in the USA are required to submit GRE general test scores with the engineering subject test score being optional. The GRE scores required for admission as a regular graduate student in the department need to be seventy-fourth percentile or higher in the Quantitative section (strictly enforced). The GRE scores for the verbal and analytical sections will be taken into consideration in the admission process.
- Three recent reference letters, at least two of the three references should be from the institution last attended.

Doctoral Admissions

ADMISSION TO DOCTOR OF PHILOSOPHY PROGRAM

To be eligible for admission into the doctor of philosophy degree program with a major in aerospace or mechanical engineering, a candidate must hold or expect to receive (by the enrollment date) a M.S. degree in an engineering discipline from an institution which has an ABET accredited undergraduate program in engineering or an internationally recognized program in engineering (except for students qualified for the direct track to Ph.D. degree option, described below). Qualified candidates holding a M.S. degree in applied sciences can also be considered for admission into the Ph.D. program.

ADMISSION TO THE DIRECT-TRACK TO PH.D. DEGREE OPTION

The Department of Mechanical and Aerospace Engineering (MAE) offers a direct track option from the bachelor of science (B.S.) to the doctor of philosophy (Ph.D.) degree for prospective qualified students holding a B.S. degree in an engineering discipline, materials science, mathematics, or applied sciences from an accredited undergraduate program or an internationally recognized program. This is an accelerated track that provides outstanding candidates the option of earning a Ph.D. degree in less than five years after graduating from an undergraduate program by engaging early in their Ph.D. dissertation research without having to complete a research thesis for a master of science (M.S.) degree. To qualify for the direct track degree option, a candidate must have earned a cumulative grade point average (GPA) of 3.5/4.0 or higher in his/her undergraduate studies and attain a minimum of seventy-fourth percentile in the quantitative section of the standardized Graduate Record Examination (GRE). Students who are pursuing an M.S. degree in the MAE department have also the possibility of transferring into the direct track option in their third semester in the program, provided that they earn a GPA of at least 3.75/4.0 and attain a minimum of seventy-fourth percentile in the quantitative section of the GRE by the end of their first two semesters of graduate studies at WVU. Students admitted into the direct track option are considered to be Ph.D. students in the MAE department.

Curriculum in Master of Science in Aerospace Engineering

A candidate for the M.S. degree in aerospace engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Mechanical and Aerospace Engineering Department.

Program Requirements

All M.S. degree candidates are required to perform research (except those pursuing the coursework-only degree option) and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required in all courses.

A minimum of 60% of courses must be from 500 level or above.

Course Requirements *

Thesis Option (30 credit hours)

Technical Electives (6 credit hours)

Mathematics Requirements (6 credit hours)

Additional Courses (12 credit hours) - Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, MAE, MATH, MINE, PNGE, PHYS, SENG, or STAT courses 400-799, as approved by the student's AEC

MAE 697	Research (6 credit hours)

Thesis

Final Oral or Written Examination

Problem Report Option (33 credit hours)

Technical Electives (6 credit hours)

Mathematics Requirements (6 credit hours)

Additional Courses (18 credit hours) - Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, MAE, MATH, MINE, PNGE, PHYS, SENG, or STAT courses 400-799, as approved by the student's AEC

MAE 697	Research (3 credit hours)

Formal Written Report or Professional Report/Paper

Final Oral or Written Examination

Coursework Option (33 credit hours)

Technical Electives (18 credit hours)

Mathematics Requirements (6 credit hours)

Additional Courses (9 credit hours) - Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, MAE, MATH, MINE, PNGE, PHYS, SENG, or STAT courses 400-799, as approved by the student's AEC

Comprehensive Exam (Written or Oral)	
Total Hours	**30-33**

MATHEMATICS REQUIREMENTS FOR ALL OPTIONS (6 CREDIT HOURS)

Select two of the following (at least one course with MATH prefix):

MATH 420	Numerical Analysis 1
MATH 441	Applied Linear Algebra
MATH 456	Complex Variables
MATH 521	Numerical Analysis
MATH 522	Numerical Solution of PDE
MATH 541	Modern Algebra
MATH 543	Linear Algebra
MATH 545	Number Theory 1
MATH 551	Real Variables 1
MATH 555	Complex Variables 1
MATH 560	Introduction to Dynamical Systems and Applications
MATH 563	Mathematics Modeling
MATH 564	Intermediate Differential Equations
MATH 567	Advanced Calculus
MATH 568	Advanced Calculus
MATH 573	Graph Theory
STAT 513	Design of Experiments
STAT 545	Applied Regression Analysis
STAT 561	Theory of Statistics 1
STAT 562	Theory of Statistics 2
MAE 515	Analytical Methods in Engineering
MAE 623	Conduction Heat Transfer
MAE 633	Computational Fluid Dynamics
MAE 640	Continuum Mechanics
MAE 645	Energy Methods in Applied Mechanics
CHE 531	Mathematical Methods in Chemical Engineering
EE 463	Digital Signal Processing Fundamentals
EE 465	Introduction to Digital Image Processing
EE 515	Linear Control Systems
EE 517	Optimal Control
IENG 518	Technology Forecasting
IENG 553	Applied Linear Programming
PHYS 461	Thermodynamics and Statistical Mechanics
PHYS 611	Introduction to Mathematical Physics

TECHNICAL AREA COURSES FOR THESIS OR PROBLEM REPORT OPTIONS (6 CREDIT HOURS)

Select two courses in a single core technical area from the following:

Area A: Fluid Mechanics and Aerodynamics (FMA)	
MAE 532	Dynamics of Viscous Fluids
MAE 624	Convection Heat Transfer
or MAE 636	Fundamentals of Turbulent Flow
Area B: Thermal Sciences and Systems (TSS)	
MAE 521	Advanced Thermodynamics 1
MAE 532	Dynamics of Viscous Fluids
MAE 624	Convection Heat Transfer
Area C: Dynamics and Controls (D&C)	

MAE 642	Intermediate Dynamics	
or MAE 653	Advanced Vibrations	
MAE 660	Feedback Control in Mechanical Engineering	
Area D: Solid Mechanics and Design (SMD)		
MAE 543	Advanced Mechanics of Materials	
or MAE 642	Intermediate Dynamics	
MAE 640	Continuum Mechanics	
or MAE 653	Advanced Vibrations	
Area E: Materials Science (MS)		
MAE 580	Crystallography and Crystals	
MAE 583	Thermodynamics and Kinetics of Materials	
MAE 649	Microscopy of Materials	

TECHNICAL AREA COURSES FOR COURSEWORK OPTION (18 CREDIT HOURS)

Required Courses

MAE 521	Advanced Thermodynamics 1
MAE 532	Dynamics of Viscous Fluids
MAE 543	Advanced Mechanics of Materials
MAE 580	Crystallography and Crystals
MAE 653	Advanced Vibrations
MAE 660	Feedback Control in Mechanical Engineering

*   Students who do not hold a baccalaureate degree in aerospace engineering will be required to take a set of undergraduate aerospace engineering courses above and beyond the minimum coursework requirements in order to overcome deficiencies in the aerospace engineering area.

Final Examination

M.S. students following the thesis or problem report option must prepare a written research proposal. The proposal must be approved by the student's AEC at least one semester prior to the final oral examination.

All students, regardless of option, are required to pass a final oral or written examination, administered by their AEC, covering the thesis or problem report and/or related course material.

The students request for the comprehensive exam for students in the Coursework Only degree option must be filed at least four weeks in advance of the desired date of the exam. The comprehensive exam for students in the Coursework Only degree option must be passed at least 3 weeks before graduation.

Suggested Plan of Study

The plan below illustrates the Thesis Option. It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical M.S.A.E degree program that completes degree requirements in two years is as follows.

First Year

Fall	Hours	Spring	Hours
Technical Area Course		3 Technical Area Course	3
Math Course		3 Math Course	3
Additional Course		3 Additional Course	3
		9	9

Second Year

Fall	Hours	Spring	Hours
Additional Course		3 Additional Course	3
MAE 697		3 MAE 697	3
		6	6

Total credit hours: 30

Curriculum in Doctor of Philosophy – Aerospace Engineering

A candidate for the Ph.D. degree with a major in aerospace engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Mechanical and Aerospace Engineering Department.

Program Requirements

The doctor of philosophy degree with a major in aerospace engineering is administered through the college's interdisciplinary Ph.D. program. The research work for the doctoral dissertation must show a high degree of originality on the part of the student and must constitute an original contribution to the art and science of aerospace engineering.

All Ph.D. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

The doctoral courses of study are selected to fit the particular interests and objectives of the student, with proper attention given to broadening related areas of study. The research work for the doctoral dissertation may entail a fundamental investigation into a specialized area or a broad and comprehensive study in a related subject.

All students pursuing a Ph.D. degree in the MAE department are expected to engage in research and complete and successfully defend a Ph.D. dissertation. They should identify a subject for their Ph.D. dissertation, form a five-member advisory and examining committee, and file a plan of study by the end of their second semester of enrollment in the graduate program. At least one member of the graduate faculty from outside the department is required to serve on the advisory and examining committee.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required in all courses.

Course Requirements [*]	
Technical Area Courses	**3**
Select one course in the relevant core technical area from the following: [**]	
Area A: Fluid Mechanics and Aerodynamics (FMA)	
MAE 532	Dynamics of Viscous Fluids
MAE 624	Convection Heat Transfer
MAE 636	Fundamentals of Turbulent Flow
Area B: Thermal Sciences and Systems (TSS)	
MAE 521	Advanced Thermodynamics 1
MAE 532	Dynamics of Viscous Fluids
MAE 624	Convection Heat Transfer
Area C: Dynamics and Controls (D&C)	
MAE 642	Intermediate Dynamics
MAE 653	Advanced Vibrations
MAE 660	Feedback Control in Mechanical Engineering
Area D: Solid Mechanics and Design (SMD)	
MAE 543	Advanced Mechanics of Materials
MAE 640	Continuum Mechanics
MAE 642	Intermediate Dynamics
MAE 653	Advanced Vibrations
Area E: Materials Science (MS)	
MAE 580	Crystallography and Crystals
MAE 583	Thermodynamics and Kinetics of Materials
MAE 649	Microscopy of Materials
Mathematics Requirements	**6**
Select two of the following (at least one course with MATH prefix):	
MATH 521	Numerical Analysis
MATH 522	Numerical Solution of PDE
MATH 541	Modern Algebra
MATH 543	Linear Algebra

MATH 545	Number Theory 1	
MATH 551	Real Variables 1	
MATH 555	Complex Variables 1	
MATH 560	Introduction to Dynamical Systems and Applications	
MATH 563	Mathematics Modeling	
MATH 564	Intermediate Differential Equations	
MATH 567	Advanced Calculus	
MATH 568	Advanced Calculus	
MATH 573	Graph Theory	
STAT 513	Design of Experiments	
STAT 545	Applied Regression Analysis	
STAT 561	Theory of Statistics 1	
STAT 562	Theory of Statistics 2	
MAE 515	Analytical Methods in Engineering	
MAE 623	Conduction Heat Transfer	
MAE 633	Computational Fluid Dynamics	
MAE 640	Continuum Mechanics	
MAE 645	Energy Methods in Applied Mechanics	
CHE 531	Mathematical Methods in Chemical Engineering	
EE 515	Linear Control Systems	
EE 517	Optimal Control	
IENG 518	Technology Forecasting	
IENG 553	Applied Linear Programming	
PHYS 611	Introduction to Mathematical Physics	
Research		24
MAE 797	Research	
Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, IH&S, MAE, MATH, MINE, PNGE, PHYS, SAFM, SENG, or STAT courses 500-799		9
Examinations		
Qualifying Exam (Ph.D. qualifying examination)		
Candidacy Exam (Dissertation research proposal defense)		
Final Exam (Final dissertation defense)		
The "Publication Requirement" must be satisfied prior to scheduling the final dissertation defense		
Total Hours		42

*   Students who do not hold a baccalaureate degree in aerospace engineering are required to take a set of undergraduate aerospace courses above and beyond the minimum coursework requirements.
For these students, a minimum of fifty-four hours of coursework and thirty hours of independent research beyond a bachelor's degree, or eighteen hours of coursework and twenty-four hours of independent research beyond an M.S. degree are required.

**   PhD students who also earn their MS degree in the MAE Department are expected to select the third core course in their technical area.

First Year

Fall	Hours	Spring	Hours
Technical Area Course	3	Math Course	3
Math Course	3	Additional Course	3
MAE 797	3	MAE 797	3
	9		9

Second Year

Fall	Hours	Spring	Hours
Additional Course	3	Additional Course	3
MAE 797	3	MAE 797	3
	6		6

Third Year

Fall	Hours	Spring	Hours
MAE 797	6	MAE 797	6
	6		6

Total credit hours: 42

JOURNAL PAPER PUBLICATION REQUIREMENT FOR ALL PHD STUDENTS:

Beginning with all PhD students admitted for the summer or fall of 2016 and thereafter, every Ph.D. student, prior to his/her dissertation defense, will be required to provide written documentation that they have received formal proof of submission of either:

a.) At least one manuscript, generally co-authored with their research supervisor and about some portion of their PhD dissertation research, to an archival journal for publication, or

b.) At least one patent disclosure, also generally about some portion of their PhD dissertation research.

This publication requirement will have to be satisfied prior to scheduling the defense of the Ph.D. Dissertation.

Major Learning Outcomes

AEROSPACE ENGINEERING

The MAE Department is committed to deliver high quality education and research experience to all graduate students in order to enable them to achieve success in their careers, though the following Learning Goals:

- Expertise, depth and breadth in a chosen field of aerospace engineering.
- Capacity to engage in original research, advanced technological discovery and innovation in order to advance the frontiers of knowledge in the science of the aerospace engineering discipline.
- Capacity of effective high level communication in order to document, disseminate and transfer knowledge of the science of the aerospace engineering discipline in educational, research or applied workplace settings.
- Appreciation and understanding of the role of the science of the aerospace engineering discipline in a global and societal context.

Thesis Based Master's Degrees

All the requirements for thesis based master's degrees (M.S.A.E., M.S.M.E. and M.S.M.S.&E.) in the MAE Department must be completed within eight years preceding the student's graduation. All students in these programs are required to engage in research, complete and successfully defend a master's thesis. They must identify a subject for their thesis research, form a three-member advisory and examining committee (AEC), and file a plan of study by the end of their second semester of enrollment in the graduate program. A minimum of twenty-four credit hours of coursework with a minimum overall GPA of 3.0/4.0 and six credit hours of M.S. thesis research are required for the thesis based master's degrees. Students must pass a final examination administered by their advisory and examining committee before being certified for the degree. All thesis based master's degree students have to comply with core requirements by selecting a "core area" and taking two of the courses listed in that area, and in addition they have to comply with the mathematics requirements by taking two courses from an approved list. Four additional courses can be selected from a list of technical electives, or from the core and mathematics lists to complete the coursework requirements, with no more than three courses at the 400 level.

Course Based Master's Degree

A course-only master's degree option is available (M.S.E.), in which students are required to complete thirty-three credit hours of coursework with a minimum overall GPA of 3.0/4.0 and pass a comprehensive examination administered by an advisory and examining committee. Students pursuing a course-only master's degree option are not eligible to receive financial support from the MAE Department. All the requirements for this degree option must also be completed within eight years preceding the student's graduation.

Ph.D. Degrees

The MAE Department offers Ph.D. Programs in Aerospace Engineering, in Mechanical Engineering and in Materials Science and Engineering. These programs require a minimum of eighteen credit hours of graduate level coursework plus a minimum of twenty-four credit hours of research. Students in the Ph.D. program must take and pass the Ph.D. Qualifier examination by the second semester of the program with a second attempt no later than the third semester in the program if necessary. After the qualifier examination, students are expected to produce a dissertation proposal and defend it before a five-member advising and examining committee (AEC). Subsequent the successful proposal defense, students must comply with the journal paper publication (or patent disclosure) requirement in order to attain Ph.D. Candidacy. Finally Ph.D. candidates must successfully defend a Ph.D. dissertation and submit it to WVU library through the ETD protocol to fulfill all the requirements for the degree.

Mechanical Engineering, M.S.M.E., Ph.D.

Degrees Offered

- Masters of Science, Mechanical Engineering (M.S.M.E.)
- Doctor of Philosophy, Mechanical Engineering (Ph.D.)

Educational Objectives of the Departmental Graduate-Level Programs:

1. To provide high quality advanced master-level and Ph.D. level education to graduate engineering students to enable successful careers in technology development, innovation and research, with depth and breadth in one or several areas of the mechanical engineering discipline.
2. To develop the capacity of graduates to conduct independent research and/or technology development and innovation, through original contributions to the mechanical engineering discipline and to disseminate the results of their scholarly work.
3. To instill in graduates the drive for leadership in technology development, innovation and research and to contribute to the advancement of the profession in a societal and economic context.

The outcomes of the graduate programs in Mechanical Engineering are as follows:

- Holders of graduate degrees will have an expert-level understanding of the advanced principles of mechanical engineering, which include mechanical systems design, system dynamics, solid mechanics, energy systems, engineering materials, automatic controls, mechatronics, and computational mechanics.
- Holders of graduate degrees will hold paramount the highest standards of ethical and professional responsibility in the practice of their profession to contribute to the well being of society and to the advancement of the mechanical engineering profession.
- Holders of Ph.D. degrees will have furthered original research contributions to the state of the art in their specific areas of expertise and will be able to develop innovative research in order to advance the frontiers of knowledge, secure sponsored research, and disseminate its findings through scholarly publications.

Thesis Based Master's Degrees

All the requirements for thesis based master's degrees (M.S.A.E., M.S.M.E. and M.S.M.S.&E.) in the MAE Department must be completed within eight years preceding the student's graduation. All students in these programs are required to engage in research, complete and successfully defend a master's thesis. They must identify a subject for their thesis research, form a three-member advisory and examining committee (AEC), and file a plan of study by the end of their second semester of enrollment in the graduate program. A minimum of twenty-four credit hours of coursework with a minimum overall GPA of 3.0/4.0 and six credit hours of M.S. thesis research are required for the thesis based master's degrees. Students must pass a final examination administered by their advisory and examining committee before being certified for the degree. All thesis based master's degree students have to comply with core requirements by selecting a "core area" taking two of the courses listed in that area, and in addition they have to comply with the mathematics requirements by taking two courses from an approved list. Four additional courses can be selected from a list of technical electives, or from the core and mathematics lists to complete the coursework requirements, with no more than three courses at the 400 level.

Ph.D. Degrees

The MAE Department offers Ph.D. Programs in Aerospace Engineering, in Mechanical Engineering and in Materials Science and Engineering. These programs require a minimum of eighteen credit hours of graduate level coursework plus a minimum of twenty-four credit hours of research. Students in the Ph.D. program must take and pass the Ph.D. Qualifier examination by the second semester of the program with a second attempt no later than the third semester in the program if necessary. After the qualifier examination, students are expected to produce a dissertation proposal and defend it before a five-member advising and examining committee (AEC). Subsequent the successful proposal defense, students must comply with the journal paper publication (or patent disclosure) requirement in order to attain Ph.D. Candidacy. Finally Ph.D. candidates must successfully defend a Ph.D. dissertation and submit it to WVU library through the ETD protocol to fulfill all the requirements for the degree.

Admissions Requirements

Minimum requirements for admission as a regular student into the graduate programs of the department are summarized as follows:

- An applicant for admission into the M.S. or the Ph.D. degree program must have earned a grade point average (GPA) of 3.0 or better (out of a possible 4.0) in all previous college work if he/she holds a B.S. or M.S. degree, respectively, from an accredited or internationally recognized program, as stated above.
- Applicants for admission into the B.S. to M.S. degree track must have a grade point average of 3.5 or higher at the end of the first semester in the junior year of the curriculum.
- Applicants for admission into the direct-track from B.S. to Ph.D. degree option must have a grade point average of 3.5 or higher if they commence their graduate studies in the department as Ph.D. students or must have a cumulative grade point average of 4.0 if they transfer from the M.S. degree program by the end of their first year of graduate studies in the department.
- International applicants must submit proof of English language proficiency.

- All international applicants who have not received their undergraduate degree in the USA are required to submit GRE general test scores with the engineering subject test score being optional. The GRE scores required for admission as a regular graduate student in the department need to be seventy-fourth percentile or higher in the Quantitative section (strictly enforced). The GRE scores for the verbal and analytical sections will be taken into consideration in the admission process.
- Three recent reference letters, at least two of the three references should be from the institution last attended.

Doctoral Admissions

ADMISSION TO DOCTOR OF PHILOSOPHY PROGRAM

To be eligible for admission into the doctor of philosophy degree program with a major in aerospace or mechanical engineering, a candidate must hold or expect to receive (by the enrollment date) a M.S. degree in an engineering discipline from an institution which has an ABET accredited undergraduate program in engineering or an internationally recognized program in engineering (except for students qualified for the direct track to Ph.D. degree option, described below). Qualified candidates holding a M.S. degree in applied sciences can also be considered for admission into the Ph.D. program.

ADMISSION TO THE DIRECT-TRACK TO PH.D. DEGREE OPTION

The Department of Mechanical and Aerospace Engineering (MAE) offers a direct track option from the bachelor of science (B.S.) to the doctor of philosophy (Ph.D.) degree for prospective qualified students holding a B.S. degree in an engineering discipline, materials science, mathematics, or applied sciences from an accredited undergraduate program or an internationally recognized program. This is an accelerated track that provides outstanding candidates the option of earning a Ph.D. degree in less than five years after graduating from an undergraduate program by engaging early in their Ph.D. dissertation research without having to complete a research thesis for a master of science (M.S.) degree. To qualify for the direct track degree option, a candidate must have earned a cumulative grade point average (GPA) of 3.5/4.0 or higher in his/her undergraduate studies and attain a minimum of seventy-fourth percentile in the quantitative section of the standardized Graduate Record Examination (GRE). Students who are pursuing an M.S. degree in the MAE department have also the possibility of transferring into the direct track option in their third semester in the program, provided that they earn a GPA of at least 3.75/4.0 and attain a minimum of seventy-fourth percentile in the quantitative section of the GRE by the end of their first two semesters of graduate studies at WVU. Students admitted into the direct track option are considered to be Ph.D. students in the MAE department. International applicants must submit proof of English language proficiency.

Curriculum in Master of Science in Mechanical Engineering

A candidate for the M.S. degree in mechanical engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Mechanical and Aerospace Engineering Department.

Program Requirements

All M.S. degree candidates are required to perform research (except those pursuing the coursework-only degree option) and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required in all courses.

Course Requirements *	
A minimum of 60% of courses must be from 500 level or above.	
Thesis Option (30 credit hours)	
Technical Electives (6 credit hours)	
Mathematics Requirements (6 credit hours)	
Additional Courses (12 credit hours) - Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, MAE, MATH, MINE, PNGE, PHYS, SENG, or STAT courses 400-799, as approved by the student's AEC	
MAE 697	Research (6 credit hours)
Thesis	
Final Oral or Written Examination	
Problem Report Option (33 credit hours)	
Technical Electives (6 credit hours)	
Mathematics Requirements (6 credit hours)	
Additional Courses (18 credit hours) - Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, MAE, MATH, MINE, PNGE, PHYS, SENG, or STAT courses 400-799, as approved by the student's AEC	
MAE 697	Research (3 credit hours)
Formal Written Report or Professional Report/Paper	

Final Oral or Written Examination

Coursework Option (33 credit hours)

Technical Electives (18 credit hours)

Mathematics Requirements (6 credit hours)

Additional Courses (9 credit hours) - Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, MAE, MATH, MINE, PNGE, PHYS, SENG, or STAT courses 400-799, as approved by the student's AEC

Comprehensive Exam (Written or Oral)

Total Hours   **30-33**

MATHEMATICS REQUIREMENTS FOR ALL OPTIONS (6 CREDIT HOURS)

Select two of the following (at least one course with MATH prefix):

MATH 420	Numerical Analysis 1
MATH 441	Applied Linear Algebra
MATH 456	Complex Variables
MATH 521	Numerical Analysis
MATH 522	Numerical Solution of PDE
MATH 541	Modern Algebra
MATH 543	Linear Algebra
MATH 545	Number Theory 1
MATH 551	Real Variables 1
MATH 555	Complex Variables 1
MATH 560	Introduction to Dynamical Systems and Applications
MATH 563	Mathematics Modeling
MATH 564	Intermediate Differential Equations
MATH 567	Advanced Calculus
MATH 568	Advanced Calculus
MATH 573	Graph Theory
STAT 513	Design of Experiments
STAT 545	Applied Regression Analysis
STAT 561	Theory of Statistics 1
STAT 562	Theory of Statistics 2
MAE 515	Analytical Methods in Engineering
MAE 623	Conduction Heat Transfer
MAE 633	Computational Fluid Dynamics
MAE 640	Continuum Mechanics
MAE 645	Energy Methods in Applied Mechanics
CHE 531	Mathematical Methods in Chemical Engineering
EE 463	Digital Signal Processing Fundamentals
EE 465	Introduction to Digital Image Processing
EE 515	Linear Control Systems
EE 517	Optimal Control
IENG 518	Technology Forecasting
IENG 553	Applied Linear Programming
PHYS 461	Thermodynamics and Statistical Mechanics
PHYS 611	Introduction to Mathematical Physics

TECHNICAL AREA COURSES FOR THESIS OR PROBLEM REPORT OPTIONS (6 CREDIT HOURS)

Select two courses in a single core technical area from the following:

Area A: Fluid Mechanics and Aerodynamics (FMA)	
MAE 532	Dynamics of Viscous Fluids
MAE 624	Convection Heat Transfer

or MAE 636	Fundamentals of Turbulent Flow	
Area B: Thermal Sciences and Systems (TSS)		
MAE 521	Advanced Thermodynamics 1	
MAE 532	Dynamics of Viscous Fluids	
MAE 624	Convection Heat Transfer	
Area C: Dynamics and Controls (D&C)		
MAE 642	Intermediate Dynamics	
or MAE 653	Advanced Vibrations	
MAE 660	Feedback Control in Mechanical Engineering	
Area D: Solid Mechanics and Design (SMD)		
MAE 543	Advanced Mechanics of Materials	
or MAE 642	Intermediate Dynamics	
MAE 640	Continuum Mechanics	
or MAE 653	Advanced Vibrations	
Area E: Materials Science (MS)		
MAE 580	Crystallography and Crystals	
MAE 583	Thermodynamics and Kinetics of Materials	
MAE 649	Microscopy of Materials	

TECHNICAL AREA COURSES FOR COURSEWORK OPTION (18 CREDIT HOURS)

Required Courses

MAE 521	Advanced Thermodynamics 1
MAE 532	Dynamics of Viscous Fluids
MAE 543	Advanced Mechanics of Materials
MAE 580	Crystallography and Crystals
MAE 653	Advanced Vibrations
MAE 660	Feedback Control in Mechanical Engineering

* Students who do not hold a baccalaureate degree in mechanical engineering will be required to take a set of undergraduate mechanical engineering courses above and beyond the minimum coursework requirements in order to overcome deficiencies in the mechanical engineering area.

Final Examination

M.S. students following the thesis or problem report option must prepare a written research proposal. The proposal must be approved by the student's AEC at least one semester prior to the final oral examination.

All students, regardless of option, are required to pass a final oral or written examination, administered by their AEC, covering the thesis or problem report and/or related course material.

The students request for the comprehensive exam for students in the Coursework Only degree option must be filed at least four weeks in advance of the desired date of the exam. The comprehensive exam for students in the Coursework Only degree option must be passed at least 3 weeks before graduation.

Suggested Plan of Study

The plan below illustrates the Thesis Option. It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical M.S.M.E degree program that completes degree requirements in two years is as follows.

First Year

Fall	Hours	Spring	Hours
Technical Area Course	3	Technical Area Course	3
Math Course	3	Math Course	3
Additional Course	3	Additional Course	3
	9		9

Second Year

Fall	Hours	Spring	Hours
Additional Course	3	Additional Course	3
MAE 697	3	MAE 697	3
	6		6

Total credit hours: 30

Curriculum in Doctor of Philosophy – Mechanical Engineering

A candidate for the Ph.D. degree with a major in mechanical engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Mechanical and Aerospace Engineering Department.

Program Requirements

The doctor of philosophy degree with a major in mechanical engineering is administered through the college's interdisciplinary Ph.D. program. The research work for the doctoral dissertation must show a high degree of originality on the part of the student and must constitute an original contribution to the art and science of mechanical engineering.

All Ph.D. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

The doctoral courses of study are selected to fit the particular interests and objectives of the student, with proper attention given to broadening related areas of study. The research work for the doctoral dissertation may entail a fundamental investigation into a specialized area or a broad and comprehensive study in a related subject.

All students pursuing a Ph.D. degree in the MAE department are expected to engage in research and complete and successfully defend a Ph.D. dissertation. They should identify a subject for their Ph.D. dissertation, form a five-member advisory and examining committee, and file a plan of study by the end of their second semester of enrollment in the graduate program. At least one member of the graduate faculty from outside the department is required to serve on the advisory and examining committee.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required in all courses.

Course Requirements [*]		
Technical Area Courses		**3**
Select one course in the relevant core technical area from the following: [**]		
Area A: Fluid Mechanics and Aerodynamics (FMA)		
MAE 532	Dynamics of Viscous Fluids	
MAE 624	Convection Heat Transfer	
MAE 636	Fundamentals of Turbulent Flow	
Area B: Thermal Sciences and Systems (TSS)		
MAE 521	Advanced Thermodynamics 1	
MAE 532	Dynamics of Viscous Fluids	
MAE 624	Convection Heat Transfer	
Area C: Dynamics and Controls (D&C)		
MAE 642	Intermediate Dynamics	
MAE 653	Advanced Vibrations	
MAE 660	Feedback Control in Mechanical Engineering	
Area D: Solid Mechanics and Design (SMD)		
MAE 543	Advanced Mechanics of Materials	
MAE 640	Continuum Mechanics	
MAE 642	Intermediate Dynamics	
MAE 653	Advanced Vibrations	
Area E: Materials Science (MS)		
MAE 580	Crystallography and Crystals	
MAE 583	Thermodynamics and Kinetics of Materials	

MAE 649	Microscopy of Materials	
Mathematics Requirements		**6**
Select two of the following (at least one course with MATH prefix):		
MATH 521	Numerical Analysis	
MATH 522	Numerical Solution of PDE	
MATH 541	Modern Algebra	
MATH 543	Linear Algebra	
MATH 545	Number Theory 1	
MATH 551	Real Variables 1	
MATH 555	Complex Variables 1	
MATH 560	Introduction to Dynamical Systems and Applications	
MATH 563	Mathematics Modeling	
MATH 564	Intermediate Differential Equations	
MATH 567	Advanced Calculus	
MATH 568	Advanced Calculus	
MATH 573	Graph Theory	
STAT 513	Design of Experiments	
STAT 545	Applied Regression Analysis	
STAT 561	Theory of Statistics 1	
STAT 562	Theory of Statistics 2	
MAE 515	Analytical Methods in Engineering	
MAE 623	Conduction Heat Transfer	
MAE 633	Computational Fluid Dynamics	
MAE 640	Continuum Mechanics	
MAE 645	Energy Methods in Applied Mechanics	
CHE 531	Mathematical Methods in Chemical Engineering	
EE 515	Linear Control Systems	
EE 517	Optimal Control	
IENG 518	Technology Forecasting	
IENG 553	Applied Linear Programming	
PHYS 611	Introduction to Mathematical Physics	
Research		24
MAE 797	Research	
Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, IH&S, MAE, MATH, MINE, PNGE, PHYS, SAFM, SENG, or STAT courses 500-799		9
Examinations		
Qualifying Exam (Ph.D. qualifying examination)		
Candidacy Exam (Dissertation research proposal defense)		
Final Exam (Final dissertation defense)		
The "Publication Requirement" must be satisfied prior to scheduling the final dissertation defense		
Total Hours		42

*   Students who do not hold a baccalaureate degree in mechanical engineering are required to take a set of undergraduate mechanical engineering courses above and beyond the minimum coursework requirements in order to overcome deficiencies in the area.
For these students, a minimum of fifty-four hours of coursework and thirty hours of independent research beyond a bachelor's degree, or eighteen hours of coursework and twenty-four hours of independent research beyond an M.S. degree are required.

**   PhD students who also earn their MS degree in the MAE Department are expected to select the third core course in their technical area.

Examinations
QUALIFYING EXAM

All students must take and pass a written qualifying examination. Normally, the qualifying examination is given no later than one semester after completion of eighteen credit hours toward the doctoral degree. This examination is designed to assess the basic competency of students in the mechanical engineering field to determine whether or not they have sufficient knowledge to undertake independent research.

The Ph.D. qualifying examination is the method of assessing whether the student has attained sufficient knowledge of the discipline and supporting fields in order to undertake independent research or practice. Students are required to pass a qualifying examination administered by the department which tests for a minimum level of proficiency expected of all students in a given area. It is expected that students will take the qualifying exam during their first or second semester of enrollment in the Ph.D. program; however, it is required that full-time students pass the qualifying examination no later than the end of the third semester of enrollment in their Ph.D. program. Students admitted in the direct track from B.S. to Ph.D. degree option are expected to take the qualifying exam by the end of their fourth semester of enrollment in the MAE graduate program.

CANDIDACY EXAMINATION

In order to be admitted to candidacy, the student must pass a candidacy exam, which is designed to evaluate the student's overall ability to engage in high-level research.

As the student progresses, his or her advisory and examining committee is charged with evaluating the student's competency in the specific area of study through the assessment of a dissertation proposal for the research to be completed and the evaluation of the student's plan of study and associated coursework. After these requirements are completed, the student is formally admitted to candidacy for the Ph.D. degree. Only at this point can a student be called a doctoral candidate; admission to the graduate program for the purpose of pursuing the Ph.D. degree is not equivalent to becoming a Ph.D. candidate. Doctoral candidates are allowed no more than five years to complete the remaining degree requirements after admission to candidacy. An extension of time can be obtained only by repeating the qualifying and candidacy examinations and meeting any other requirements specified by the student's advisory and examining committee.

A student who has successfully completed all coursework, passed the qualifying examination, and successfully defended the research proposal is defined as one who is a candidate for the Ph.D. degree.

FINAL EXAMINATION

At the completion of the dissertation research, candidates must prepare a dissertation and pass the final oral examination (defense) administered by their AEC.

In order to complete the Ph.D. requirements, a student must pass a final oral examination on the results embodied in the dissertation. This examination is open to the public and, in order to evaluate critically the student's competency, may include testing on material in related fields, as deemed necessary by the AEC. In addition, since the Ph.D. degree is primarily a research degree that embodies the results of an original research proposal and represents a significant contribution to scientific literature, the student must submit a manuscript on this research to the AEC.

Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical doctoral degree program that completes degree requirements in three years is as follows. The Ph.D. degree signifies that the holder has the competence to function independently at the highest level in the chosen field. Hence, the number of years involved in attaining or retaining competency cannot be readily specified, nor can an exact program of study be defined.

First Year

Fall	Hours	Spring	Hours
Technical Area Course	3	Math Course	3
Math Course	3	Additional Course	3
MAE 797	3	MAE 797	3
	9		9

Second Year

Fall	Hours	Spring	Hours
Additional Course	3	Additional Course	3
MAE 797	3	MAE 797	3
	6		6

Third Year

Fall	Hours	Spring	Hours
MAE 797	6	MAE 797	6
	6		6

Total credit hours: 42

JOURNAL PAPER PUBLICATION REQUIREMENT FOR ALL PHD STUDENTS:

Beginning with all PhD students admitted for the summer or fall of 2016 and thereafter, every Ph.D. student, prior to his/her dissertation defense, will be required to provide written documentation that they have received formal proof of submission of either:

a.) At least one manuscript, generally co-authored with their research supervisor and about some portion of their PhD dissertation research, to an archival journal for publication, or

b.) At least one patent disclosure, also generally about some portion of their PhD dissertation research.

This publication requirement will have to be satisfied prior to scheduling the defense of the Ph.D. Dissertation.

Major Learning Outcomes

MECHANICAL ENGINEERING

The MAE Department is committed to deliver high quality education and research experience to all graduate students in order to enable them to achieve success in their careers, though the following Learning Goals:

- Expertise, depth and breadth in a chosen field of mechanical engineering.
- Capacity to engage in original research, advanced technological discovery and innovation in order to advance the frontiers of knowledge in the science of the mechanical engineering discipline.
- Capacity of effective high level communication in order to document, disseminate and transfer knowledge of the science of the mechanical engineering discipline in educational, research or applied workplace settings.
- Appreciation and understanding of the role of the science of mechanical engineering discipline in a global and societal context.

Materials Science and Engineering, M.S.M.S.E., Ph.D.

Degrees Offered

- Master of Science, Materials Science and Engineering (M.S.M.S.E)
- Doctor of Philosophy, Materials Science and Engineering (Ph.D.)

Nature of the Program

Materials science and engineering is designed for students with undergraduate degrees in engineering or a closely related STEM discipline. MS&E research focuses on the study of metals, ceramics, glass, polymers, semiconductors, composites, nanomaterials and biomaterials to be implemented in a variety of applications including energy, civil, industrial and environmental. The area of study is diverse and multidisciplinary, since it incorporates aspects of chemistry, physics, electronics, mechanics, biology and medicine. The program will provide students with opportunities to investigate various aspects of materials science and engineering, which includes the processing, structure and properties of materials through computational modeling and/or experimental studies.

Students will be trained in core discipline areas using the most advanced materials processing, physical property testing and chemical/structure characterization equipment available. In addition to coursework in the core areas of materials science, students will choose a specialty area of focus to further his or her expertise. Specialty areas may be in either the chemical, mechanical or electrical engineering departments. The student's home department will be determined by the student's particular background, interests and research advisor.

The program is designed to be flexible, permitting students to acquire the knowledge and skills required to participate in cutting-edge technological areas, such as nanomaterials, ultra-high performance materials, smart materials, bio-inspired materials, environmental materials and energy materials. Students that complete the program will be prepared to perform at the highest levels within industry or within any research environment.

FACULTY

CHEMICAL AND BIOMEDICAL ENGINEERING

- Brian Anderson
- Cerasela Zoica Dinu
- Rakesh K. Gupta
- Robin Hissam
- Ahmed Ismael
- Charter Stinespring
- Hanjing Tian
- Yong Yang

LANE DEPARTMENT OF COMPUTER SCIENCE AND ELECTRICAL ENGINEERING

- Xian-An Cao
- Jeremy Dawson

- Parviz Famouri
- Dimitris Korakakis
- Yuxin Liu

MECHANICAL AND AEROSPACE ENGINEERING

- Ever Barbero
- Bruce Kang
- Xingbo Liu
- David Mebane
- Terence Musho
- Ming Pei
- Edward M. Sabolsky
- Kostas Sierros
- Xueyan Song
- Nianqiang Wu

Admissions

REGULAR ADMISSION REQUIREMENTS

Minimum requirements for admission as a regular student into the graduate programs of the department are summarized as follows:

- An applicant for admission into the M.S. or the Ph.D. degree program must have earned a grade point average (GPA) of 3.0 or better (out of a possible 4.0) in all previous college work if they holds a B.S. or M.S. degree, respectively, from an accredited or internationally recognized program.
- International applicants must submit proof of English language proficiency.
- All applicants are required to submit GRE general test scores with the engineering subject test score being optional. The GRE scores required for admission as a regular graduate student should be seventy-fourth percentile or higher in the Quantitative section. The GRE scores for the verbal and analytical sections will be taken into consideration in the admission process.

Admission to the Direct-Track to Ph.D. Degree Option

The Statler College of Engineering and Mineral Resources offers a materials science and engineering (MS&E) direct-track option from the bachelor of science (B.S.) to the doctor of philosophy (Ph.D.) degree for prospective qualified students holding a B.S. degree in an engineering discipline, materials science, mathematics or applied sciences from an accredited undergraduate program or an internationally recognized program. This is an accelerated track that provides outstanding candidates the option of earning a Ph.D. degree after graduating from an undergraduate program by engaging early in their Ph.D. dissertation research without having to complete a research thesis for a master of science (M.S.) degree. To qualify for the direct-track degree option, a candidate must have earned a cumulative grade point average (GPA) of 3.5/4.0 or higher in his/her undergraduate studies, and attain a minimum of seventy-fourth percentile in the quantitative section of the standardized Graduate Record Examination (GRE). Students who are pursuing a M.S.M.S.E. (from any of the three participating departments -- Chemical and Biomedical Engineering, Mechanical and Aerospace Engineering, and Lane Department of Computer Science and Electrical Engineering -- also have the possibility of transferring into the direct-track option in their third semester in the program, provided that they earn a GPA of at least 3.75/4.0 and attain a minimum of seventy-fourth percentile in the quantitative section of the GRE by the end of their first two semesters of graduate studies at WVU. Students admitted into the direct-track option are considered to be Ph.D. students within the college.

Curriculum in Master of Science in Material Science and Engineering

A candidate for the M.S. degree in Material Science and Engineering must comply with the rules and regulations outlined in the WVU Graduate catalog and the specific requirements of the Statler College and the specific department in which the student's concentration is in.

Program Requirements

All M.S. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required in all courses

Course Requirements [*]
A minimum of 60% of courses must be from 500 level or above

Core Courses

MAE 583	Thermodynamics and Kinetics of Materials	3
MAE 580	Crystallography and Crystals	3
MAE 649	Microscopy of Materials	3
MAE 694	Seminar	1
Area of Emphasis Requirement		**15**
Complete 1 of the following options:		6-9
Thesis Option - 6 hours		
Any 697	Research (6 hours)	
Written Proposal/Oral Presentation		
Oral Defense		
Thesis		
Final Oral or Written Examination		
Problem Report Option - 9 hours		
Complete 6 additional hours of coursework		
Any 697	Research (3 hours)	
Written Proposal/Oral Presentation		
Oral Defense		
Formal written report or professional report/paper		
Final Oral or Written Examination		
Total Hours		31-34

* All M.S.M.S.E. students, whether pursuing the thesis option or the problem report option, are allowed to include <u>up to a maximum of three</u> (3), 3-credit courses at the 400 level towards the coursework requirements for their degrees.

Final Examination

M.S. students following the thesis or problem report option must prepare a written research proposal. The proposal must be approved by the student's AEC at least one semester prior to the final oral examination.

All students, regardless of option, are required to pass a final oral or written examination, administered by their AEC, covering the thesis or problem report and/or related course material.

SUGGESTED PLAN OF STUDY

The plan below illustrates the Thesis Option. It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical M.S.M.S.E. degree program that completes degree requirements in two years is as follows.

First Year

Fall	Hours	Spring	Hours
MAE 580	3	AOE Course 1	3
MAE 583	3	AOE Course 2	3
MAE 649	3	MAE 697	3
MAE 694	1		
	10		9

Second Year

Fall	Hours	Spring	Hours
AOE Course 3	3	AOE Course 5	3
AOE Course 4	3	MAE 697	6
MAE 697	3		
	9		9

Total credit hours: 37

Areas of Emphasis

Students must complete one of the following Areas of Emphasis

- Chemical Engineering Materials (http://catalog.wvu.edu/graduate/collegeofengineeringandmineralresources/collegewidedegrees/materialscienceandengineering/#ChemicalEngineering)
- Electrical Engineering Materials (http://catalog.wvu.edu/graduate/collegeofengineeringandmineralresources/collegewidedegrees/materialscienceandengineering/#electricalengineering)
- Mechanical Engineering Materials (http://catalog.wvu.edu/graduate/collegeofengineeringandmineralresources/collegewidedegrees/materialscienceandengineering/#MechanicalEngineering)

Chemical Engineering Materials Area of Emphasis Requirements

CHE Electives [*]

Select 2 of the following:		6
CHE 461	Polymer Science and Engineering	
CHE 462	Polymer Processing	
CHE 463	Polymer Composites Processing	
CHE 466	Electronic Materials Processing	
CHE 475	Chemical Process Safety	
CHE 531	Mathematical Methods in Chemical Engineering	
CHE 615	Transport Phenomena	
CHE 620	Thermodynamics	
CHE 625	Chemical Reaction Engineering	
CHE 720	Applied Statistical and Molecular Thermodynamics	
BMEG 482	Introduction to Tissue Engineering	

Additional Electives [*]

Select 3 of the following:		9
CHEM 422	Intermediate Inorganic Chemistry	
CHEM 423	Inorganic Synthesis Laboratory	
CHEM 444	Colloid and Surface Chemistry	
CHEM 514	Mass Spectrometry Principles and Practices	
CHEM 521	Organometallic Chemistry	
CHEM 547	Chemical Crystallography	
CHEM 713	Electrochemistry and Instrumentation	
CHEM 723	Physical Methods in Inorganic Chemistry	
EE 528	Biomedial Microdevices	
EE 550	Advanced Semiconductor Electronics	
EE 650	Optoeletronics	
MAE 446	Mechanics of Composite Materials	
MAE 528	Introduction to Fuel Cell Technology	
MAE 543	Advanced Mechanics of Materials	
MAE 640	Continuum Mechanics	
MAE 641	Theory of Elasticity 1	
MAE 643	Inelastic Behavior of Engineering Materials	
MAE 644	Fracture Mechanics	
MAE 646	Advanced Mechanics of Composite Materials	
MAE 687	Materials Engineering	
PHYS 471	Solid State Physics	
PHYS 771	Introduction to Solid State Physics	
PHYS 772	Semiconductor Physics	
PHYS 773	Collective Phenomena in Solids	
PHYS 774	Optical Properties of Solids	
Total Hours		15

[*]   Students completing the problem report option must take an additional 2 courses (6 credit hours) from either set of electives.

Electrical Engineering Materials Area of Emphasis Requirements

Select 4 of the following: *		**12**
CHE 466	Electronic Materials Processing	
EE 435	Introduction to Power Electronics	
EE 437	Fiber Optics Communications	
EE 455	Introduction to Microfabrication	
EE 457	Fundamentals of Photonics	
EE 528	Biomedial Microdevices	
EE 550	Advanced Semiconductor Electronics	
EE 551	Linear Integrated Circuits	
EE 650	Optoeletronics	
PHYS 771	Introduction to Solid State Physics	
PHYS 772	Semiconductor Physics	
PHYS 773	Collective Phenomena in Solids	
Select 1 additional course in consultation by the AEC. *		**3**
Total Hours		15

* Students completing the problem report option must take an additional 2 courses (6 credit hours).

Mechanical Engineering Materials Area of Emphasis Requirements

MAE Electives *		
Complete at least 2 of the following:		6
MAE 446	Mechanics of Composite Materials	
MAE 528	Introduction to Fuel Cell Technology	
MAE 543	Advanced Mechanics of Materials	
MAE 640	Continuum Mechanics	
MAE 641	Theory of Elasticity 1	
MAE 643	Inelastic Behavior of Engineering Materials	
MAE 644	Fracture Mechanics	
MAE 646	Advanced Mechanics of Composite Materials	
MAE 687	Materials Engineering	
Math and Science Electives *		
Complete at least 2 of the following:		6
CHE 531	Mathematical Methods in Chemical Engineering	
EE 463	Digital Signal Processing Fundamentals	
EE 465	Introduction to Digital Image Processing	
EE 515	Linear Control Systems	
EE 517	Optimal Control	
IENG 518	Technology Forecasting	
IENG 553	Applied Linear Programming	
MAE 623	Conduction Heat Transfer	
MAE 633	Computational Fluid Dynamics	
MAE 640	Continuum Mechanics	
MAE 645	Energy Methods in Applied Mechanics	
MATH 420	Numerical Analysis 1	
MATH 441	Applied Linear Algebra	
MATH 456	Complex Variables	
MATH 465	Partial Differential Equations	
MATH 521	Numerical Analysis	
MATH 522	Numerical Solution of PDE	
MATH 541	Modern Algebra	
MATH 543	Linear Algebra	

MATH 545	Number Theory 1
MATH 551	Real Variables 1
MATH 555	Complex Variables 1
MATH 563	Mathematics Modeling
MATH 564	Intermediate Differential Equations
MATH 567	Advanced Calculus
MATH 568	Advanced Calculus
MATH 573	Graph Theory
PHYS 461	Thermodynamics and Statistical Mechanics
PHYS 611	Introduction to Mathematical Physics
STAT 513	Design of Experiments
STAT 545	Applied Regression Analysis
STAT 561	Theory of Statistics 1
STAT 562	Theory of Statistics 2

Additional Electives *

Complete at least 1 of the following:		3
CHE 461	Polymer Science and Engineering	
CHE 462	Polymer Processing	
CHE 463	Polymer Composites Processing	
CHE 466	Electronic Materials Processing	
CHE 475	Chemical Process Safety	
CHE 531	Mathematical Methods in Chemical Engineering	
CHE 615	Transport Phenomena	
CHE 620	Thermodynamics	
CHE 625	Chemical Reaction Engineering	
CHE 720	Applied Statistical and Molecular Thermodynamics	
BMEG 482	Introduction to Tissue Engineering	
CHEM 422	Intermediate Inorganic Chemistry	
CHEM 423	Inorganic Synthesis Laboratory	
CHEM 444	Colloid and Surface Chemistry	
CHEM 514	Mass Spectrometry Principles and Practices	
CHEM 521	Organometallic Chemistry	
CHEM 547	Chemical Crystallography	
CHEM 713	Electrochemistry and Instrumentation	
CHEM 723	Physical Methods in Inorganic Chemistry	
EE 528	Biomedial Microdevices	
EE 550	Advanced Semiconductor Electronics	
EE 650	Optoeletronics	
PHYS 471	Solid State Physics	
PHYS 771	Introduction to Solid State Physics	
PHYS 772	Semiconductor Physics	
PHYS 773	Collective Phenomena in Solids	
PHYS 774	Optical Properties of Solids	

Total Hours	15

*   Students completing the problem report option must take an additional 2 courses (6 credit hours) from any set of electives.

Curriculum in Doctor of Philosophy – Materials Science and Engineering

A candidate for the Ph.D. degree with a major in materials science and engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College.

Program Requirements

The doctor of philosophy degree with a major in materials science and engineering is administered through the college's interdisciplinary Ph.D. program. The research work for the doctoral dissertation must show a high degree of originality on the part of the student and must constitute an original contribution to the art and science of materials science and engineering.

All Ph.D. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum GPA of 3.0 is required in all courses.

Course Requirements *		
500-level or higher coursework		18
Materials Science and Engineering Seminar		2
MAE 686	Materials Science and Engineering Seminar	
Research		24
MAE 797	Research	
Examinations		
Qualifying Exam		
Candidacy Exam		
Final Exam		
Total Hours		44

* Students admitted to the Ph.D. program must have completed or will need to complete the following set of core courses or equivalent: MAE 583, MAE 580, MAE 649.

Examinations

QUALIFYING EXAM

All students must take and pass a written qualifying examination. Normally, the qualifying examination is given no later than the end of the third semester of enrollment in their Ph.D. program. This examination is designed to assess the basic competency of students to determine whether or not they have sufficient knowledge of the discipline to undertake independent research. The structure of the Ph.D. qualifying examination for all students pursuing the Ph.D. degree in Materials Science and Engineering will be comprised of two components: a written examination that will test on the student's knowledge in the three core areas studied in MAE 583 Thermodynamics and Kinetics of Materials, MAE 580 Crystallography and Crystals, and MAE 649 Microscopy of Materials or their equivalent, and a second examination that will be administered by the MS&E Faculty in the home department of the student's Ph.D. advisor, and which should be consistent with the format used by that program/department for their qualifying exam. These two examinations will receive equal weighting in determining the student's overall score on the qualifying examination. Students who do not pass either part or both parts of this exam on their initial attempt will be allowed a second attempt to pass either or both parts of the qualifying exam. If they are not successful on their second attempt, then they will be dismissed from the program.

CANDIDACY EXAMINATION

In order to be admitted to candidacy, the student must pass a candidacy exam, which is designed to evaluate the student's overall ability to engage in high-level research. After passing the qualifying examination, the student must submit to the AEC a written research proposal of his/her planned dissertation work and successfully defend it in an oral examination. The research proposal must be approved by the student's AEC. A student who has successfully completed all coursework, passed the qualifying examination, and successfully defended the research proposal, and receives the college's approval becomes a candidate for a Ph.D. degree. Thereafter, the student will officially be engaged in dissertation research.

FINAL EXAMINATION

At the completion of the dissertation research, candidates must prepare a dissertation and pass the final oral examination (defense) administered by their AEC. This examination is open to the public and, in order to evaluate critically the student's competency, may include testing on material in related fields, as deemed necessary by the AEC.

Major Learning Outcomes

MASTER OF SCIENCE IN MATERIALS SCIENCE AND ENGINEERING (MSMSE)

Upon graduation, with a Masters of Science degree in Materials Science and Engineering, students will have:

- An expert level understanding of the advanced principles of their engineering specialty
- Ability to apply advanced methodologies in their specialty area
- Ability to design and conduct original experiments, analyze and interpret data, and develop recommendations with a high degree of independence
- Advanced ability to use contemporary techniques, skills, and tools necessary for engineering practice in education, industry, and/or government
- Ability to effectively communicate technical information in the form of a thesis, scientific publication or presentation
- Understanding of professional and ethical responsibility
- Ability to understand the impact of engineering solutions in global and societal context
- Recognition of the need to engage in life-long learning
- Foundational preparation to pursue doctoral studies

DOCTOR OF PHILOSOPHY (PHD)

Upon graduation with a Ph.D. degree from the Statler College of Engineering and Mineral Resources students will have:

- Ability to initiate research ideas in order to solve specific problems and to write research proposals on these ideas
- Have an expert-level understanding of the advanced principles of their fields of study
- Furthered a novel research idea which has contributed to the state of the art in their specific areas of expertise
- Ability to plan original research projects, to perform laboratory or field based experimental tasks, generate data from those tasks, and draw conclusions based on sound scientific and engineering principles
- Ability to develop innovative research in order to advance the frontiers of knowledge and secure sponsored research
- Ability to write technical articles for dissemination through peer-reviewed, refereed journals or other venues
- Ability to make oral and poster presentations at technical meetings
- Understanding of professional and ethical responsibilities in the practice of their profession to contribute to the well-being of society and to the advancement of their profession
- Demonstrated initiative in research planning and management, including safety and environmental issues
- Technical preparation for and an awareness of the need for life-long learning and continuing education

Department of Mining Engineering, M.S.Min.E., Ph.D.

Degrees Offered

- Masters of Science, Mining Engineering (M.S.Min.E.)
- Doctor of Philosophy, Mining Engineering (Ph.D.)

Program Objectives

The objective of the master's of science in mining engineering (M.S.Min.E.) program is to equip students to investigate and develop solutions to advanced mining engineering problems. This program provides students the technical knowledge and research experience needed to address the most challenging contemporary issues within a specialized area of study.

Moreover, the objective of the Ph.D. program in mining engineering is to educate students to the highest level of technical and research performance within the minerals profession. Graduates of this program not only possess the requisite technical skills, but they also have the capability to actively contribute to the scholarly body of knowledge through independent research. These graduates pursue careers in industry, government agencies, and academia.

Areas of Research

The expertise of the current faculty members broadly spans many traditional mining sub-disciplines. Active research areas include surface and underground mining, rock mechanics and ground control, mine health and safety, mineral/coal processing, mine pollution control, and mine ventilation.

FACULTY

CHAIR

- Vladislav Kecojevic - Ph.D. (University of Belgrade)
  Surface mining, Surface mine health and safety, Environmental impact of surface mining

ASSOCIATE PROFESSOR

- Yi Luo - Ph.D. (West Virginia University)
  Surface Subsidence, Ventilation, Miners' Health

- Brijes Mishra - Ph.D. (West Virginia University)
  Rock mechanics, Numerical modeling

ASSISTANT PROFESSOR

- Qingqing Huang - Ph.D. (University of Kentucky)
  Mineral Processing, Coal Preparation, Explosion Mitigation, Extractive Metallurgy
- Tulu, I. Berk - Ph.D. (West Virginia University)
  Coal/stone/hard rock pillar stability, Coal bump/burst, Rock drilling and fragmentation

LECTURER

- Dan Alexander - Ph.D. (West Virginia University)
  Mineral economics evaluation

Admissions

The M.S and Ph.D programs in the Mining Engineering department may admit students who meet the following minimum requirements:

- A grade point average (GPA) of 3.0/4.0 or above from an ABET-accredited B.S.Min.E. program or its equivalent. Additionally, all Ph.D. applicants must have earned an M.S. degree in mining engineering with a GPA of 3.0 or higher. Transfer students must have at least a GPA of 3.0/4.0 for the graduate programs at similar institutions.
- International applicants must submit a GRE score.
- International applicants must submit proof of English language proficiency.
- At least three letters of recommendation, one of which must be from the applicant's previous thesis advisor or an academic equivalent. All letters of recommendation should evaluate the student's potential for performing independent, masters or doctoral-level research.
- Applicants for both M.S. and Ph.D. are considered by the entire faculty for both admissions and funding.

The same review process is used for M.S. and Ph.D. applications. In both cases, the completed application packets are circulated to the graduate faculty. Initial evaluations consider whether:

1. The applicant should or should not be accepted; and
2. The reviewing faculty member is or is not willing to provide support.

If multiple positive responses are produced, the assignment of the potential graduate student is resolved at a meeting of the faculty according to specific needs and interests.

Curriculum in Masters of Science in Mining Engineering

A candidate for the M.S. degree in mining engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Mining Engineering Department.

Program Requirements

All M.S. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required in all courses

Course Requirements [*]	
A minimum of 60% of course credits must be from 500 level or above	
Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, IH&S, MAE, MATH, MINE, PNGE, PHYS, SAFM, SENG, or STAT courses 400-799	24
Select from the following based on degree path	**6-9**
Thesis Option - 6 hours	
MINE 697 Research (6 hours)	
Written Research Proposal	
Thesis	
Final Oral or Written Examination	
Problem Report Option - 9 hours	
MINE 697 Research (3 hours)	

Complete 6 additional hours of coursework	
Written Proposal	
Formal written report or professional report/paper	
Final Oral or Written Examination	
Total Hours	30-33

*   Students who do not hold a baccalaureate degree in mining engineering are required to take a set of undergraduate mining engineering courses above and beyond the minimum coursework requirements.

Final Examination

M.S. students following the thesis or problem report option must prepare a written research proposal. The proposal must be approved by the student's AEC at least one semester prior to the final oral examination.

All students, regardless of option, are required to pass a final oral or written examination, administered by their AEC, covering the thesis or problem report and/or related course material.

Curriculum in Doctor of Philosophy – Mining Engineering

A candidate for the Ph.D. degree with a major in mining engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Mining Engineering Department.

Program Requirements

The doctor of philosophy degree with a major in mining engineering is administered through the college's interdisciplinary Ph.D. program. The research work for the doctoral dissertation must show a high degree of originality on the part of the student and must constitute an original contribution to the art and science of mining engineering.

All Ph.D. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required in all courses

Course Requirements [*]		
Research		24
MINE 797	Research	
Select from the following based on degree path:		18
Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, IH&S, MAE, MATH, MINE, PNGE, PHYS, SAFM, SENG, or STAT courses 500-799		
Examinations		
Qualifying Exam		
Candidacy Exam		
Final Exam		
Total Hours		42

*   Students who do not hold a baccalaureate degree in mining engineering are required to take a set of undergraduate mining engineering courses above and beyond the minimum coursework requirements.
         A minimum of eighteen hours of coursework and twenty-four hours of independent research beyond an M.S. degree are required.

Examinations

QUALIFYING EXAM

All students must take and pass a written qualifying examination. Normally, the qualifying examination is given no later than one semester after completion of eighteen credit hours toward the doctoral degree. . All mining engineering students must pass the written qualifying examination within three semesters since registered in Mining Engineering graduate program. This examination is designed to assess the basic competency of students in the mining engineering field to determine whether or not they have sufficient knowledge to undertake independent research.

CANDIDACY EXAMINATION

In order to be admitted to candidacy, the student must pass a candidacy exam, which is designed to evaluate the student's overall ability to engage in high-level research. The candidacy exam consists of a written qualifying examination and dissertation proposal defense. The proposal must be approved by the student's AEC at least one semester prior to/ the final oral examination. The written qualifying exam includes material from the eight areas of specialization.

A student who has successfully completed all coursework, passed the qualifying examination, and successfully defended the research proposal is defined as one who is a candidate for the Ph.D. degree.

FINAL EXAMINATION

At the completion of the dissertation research, candidates must prepare a dissertation and pass the final oral examination (defense) administered by their AEC.

In order to complete the Ph.D. requirements, a student must pass a final oral examination on the results embodied in the dissertation. This examination is open to the public and, in order to evaluate critically the student's competency, may include testing on material in related fields, as deemed necessary by the AEC. In addition, since the Ph.D. degree is primarily a research degree that embodies the results of an original research proposal and represents a significant contribution to scientific literature, the student must submit a manuscript on this research to the AEC.

Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical doctoral degree program that completes degree requirements in four years is as follows.

First Year

Fall	Hours	Spring	Hours
Course	3	Course	3
Course	3	Course	3
MINE 797	3	MINE 797	3
	9		9

Second Year

Fall	Hours	Spring	Hours
Course	3	Course	3
MINE 797	6	MINE 797	6
	9		9

Third Year

Fall	Hours	Spring	Hours
MINE 797	9	MINE 797	9
	9		9

Fourth Year

Fall	Hours	Spring	Hours
MINE 797	9	MINE 797	9
	9		9

Total credit hours: 72

Major Learning Outcomes

MASTER OF SCIENCE IN MINING ENGINEERING (MSMINE)

Upon graduation, with a Masters of Science degree in Mining Engineering, students will have:

- Ability to investigate and develop solutions to advanced mining engineering problems
- Advanced technical knowledge and research experience needed to address the most challenging contemporary issues within a specialized area of study
- Ability to plan original research projects, to perform laboratory or field based experimental tasks, generate data from those tasks, and draw conclusions based on sound scientific and engineering principles
- Ability to write technical articles for dissemination through peer-reviewed, refereed journals or other venues
- Ability to make oral and poster presentations at technical meetings

- Understanding of professional and ethical responsibilities in the practice of their profession to contribute to the well-being of society and to the advancement of their profession
- Technical preparation for and an awareness of the need for life-long learning and continuing education

DOCTOR OF PHILOSOPHY (PHD)

Upon graduation with a Ph.D. degree from the Statler College of Engineering and Mineral Resources, students will have:

- Ability to initiate research ideas in order to solve specific problems and to write research proposals on these ideas
- Have an expert-level understanding of the advanced principles of their fields of study
- Furthered a novel research idea which has contributed to the state of the art in their specific areas of expertise
- Ability to plan original research projects, to perform laboratory or field based experimental tasks, generate data from those tasks, and draw conclusions based on sound scientific and engineering principles
- Ability to develop innovative research in order to advance the frontiers of knowledge and secure sponsored research
- Ability to write technical articles for dissemination through peer-reviewed, refereed journals or other venues
- Ability to make oral and poster presentations at technical meetings
- Understanding of professional and ethical responsibilities in the practice of their profession to contribute to the well-being of society and to the advancement of their profession
- Demonstrated initiative in research planning and management, including safety and environmental issues
- Technical preparation for and an awareness of the need for life-long learning and continuing education

Department of Petroleum and Natural Gas Engineering, M.S.P.N.G.E, Ph.D.

Degrees Offered

- Masters of Science, Petroleum and Natural Gas Engineering (M.S.P.N.G.E.)
- Doctor of Philosophy, Petroleum and Natural Gas Engineering (Ph.D.)

The Petroleum and Natural Gas Engineering (PNGE) graduate programs are designed for students who have already completed a basic petroleum engineering curriculum.

Degree Programs

The Department of Petroleum and Natural Gas Engineering admits students to the following degree programs: master of science in petroleum and natural gas engineering (M.S.P.N.G.E.) and petroleum and natural gas engineering major under the Statler College of Engineering and Mineral Resources' interdisciplinary doctor of philosophy (Ph.D.). Students in these programs must comply with the rules and regulations as presented in the general requirements for graduate work in the Statler College of Engineering and Mineral Resources.

Program Objectives

The objective of the Petroleum and Natural Gas Engineering (PNGE) graduate programs is to educate and train men and women who will be capable of performing at the highest levels of the petroleum and natural gas engineering profession. The programs provide students with the advanced technical knowledge and engineering skills needed by the oil and gas industry in the state, the nation, and the world. Moreover, the programs will make students competent to perform independent research and will prepare them to be the future providers of high quality education in petroleum and natural gas engineering. Graduates have the opportunity to enter all phases of the oil and natural gas industry, government agencies, and academia in meaningful and important jobs.

Student Learning Outcomes

- Graduates will have in-depth knowledge of petroleum and natural gas engineering principles and applications to function effectively in their profession or continue their education.
- Graduates will have the ability to perform independent research to solve engineering and scientific problems encountered in their profession.

Areas of Research

- Development of the Unconventional Oil and Gas Resources
- Drilling and Well Completion
- Stimulation
- Reservoir Characterization and Formation Evaluation
- CO_2 Sequestration and Enhanced Oil Recovery

- Reservoir Modeling and Simulation
- Application of Artificial Intelligence and Data Analytics

FACULTY

CHAIR

- Samuel Ameri - M.S.Pet.E., P.E. (West Virginia University)
  Formation Evaluation

PROFESSORS

- Kashy Aminian - Ph.D. (University of Michigan)
  Natural Gas Engineering, Unconventional Reservoirs
- Shahab Mohaghegh - Ph.D. (Pennsylvania State University)
  Intelligent Systems, Shale Analytics

ASSOCIATE PROFESSOR

- H. Ilkin Bilgesu - Ph.D., P.E. (Pennsylvania State University)
  Drilling and Production Engineering
- Ebrahim Fathi - Ph.D. (University of Oklahoma)
  Phase Behavior

ASSISTANT PROFESSOR

- Ming Gu - Ph.D. (University of Texas)
  Rock Mechanics

TEACHING ASSISTANT PROFESSOR

- Mehrdad Zamirian - Ph.D. (West Virginia University)
  Property Evaluation

ADJUNCT PROFESSOR

- Alan Brannon - Ph.D. (West Virginia University)
  Petroleum Engineering Fundamentals
- Josh Dalton - MSPNGE (West Virginia University)
  Drilling and Stimualtion
- Pramod Thakur - Ph.D. (Pennsylvania State University)
  Coalbed Methane Development

Admissions

MASTERS ADMISSION

A candidate for the M.S.P.N.G.E. program must meet the following requirements:

- B.S. degree in engineering from an ABET-accredited, or an internationally-recognized engineering program or equivalent with a grade point average (GPA) equal to, or greater than, 3.0 (on a 4.0 scale) (Applicants who do not meet this condition may be considered for admission based on relevant professional experience.)
- International applicants must submit proof of English language proficiency.
- At least three recommendation letters (one letter must be from the applicant's academic advisor or equivalent.)

DOCTORAL ADMISSION

Doctoral candidates must comply with the rules and regulations as outlined in the general requirements for graduate work in engineering and the specific requirements stated in the departmental guidelines.

A candidate for the degree of Doctor of Philosophy (Ph.D.) must meet the following requirements:

- B.S. or M.S. degree in petroleum engineering from an ABET-accredited, or an internationally-recognized petroleum engineering program or equivalent with a grade point average (GPA) equal to, or greater than, 3.0 and 3.2, respectively
- A score of at least seventy-fifth percentile for Graduate Record Examination (GRE) quantitative analysis

- International applicants must submit proof of English language proficiency.
- At least three recommendation letters (one letter must be from the applicant's previous thesis advisor or an academic equivalent.)

Curriculum in Master of Science in Petroleum and Natural Gas Engineering

A candidate for the M.S. degree in petroleum and natural gas engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Petroleum and Natural Gas Engineering Department.

Program Requirements

All M.S. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required in all courses

Course Requirements	
A minimum of 60% of courses must be from 500 level or above	
All students are required to take Graduate Seminar (PNGE 796) for each semester enrolled.	3
PNGE 796 Graduate Seminar	
A maximum of three credit hours each of Graduate Seminar (PNGE 796) and Independent	
Study (PNGE 695) can be counted towards meeting the coursework requirements.	
Any PNGE course 400-799	15
Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, IH&S, GEOL, MAE, MATH, MINE, PNGE, PHYS, SAFM, SENG, or STAT courses 400-799	6
Complete 1 of the following options:	6-9
Thesis Option - 6 hours	
PNGE 697 Research (6 hours)	
Written Research Proposal	
Thesis	
Final Oral or Written Examination	
Problem Report Option - 9 hours	
Complete 6 additional hours of coursework	
PNGE 697 Research (3 hours)	
Written Research Proposal	
Formal written report or professional report/paper	
Final Oral or Written Examination	
Total Hours	30-33

Final Examination

M.S. students following the thesis or problem report option must prepare a written research proposal. The proposal must be approved by the student's AEC at least one semester prior to the final oral examination.

All students, regardless of option, are required to pass a final oral or written examination, administered by their AEC, covering the thesis or problem report and/or related course material.

Suggested Plan of Study

The plan below illustrates the Thesis Option. It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical M.S.P.N.G.E degree program that completes degree requirements in one and half years is as follows.

First Year

Fall	Hours	Spring	Hours
PNGE 796	1	PNGE 796	1
Course	3	PNGE 697	3
Course	3	Course	3

Course	3	Course	3
	10		10

Second Year

Fall	Hours
PNGE 796	1
PNGE 697	3
Course	3
Course	3
	10

Total credit hours: 30

Curriculum in Doctor of Philosophy - Petroleum and Natural Gas Engineering

A candidate for the Ph.D. degree with a major in petroleum and natural gas engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the Petroleum and Natural Gas Engineering Department.

Program Requirements

The doctor of philosophy degree with a major in petroleum and natural gas engineering is administered through the college's interdisciplinary Ph.D. program. The research work for the doctoral dissertation must show a high degree of originality on the part of the student and must constitute an original contribution to the art and science of petroleum and natural gas engineering.

All Ph.D. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required in all courses

Course Requirements [*]	
All students are required to take Graduate Seminar (PNGE 796) for each semester enrolled.	
A maximum of three credit hours each of Graduate Seminar (PNGE 796) and Independent Study (PNGE 795) can be counted towards meeting the coursework requirements.	
Research	24
PNGE 797 Research	
Select the following based on degree path:	
Any BIOM, CE, CHE, CHEM, CPE, CS, EE, GEOL, IENG, IH&S, MAE, MATH, MINE, PNGE, PHYS, SAFM, SENG, or STAT courses 500-799	24
Examinations	
Qualifying Exam	
Candidacy Exam	
Final Exam	
Total Hours	48

Examinations

QUALIFYING EXAM

All students must take and pass a written qualifying examination. Normally, the qualifying examination is given no later than one semester after completion of eighteen credit hours toward the doctoral degree. This examination is designed to assess the basic competency of students in the petroleum and natural gas engineering field to determine whether or not they have sufficient knowledge to undertake independent research.

CANDIDACY EXAMINATION

In order to be admitted to candidacy, the student must pass a candidacy exam, which is designed to evaluate the student's overall ability to engage in high-level research. A student must pass the qualifying examination prior to taking Candidacy Exam. The Candidacy Exam is administered by the student's AEC and requires preparation and defense of the dissertation research proposal. The Candidacy Exam may also include testing on material in related fields, as deemed necessary by the AEC.

A student who has successfully completed all coursework, passed the qualifying and candidacy exam and successfully defended the research proposal is defined as one who is a candidate for the Ph.D. degree.

FINAL EXAMINATION

At the completion of the dissertation research, candidate must prepare a dissertation and pass the final oral examination (defense) administered by his/her AEC.

In order to complete the Ph.D. requirements, a student must pass a final oral examination on the results embodied in the dissertation. This examination is open to the public and, in order to evaluate critically the student's competency, may include testing on material in related fields, as deemed necessary by the AEC. In addition, since the Ph.D. degree is primarily a research degree that embodies the results of an original research work and represents a significant contribution to scientific literature, the student must submit a manuscript on this research to the AEC.

Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical doctoral degree program that completes degree requirements in three years is as follows.

First Year

Fall	Hours	Spring	Hours
PNGE 796	1	PNGE 796	1
Course	3	Course	3
Course	3	Course	3
PNGE 797	2	PNGE 797	2
	9		9

Second Year

Fall	Hours	Spring	Hours
PNGE 796	1	PNGE 796	1
PNGE 797	2	PNGE 797	2
Course	3	Course	3
Course	3	Course	3
	9		9

Third Year

Fall	Hours	Spring	Hours
PNGE 796	1	PNGE 796	1
PNGE 797	8	PNGE 797	8
	9		9

Total credit hours: 54

Major Learning Outcomes

PETROLEUM AND NATURAL GAS ENGINEERING

- Graduates will have in-depth knowledge of petroleum and natural gas engineering principles and applications to function effectively in their profession or continue their education.
- Graduates will have the ability to perform independent research to solve engineering and scientific problems encountered in their profession.
- Graduates will have in-depth petroleum and natural gas scientific and engineering knowledge to provide high quality education in petroleum and natural gas engineering.

College Wide Degrees

Degrees Offered

- Master of Science, Energy Systems Engineering (M.S.E.S.E.)
- Master of Science, Engineering (M.S.E.)

Engineering, M.S.E.

Degree Offered

- Master of Science, Engineering (M.S.E.)

Nature of the Program

The master of science in engineering (M.S.E) program is available to students holding a baccalaureate degree in a field of engineering different from the M.S. major they are seeking. It is also open to students holding a baccalaureate degree in the physical sciences wishing to pursue a broad interdisciplinary M.S. degree in an engineering program (for example, a student with a B.S. in chemistry can pursue an M.S.E. with an emphasis in chemical engineering). The M.S.E. is a college-wide undesignated program that compliments the designated master's program in each of the eight individual engineering discipline majors, namely, aerospace engineering, chemical engineering, civil engineering, electrical engineering, industrial engineering, mechanical engineering, mining engineering or petroleum and natural gas engineering.

It is important to note that the M.S. in specific disciplines requires an equivalent bachelor's degree-level of knowledge to pursue; students may pursue the M.S.E. degree with a more basic level of knowledge in that field, the difference of which could be the equivalent of several semesters of undergraduate work. The M.S.E., therefore, is an important element in providing students with additional professional options, allowing for a broad and diverse masters experience and preparing students from the physical sciences with the basis to pursue doctoral work in engineering.

Due to the interdisciplinary nature of the degree program, the M.S.E. can also serve as an avenue to explore and develop potential future M.S. programs in a new engineering discipline on an experimental basis.

Curriculum in Master of Science in Engineering

The following programs participate in the Master of Science in Engineering Program:

- Chemical Engineering
- Civil Engineering
- Computer Science
- Electrical Engineering
- Industrial Engineering

A candidate for the M.S. degree in engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the specific department in which the student's concentration is in.

Program Requirements

All M.S. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required in all courses

Course Requirements [*]	
A minimum of 60% of courses must be from 500 level or above	
Select from the following based on degree path:	24
Any BIOM, CE, CHE, CHEM, CPE, CS, EE, IENG, IH&S, MAE, MATH, MINE, PNGE, PHYS, SAFM, SENG, or STAT courses 400-799	
Complete 1 of the following options:	6-9
Thesis Option - 6 hours	
Research - any 697 (6 hours)	
Written Research Proposal	
Thesis	
Final Oral or Written Examination	
Problem Report Option - 9 hours	
Complete 6 additional hours of coursework	
Research - any 697 (3 hours)	
Written Research Proposal	
Formal written report or professional report/paper	

Final Oral or Written Examination

Coursework Option - 9 hours

Complete 8 additional hours of coursework

Final Oral or Written Examination

Total Hours	30-33

*   Students who do not hold a baccalaureate degree in engineering may be required to take a set of undergraduate engineering courses above and beyond the minimum coursework requirements.

Final Examination

M.S. students following the thesis or problem report option must prepare a written research proposal. The proposal must be approved by the student's AEC at least one semester prior to the final oral examination.

All students, regardless of option, are required to pass a final oral or written examination, administered by their AEC, covering the thesis or problem report and/or related course material.

Suggested Plan of Study

The plan below illustrates the Thesis Option. It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical M.S.E degree program that completes degree requirements in two years is as follows.

First Year

Fall	Hours	Spring	Hours
Course	3	Course	3
Course	3	Course	3
Course	3	Course	3
	9		9

Second Year

Fall	Hours	Spring	Hours
Course	3	Research	9
Course	3		
Research	3		
	9		9

Total credit hours: 36

Major Learning Outcomes

Upon graduation, with a masters of science degree in engineering, students will have:

- An expert level understanding of the advanced principles of their engineering specialty
- Ability to apply advanced methodologies in their specialty area
- Ability to design and conduct original experiments, analyze and interpret data, and develop recommendations with a high degree of independence
- Advanced ability to use contemporary techniques, skills, and tools necessary for engineering practice in education, industry, and/or government
- Ability to effectively communicate technical information in the form of a thesis, scientific publication or presentation
- Understanding of professional and ethical responsibility
- Ability to understand the impact of engineering solutions in global and societal context
- Recognition of the need to engage in life-long learning
- Foundational preparation to pursue doctoral studies

Energy Systems Engineering, M.S.E.S.E.

Degree Offered

- Master of Science, Energy Systems Engineering (M.S.E.S.E.)

Nature of the Program

The master of science in energy systems engineering is designed for students with undergraduate degrees in engineering or a closely related STEM discipline. The program will provide students opportunities to expand and strengthen their scholastic background and skills relative to the production, conversion, transmission and utilization of energy; carbon-based and "green" energy; renewable or alternate energy sources; energy storage, modeling and simulation of energy systems; and critical materials for energy generation and utilization.

Students enrolled and graduating from this program will fulfill a need for specially trained professionals to satisfy growing needs of governmental agencies and industrial companies in West Virginia, the region and the country for technical personnel with advanced training in specialized areas of energy systems and energy supply-chain management. The program will produce master's-level students who are able to function at the highest levels of expertise in their chosen sub-discipline of energy, and who are well versed in the overall concepts of getting energy to consumers.

The degree can be used as a terminal degree or prepare students, with unique perspectives in the field of energy, for prospective study in existing Ph.D. programs at WVU and other universities nationally and internationally.

FACULTY
COMMITTEE

- Kashy Aminian
- Roger Chen
- Bhaskaran Gopalakrishnan
- Hailin Li
- Yi Luo
- Jignesh Solanki

Admissions

To enter the Energy Systems Engineering program, students are required to have, as a minimum, a B.S. degree in engineering or a closely related STEM discipline, single- and multi-variable calculus, calculus-based probability and statistics, and a course in thermodynamics.

All applicants must provide the items below to be considered for admission:

- All students must submit a completed application
- Three letters of reference/recommendation.
- Students not having sufficient mathematics or calculus-based probability and statistics or thermodynamics coursework will only be admitted as provisional students and will not be admitted to regular student status until they meet these minimum coursework requirements.
- Applicants having a grade point average (GPA) of 3.0 or better (out of a possible 4.0) in all previous college work
- The Graduate Record Examination (GRE) is highly recommended but not required for admission; high scores on the GRE will provide additional evidence for provisional admission consideration.
- International applicants must submit proof of English language proficiency.

Curriculum in Master of Science in Energy Systems Engineering

A candidate for the M.S. degree in energy systems engineering must comply with the rules and regulations as outlined in the WVU Graduate Catalog and the specific requirements of the Statler College and the specific department in which the student's concentration is in.

Program Requirements

All M.S. degree candidates are required to perform research and follow a planned program of study. The student's research advisor, in conjunction with the student's Advising and Examining Committee (AEC) will be responsible for determining the plan of study appropriate to the student's needs. The underlying principle of the planned program is to provide the students with the necessary support to complete their degree and prepare them for their career.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required in all courses

Course Requirements [*]	
A minimum of 60% of courses must be from 500 level or above	
Extraction	3
Examples include:	
MINE 411	Rock Mechanics/Ground Control

MINE 505	Integrated Mining Systems	
MINE 611	Advanced Ground Control-Coal Mines	
or any other approved course in the area of extraction		
Conversion		3
Examples include:		
CHE 414	Coal Conversion Engineering	
MINE 427	Coal Preparation	
MAE 438	Introduction to Gas Dynamics	
MAE 528	Introduction to Fuel Cell Technology	
MINE 627	Advanced Coal Preparation	
or any other approved course in the area of conversion		
Distribution/storage		3
Examples include:		
EE 533	Computer Applications in Power System Analysis	
PNGE 471	Natural Gas Production and Storage	
or any other approved course in the area of distribution/storage		
Utilization		3
Examples include:		
MAE 424	Applications in Heat Transfer	
MAE 425	Internal Combustion Engines	
IENG 433	Energy Efficiency and Sustainability	
MAE 427	Heating, Ventilating, and Air Conditioning	
MAE 525	Heavy Duty Vehicle Emissions	
or any other approved course in the area of utilization		
Technical Electives selected from the table of technical electives below.		12
Complete 1 of the following options:		6-9
Thesis Option - 6 hours		
Research (6 hours)		
Written Research Proposal		
Thesis		
Final Oral or Written Examination		
Problem Report Option - 9 hours		
Complete 6 additional hours of Technical Electives. A minimum of 12 credit hours of the 18 credit hours of technical elective course work must be taken in the Statler College.		
Research (3 hours)		
Written Research Proposal		
Formal written report or professional report/paper		
Final Oral or Written Examination		
Coursework Option - 9 hours		
Complete 9 additional hours of Technical Electives.		
Final Oral or Written Examination		
Total Hours		30-33

*   Students who do not hold a baccalaureate degree in engineering may be required to take a set of undergraduate engineering courses above and beyond the minimum coursework requirements.

TECHNICAL ELECTIVES

Any 400 level or higher CE, CHE, CPE, EE, IENG, MAE, MINE, or PNGE course dealing with issues related to extraction, conversion, distribution/storage, and utilization of energy.

ARE 445	Energy Economics	3
WDSC 444	Bio-based Energy Systems	3
ARE 410	Environmental and Resource Economics	3
ARE 632	Natural Resource and Environmental Economics	3

RESM 440	Foundations of Applied Geographic Information Systems	3
RESM 480	Environmental Regulation	3
FOR 670	Human Dimensions of Natural Resource Management	3
BADM 511	Managerial Economics	3
BADM 531	Supply Chain Design and Innovation	3
BADM 532	Corporate Finance	3
ILR 511	Human Capital Management	3
LAW 613	International Environmental Law	2-3
LAW 604	Natural Resources	3
LAW 630	Energy Law	3
LAW 689D	Seminar: Environmental Law	2
LAW 689W	Seminar:Issues in Energy Law	2

Final Examination

M.S. students following the thesis or problem report option must prepare a written research proposal. The proposal must be approved by the student's AEC at least one semester prior to the final oral examination.

All students, regardless of option, are required to pass a final oral or written examination, administered by their AEC, covering the thesis or problem report and/or related course material.

SUGGESTED PLAN OF STUDY

The plan below illustrates the Problem Report Option. It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical M.S.E.S.E degree program that completes degree requirements in one year is as follows.

First Year

Fall	Hours	Spring	Hours	Summer	Hours
Critical Subject Area Courses	12	Technical Elective Courses	15	Research	3
Technical Elective	3				
	15		15		3

Total credit hours: 33

Major Learning Outcomes

Upon graduation, with a Masters of Science degree in Energy Systems Engineering, students will have:

- Understanding of the supply chain for carbon based and "green" energy, for production, conversion or processing, transmission, and point of utilization;
- Advanced training in specialized areas of energy systems engineering;
- Ability to function at the highest levels of expertise in their chosen sub-discipline of energy, and who are well versed in the overall concepts of getting energy to consumers;
- Ability to complete on time specific professional-paper tasks
- Strong oral and written communication skills
- Ability to work independently in a collaborative environment
- Understanding of professional and ethical responsibility
- Ability to understand the impact of engineering solutions in global and societal context
- Recognition of the need to engage in life-long learning

Law

College Website: https://www.law.wvu.edu/

West Virginia University College of Law students have a passion for justice, an interest in how our legal system contributes to society, and a desire to learn a discipline that is both structured and creative.

The College of Law provides students a unique opportunity to attend a small public law school within a nationally recognized research university. Here you can join diverse students from around the globe who come together in the beautiful mountains of West Virginia to experience public legal education with the intimacy of a fine private law school. Small class sizes and an excellent faculty-student ratio tell part of the story, but not all.

What makes the College of Law experience exceptional is its culture of excellence. Our faculty, staff, and students are committed to creating a rigorous, inclusive, exciting, and supportive educational community in which individuals can pursue their personal vision of success in the legal profession.

Our faculty members are outstanding teachers, scholars, and leaders in legal education. What distinguishes our faculty from others, however, is the remarkable commitment they have in mentoring students to help them achieve individual goals. The faculty supervise student articles for publication, assist in obtaining prestigious federal judicial clerkships, and provide guidance for student-led symposia exploring cutting-edge topics. In addition, whether our faculty members teach corporate securities or civil disobedience, each one exemplifies the duty of a lawyer to serve the public interest.

To fulfill its commitments to individual student success and to improving the profession by producing the leaders of the future, the College of Law has a rapidly developing curriculum that combines the best of traditional legal education with new courses and opportunities necessary to practice law in the global society in the 21st century.

Mission Statement of the College of Law

The College of Law's mission statement is, "Preparing 21st century lawyers and leaders to serve the public, government, and business — both locally and globally — while focusing on justice, ethics, professionalism, and service in a diverse, vibrant, and respectful community."

ADMINISTRATION

DEAN

- Gregory W. Bowman - J.D. (Northwestern University)
  William J. Maier, Jr. Dean and Professor of Law

ASSOCIATE DEANS

- Jessica Haught - J.D, (West Virginia University)
  Interim Associate Dean for Administration, Teaching Professor of Law
- Shine (Sean) Tu - J.D. (University of Chicago); Ph.D (Cornell University)
  Associate Dean for Faculty Research and Development, Professor of Law
- Elaine Waterhouse Wilson - J.D. (Boston University)
  Associate Dean for Academic Affairs, Professor of Law

ASSISTANT DEANS

- Jennie James - M.B.A (University of Charleston); M.A. (Marshall University)
  Development
- Tina Jernigan - M.A. (Marshall University)
  Student Life
- Lauren McCartney - J.D. (West Virginia University)
  Continuing Legal Education
- Beth Pierpont - J.D. (Western Michigan University Cooley Law School)
  Admissions and Student Financial Support

DIRECTORS

- James Jolly - B.A. (Radford University)
  Marketing and Communications
- Dan Kimble - J.D. (West Virginia University)
  Access to Justice Commission
- Jonathan Marshall - J.D. (West Virginia University)
  Center for Consumer Law and Education

- Caroline Osborne - J.D. (University of Richmond); LL.M. (Emory University)
  Law Library
- Jennifer Powell - J.D. (West Virginia University); M.S.W. (West Virginia University)
  Center for Law and Public Service
- Melanie Stimeling - M.A. (West Virginia University); B.A. (West Virginia Wesleyan College)
  Writing Center
- Keith Walton - B.S. (West Virginia University)
  Law School Technology

ASSOCIATE DIRECTOR

- Elissa Momen - M.A. (West Virginia University)
  Enrollment Management and Scholarships

ASSISTANT DIRECTORS

- Alice Foley - J.D. (West Virginia University)
  Enrollment Management
- Rosalind Lister - M.S.Ed. (Purdue University)
  Career Services
- Carli Yoho - M.B.A. (West Virginia University; M.S. (West Virginia University)
  Leadership Annual Giving

FINANCIAL AID

- Elissa Momen - M.A. (West Virginia University)
  Associate Director for Enrollment Management and Scholarships

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FACULTY

PROFESSORS OF LAW

- Robert M. Bastress - J.D. (Vanderbilt University); LL.M. (Temple University)
  John W. Fisher, II Professor of Law
- Vincent P. Cardi - J.D. (Ohio State University); LL.M. (Harvard University)
  Bowles Rice Professor of Law
- Charles R. DiSalvo - J.D. (University of Southern California); M.A. (Claremont Graduate University)
  Woodrow A. Potesta Professor of Law
- James J. Friedberg - J.D. (Harvard University)
  Hale J. and Roscoe P. Posten Professor of Law
- David L. Krech - J.D. (Cornell University)
  Director of Legal Research and Writing; Director of Appellate Advocacy
- Anne M. Lofaso - J.D. (University of Pennsylvania); Ph.D. (University of Oxford)
  Arthur B. Hodges Professor of Law
- Jena Martin - J.D. (Howard University); LL. M. (University of Texas)
- Majorie A. McDiarmid - J.D. (Columbia University); LL.M. (Harvard University)
  Steptoe and Johnson Professor of Law and Technology; Director of the Clinical Law Program
- Patrick C. McGinley - J.D. (Duke University)
  Charles H. Haden II Professor of Law
- Dale P. Olson - J.D. (University of Minnesota); LL.M. (Yale University)
- Alison Peck - J.D. (Yale Law School); LL.M. (University of Arkansas)
- William Rhee - J.D. (Northwestern University)
- Jesse Richardson - J.D. (University of Virginia)
- John E. Taylor - J.D. (University of North Carolina); Ph.D. (Stanford University)
  Jackson Kelly Professor of Law
- Hollee S. Temple - J.D. (Duke University)
- Matthew Titolo - J.D. (University of California); Ph.D. (University of California)
- James Van Nostrand - J.D. (University of Iowa); LL.M. (Pace University)
- Joshua Weishart - J.D. (University of Calfironia, Berkeley School of Law

ASSOCIATE PROFESSORS

- Valarie Blake - J.D. (University of Pittsburgh)
- Kirsha Trychta - J.D. (Duquesne University School of Law)
- Suzanne M. Weise - J.D. (West Virginia University)
  Teaching Associate Professor, Director of the Child and Family Law Clinic

LAND USE AND SUSTAINABLE DEVELOPMENT CLINICIANS

- Jared Anderson - J.D. (Catholic University of America)
  Supporting Land Use Attorney
- Christy Burnside DeMuth - M.S. (Indiana University of Pennsylvania)
  Land Use Planner
- Nathan Fetty - J.D. (West Virginia University)
  Managing Attorney
- Katherine Garvey - J.D. (University of Missouri-Kansas City); LL.M. (Vermont Law School)
  Director of the Land Use and Sustainable Development Clinic
- Jason Walls - J.D. (West Virginia University)
  Land Conservation Attorney

VISITING FACULTY

- Barton Z. Cowan - J.D. (Harvard University)
- Amy Cyphert - J.D. (Harvard University)
- Larry Starcher - J.D. (West Virginia University)

PROFESSORS EMERITI

- David Hardesty, Jr. - J.D (Harvard University)
  President Emeritus, West Virginia University (1995-2007)
- Gerald G. Ashdown - J.D. (University of Iowa)
  James. H. Buck and June M. Harless Emeritus
- Forest J. Bowman - J.D. (West Virginia University)
  Jackson and Kelly Professor of Law Emeritus
- John Fisher - J.D. (West Virginia University)
  William J. Maier, Jr. Dean Emeritus; Robert M. Steptoe and James D. Steptoe Professor of Law Emeritus
- Robert Lathrop - LL.M. (New York University)
  Professor Emeritus
- Joyce McConnell - J.D. (Georgetown University)
  Thomas R. Goodwin Professor of Law Emeritus
- Thomas O. Patrick - J.D. (West Virginia University)
  Professor Emeritus
- Camille M. Riley - J.D. (St. Louis University)
- Grace Wigal - M.A. Marshall University; J.D. (West Virginia University)
  Teaching Professor Emeritus

Degree Designation

DOCTOR OF JURISPRUDENCE (J.D.)

The J.D. program forms students' professional identities as lawyers and provides students with the core legal knowledge and practical skills to pass the bar exam and to serve their clients competently and ethically.

In developing professional identity and values, the College of Law seeks to produce students committed to professional excellence, justice, leadership, public service, global engagement, and lifelong learning. College of Law graduates are trained to be legal problem solvers who possess a solid grasp of the substantive and procedural law of their chosen fields, understand their professional responsibilities and ethical obligations, and have the varied skills needed for successful practice, including: legal analysis, legal writing, legal research, factual investigation, client counseling, negotiation, drafting, and advocacy.

MASTER OF LAWS (LL.M.)

Our LL.M. programs offer post-J.D. students an opportunity to deepen their subject-matter expertise and skills in particular areas of the law.

ENERGY & SUSTAINABLE DEVELOPMENT LAW

The LL.M. in Energy & Sustainable Development Law provides lawyers with a deep and broad knowledge of law and policy in the critical areas of energy, environmental protection, and sustainable development. Students will master these areas through course work, writing projects, and a variety of experiential learning opportunities. LL.M. graduates will have the skills necessary to work as lawyers serving energy companies, investors, utilities, manufacturing companies, lawmakers, policymakers, regulators, land use professionals, and environmental organizations.

FORENSIC JUSTICE

The LL.M. in Forensic Justice provides working lawyers with a solid grounding in the theory and practice of the forensic sciences and their application in the courts. LL.M. students will gain an understanding of scientific method and of critical areas of forensic science including biological and chemical evidence, impression and trace evidence, and statistics and probability. In addition, students will gain practical experience in working with this evidence in a courtroom setting. The degree will be especially valuable for prosecutors and criminal defense attorneys, enabling those on both sides of the criminal process to ensure that forensic science serves the ultimate goal of justice.

WHITE-COLLAR FORENSIC JUSTICE

The White-Collar Forensic Justice LL.M. provides attorneys with foundational expertise and transferable skills in forensic fraud, accounting, and the law. Courses include fraud investigation and examination, data analysis, expert evidence, health care fraud, and analytical methods. The degree is particularly helpful for any attorney who wishes to specialize in white-collar crime or corporate compliance issues.

Admissions - Doctor of Jurisprudence

FIRST-TIME ADMISSIONS

The following are the essential requirements to apply to law school:

- A bachelor's degree from an accredited four-year institution,
- Completion of the Law School Admissions Test (LSAT), and
- Application for admission / Credential Assembly Service (CAS) report.

For additional information, please visit the College of Law Admissions (https://admissions.law.wvu.edu/) homepage.

TRANSFER ADMISSIONS

A transfer student is a student who has taken some or all of his or her first-year curriculum at another law school and is admitted to earn a J.D. degree at the College of Law. As described more fully below, the College of Law accepts transfer students only from other law schools accredited by the American Bar Association. The College will not accept transfer applicants from law schools that do not award letter grades (or their numerical equivalent) during the first academic year or its equivalent. All candidates who transfer to the College of Law from another ABA-accredited law school must satisfactorily complete courses aggregating at least forty-five credit hours at the College of Law. In addition, a transfer student must earn the last thirty credit hours at the College of Law.

The College of Law will accept transfer credits only for courses where the student earned a grade of C or better. In exceptional circumstances, the Associate Dean for Academic Affairs may approve the transfer of a small number of pass/fail credits. The Associate Dean will determine the total number of credit hours that will transfer; however, only in exceptional cases will the Associate Dean give credit for more than thirty-two credit hours. The Associate Dean will also determine whether particular courses taken at another law school satisfy specific course requirements at the College of Law. Graded credits at other law schools that transfer to the College of Law will be entered on the student's College of Law record as pass/fail credits, and hence will not affect the student's College of Law grade point average.

In order to graduate, all transfer students must obtain a cumulative grade point average of 2.30 or better on courses taken at the College of Law. Transfer students are not eligible for election to Order of the Coif at the College of Law.

The deadline for transfer applications is **July 1**. The College of Law has established the following guidelines for the Enrollment Management Committee to use in reviewing transfer applications:

- In reviewing applications for advanced standing, the Enrollment Management Committee will give preference to West Virginia residents.
- Applicants must have completed at least one academic year of study or its equivalent at the institution from which transfer is being sought. For admission purposes, one year of study or its equivalent is equal to a minimum of twenty-eight credit hours of coursework. The twenty-eight credit hours should ideally include the following coursework, but the College of Law will consider transfer applicants who have a substantial number of the listed courses:

  1. Civil Procedure I & II
  2. Contracts I
  3. Torts I
  4. Constitutional Law

5. Criminal Law

6. Property I

7. Legislation and Regulation

8. Legal Writing/Research/Analysis courses

- Applications from students seeking to transfer from schools that are not accredited by the ABA will not be accepted under any circumstances. (The applicant may apply as a first- year student.)

- Applications for transfer to the College of Law for the second year will be considered by the Committee on the basis of the following:

1. The size of the returning second-year class.

2. The applicant's grades and/or class rank at her/his law school. Applicants from law schools who do not provide either a GPA or class rank for 1L students will not be considered for transfer.

3. Whether the applicant would have been admitted to the College of Law in the first year had the applicant applied.

4. The academic strength of the law school attended by the applying student, including whether it is accredited by the AALS. (ABA accreditation is required.)

5. Recommendation(s) from a law professor in whose class the applicant was enrolled. (At least one is required.)

6. Residency of the applicant.

7. All of those facts, performance records, recommendations, and other matters that the Committee normally considers for applicants to the first-year class, including everything that might implicate the student's fitness for the practice of law.

8. Any other activities and experiences of the applicant occurring since the student began law school.

9. Any other information regarding the applicant that may be considered relevant to success in law school.

- In addition to the aforementioned criteria, applicants must meet the requirements set forth below.

1. Applicants must conform to all other relevant criteria relating to first-year entering students as found in the admission policy of the West Virginia University College of Law.

2. Applicants must submit a certified official transcript of their first-year law school grades and class ranking. If class ranking from the law school is unavailable, the applicant must submit sufficient information about grades from the law school attended to make a reasonable estimation of class ranking. No one will be admitted for transfer without class rank (or its reasonable equivalent) based on a full year of law school attendance, as defined above.

3. Applicants must provide a letter of good standing from the Dean of the law school (or his or her designee) from which the student is transferring.

4. Applicants must submit a copy of their most recent LSAC Credential Assembly Service (CAS) report including a certified transcript of undergraduate school grades and the LSAT writing sample.

5. Applicants must fully explain any ethical or other problems with admission that may appear in the file.

6. Applicants must submit the completed file to the Admission Office by July 1 in order to be considered for transfer.

- In considering applications for admission from individuals with credits or degrees from foreign institutions, the Enrollment Management Committee shall have the authority to make any of the below stated decisions with regard to the applicant:

1. The Committee may admit the applicant as a first-year entering student.

2. The Committee may admit the applicant with advanced standing by granting credit for specific course work completed at another institution. (AALS Executive Committee Regulations 2.8 and 2.9 prescribe limitations on the award of advanced standing.)

3. The Committee may admit the applicant as a special student for the purposes of auditing courses or transferring course work to another institution.

4. The Committee may deny admission to the applicant.

TRANSIENT ADMISSIONS

The West Virginia University College of Law accepts transient students only from other law schools accredited by the American Bar Association. A transient student is one who has taken or will take most of his or her work toward a J.D. at another ABA-approved law school and will earn a degree from that institution. Transient students are permitted to earn some credits toward that J.D. while in temporary residence at the West Virginia University College of Law, provided that they obtain permission from their school and from the Associate Dean for Academic Affairs.

Admissions - LL.M. (Master of Laws)

ENERGY & SUSTAINABLE DEVELOPMENT

The College of Law's LL.M. in Energy & Sustainable Development Law is a source for a high-quality professional legal education and a home for thought leaders in the areas of energy and sustainable development.

Minimum admission requirements for the program are as follows:

- A J.D. from an ABA (American Bar Association) accredited school.
- A J.D. grade point average of at least a 3.0 (on a 4.0 scale) or other demonstrated indicia of likelihood of success.
- A demonstrated interest in or commitment to the fields of energy and/or sustainable development.

For additional information, please visit the LL.M. in Energy & Sustainable Development Law (http://law.wvu.edu/energy-llm/) homepage.

The College of Law also offers students an opportunity for a dual J.D./LL.M in Energy and Sustainable Development Law. For more information about participating as a dual degree student, please visit the J.D./LL.M homepage. (http://www.law.wvu.edu/academics/academic-programs/dual-degree-programs/jd-llm/)

FORENSIC JUSTICE

Minimum admission requirements for the LL.M. in Forensic Justice are as follows:

- A J.D. from an ABA (American Bar Association) accredited school or equivalent.
- A grade point average of at least a 3.0 (on a 4.0 scale) or other demonstrated indicia of likelihood of success.
- A demonstrated interest or commitment to the fields of science, forensic evidence, and law.

Applicants may include newly graduated J.D. students, professionals (prosecutors, defense attorneys, judges) returning for study after years of practice, or qualified international students.

For additional information, please visit the LL.M. in Forensic Justice (http://law.wvu.edu/forensic-llm/) homepage.

WHITE COLLAR FORENSIC JUSTICE

Minimum admission requirements for the LL.M. in White Collar Forensic Justice are as follows:

- A J.D. from an ABA (American Bar Association) accredited school or equivalent.
- A grade point average of at least a 3.0 (on a 4.0 scale) or other demonstrated indicia of likelihood of success.
- A demonstrated interest or commitment to the fields of white collar crime, business law and/or forensic accounting
- Some familiarity with accounting, as demonstrated by previous accounting courses or practical experience in the field. If neither is present, students agree to matriculate in a non-credit course in accounting that exposes them to working vocabulary and foundations in accounting.

Applicants may include newly graduated J.D. students, professionals (prosecutors, defense attorneys, judges) returning for study after years of practice, or qualified international students.

Accreditation

The JD program within the College of Law has specialized accreditation through the Section of Legal Education of the American Bar Association.

The College of Law was established in 1878, accredited by the AALS in 1914, and approved by the ABA in 1923. The College of Law is fully approved by the American Bar Association Council of the Section of Legal Education and Admissions to the Bar. Since 1952, the ABA Council of the Section of Legal Education and Admissions to the Bar has been approved by the U.S. Department of Education as the recognized national agency for the accreditation of professional schools of law.

Further information as to the Standards and Rules of Procedure for the Approval of Law Schools by the American Bar Association may be obtained from the Section of Legal Education and Admissions to the Bar, 321 N. Clark Street, 21st Floor, Chicago, IL 60654. Phone: (312) 988-6738, Fax: (312) 988-5681. Email: legaled@americanbar.org. Website: http://www.americanbar.org/groups/legal_education.html

Student Catalog Policy

All students at West Virginia University College of Law must abide by the content of the student catalog and the Student Code of Professional Responsibility. You are responsible for knowing and understanding the rules and policies contained in those documents. You are governed by the rules and policies of the catalog for the current academic year, including any addenda to the catalog published on the College of Law's website. The student catalog is revised each academic year. Students will be notified of any significant change in school policies during the academic year. You may consult

the Assistant Registrar for the College of Law and/or the Associate Dean for Academic Affairs at any time for advice as to any policy contained in the student catalog.

Frequently Asked Questions

- **What academic honors can I earn while in law school?**

  See 'Academic Policies & Procedure - Honors' of the College of Law catalog for additional information.

- **What does it mean to be on academic probation?**

  See 'Academic Policies & Procedure - Academic Standing - Academic Probation & Dismissal' section of the College of Law catalog.

- **What student organizations can I join at the law school?**

  Many College of Law organizations welcome all students who are interested, while others require students to be elected or chosen. See ' Student Organizations, Guidelines, and Services - College of Law Organizations - Recognized College of Law Student Organizations' section of the College of Law catalog or visit the 'Student Organizations (http://studentengagement.wvu.edu/)' homepage.

- **What is the law school's grade point average system?**

  See the 'Academic Policies and Procedure - Grading Information and Procedures - Grades' section of the College of Law catalog.

- **How can I change my address with WVU so I will receive my financial aid check?**

  Students may change their addresses online via the WVU Portal. Once there, click on the 'Personal Information' link.

- **What is Degree Works?**

  Degree Works (http://registrar.wvu.edu/dw/) is an online audit for students to review and monitor their progress toward degree completion. It organizes academic coursework into blocks of requirements to help easily identify courses completed and what courses are still needed in order to complete your degree. For additional information, including how to log in to Degree Works, see the 'Academic Policies and Procedures - Graduation' section of the College of Law catalog.

- **Whom should I see if I have a question regarding academic matters at the College of Law?**

  For academic matters, please see the Associate Dean for Academic Affairs.

- **Whom should I see if I have a non-academic or personal matter that pertains to my law school experience?**

  For such matters, see the College of Law's Assistant Dean for Student Life.

- **What is my professor's phone number, e-mail address, etc.?**

  See the 'Faculty (http://law.wvu.edu/faculty-staff/)' link on the College of Law (http://www.law.wvu.edu/) homepage. Many professors also list their contact information on their class syllabi.

- **Whom do I call if I am sick and must miss class?**

  See the 'Academic Policies and Procedures - Academic Policies - Missing Class Due to Illness' section of the College of Law catalog. Also, for treatment information, see the 'Student Organizations and Services - University Services - Health Services' section of the College of Law catalog.

- **What are midterm and/or final exam numbers?**

  Midterm and final exam numbers are assigned to students each semester by the Assistant Registrar for the College of Law. In many classes, these numbers are used on papers and exams in place of student names so that the professors can grade anonymously. Students are routinely notified of information concerning midterm exam and final exam numbers each semester.

- **If I'm traveling for competitions with the College of Law, what do I do?**

  If the completion has been approved as part of the student organization's budget, then check with the Assistant Dean for Student Life. Student travel expenses must be approved in advance in order to be reimbursed.

- **How do I register for classes?**

  Registration for classes occurs in STAR. Students are routinely notified of information concerning registration each semester. For additional information, please review the Student Services Guide, located on the College of Law website on the 'Course Schedule and Registration Information' link under the 'Academics' tab.

- **Where can I find guidance about choosing courses?**

  The College of Law J.D. curriculum is separated into required courses and electives courses. For required courses, see 'Academic Programs - Doctor of Jurisprudence - First-Year Curriculum & Required Courses after the First-Year Curriculum.' For elective courses, the College of Law publishes a 'Curriculum Opportunities and Options (https://www.law.wvu.edu/files/d/1d14706c-e757-4898-8810-7b0360976666/curriculum-opp-and-options-2018-2019.pdf)' guide. This guide organizes courses into specific career tracks.

- **When are classes canceled, and how do I find out?**

  It is rare that the College of Law will cancel classes or activities due to weather or other events. Decisions regarding class cancellations are made at the university level by the Provost's Office. In the event classes are canceled or delayed because of weather or other reasons, the university will issue a notice by morning. If you receive no notice, assume that there are no cancellations for that day. Sign up to receive these notices via phone by going to the 'WVU Alert' homepage (http://emergency.wvu.edu/alert/).

- **Where can I find the Code of Professional Responsibility (Honor Code)?**

  See the 'Professional Responsibility - WVU College of Law Student Code of Professional Responsibility' section of the College of Law catalog.

- **Where can I find out about careers, jobs, and summer internships?**

  See the 'Student Organizations and Services - College of Law Services - Meredith Career Services Center' section of the College of Law catalog or visit the College of Law's Meredith Career Services Center (http://law.wvu.edu/career-services/) homepage.

- **What do I need to do in my 3L year to apply to take the bar exam the following summer?**

  No later than the beginning of the fall of your 3L year, visit the bar examiners' homepage in the state where you plan to practice. The application must be started and finished in a timely manner to be able to take the exam in the summer. Some applications are due in the fall of the 3L year. The application to practice includes a character and fitness review. Contact the Director of the Academic Excellence Center for more information.

- **What do I need to do in my 3L year to prepare to take the bar exam?**

  (1) Take the Multistate Professional Responsibility Exam (MPRE) in the spring of second year or fall of 3L year (after you have taken the class in Professional Responsibility), (2) determine what is going to be on your state's July exam, (3) explore early and summer prep programming that will prepare you for that exam (*e.g.* classes at the law school and state-specific commercial programming for the summer) and (4) connect wit the Academic Excellence Center. In short, choose a program of preparation, and realize that your program of preparation could begin as early as the 6th semester of law school if you choose to participate in the school's early-start bar preparation class. Contact the Director of the Academic Excellence Center for more information.

- **Upon graduation, how do I assure that I pass the exam the first time I take it in July?**

  The College of Law strongly urges students to focus on and complete the summer bar exam preparation program of your choosing. Do not work unless it is absolutely necessary because studying for the exam is a full-time job.

Academic Programs

Degrees Offered

- Doctor of Jurisprudence
- Dual Degree Programs
- Energy Law and Sustainable Development LL.M.
- Forensic Justice LL.M.
- White Collar Forensic Justice LL.M.

College Website: https://www.law.wvu.edu/

Law, JD

A. DOCTOR OF JURISPRUDENCE (J.D.)

1. Curriculum Requirements
2. First-Year Curriculum
3. Required Courses after the First-Year Curriculum
4. Upper-Level Electives

5. Areas of Emphasis

6. Part-Time Program

A. DOCTOR OF JURISPRUDENCE

A.1 CURRICULUM REQUIREMENTS

Students at the West Virginia University College of Law must earn 91 credit hours with a cumulative grade point average (GPA) of at least 2.30 in order to graduate. Students must maintain a cumulative GPA of at least a 2.30 after the second semester to remain in good academic standing. The first-year curriculum is a fixed set of courses taken by all students. Students are largely free to shape their own courses of study during the last two years of law school, subject to a small number of upper-level requirements. If a student receives a failing grade in a course required for graduation, the student must repeat the course for a passing grade. That grade will be factored into the student's overall GPA and will not replace the 'F' the student received the first time he or she took the course.

Minimum GPA of 2.3 or higher required.

First-Year Required Courses		
LAW 638	Legislation and Regulation	3
LAW 641	Introduction to Legal Research	1
LAW 700	Legal Analysis, Research and Writing 1	2
LAW 703	Contracts 1	4
LAW 705	Criminal Law	3
LAW 706	Civil Procedure: Jurisdiction	2
LAW 707	Property	4
LAW 709	Torts 1	4
LAW 711	Legal Analysis, Research and Writing 2	2
LAW 722	Civil Procedure: Rules	3
LAW 725	Constitutional Law 1	4
Upper-Level Requirements		
LAW 715	Appellate Advocacy	2
LAW 742	Professional Responsibility	3
Seminar (any 688, 689, or 794 course)		2
Perspective		2
Capstone		4
Electives (credit may vary - used to reach minimum of 91 hours for the degree)		46
Total Hours		91

A.2 FIRST-YEAR CURRICULUM

The first-year curriculum is a required set of courses designed by the faculty to give new law students an introduction to the fundamentals of legal practice. You will be assigned to a section of each required course. The first-year curriculum covers three areas:

- **Private Law** governs the legal relationships and the resolution of disputes among private persons and entities. The private law courses you will take are Torts (civil wrongs), Contracts, and Property.

- **Public Law** concerns governmental regulation of private persons and entities. The public law courses you will take are Criminal Law, Legislation & Regulation, and Constitutional Law.

- **Practice** courses teach procedural law and the skills of legal research, reasoning, and writing. The practice courses you will take are Civil Procedure (both Jurisdiction and Rules), two semesters of Legal Reasoning, Research, and Writing, and Introduction to Legal Research.

Legal Reasoning, Research, and Writing (four credits). First-year students must pass both LRRW I and LRRW II with an average grade of C (2.0) or better over the two semesters in order to satisfy the Legal Reasoning, Research, and Writing (LRRW) course requirement. The vast majority of students will satisfy the requirement by making grades of C or better in both semesters of LRRW. However, a student who makes a C- in one semester must make a C+ or better in the other semester to obtain a C average; a student who makes a D+ in one semester must make a B- or better in the other semester to obtain a C average; a student who makes a D in one semester must make a B or better in the other semester to obtain a C average. A student who fails one or both semesters of LRRW must repeat the course.

Students who fail to obtain an average of C or better in the first-year LRRW program have a second opportunity to satisfy the LRRW requirement in a second taking of the two-semester, first-year sequence of LRRW I and LRRW II. (In some years, an LRRW III class may be offered in the fall semester for such students to take in lieu of retaking LRRW I and II.) Students who fail to make a C or better in their second attempt to satisfy the LRRW requirement will be dismissed from the College of Law. For students who make a C or better on the second attempt, both grades will count in the student's law school GPA, but the student will receive only four total hours of credit toward law school graduation.

No student will be allowed to drop the required first-year LRRW course. Students needing to decelerate during the first year of law school must drop another required course. There is one possible exception to this policy: a student receives an F in LRRW I, the student may drop LRRW II with the permission of the Associate Dean for Academic Affairs. Part-time students must take LRRW during their first year of law school.

Successful completion (an average grade of C or better) of the first-year LRRW program is a prerequisite for taking Appellate Advocacy, any seminar, or any clinic. This prerequisite may not be waived. Students will receive a detailed policy handbook at the beginning of the LRRW course; all policies will be in effect for the duration of the course.

A.3 REQUIRED COURSES AFTER THE FIRST-YEAR CURRICULUM

Appellate Advocacy: Students must take Appellate Advocacy and receive a C or higher in the course to graduate.

Seminar Requirement (two-three credits, depending on length of class meetings and paper length) from a menu of seminars. Seminars are specifically noted by the letters "Sem or Seminar" in the course title and are numbered as LAW 688, 689 or 794. Seminars have a common structure: small-class discussions geared toward the production of a substantial (*i.e.* at least 8,000 words which is approximately twenty-five pages) written product supported by extensive research. Typically, the research seminar aims at the production of a law-review style research paper of publishable quality. Seminars may aim at other written products, such as draft legislation or jury instructions, so long as these products are accompanied by papers urging their adoption by the appropriate lawmakers. Enrollment is limited to fifteen students in each seminar. Two-hour seminar courses must meet as a group for no less than 10 weeks and no less than 110 minutes per week. Three-hour seminar courses must meet as a group for no less than 10 weeks and no less than 165 minutes per week. Students must obtain a grade of C or better to satisfy the seminar requirement. Independent studies and externships do not satisfy the seminar requirement.

Perspective Requirement. The perspective requirement reflects the College of Law's conviction that legal education should expand students' horizons by connecting their studies to the traditions of the liberal arts (*i.e.*, the humanities, social sciences, and natural sciences). Perspective courses, examine law and lawyers primarily from points of view that are significantly different from the doctrinal and policy analysis taught in standard upper-level courses on various areas of practice. Perspective courses look across doctrinal boundaries and engage students in conversations about the relationships between law and other disciplines; explore the nature of the American legal system by contrasting it with other legal systems; and discuss the ways in which law and lawyers both shape and are shaped by the liberal arts and wider culture.

Students must take one perspective course in order to graduate. Some seminars satisfy the perspective requirement, but students cannot count one perspective seminar as simultaneously satisfying both the perspective and seminar requirements. (In other words, there is no "double-dipping" on the perspective and seminar requirements.) This means that a student can satisfy the perspective *and* seminar requirements by

   (a) taking one perspective class and one research seminar (which may or may not be a perspective), or

   (b) taking two research seminars, at least one of which is also a perspective.

In addition, students who complete either the joint M.B.A. or joint M.P.A. program at the time of earning the J.D. are deemed to have satisfied the perspective requirement.

The following courses satisfy the perspective requirement:

Perspective Courses

LAW 601	Lawyers, Poets and Poetry	3
LAW 602	Lawyers and Film	3
LAW 607	Psychology for Lawyers	3
LAW 614	Jewish/Islamic Comparative Law	3
LAW 621	Lawyers as Leaders	3
LAW 663	Renewable Energy & Alternative Fuels	3
LAW 688A	Seminar in American Constitutional History	2

LAW 688D	Seminar in Science and the Law	2-3
LAW 688I	Seminar in Sexuality and the Law	2
LAW 688K	Seminar in Schools, Race, & Money	2 to 3
LAW 689H	Seminar: Bioethics and the Law	2
LAW 689I	Seminar: Environmental Justice	2
LAW 689K	Seminar: Civil Disobedience	2
LAW 689M	Seminar: Race/Racism and American Law	2
LAW 689P	Seminar: Gender and Law	2
LAW 689S	Seminar: Law and Socioeconomic	2
LAW 689T	Seminar:Comparative and International Workplace Law	2
LAW 689Y	Seminar in Sustainable Development	2
LAW 701	International Human Rights	3
LAW 712	Analytical Methods for Lawyers	3
LAW 739	American Legal History	3
LAW 744	Law and Economics	3
LAW 746	Lawyers and Literature	3
LAW 752	Jurisprudence	3
LAW 768	International Law	3
Additional Approved Courses		
LAW 793	Adv Crim Law: Crime File Doc	
LAW 793	Comparative Law (Common Law v Civil)	
LAW 793	Comparative Law: European Union	
LAW 793	Dying & the Law	
LAW 793	Lawyer as Storyteller	
LAW 793	Memoir and Legal Education	
LAW 793	Democratic Transitions	
LAW 793	Genetic Property & the Law	
LAW 793	Empirical Legal Methods	
LAW 793	Trends in the Profession	

Capstone Requirement. Capstone courses provide students with opportunities to synthesize critically and apply knowledge and skills they have developed during law school. The following course(s) satisfy the capstone requirement:

Capstone

LAW 627 & LAW 628	Land Use/Sustainable Development Clinic 1 and Land Use/Sustainable Development Clinic 2	14
LAW 650 & LAW 651	Entrepreneurship Clinic 1 and Entrepreneurship Clinic 2	14
LAW 655 & LAW 656	Law and Public Service Full-Time and Law and Public Service Externship Full-Time	13
LAW 677 & LAW 678	United States Supreme Court Clinic 1 and United States Supreme Court Clinic 2	8
LAW 756	Trial Advocacy (C or better)	4
LAW 779	Business Transactions Drafting	4
LAW 780 & 780A	Federal Judicial Externship 1 and Federal Judicial Externship 2	13
LAW 782 & LAW 783	Legal Clinic 1 and Legal Clinic 2	14

Students fulfilling the Capstone requirement though the clinic must take both semesters of Clinic unless waived by the Academic Standards Committee on a situation of due cause that occurred outside the control of the student.

In addition to the above-listed capstone courses, students may also fulfill the capstone requirement by completing the following:

- When available; writing a Law School faculty-supervised brief and making an oral argument before the U.S. Court of Appeals or the Supreme Court of Appeals of West Virginia as an independent study project (two credits)

- An interdisciplinary project supervised by a law faculty member and a university faculty member who is not a law faculty member, which must be approved in advance by the Academic Standards Committee

Prerequisite Requirement for Some Capstone Courses. The course in Evidence is a prerequisite to taking Trial Advocacy, the Clinical Law Program, or a Federal Judicial Externship. (There is no requirement that the student attain a particular grade in Evidence prior to taking the other courses.)

Requirement Waiver. In exceptionally rare circumstances and except as otherwise noted in the catalog, the Academic Standards Committee may exempt a student from taking a required course, approve an alternate course or may permit a student to take a course out of sequence.

A.4 UPPER-LEVEL ELECTIVES

Apart from the small number of upper-level requirements already described, students choose from a wide variety of upper-level electives to create their courses of study over the final two years of law school. A list of all the permanent law school courses with their descriptions can be found elsewhere in this academic catalog. (See "Courses.") The law school also offers additional courses on a temporary basis that are not included in this catalog.

With so many choices, students may wish for guidance about how to choose the courses best suited to their goals and interests. Toward that end, each spring the Associate Dean for Academic Affairs meets with rising 2L students and publishes on the law school website a booklet entitled *Curriculum Opportunities and Options: An Informal Guide to Planning Your Last Two Years of Law School.* For the latest version, go to the "Course Schedules and Student Resources (https://www.law.wvu.edu/academics/course-schedule-and-registration-information/)" link on the College of Law homepage. This booklet includes, among other things, advice about curricular planning, lists of key courses for various areas of practice and when they are typically offered, and information about subjects tested on the bar exam. Students with questions about choosing courses that are not addressed in the booklet should consult faculty in their areas of interest and/or the Associate Dean for Academic Affairs.

In addition, the College of Law website contains a "Course Classifieds (https://www.law.wvu.edu/academics/course-schedule-and-registration-information/)" page where professors may post information about courses to be offered in the next semester. Typically, "course classifieds" listings for a given semester begin to appear a few weeks before registration for that semester.

A.5 AREAS OF EMPHASIS

An Area of Emphasis (also informally called a "Concentration") is a course of study that enables students to develop skills and competency in a particular area of the law. A student who satisfies the requirement of an Area of Emphasis will have that Area of Emphasis listed on the official transcript. The College of Law has four Areas of Emphasis: (1) Energy and Sustainable Development Law, (2) International Law, (3) Labor and Employment Law, and (4) Public Interest Law.

ENERGY AND SUSTAINABLE DEVELOPMENT LAW AREA OF EMPHASIS

The Energy and Sustainable Development Law Area of Emphasis is intended to educate the next generation of lawyers who will work in and shape the fields of energy, environmental, and sustainable development law, by providing an opportunity to learn the applicable laws and regulations in this area, consider policy issues through written work, and obtain practical skills applicable in this area through an experiential learning requirement.

Course Requirements. In order to satisfy the requirements of this Area of Emphasis, a student must have (1) all required first-year courses; (2) all required core courses; and (3) seventeen (17) total credit hours from a combination of the required courses, designated elective courses, and the experiential learning course (see below). Note: No more than five credits of the 17 credits can come from clinic or an externship.

Required Courses		9
LAW 630	Energy Law	
LAW 764	Administrative Law	
LAW 789	Law of Environmental Protection	
Elective Courses		**5**
LAW 604	Natural Resources	
LAW 612	Agriculture & Food Law	
LAW 613	International Environmental Law	
LAW 627	Land Use/Sustainable Development Clinic 1	
LAW 634	Energy Reg, Markets and Environ	
LAW 635	Land Use and Resilience Law	
LAW 644	Energy Siting & Permitting	
LAW 645	Water Law	
LAW 647	Nuclear Law & Policy	
LAW 648	Energy Business/Law & Strategy	
LAW 658	Science & Technology of Energy	

LAW 659	Administrative Energy Law and Practice
LAW 660	Law of Coal
LAW 662	Mine Safety & Health Law
LAW 663	Renewable Energy & Alternative Fuels
LAW 688E	Seminar in Human Rights & the Environment
LAW 688F	Seminar in Hydraulic Fracturing
LAW 689I	Seminar: Environmental Justice
LAW 689W	Seminar:Issues in Energy Law
LAW 766	Coal/Oil and Gas
LAW 693	Special Topics (Environmental Law Nat Res & Conservation)
LAW 693	Special Topics (Environmental Litigation)
LAW 793	Hazardous Waste
LAW 793	Environmental Law Pollution
LAW 793	Trends in Env & Energy Law
Writing Requirement	
Experiential Learning	3
Extra/Co-Curricular Activities	
Total Hours	17

Writing Requirement. Students must produce a written paper or court document of no less than 25 pages on a topic related to energy, environmental, and/or sustainable development law. A student may fulfill this requirement through any of the following methods:

1. Law review note, with approval of the Area of Emphasis administrator and with a faculty member as advisor.
2. A court document, e.g. Amicus Brief or Memorandum of Law (real or moot), with the approval of the Area of Emphasis administrator and with a faculty member as advisor.
3. Independent study overseen by an Area of Emphasis faculty member.
4. Qualifying paper in any elective course listed above.

- The writing requirement requires input and approval from a faculty member and the Area of Emphasis administrator, even if the writing was completed outside a formal class or independent study arrangement. A student may fulfill the writing requirement through an alternative method with the consent of the Area of Emphasis administrator.

Experiential Learning. Students must meet the following experiential learning requirement of no less than 3 credits (no more than 5 credits from participation in a clinic or externship count toward the 17 credit requirement). A student may fulfill this requirement through any of the following methods:

1. Land Use and Sustainable Development Clinic
2. Externship approved per catalog, with approval of the Area of Emphasis administrator
3. Other clinic or simulation course, with approval of the Area of Emphasis administrator

Note: Any externship placements for the Energy & Sustainable Development Area of Emphasis must comply with the general rules of the externship program.

- A student may fulfill the experiential learning requirement through an alternative method with the consent of the Area of Emphasis administrator.

Extra Curricular or Co-Curricular Activity Requirement. Students must also meet the following requirement:

1. Ten hours of related extracurricular or co-curricular activities, such as active participation in the Energy Law Society or Environmental Law Society, attending relevant meetings, hearings or speakers, administrative or other active participation in related events (*e.g.*, moot court, symposia).

INTERNATIONAL LAW AREA OF EMPHASIS

The International Law Area of Emphasis educates the next generation of lawyers who will work in careers related to international law and its many sub-specialties in both public international law and private international law. The Area of Emphasis provides students with robust and varied opportunities to learn and develop skills in international law-related practice areas.

Course Requirements. In order to satisfy the requirements of this Area of Emphasis, a student must have (1) all mandatory first-year requirements; (2) all required core courses; and (3) seventeen (17) total credit hours from a combination of the required courses, designated elective courses, and the experiential learning course (see below). Note: No more than five (5) credits of the seventeen (17) credits can come from clinic or an externship.

| **Required Courses** | | **12** |
| LAW 603 | Comparative Brazilian Law | |

or LAW 610	Comparative Law in Mexico	
or LAW 617	Geneva Study Abroad	
LAW 626	International Trade Law	
or LAW 633	International Business Transactions	
LAW 701	International Human Rights	
LAW 768	International Law	
Elective Courses		**3**
LAW 613	International Environmental Law	
LAW 614	Jewish/Islamic Comparative Law	
LAW 626	International Trade Law	
LAW 633	International Business Transactions	
LAW 688B	Seminar in International Trade Regulations	
LAW 689N	Seminar: Refugee and Asylum Law	
LAW 689T	Seminar:Comparative and International Workplace Law	
LAW 689X	Seminar: National Security Law	
LAW 689Y	Seminar in Sustainable Development	
LAW 723	Immigration Law	
LAW 764	Administrative Law	
LAW 793	SPTP:Intrntl Enrgy/Climate Law	
LAW 793	SPTP: Internatnl Criminal Law	
LAW 793	SPTP: Jewish/Islamic Comp Law	
Writing		
Experiential Learning		2
Extra/Co-Curricular Activities		
Total Hours		17

Additional courses may be added with the consent of the Area of Emphasis administrator.

Under exceptional circumstances, a student may fulfill the study abroad requirement through an alternative method with the consent of the Area of Emphasis administrator.

Writing Requirement. Students must produce a written paper or court document of no less than 25 pages on a topic related to international law. A student may fulfill this requirement through any of the following methods:

1. Qualifying paper in any designated elective course or seminar.
2. Independent Study approved per WVU College of Law catalog and overseen by an Area of Emphasis faculty member.
3. Law Review Note, with approval of the Area of Emphasis administrator and with a faculty member as advisor.
4. A Court Document, *e.g.* Amicus Brief or Memorandum of Law (real or moot) with the approval of the Area of Emphasis administrator and with a faculty member as advisor.

The writing requirement requires input and approval from a faculty member and the Area of Emphasis administrator, even if the writing was completed outside a formal class or independent study arrangement. A student may fulfill the writing requirement through an alternative method with the consent of the Area of Emphasis administrator.

Experiential Learning Requirement. Student must meet the following experiential learning requirement of no less than two (2) credits, with no more than five (5) credits from a clinic counting towards the seventeen (17) credit requirement. A student may fulfill this requirement through any of the following methods:

1. Participation in at least one year of the College of Law's Jessup International Moot Court team (LAW 652)
2. International Organization Externship (full- or part-time)
3. Government Agency Externship (full- or part-time - must be related to an area of international, comparative, or transnational law)
4. Immigration Clinic

Note: Any externship placements for the International Law and Practice Area of Emphasis must comply with the general rules of the externship program.

A student may fulfill this Area of Emphasis requirement through an alternative method with the consent of the Area of Emphasis administrator.

Extra Curricular or Co-Curricular Activity Requirement.

Students must also engage in ten hours of related extracurricular or co-curricular activities, such as active participation in the International Law Students Association, by attending relevant meetings, hearings or speakers, administrative or other active participation in the international law-related events (e.g., symposia).

Foreign Language

Students are strongly encouraged to gain competency in a foreign language in conjunction with pursuing this Area of Emphasis.

LABOR AND EMPLOYMENT LAW AREA OF EMPHASIS

The Labor and Employment Law Area of Emphasis educates the next generation of lawyers in West Virginia and beyond who will work in and shape the fields of labor and employment law by providing an opportunity to learn the applicable laws and regulations in the area, consider policy issues through a written work, and obtain practical skills applicable in the area through an experiential learning requirement.

Course Requirements. In order to satisfy the requirements of this Area of Emphasis, a student must have (1) all required first-year courses; (2) all mandatory core courses; and (3) seventeen (17) total credit hours from mandatory core courses, designated elective courses, and an experiential learning course (described below). Note: No more than five (5) credits of the seventeen (17) credits can come from clinic or an externship.

Required Courses		9
LAW 741	Employment Law	
LAW 763	Employment Discrimination	
LAW 771	Labor Law	
Elective Courses		**5**
LAW 632	Advanced Labor Law	
LAW 662	Mine Safety & Health Law	
LAW 689S	Seminar: Law and Socioeconomic	
LAW 689T	Seminar:Comparative and International Workplace Law	
LAW 701	International Human Rights	
LAW 720	Entertainment Law	
LAW 721	Sports Law	
LAW 723	Immigration Law	
LAW 726	Constitutional Law 2	
LAW 750	Alternative Dispute Resolution	
LAW 760	Workers Compensation Law	
LAW 764	Administrative Law	
LAW 793	ERISA	
Writing		
Experiential Learning		3
Extra/Co-Curricular Activities		
Total Hours		17

Writing Requirement. Students must produce a written paper or court document of no less than 25 pages on a topic related to labor law, employment law, employment discrimination law, benefits law, and/or comparative/international work law. A student may fulfill this requirement through any of the following methods:

1. Qualifying paper in any designated elective course.
2. Independent Study approved per WVU College of Law catalog and overseen by an Area of Emphasis faculty member.
3. Law Review Note, with approval of the Area of Emphasis administrator and with a faculty member as advisor.
4. A Court Document, *e.g.* Amicus Brief or Memorandum of Law (real or moot) with the approval of the Area of Emphasis administrator and with a faculty member as advisor. For example, a student may fulfill this requirement by participating in New York Law School's Wagner Moot Court Competition as part of the Moot Court Team.

Experiential Learning Requirement. Student must meet the following experiential learning requirement of no less than three (3) credits (no more than five (5) credits from participation in a clinic count toward the seventeen (17) credit requirement.) A student may fulfill this requirement through any of the following methods:

1. Externship in a labor/employment practice setting approved by the Area of Emphasis administrator and complying with the general rules and policies governing externships

2. Entrepreneurship Clinic (LAW 650 & LAW 651)
3. Other clinic or simulation course, with approval of the Area of Emphasis administrator

Area of Emphasis students in the Entrepreneurship Clinic or any other clinic approved by the Area of Emphasis administrator shall make every effort to work on labor and employment matters within these clinic placements.

A student may fulfill the experiential learning requirement through an alternative method with the consent of the Area of Emphasis administrator.

Extra Curricular or Co-Curricular Activity Requirement.

Student must engage in ten hours of related extracurricular or co-curricular activities, such as active participation in the Labor Law Society or ADR Society, attending relevant meetings, hearings or speakers, administrative or other active participation in the work-law related events (*e.g.*, moot court, symposia).

PUBLIC INTEREST LAW AREA OF EMPHASIS

The Area of Emphasis in Public Interest Law prepares students to work to advance the common good of the general public using the legal process through the representation of individuals and organizations who might otherwise be unrepresented.

Course Requirements. In order to satisfy the requirements of this Area of Emphasis, a student must have (1) one required course; and (2) seventeen (17) total credit hours from one required course, designated elective courses, and the credits allowed for the experiential learning course (see below).

Required Courses (choose one)		3
LAW 750	Alternative Dispute Resolution	
or LAW 756	Trial Advocacy	
or LAW 788	Interviewing, Counseling, and Negotiation	
Elective Courses		**11**
LAW 604	Natural Resources	
LAW 605	Post-Conviction Remedies	
LAW 609	Child Protection and the Law	
LAW 612	Agriculture & Food Law	
LAW 615	Elder Law	
LAW 625	Nonprofit Organizations	
LAW 629	Advanced Family Law Advocacy	
LAW 640	Parent, Child, and State	
LAW 688K	Seminar in Schools, Race, & Money	
LAW 688J	Seminar in Disability and the Law	
LAW 689F	Seminar: Lawyers and Legislation	
LAW 689I	Seminar: Environmental Justice	
LAW 689K	Seminar: Civil Disobedience	
LAW 689N	Seminar: Refugee and Asylum Law	
LAW 717	Domestic Violence and The Law	
LAW 723	Immigration Law	
LAW 726	Constitutional Law 2	
LAW 759	Civil Rights	
LAW 763	Employment Discrimination	
LAW 769	Family Law	
LAW 771	Labor Law	
LAW 789	Law of Environmental Protection	
LAW 793	Intro to Consumer Law	
Writing Requirement		
Experiential Learning		3
Pro-Bono Requirement		
Total Hours		17

Writing Requirement. Students must produce a written paper document of no less than 25 pages on a topic related to public interest law. A student may fulfill this requirement through any of the following methods:

1. Law Review Note, with approval of the Area of Emphasis administrator and with a faculty member as advisor.
2. Qualifying paper in any elective course listed above.
3. Qualifying paper in a non-designated elective course if the topic involves matters of public interest, with the advance approval of the Area of Emphasis administrator.
4. Independent study approved per the catalog and with the advanced approval of the AOE administrator.
5. Qualifying alternative approved by AOE administrator.

Experiential Learning. Students must meet the following experiential learning requirement of no less than three (3) credits. No more than seven (7) credits from participation in a clinic shall count toward the 17 credit hour requirement for the concentration. A student may fulfill this requirement through any of the following methods:

1. Any West Virginia University College of Law clinic; provided, however, that any student in clinic shall make every effort to work on matters that further the common good using the legal process through the representation of individuals and organizations who might otherwise be unrepresented.
2. Externship approved per the catalog and approved by the Area of Emphasis administrator.

Note: Any externship placements for the Public Interest Law Area of Emphasis must comply with the general rules of the externship program.

Pro-Bono Requirement.

Students must also engage in twenty-five pro-bono hours over the student's three years at the College of Law (which may include, but is not limited to, participation in Public Interest Advocates).

A.6 PART-TIME PROGRAM

Full-time students average just over fifteen (15) hours per semester in order to amass ninety-one (91) credits in six (6) semesters. Students taking significantly fewer hours per semester will take longer to finish their degrees and are considered part-time students at the College of Law. (Note, however University graduate or professional students taking nine hours or more are charged full tuition and fees. Thus, some "part- time" students will still pay the same tuition and fees each semester as their full-time colleagues.)

Part-time students are subject to the same graduation requirements in terms of total credit hours (ninety-one credits), cumulative grade point average (2.30), and specific required courses. Per ABA requirements, part-time students must complete all graduation requirements within seven years from the date of initial enrollment.

Students Who Wish to Begin Law School as Part-Time Students. The Enrollment Management Committee selects first-year part-time students from students already admitted to the Law School. The total size of the entering class is not increased. A student requesting for part-time status must submit a written request to the Enrollment Management Committee on objective indicators of the need to attend on a part-time basis. Students who wish to become part-time students after starting law school but before completing the first-year curriculum must consult with the Associate Dean for Academic Affairs as indicated in this catalog's section on Academic Policies and Procedures. Students who have completed the first-year curriculum (see "First-Year Curriculum (p. 578)" above) may request to become part-time students by consulting the Associate Dean for Academic Affairs of that intention at the beginning of the semester.

First-Year Curriculum. Part-time students must take both semesters of LRRW and Introduction to Legal Research course in their first year of law school. Typically, part- time students take two courses in addition to LRRW/Legal Research in each semester of the first year, then take the rest of the first-year curriculum in their second year of studies. As a general rule, part-time students may not enroll in upper-level courses until they have completed the entire first-year curriculum. The Associate Dean for Academic Affairs may grant exceptions to this rule for good cause.

Scheduling of Classes. Part-time students must consult the Associate Dean for Academic Affairs in scheduling.

Probation and Dismissal. Students entering the part-time program during the first-year curriculum are subject to the probation and dismissal rules applicable to full-time students who have completed the first-year curriculum only when the part-time students have completed the entire first-year curriculum. Part-time students do not receive a class rank until they have completed the entire first-year curriculum. In all other respects, part-time students and full-time students attending more than six semesters are subject to probation and dismissal rules substantially equivalent to those applicable to full-time students.

Degree Requirements

To qualify for the Bachelor of Science in Economics and Doctor of Jurisprudence joint program, you must meet the following criteria:

- Have a 3.0 after your freshman year,
- Have a 3.2 after your sophomore year,
- Have a 3.4 after the first semester of your junior year,
- Take the LSAT in October of your junior year,
- Complete the first three years as outlined in the plan of study, and

- Apply to and be accepted by the Law School. Those who apply by January 15th of their junior year with LSAT scores of 158 or higher and an undergraduate GPA of 3.7 or higher will be admitted to the College of Law. Students with a GPA of 3.4-3.69 and an LSAT less than 158 will have their application considered alongside the general Law School applicant pool.

Curriculum Requirements

ACCT 201	Principles of Accounting	3
ACCT 202	Principles of Accounting	3
CS 101	Intro to Computer Applications	4
ECON 201	Principles of Microeconomics (GEF 4)	3
ECON 202	Principles of Macroeconomics (GEF 8)	3
Select one of the following (GEF 8):		3
ECON 225	Elementary Business and Economics Statistics	
STAT 211	Elementary Statistical Inference	
Select one of the following:		3-6
ENGL 101 & ENGL 102	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research	
ENGL 103	Accelerated Academic Writing	
Select one of the following:		3-8
MATH 124 & MATH 150	Algebra with Applications and Applied Calculus	
MATH 129 & MATH 155	Pre-Calculus Mathematics and Calculus 1	
MATH 150	Applied Calculus	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 155	Calculus 1	
GEF 2A, Science & Technology		3
GEF 5, Human Inquiry & the Past		3
GEF 6, The Arts & Creativity		3
GEF 7, Global Studies & Diversity		3
GEF 8, Focus		3
BCOR 191	First-Year Seminar	1
BCOR 199	Introduction to Business	3
BCOR 299	Business Communication	3
ECON 301	Intermediate Micro-Economic Theory	3
ECON 302	Intermediate Macro-Economic Theory	3
ECON 425	Introductory Econometrics	3
ECON 441	Public Economics	3
ECON 443	Law and Economics	3
ECON 465	Health Economics	3
ECON 482	Applied Economic Research	3
ECON Elective:		3
ECON 463	Applied Regional Economics Research	
ECON 471	Labor Economics	
ECON 473	BEHAVIORAL ECONOMICS	
ECON 481	American Economic History	
ECON 493	Special Topics	
B&E Elective (300 or higher B&E elective towards a minor)		15
LAW 638	Legislation and Regulation	3
LAW 641	Introduction to Legal Research	1
LAW 700	Legal Analysis, Research and Writing 1	2
LAW 703	Contracts 1	4
LAW 705	Criminal Law	3

LAW 706	Civil Procedure: Jurisdiction	2
LAW 707	Property	4
LAW 709	Torts 1	4
LAW 711	Legal Analysis, Research and Writing 2	2
LAW 722	Civil Procedure: Rules	3
LAW 725	Constitutional Law 1	4
Total Hours		121

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
BCOR 191	1	ENGL 101 (GEF 1)	3
BCOR 199	3	ECON 202 (GEF 8)	3
CS 101 (GEF 2A)	4	ACCT 201	3
Select one of the following (GEF 3):	3-4	Select one of the following:	3-4
MATH 124		MATH 150	
MATH 129		MATH 154	
MATH 150		MATH 155	
MATH 153		MATH 156	
MATH 155		GEF (Choose from F2A, F5, F6 or F7)	3
ECON 201 (GEF 4)	3		
GEF (Choose from F2A, F5, F6 or F7)	3		
	17		15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)	3	BCOR 299	3
ACCT 202	3	ECON 302	3
ECON 225 (GEF 8)	3	ECON 425	3
ECON 301	3	ECON 443	3
GEF (Choose from F2A, F5, F6 or F7)	3	ECON 465	3
	15		15

Third Year

Fall	Hours	Spring	Hours
ECON 441	3	ECON 482	3
Business and Economics Elective	3	ECON Elective	3
Business and Economics Elective	3	Business and Economics Elective	3
Business and Economics Elective	3	Business and Economics Elective	3
GEF (Choose from F2A, F5, F6 or F7)	3		
	15		12

Fourth Year

Fall	Hours	Spring	Hours
LAW 641	1	LAW 638	3
LAW 700	2	LAW 706	2
LAW 703	4	LAW 707	4
LAW 705	3	LAW 711	2
LAW 709	4	LAW 725	4
LAW 722	3		
	17		15

Total credit hours: 121

Dual-Degree Programs

B. DUAL-DEGREE PROGRAMS

1. Master of Business Administration (p.   )
2. Master of Public Administration (p.   )
3. J.D./LL.M. in Energy and Sustainable Development Law (p.   )

Students may enroll in an approved joint degree program with another College of the University. At present, there are two such programs: a joint J.D./ M.B.A. (Masters of Business Administration) and a joint J.D./M.P.A. (Master of Public Administration).

B.1 MASTER OF BUSINESS ADMINISTRATION (M.B.A.)

A J.D./M.B.A. student may earn law school credit pursuant to the dual degree requirements approved by the faculties of the College of Law and the College of Business & Economics and provided to students admitted to that program. (See below for program requirements.) J.D./M.B.A. students receive twelve credits toward the J.D. degree if the M.B.A. degree is awarded concurrently with the J.D. degree, which means that at least 79 J.D. credit hours are required. Grades earned in business school classes do not affect the cumulative law school GPA. Professor Jena Martin is the College of Law contact person for the J.D./M.B.A. program.

*The College of Law's perspective requirement is met by completing the dual-degree. Also, the capstone requirement is met by completing Business Transactions Drafting, which is required in the J.D./M.B.A. program.

**Students may substitute up to two (2) of the courses marked with a double-asterisk with approval from the J.D./M.B.A. advisor.

***Students are strongly encouraged (but not required) to take the Entrepreneurship Clinic (14 hours) as part of their J.D./M.B.A. electives. Admission into the clinic is subject to the standard admission procedures for Clinics.

B.2 MASTER OF PUBLIC ADMINISTRATION (M.P.A.)

A J.D./M.P.A. student may earn law school credit for one M.P.A. course (up to four hours) if that course is taken after the student has entered the College of Law and been admitted to the joint degree program. In addition, if the M.P.A. degree is awarded before or concurrently with the J.D. degree, an M.P.A. student may receive an additional two hours of law school credit for courses included in the M.P.A. degree that the student takes while enrolled in the College of Law. Grades earned in Public Administration do not affect the cumulative law school GPA. Professor James Van Nostrand is the College of Law contact person for the J.D./M.P.A. program.

B.3 J.D./LL.M IN ENERGY AND SUSTAINABLE DEVELOPMENT LAW

College of Law students may earn credit toward the College of Law Energy and Sustainable Development L.L.M. while finalizing their J.D. degree. College of Law students can apply for the program at the end of their 2L year (approximately May 1). Applications must be received by June 15.

Current J.D./LL.M. students must complete their J.D. with an Area of Emphasis on Energy and Sustainable Development Law (http://www.law.wvu.edu/ academics/academic-programs/energy-sustainable-development-law-concentration/). Following completion and conferral of the J.D. degree and after completing the requirements for the Energy and Sustainable Development Area of Emphasis, students must complete an additional 14 credits of coursework that qualify for the LL.M. in Energy and Sustainable Development Law (http://www.law.wvu.edu/energy-llm/), including the LL.M. Seminar and LL.M. Capstone. Students seeking this J.D./LL.M. shall endeavor to obtain a clinical opportunity in an appropriate clinic or a relevant externship opportunity, and if unable to do so, shall enroll in such other experiential learning opportunity (including Business Transactions Drafting and Trial Advocacy), which is necessary to fulfill the requirements of the Energy and Sustainable Development Area of Emphasis.

Students from other law schools may apply for the program starting on February 1 each year. Applications to the J.D./LL.M program must be received by June 15.

In order to be admitted to the J.D./LL.M. program, at student must apply to attend WVU Law as a visiting student for their entire 3L year. Visiting students from other law schools should state the intent to pursue the J.D./LL.M. in Energy & Sustainable Development Law as the primary reason for seeking admission as a visiting student. A visiting student must include in his or her application to attend WVU Law a letter from the applicant's Dean (or equivalent) authorizing the student's attendance at WVU Law and stating that the home school will agree to transfer credits earned at WVU Law.

Visiting students must complete the coursework for the Energy & Sustainable Development Law Area of Emphasis in their 3L year while attending WVU Law. Some courses taken at a student's home institution may be approved to satisfy some area of emphasis requirements. Visiting students must take a minimum of nine credit hours in qualifying courses (related to the area of emphasis) while visiting at WVU Law, in addition to the required LL.M. courses.

In addition to the coursework required, students will be required to complete all their LL.M. Degree requirements, including the research paper or field work requirement and the portfolio of work. Professor Joshua Fershee is the College of Law advisor and contact person for the J.D./LL.M. program.

Energy Law and Sustainable Development

Degree Offered

- Energy Law and Sustainable Development, LL.M.

WVU College of Law is committed to playing a prominent role in shaping the energy, environmental, and sustainable development policies of the future for the state, the nation, and the world.

Energy is the foundation of our nation's future, both economically and environmentally. West Virginia is at the center of energy production for the country. There is no better place to learn about the intersecting laws and policies governing all of the country's energy resources than at WVU College of Law.

Although many law schools provide opportunities to learn energy or environmental law, WVU College of Law is committed to providing students opportunities to learn the full range of energy, environmental, and sustainable development law through its Center for Energy and Sustainable Development Law (http://energy.law.wvu.edu/) and through its other resources in the area.

The College of Law provides a broad and deep offering of courses, experiential learning opportunities, and practical training for every part of the energy sector. Our broad spectrum of courses allows our students to prepare to be lawyers and leaders serving energy companies, investors, utilities, manufacturing companies, lawmakers, policymakers, regulators, land use professionals, and environmental organizations.

Program Objectives

The College of Law's objectives in establishing an LL.M. in Energy Law and Sustainable Development are as follows:

- To educate the next generation of lawyers in the state and beyond who will work in and shape the field of energy and sustainable development;
- To utilize WVU's expertise and reputation in the areas of natural resources, energy, and sustainable development and further establish the College of Law as a leader in law and public policy in those fields; and
- To build upon the WVU 2020 Strategic Plan for the Future, which emphasizes the unique role and expertise of West Virginia and the university in the areas of natural resources, energy, and sustainable development.

Admission Requirements

WVU Law's LL.M. in Energy Law and Sustainable Development will be a source for a high-quality professional legal education and a home for thought leaders in the areas of energy and sustainable development.

Minimum admission requirements for the program are as follows:

- A J.D. from an ABA-accredited school (or foreign equivalent, as determined by the College of Law in accordance with ABA guidelines).
- A J.D. (or equivalent) grade point average of at least a 3.0 (on a 4.0 scale) or other demonstrated indicia of likelihood of success.
- A demonstrated interest in or commitment to the fields of energy and/or sustainable development.

Major Code: 7752

Curriculum

The College of Law intends that its graduates excel academically. Our goal is for our graduates to function on a high level as professionals in the field and to add to the national conversation on energy and sustainable development policy on a thoughtful and practical level.

This goal is reflected in our rigorous curriculum for the LL.M. in Energy and Sustainable Development Law.

Required Courses

LAW 630	Energy Law	3
LAW 764	Administrative Law	3
LAW 789	Law of Environmental Protection	3
LAW 670	LLM Seminar	3
LAW 671	LL.M. Capstone (*)	4
Electives		10
Total Hours		26

*   Minimum 1 credit required, may be combined with another course to reach 4 credits total

Electives		**10**
LAW 604	Natural Resources	3
LAW 612	Agriculture & Food Law	3
LAW 613	International Environmental Law	3
LAW 627	Land Use/Sustainable Development Clinic 1	7
LAW 628	Land Use/Sustainable Development Clinic 2	7
LAW 634	Energy Reg, Markets and Environ	3
LAW 635	Land Use and Resilience Law	3
LAW 644	Energy Siting & Permitting	3
LAW 645	Water Law	3
LAW 647	Nuclear Law & Policy	3
LAW 648	Energy Business/Law & Strategy	3
LAW 658	Science & Technology of Energy	2-3
LAW 659	Administrative Energy Law and Practice	2
LAW 660	Law of Coal	2-3
LAW 662	Mine Safety & Health Law	3
LAW 688E	Seminar in Human Rights & the Environment	2
LAW 688F	Seminar in Hydraulic Fracturing	2-3
LAW 689W	Seminar:Issues in Energy Law	2
LAW 766	Coal/Oil and Gas	3
LAW 693	Environmental Litigation	3
LAW 693	Environmental Law Nat Res & Conservation	3
LAW 793	Environmental Law Pollution	3
LAW 793	Trends in Env & Energy Law	2

Related Courses		
LAW 633	International Business Transactions	3
LAW 689X	Seminar: National Security Law	2
LAW 719	Income Taxation 1	3
LAW 729	Business Organizations	4
LAW 734	Intellectual Property	3
LAW 643	Taxation of Business Entities	4
LAW 768	International Law	3
LAW 771	Labor Law	3
LAW 774	Local Government	2
LAW 778	Antitrust	3
LAW 779	Business Transactions Drafting	4
LAW 784	Securities	3

Class Work. One-year course of study requiring 26 credit hours, including a final paper or fieldwork project. Students will have the added benefit of seeking approval to include up to 6 credits in their course of study from relevant WVU graduate-level programs, such as course offerings in business, ecology, engineering, public policy, economics, and natural resources.

Energy Law Survey. This introductory energy law course provides an overview of the law and regulatory policies that govern and affect the energy industry. The course includes a review of the various traditional and renewable energy sources, mineral rights, economic regulation of the energy industry, and climate change and environmental concerns.

Environmental Protection Law. This survey course introduces students to energy, environment, and sustainability law and policy issues. Students will examine the development of environmental law from its common law tort roots through the birth of the "environmental movement" and the enactment of federal environmental regulatory laws such as the Clean Water Act, the Clean Air Act, and the Surface Coal Mining and Reclamation Act. The overarching goals of the course are to expose students to "real world" environmental issues they may face in practice and the principles, doctrine, and process lawyers use while representing clients in environmental and natural resource matters.

Administrative Law. A basic understanding of administrative law is nearly essential for all attorneys. This is especially true for those practicing in the areas of energy, environmental, and sustainable development law. This course covers the creation and operation of administrative agencies, common procedural practices and requirements of administrative procedure acts, judicial control of administrative agencies, and constitutional issues related to the area.

LL.M. Seminar. The program will require a 3-credit LL.M. Seminar that covers a wide range of energy and sustainable development law and policy and explores diverse advanced topics and perspectives. The seminar will feature guest speakers who will present their scholarship and other works. Guests will include, for example, WVU Law faculty, local and national scholars and practitioners, government officials, regulators, and other leaders in the fields. Students will be required to engage in rigorous preparation for each seminar discussion and will be expected to develop a writing project that will be presented at the end of the course.

LL.M. Capstone (Research Paper or Fieldwork Project). The College of Law expects LL.M. graduates to bring their in-depth knowledge in the areas of energy and sustainable development into the world in a tangible way. The 4-credit Capstone (Research Paper or Fieldwork Project) requirement lays the groundwork for that expectation. For those students looking to focus on influencing energy and sustainable development policy, the option to write a research paper on a significant issue in law and energy or sustainable development policy would form the basis for further work in the field. The paper can be related to an existing course (e.g., a 3-credit course with an additional credit granted for additional required research) or a student-specific study/thesis option with the approval of the program director.

Those students intending to enter private practice or work in industry may prefer to experience real world problems with real world clients. Whether through existing experiential learning opportunities available through the College of Law or through specific projects developed through student interest or via significant industry contacts, a student will be able to see energy and sustainability law in actual practice. Each project will require approval of the program director before it is started and upon completion.

Specializations. Given the nature of the degree, students will earn their LL.M. in Energy and Sustainable Development Law without further formal specialization. Beyond the course requirements, however, students will have the flexibility in elective courses to focus their studies more specifically on courses in energy law, land use planning, and environmental law, among other options.

Portfolio of Work. All LL.M. students will be required to develop a portfolio of work, consisting of at least four written pieces that are representative of the student's experiences in the course of the program. These pieces could include, but are not limited to, scholarly papers, industry white papers, significant legal motions, briefs or memoranda, substantial transactions documents, policy analyses, or draft legislation or regulations.

Graduation Requirements

The graduation requirements for the LL.M. in Energy and Sustainable Development Law are as follows:

- A minimum GPA of 2.5 (on a 4.0 scale).
- No less than the equivalent of a "C" (2.0) in any class counted toward the degree.
- Successful completion of the required 26 credits (including the LL.M. Seminar and the LL.M. Capstone).
- Completion of the 3-credit LL.M. Seminar, which must be completed in residence at the College of Law's Morgantown campus unless otherwise approved by the program director.
- Successful completion of the 4-credit-hour Capstone (writing or field-work project) requirement.
- Development of a portfolio of work (consisting of at least four written pieces) that is representative of the student's experiences in the course of the program.

Forensic Justice

Degree Offered

- Forensic Science, LL.M.

Recent developments have demonstrated that a solid grounding in the scientific method and forensic evidence is critical for any attorney, especially for those practicing criminal law. These developments include more than 300 DNA-based exonerations that have taken place since the early 1990's, the uncovering of numerous scandals in forensic laboratories across the country, and the recommendations put forth by the National Academy of Sciences in a 2009 report.

The WVU College of Law, in partnership with the WVU Department of Forensic and Investigative Science, is a pioneer in the criminal justice field by offering the country's only graduate law degree program in Forensic Justice.

Many American law schools offer upper-level courses in areas such as expert testimony and forensic evidence, but LL.M. programs in law and forensic science remain virtually nonexistent. Currently, no other ABA-approved U.S. law school offers such a degree.

Because WVU has long been a leader in the field of forensic sciences and is also home to the highly regarded Department of Forensic and Investigative Sciences, WVU Law is a natural location for the country's first LL.M. in Forensic Justice.

The LL.M. curriculum makes use of the expertise present at the University and allow LL.M. candidates the opportunity to combine breadth-that is, exposure to a wide range of forensic methods- with depth- the opportunity to conduct original, independent research in a narrower area of interest.

Program Objectives

The Forensic Justice LL.M. is flexible enough to allow experienced practitioners to improve and expand their skills, allowing them to better serve their clients and communities, while also offering new attorneys an opportunity to develop skills that will make them more marketable in their chosen profession, whether that be, for example, as a state or federal prosecutor, a public defender, or an attorney in private practice focusing on criminal defense.

The objectives of the LL.M. in Forensic Justice are to:

- Educate current and future West Virginia attorneys, and those of our region and nation, whose work will help shape the field of criminal law, particularly the areas of prosecution and criminal defense;
- Build on WVU's reputation as a leader in forensic and investigative sciences; and
- Pioneer a much-needed area of advanced academic training.

Admission Requirements

Minimum admission requirements for the LL.M. in Forensic Justice are as follows:

- A J.D. from an ABA (American Bar Association) accredited school (or foreign equivalent, as determined by WVU Law in accordance with ABA guidelines).
- A grade point average of at least a 3.0 (on a 4.0 scale) or other demonstrated indicia of likelihood of success.
- A demonstrated interest in or commitment to the fields of science, forensic evidence, and law.

Applicants may include newly graduated J.D. students, professionals (prosecutors, defense attorneys, judges) returning for study after years of practice, or qualified international students.

Curriculum

The program shall consist of a one-year course of study requiring 30 credit hours, which will be evenly split between courses offered by the COL and courses offered by the Department of Forensic and Investigative Sciences ("FIS"). Candidates will also be required to complete a substantial piece of written work, final paper, or field-work project. Students in the program may also have the option to include up to 4 credits in their course of study from relevant WVU graduate-level programs, such as statistics, biology, chemistry, physics, and mathematics, provided that these students meet the per-requisite course requirements.

Required Courses

Minimum GPA of 2.5 is required.

Minimum grade of C- is required.		
FIS 480	Forensic Quality Assurance	2
FIS 501	Foundations of Criminalistics	3
FIS 514	Forensic Impression & Trace Evidence	3
FIS 620	Forensic Casework Practicum	3
LAW 661	Forensic and Expert Evidence	3
LAW 670	LLM Seminar	4
LAW 671	LL.M. Capstone	4
LAW 688D	Seminar in Science and the Law	2
LAW 712	Analytical Methods for Lawyers	3
FIS 505	Biological and Chemical Evidence	3
Total Hours		30

LL.M. Seminar. The program will require a 3-credit LL.M. Seminar that covers a wide range of topics relating to the role that forensic evidence plays in the criminal justice system, the strengths and weaknesses of various forensic disciplines and other relevant topics. The seminar may feature guest speakers who will present their scholarship or will lecture on current issues in forensic science. Students will be required to engage in rigorous preparation for each seminar discussion and will be expected to develop a writing project that will be presented at the end of the course.

LL.M. Capstone (Research paper or field-work project). The College of Law intends its LL.M. graduates to bring their in-depth understanding of the areas of law and forensic science into their practice in a tangible way. To that end, the 4-credit research paper or field-work project is meant to lay the groundwork for future professional work. For students hoping to contribute to the growing body of legal scholarship focusing on the intersection (and sometimes tension) between law and forensics, the option to write a research paper on an important issue in the field might form the basis for a later

journal article. If the paper option is chosen, the paper can be related to an existing course (e.g. a 3-credit course with an additional credit granted for additional required research) or a student-created independent study option. That is, in addition to other program requirements, students must engage in an intensive 4-credit research experience that is coordinated with the approval of the Program Director.

Alternatively, those students wishing to enter private practice or the public sector may wish to work on real world problems. In this instance, the written work product might take the form of an appellate brief, a reply brief, a pre-trial motion relating to expert witness testimony, or other similar pleading. Opportunities to complete such projects may be available through existing experiential learning placements available at the COL or through specific projects developed through student interest. Each project will require approval of the Program Director before it is started and upon completion.

Specializations. Given the nature of the degree, students will earn their LL.M. in Forensic Justice without further formal specialization.

Prerequisites. It is expected that the majority of LL.M. candidates will already have taken both Evidence and Criminal Procedure as J.D. students. In the case of practitioners, prerequisite will be will waived if not met. Prerequisites may also be waived at the discretion of the Program Director after an individual consultation with the student.

Continuing WVU Students. The College of Law anticipates that some of the students in the program may be recent graduates of, or visitors at, the WVU College of Law, and therefore may have already taken some of the classes offered by the program. If such a student has already taken a significant number of the courses listed in the program curriculum as part of the J.D. course of study at the College of Law such that the student will have difficulty taking 30 credits of course work without repetition, then the program director may authorize such student to take other related courses that are not on the initial program curriculum listing. In all events, however, a student shall be required to meet the 30-credit hour requirement.

International Programs. The College of Law already offers a number of international programs for credit, including trips to Geneva, Mexico, and Brazil. The College of Law could approve participation in any of these international programs for the LL.M. credit, with approval of the program director, as long as there is a demonstrable link between participation in the international program and the student's course of study.

Portfolio of Work. All LL.M. students will be required to develop a portfolio of work, consisting of at least four written pieces that are representative of the student's experiences in the course of the program. These pieces may include, but are not limited to, scholarly articles, legal motions, briefs, or memoranda, policy analyses, or draft legislation.

Graduation Requirements

The graduation requirements for the LL.M. in Forensic Justice are as follows:

- A minimum grade point average of 2.5 (on a 4.0 scale) upon graduation
- No less than the equivalent of a C (2.0) in any class counted toward the degree,
- Successful completion of the required 30 credits (including the LL.M. Seminar and the writing or field-work project),
- Completion of the 3-credit LL.M. Seminar, which must be completed in residence at the COL's Morgantown campus unless otherwise approved by the Program Director,
- Successful completion of the 4-credit hour writing or field-work project requirement, and,
- Development of a portfolio of work (consisting of at least four written pieces) that is representative of the student's experience in the course of the Program.

White Collar Forensic Justice

Degree Offered:

- White Collar Forensic Justice, LL.M.

Curriculum

The program shall consist of a one-year course of study requiring 30 credit hours, which will be evenly split between courses offered by the College of Law and courses offered by the Department of Accounting at the WVU College of Business & Economics. Candidates will also be required to complete a substantial piece of written work, final paper, or field-work project. Students will be required to participate in two on-campus residencies.

Both a minimum GPA of 2.5 and a minimum grade of C are required to graduate from the program.

Required Courses

Both a minimum GPA of 2.5 and a minimum grade of C are required to graduate from the program.		
ACCT 580	Accounting for Forensic and Fraud Investigators	3
or ACCT 585	Forensic and Fraud Examination Advanced Analytical Techniques	
ACCT 581	Fraud Investigation	3
ACCT 582	Fraud Data Analysis	3

ACCT 583	Fraud: Criminology/Legal Issues	3
ACCT 584	Advanced Fraud Investigation	3
LAW 670	LLM Seminar	3
LAW 671	LL.M. Capstone	2
LAW 661	Forensic and Expert Evidence	4
LAW 712	Analytical Methods for Lawyers	3
LAW 793	Special Topics (Fraud and Fraud Examination)	3
Total Hours		30

LL.M. Seminar and Capstone. The LL.M. Seminar (3 credits in the fall) covers a wide range of topics relating to the role that forensic evidence plays in the criminal justice system and civil litigation, the strengths and weaknesses of various forensic disciplines and other relevant topics. The seminar may feature guest speakers who will present their scholarship or will lecture on current issues in forensic science. Students will be required to engage in rigorous preparation for each seminar discussion and will be expected to develop a writing project that will be presented at the end of the course. In addition, the LL.M. Capstone course (LAW 671) is a two credit course that will translate the issues raised in the LL.M. Seminar into a substantial focused policy project, a field work project, or a substantial research project in the final summer of the program.

ACCT 580/ACCT585. Either course can meet the credit hour requirement. A student will select between these courses based upon the amount of experience the student brings into the program with the approval of the Program Director.

Specializations. Given the nature of the degree, students will earn their LL.M. in White Collar Forensic Justice without further formal specialization.

Prerequisites. It is expected that the majority of LL.M. candidates will already have taken both Evidence and Criminal Procedure as J.D. students.   In the case of practitioners, this prerequisite will be waived if not met. One or both of these prerequisites may also be waived at the discretion of the program director after an individual consultation with the student.

Continuing WVU Students. The College of Law anticipates that some of the students in the program may be recent graduates of, or visitors at, the WVU College of Law, and therefore may have already taken some of the classes offered by the program. If such a student has already taken a significant number of the courses listed in the program curriculum as part of the J.D. course of study at the College of Law such that the student will have difficulty taking 30 credits of course work without repetition, then the program director may authorize such student to take other related courses that are not on the initial program curriculum listing. In all events, however, a student shall be required to meet the 30 credit hour requirement.

International Programs. The College of Law already offers a number of international programs for credit, including trips to Geneva, Mexico, and Brazil. The College of Law could approve participation in any of these international programs for the LL.M. credit, with approval of the program director, as long as there is a demonstrable link between participation in the international program and the student's course of study.

Portfolio of Work. All LL.M. students will be required to develop a portfolio of work, consisting of at least four written pieces that are representative of the student's experiences in the course of the program. These pieces may include, but are not limited to, shorter scholarly articles, legal motions, briefs, or memoranda, policy analyses, or draft legislation.

GRADUATION REQUIREMENTS

The graduation requirements for the LL.M. in Forensic Justice are as follows:

- A minimum grade point average of 2.5 (on a 4.0 scale) upon graduation
- No less than the equivalent of a C (2.0) in any class counted toward the degree,
- Successful completion of the required 30 credits (including the LL.M. Seminar and LL.M. Capstone, which includes a substantial project),
- Development of a portfolio of work (consisting of at least four written pieces) that is representative of the student's experience in the course of the Program.

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5. Auditing
6. Withdrawal from the Program
7. Independent Study
8. Earning Law School Credit Outside of the Law School

9. Missing Class Due to Illness

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2. Grades

3. College of Law Grading Policy

4. Passing Grades and Graduation Credit

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C. ACADEMIC STANDING

1. Academic Difficulty

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D. HONORS

1. Class Rank

2. Order of the Coif

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4. Patrick Duffy Koontz Award

E. GRADUATION

1. DegreeWorks

2. Hours to Graduate

3. College of Law Graduation/Hooding Website

A. ACADEMIC POLICIES

A.1 ACADEMIC CALENDAR

The College of Law has its own academic calendar, which differs from the general West Virginia University academic calendar. For example, the College of Law's examination period extends over a two-week period, instead of the standard one week. Law students should refer only to the College of Law Academic Calendar, which can be accessed from the College of Law website (http://www.law.wvu.edu/).

A.2 SCHEDULING

The Associate Dean for Academic Affairs completes the master course schedule. The College of Law assigns first-year students to specific sections of their required courses. The students then register for these courses on the STAR System. Second- and third-year students make their own schedules through WVU's STAR System.

A.3 MAXIMUM CREDITS PER SEMESTER

ABA Accreditation Standard 311(c) states that law schools may not permit a student to be enrolled at one time in courses totaling more than twenty percent of the total hours required for graduation. This means that the maximum number of law school credit hours a student may take during a semester at the WVU College of Law is eighteen (*i.e.*, 20% of ninety-one is 18.2). There is only one exception to the eighteen-hour per semester cap, students who are in joint-degree programs.

A.4 SUMMER CLASSES

Students may earn credits for summer class offered only at the West Virginia University College of Law, other ABA-accredited law schools, or their ABA-approved study abroad programs. Students who are on academic probation may earn summer class credits only with the permission of the Academic Standards Committee. The College of Law will accept transfer credits only for courses where the student earned a grade of C or better. Students may transfer credits for pass/fail courses only with the advance approval of the Associate Dean for Academic Affairs.

A.5 AUDITING

A law student may audit a College of Law course (without receiving academic credit) with the permission of the professor teaching the course. The student and professor should reach an agreement about what the student must do to audit the course successfully. Typically, professors require class attendance, preparation, and participation, but individual professors are free to ask auditors to do more if they wish. Once a student has obtained a professor's permission to audit a course, the student should register the course in STAR and then notify the University Registrar's Office, who will update the 'Audit' status in STAR. An email from the professor giving permission to register for the course as an audit is required. A class may not be audited if it has reached its enrollment capacity.

A.6 WITHDRAWAL FROM THE PROGRAM

There are three types of withdrawals that are governed by this rule: (1) partial withdrawal from some part of a student's course work; (2) in-semester withdrawal from all College of Law courses in which a student is registered; and (3) between-semester withdrawal after the completion of one semester and before the start of the next semester. The faculty and staff of the College of Law are available and willing to help resolve any difficulties that may be hindering a student's legal studies. Any student wishing to withdraw from school must see the Associate Dean for Academic Affairs. Any student considering withdrawing from school must see the Associate Dean for Academic Affairs in order to withdraw according to guidelines set by the College of Law and by the University. In addition, students considering withdrawal should consider the impact the withdrawal will have on current and future financial aid awards and scholarships. Please note that the deadlines described below are for fall and spring courses. Summer courses are often shorter in length, and may have very short deadlines (*i.e.*, a couple of days) for dropping without the withdrawal being recorded on the student's official transcript.

TYPE 1 - PARTIAL WITHDRAWAL (*I.E.*, DROPPING SOME, BUT NOT ALL, COURSES FOR A SEMESTER):

Reduction in the First Year. Because a student must complete the first-year curriculum before the student may take upper-division courses, full-time students are not permitted to reduce the course load in the first year by dropping courses except with the permission of the Associate Dean for Academic Affairs, which will only be granted in extraordinary circumstances. By faculty resolution, no student shall be allowed to drop the required first-year course in Legal Reasoning, Research, and Writing.

Dropping Courses After the First Year -- During First Week of Class. During the first week of the semester, upper-level students may drop any course without having a W ("withdrew") placed on their transcripts. (See the College of Law Academic Calendar for the specific date each

semester.) If the dropped course brings a student's course load below nine hours, the student may be eligible for a reduction in tuition and fees and should consider the impact such withdrawal may have on financial aid and scholarships.

Courses Dropped Before the "Last Day to Drop" Deadline. Until the "last day to drop a course" on the law school's academic calendar, upper-level students are free to drop most courses by simply logging into STAR and dropping. The exceptions to this policy are clinical courses. Slots in such courses are limited, and the student who drops them after the first week has wasted an opportunity sought by others. Students may drop these courses only with the permission of the instructor and the Associate Dean for Academic Affairs, which permission will only be granted in extraordinary circumstances. The grade for a course dropped during this period shall be a "W." Please note that under university policy (http://studentaccounts.wvu.edu/refunds/reduction_schedule/), students who drop some but not all of their courses during this period receive no refund of tuition and fees.

Courses Dropped after the University Deadline. After the University's last date for withdrawal from a course (see the Academic Calendar), no student may withdraw from a course for any reason. Students who do not complete course requirements will receive an F for the course. Specifically, students denied permission to sit for a final because of excessive absences will receive an F if the last date for withdrawal has passed. This is a university rule, and there are no exceptions.

TYPE 2 - IN-SEMESTER WITHDRAWAL FROM ALL CLASSES:

Withdrawal Prior to University Deadline. During the semester, a student may withdraw totally from the College of Law by obtaining permission from the Associate Dean for Academic Affairs. Any student withdrawing from the College of Law during this period receives a grade of "W" in all courses dropped pursuant to this withdrawal. Students should consider the impact such withdrawal may have on financial aid and scholarships. See website (http://studentaccounts.wvu.edu/refunds/reduction_schedule/).

Withdrawal After University Deadline. After the last date of withdrawal established by the University Registrar's Office, a student may withdraw totally from the West Virginia University College of Law by obtaining permission from the Academic Standards Committee. The Committee shall grant permission upon a showing by the student that continuation in school will create a severe hardship on the student because of some substantial physical, emotional, or family problem. If permission is granted, the student receives a grade of "W" in all courses dropped; if permission is denied, then the student remains responsible for his or her performance in all courses and will be graded accordingly. The last day to withdraw from all classes is marked on the College of Law Academic Calendar. Students should consider the impact such withdrawal may have on financial aid and scholarships.

TYPE 3 - BETWEEN-SEMESTER WITHDRAWAL:

After the end of a semester and prior to the start of the next semester, a student may withdraw from the College of Law. In all such cases, the College of Law shall advise the student of its requirement that studies must be completed within seven years from the date on which the studies began. Students should consider the impact such withdrawal may have on financial aid and scholarships.

RESUMPTION OF STUDIES:

First Semester, First Year. A student who withdraws from the College of Law before completing the first semester of the first year must, except as herein provided, be readmitted by applying for an initial admission to the College of Law. A student who withdraws during the first semester may petition the Dean at the time of such withdrawal for permission to be readmitted at the next regular fall semester of the College of Law. If the Dean determines that such withdrawal is for causes beyond the control of the student, the Dean will verify this fact in writing at the time of withdrawal and grant such permission. Permission to be readmitted to the College of Law applies only for admission for the beginning of the next academic year. A student receiving an adverse decision by the Dean on granting this privilege may appeal to the Faculty.

Other Students. Any student who withdraws voluntarily after the first semester of study and wishes to resume his or her studies must petition the Academic Standards Committee to be readmitted to the College of Law. The Committee may readmit the petitioning student subject to conditions of the Committee's choosing, or it may deny the petition for readmission, thus leaving the petitioner with the option of seeking admission to the College of Law through the regular admissions process. Students who withdraw from law school and then successfully reapply through the regular admissions process start their legal educations from the beginning alongside other members of their entering class; *i.e.,* they begin with no credit hours and no law school GPA. Students who are readmitted through petition to the Academic Standards Committee retain credit hours and grades earned prior to their voluntary withdrawal from the College of Law. In deciding whether to grant a petition for readmission, the Committee considers the length of the interruption of studies, the causes for the interruption of studies, the intervening activities of the student and how they relate to the intellectual activities of a law student, changes in curriculum and the teaching program of the College of Law, and any other factors deemed relevant. The Academic Standards Committee may require a readmitted student to repeat, without credit, work previously done, or may require the student to audit certain courses. Any student who is readmitted may have the student's overall academic program adjusted to meet the requirements at the time of readmission. Resumption of studies is permitted only at the beginning of a semester. A first-year student whose last complete semester was a fall semester is permitted to return only at the beginning of a spring semester.

A.7 INDEPENDENT STUDY

A student may earn up to two hours of credit for a suitable research project completed under the supervision of a full-time faculty member. A student in an independent study must produce an academic research paper that would be acceptable in a research seminar that involves an amount of research and writing commensurate with the credit hours awarded. For example, a student seeking two hours of independent study credit would be expected

to produce a research paper at least twenty-five pages in length, *i.e.*, the same length required for a two-credit research seminar. Students wishing to pursue an independent study should draft a plan for the independent study that would specify the proposed subject for the study, a research and reading agenda, and a paper topic. A second faculty reviewer must approve the grade given for an independent study, who shall be listed in the plan. The student should obtain approval of this plan from the faculty supervisor. The student should then forward the approved plan to the Chair of the Academic Standards Committee, which must approve the project. The Associate Dean for Academic Affairs has the forms to be submitted to the Academic Standards Committee. Independent study does not satisfy the seminar or perspective requirements. Independent study courses are offered only during the fall and spring semesters and are not available during the summer.

A.8 EARNING LAW SCHOOL CREDIT OUTSIDE THE LAW SCHOOL

Individual Courses in Other WVU Colleges. Students who do not receive credit toward the J.D. for completion of a joint degree program may receive law school credit for graduate level courses in another college at the University; however, no student may receive more than a total of four credits from all classes taken under this rule. The student must obtain prior approval from the Associate Dean for Academic Affairs in order to enroll in classes outside of the College of Law. Grades earned in other colleges do not affect the student's law school GPA. When possible, students should choose the pass/fail option when registering to take courses in other colleges so that grades for these courses are not included in the cumulative GPA on the student's professional school transcript. Cross-listed courses (*i.e.*, courses that have two course numbers, one from the College of Law and one from another college) will be treated as a law course only if the student registers under the Law course number.

Law students may also register for courses in other colleges at the University (*e.g.*, physical education courses) that would not qualify for law school credit. Students do not need permission to take non-law courses for personal enrichment, but should notify the Associate Dean for Academic Affairs that they are doing so.

Study at Another School - Visiting. A student in good academic standing may take up to thirty credits toward graduation at another ABA-accredited law school. Upon completion at that law school of all the requirements necessary for the J.D. from the College of Law, the College of Law will award the J.D. degree. Such students require advance approval of their curriculum by the Associate Dean for Academic Affairs. Only grades of C or better will be transferred to the College of Law. Students may transfer credits for pass/fail courses only with the advance approval of the Associate Dean. Grades earned at other law schools will not be included in the calculation of the student's cumulative law school GPA. Students who take J.D.-required courses for credit at other law schools are not eligible for election to Order of the Coif at the College of Law.

Study at a Foreign Law School - Visiting. The College of Law, in cooperation with the WVU Office of International Programs, permits individual students to take courses toward their law degree at foreign law schools. Students wishing to study at a foreign law school must submit an application to the Associate Dean for Academic Affairs, who must review the application for compliance with the "Criteria for Student Study at a Foreign Institution" promulgated by the American Bar Association. Once approved by the Associate Dean, the application must also be approved by the Office of International Programs. Students seeking such credit must establish an educational purpose that both is consistent with the aims of the College of Law and can be met only through the proposed foreign study. Examples could include students seeking proficiency in the legal vocabulary of a foreign country, students seeking international credentials to support their practice of law, or students interested in the study of comparative legal systems. Students must have completed their first year in law school prior to application and can take only one semester under such a foreign program.

A.9 ATTENDANCE AND ILLNESS

ABA Standard 308(a) states that "A law school shall adopt, publish, and adhere to sound academic standards, including those for regular class attendance, good standing, academic integrity, graduation, and dismissal."

If you are ill and you must miss class, call or e-mail the professor whose class you will miss, unless the professor has another specific policy about absenteeism. If the illness is extended, contact the Associate Dean for Academic Affairs.

If you are struggling with physical or stress-related problems, please see someone immediately. Students can go to the Student Health Service center for a $10-per-visit co-payment for in-office treatments (such as flu shots, cold treatments, etc.). Student Health Services is located in the basement of the Robert C. Byrd Health Sciences Center. For more information, see the "Health Services" subsection under the University Services section in this handbook, see the Student Health Service website (http://well.wvu.edu/), or call 304-293-9355.

If you are experiencing family or school stress, the Assistant Dean for Student Life is always available to help you find the best solution.

A.10 STUDY OUTSIDE THE CLASSROOM

The American Bar Association prohibits a student from taking more than a total of twenty-six course hours in the following types of classes: externships, co-curricular activities (such as Law Review, Family Law Quarterly, Moot Court, Lugar Trial Association, and Jessup International Moot Court), independent study, courses in other graduate departments, summer study abroad programs, and distance education programs.

A.11 DISTANCE EDUCATION

Standard 306(a) states that a distance education course is : "a...course...in which students are separated from the faculty member or each other for more than one-third of the instruction and the instruction involves the use of technology to support regular and substantive interaction among students and between the students and the faculty member, either synchronously or asynchronously."

No student may take more than fifteen credits during his/her law school career in classes taught through distance education as defined by Standard 306. No student may take any distance education course until that student has completed at least twenty-eight credits in law school. Students should be aware that under ABA standards, the status of "asynchronous" courses *(i.e.*, "online" or "web" courses) is uncertain. The College of Law sometimes offers a small number of web-based courses, but constantly monitors such courses to maintain educational quality and does not guarantee that any will be offered. Students should also be aware that the New York Bar ruled in 2012 that it will not count asynchronous distance education hours toward the eighty-three law school credit hours students must earn to become members of the New York Bar. (Because WVU requires ninety-one hours for graduation, students who have taken a web course during law school can still become members of the New York bar because they have, in the eyes of the New York Bar, eight "surplus hours.") Students should check the bar requirements in states where they plan to practice to see whether similar rules have been adopted there.

A.12 CALCULATION OF CREDIT HOURS BY ABA RULE

The American Bar Association accredits U.S. law schools. A J.D. degree from an ABA-accredited law school entitles the recipient to take the bar examination in any state as long as the state's other individual requirements, such as character, are met. The College of Law has been fully accredited by the ABA since 1923. The ABA Standards for Approval of Law Schools are published annually and can be accessed at www.abanet.org.

ABA Standard 310 provides that a "credit hour" is an amount of work that reasonably approximates: "(1) not less than one hour of classroom time or direct faculty instruction and two hours of out-of-class student work per week for fifteen weeks, or the equivalent amount of work over a different amount of time." Interpretation 310-1 states that "[f]or the purposes of this Standard, fifty minutes suffices for one hour of classroom or direct faculty instruction. An 'hour' for out-of-class students work is sixty minutes. The fifteen-week period may include one week for a final examination."

The following policy in place to ensure that the College of Law meets the requirements of Standard 310:

(1) for classroom and simulation (including clinic and externship) courses, classes must meet for an amount of time at least equal to fifty minutes per week times fourteen weeks per credit, including, in many cases, an in-classroom final examination of three to four hours during the regularly scheduled finals period.

> (a) Faculty in doctrinal courses are required to evaluate their syllabi to ensure that assigned reading and writing exercises required in preparation for class are a reasonable approximation of the out-of-class student work standard of two hours per week per credit hour. The Associate Dean for Academic Affairs will set a schedule that ensures enough class days and minutes to meet such requirements and collect course syllabi (consistent with existing policies).

> (b) For out-of-class clinical work, students must work for at least three hours (based on a sixty-minute hour) each week times fourteen weeks per credit hour. Supervising faculty will ensure this amount of work is completed and are certifying successful completion of this work when submitting grades.

> (c) For externship placements, students must work three and a half hours (based on sixty-minute hour) in the placement each week times fourteen weeks per credit. Supervising faculty will ensure this amount of work is completed and are certifying successful completion of this work when submitting grades.

(2) for co-curricular activities, students must work for at least three hours (based on a sixty-minute hour) each week times fourteen weeks per credit. The advisor of a co-curricular activity will certify the awarding credit by confirming that a student has met all minimal work-related expectations associated with the competition or journal needs (*e.g.*, engaging in research, editing scholarship, writing a brief, preparing exhibits, prepping witnesses, participating in practice rounds, participating in the competition, etc.). Faculty advisors are aware they are certifying successful completion of this work when they approve credit.

A.13 TIME TO COMPLETE DEGREE; DEFICIENCIES AFTER THREE YEARS

Full-time students who are deficient in semester hours at the end of their third year of study must make up their deficiencies in regular law school courses. No credit is awarded for summer independent study or summer research. However, credit is awarded for summer school courses here or elsewhere or in the following fall semester. Independent study and research courses are offered only during the regular academic year, not during the summer.

Pursuant to ABA Standard 311(b), in all circumstances the J.D. degree must be "completed no earlier than 24 months and, except in extraordinary circumstances, no later than 84 months after a student has commenced law study...."

A.14 EMPLOYMENT DURING LAW SCHOOL

First Year. Full-time first-year law students at the College of Law take a fixed curriculum consisting of 32 hours of demanding course work, and they must master materials, modes of analysis, and skills that will be unfamiliar to nearly all entering students. Succeeding in the first year is critically important in preparing students for their upper-level classes, the bar exam, and their future careers. For these reasons, the College of Law strongly discourages full-time first-year students from working during the fall and spring semesters. Law school, especially in the first year, should be treated as a demanding full-time job, and adding work on top of that job is likely to prevent students from performing to their academic potential and may also compromise students' physical and mental health. Nevertheless, the College of Law recognizes that some students' financial needs may require them to seek employment even during the first year. Full- time first-year students who intend to work for more than ten hours per week must disclose their employment plans to the Assistant Dean for Student Life and must schedule a meeting with the Assistant Dean to discuss their plans for balancing school and work. This must be done before beginning work or as soon as possible thereafter. Students who plan to retain a part- time job begun prior to law school should speak with the Assistant Dean for Student Life no later than the end of the first week of classes.

Second and Third Years. Many upper-level students are able to successfully combine law school with moderate levels of paid employment. Historically, ABA rules prohibited students from working more than 20 hours per week, but this limitation was repealed effective for the fall semester of 2014. Although no longer a firm prohibition, the ABA's traditional limit of 20 hours per week remains a good guideline for the amount of work most students can manage in addition to the demands of law school. While the College of Law has no formal mechanism for monitoring or limiting hours of employment during the second and third years, students who contemplate working more than this should think seriously about whether their contemplated schedule will jeopardize their studies and/or their general well-being. The Assistant Dean for Student Life and the Faculty are happy to counsel upper-level students who plan to work more than twenty hours per week.

A.15 FULL-TIME STATUS AND TUITION/FEES

The University treats nine hours per semester as full-time status for graduate and professional students. A student taking nine or more credit hours will be charged full tuition and fees for taking nine hours or more in a given semester. Students taking fewer than nine hours will receive a proportionate reduction of their tuition and fees. (*e.g.*, students taking eight hours will be charged roughly 8/9 of their full-time tuition and fees.)

A.16 WVU GRADUATE AND POST-GRADUATE STUDENTS

Graduate and post- graduate students from other colleges, schools, and divisions within the university may enroll in College of Law courses with the permission of the Associate Dean for Academic Affairs; the appropriate officer of the college, school, or division within the University to which they are attached; and the faculty member teaching the course. The Associate Dean shall not permit a student to enroll in a course under this provision if the student (1) would have taken more than twenty-one credit hours under this provision upon completion of the course, or (2) has been excluded from the College of Law for any reason. The student's college, school, or university division will determine to what extent courses taken under this provision will be credited toward completion of the requirements for the student's graduate degree.

A student admitted to the College of Law after completing one or more courses under this provision (1) shall not receive any credit toward the J.D. degree for those previously completed courses, (2) must retake for credit, on a pass/fail basis, any course required for law school graduation that was previously taken, and (3) may not retake any elective course that was previously taken.

A.17 TRANSCRIPTS

Official transcripts can be obtained only by contacting the University Registrar's office. Information on requesting transcripts can be found on the University Registrar's website (http://registrar.wvu.edu/transcripts/). Please note that it generally takes three to five working days for the University Registrar to produce a transcript, so it is important to plan accordingly.

B. GRADING INFORMATION AND PROCEDURES

B.1 EXAMINATIONS

Attendance and Exam Eligibility. The Faculty subscribes to the principle that class attendance is important and necessary to the successful study of law. Each faculty member shall set the attendance rules for his or her class.   A faculty member may deny permission to sit for an examination to a student because of poor class attendance. Furthermore, a student who is absent from twenty-five percent or more of the scheduled class hours for any given course shall not be permitted to take an examination in the course except by special permission of the faculty member. Prior to the last day to drop a course (as indicated on the College of Law Academic Calendar), a student who is denied permission to sit for an examination may withdraw from the course. After the last day to drop has passed, denial of permission to sit for the final examination automatically results in a grade of F for the course.

No Exams During Final Week of Classes. In-class final exams shall not be scheduled during the last week of classes. In addition, the due date for take-home exams cannot be during the last week of classes.

Exam Numbers. The Office of the University Registrar randomly selects and assigns official student examination numbers for students' anonymity in the grading process. The Associate Dean for Academic Affairs notifies students when their numbers are available. Anonymity of student examination numbers are protected throughout the examination and grading period.

Exam Accommodation Requests. During the final examination period, any student who has three or more finals on consecutive days may request to move the third final to the next day (excluding the student's or instructor's observed Sabbath day or other religious holiday) on which he or she does not have a final scheduled. The purpose of this rule is to prevent a student from having more than two consecutive days of law school finals. To obtain relief under this rule, a student must notify the Associate Dean for Academic Affairs before the specified deadline so that the exam can be rescheduled and the appropriate faculty member notified.

Deferment of Exams or Assignment Deadlines. A student with a substantial physical, emotional, or family problem that would make it impractical or grossly unfair to take a scheduled examination or meet another class-wide or general deadline may submit in advance a written request to be excused from taking the examination as scheduled or complying with the deadline as fixed. Students must make such requests in a writing directed to the faculty member teaching the course in question, and must substantiate such request by a physician's statement or some other written evidence of the emergency. A faculty member acting alone or in consultation with the Associate Dean for Academic Affairs shall either deny the request or grant the request and require the student to take the examination at a later date or comply with a new deadline.

When Request Is Denied or Extended Deferment Sought. If any request for deferment (as described above) is denied, or if a student requests a deferment for reasons or to a time that would not comply with the above policy, the student may obtain the requested deferment only by approval of the Academic Standards Committee. Appeal from a denied request or an original request for an extended deferment may be made by giving the Associate Dean for Academic Affairs a copy of the request as described above together with any appropriate supporting documents.

Completion of Examinations or Other Class-Wide Assignments. A student granted a deferment has a reasonable time after the emergency has dissipated to complete the examination or other assignment. A reasonable time is established by agreement of the Associate Dean for Academic Affairs and the faculty member.

Failure to Take Examination or Comply with Deadline. A student who fails to take an examination or comply with a deadline and who does not receive a deferment under this rule shall be penalized in whatever fashion the faculty member teaching the course deems appropriate. There is no responsibility on the part of any faculty member to accept or evaluate any work that is not done in a timely fashion unless relief has been granted pursuant to this rule.

Faculty Presence During Exams. The faculty member must either (1) be present in the law school building during his or her classroom examination, or (2) find a substitute faculty member to oversee the exam and provide such substitute with contact information in the event an issue arises.

B.2 GRADES

Grading Scale. The College of Law grading scale is as follows:

Grade	Description
A+	4.3 quality points
A	4.0 quality points
A-	3.7 quality points
B+	3.3 quality points
B	3.0 quality points
B-	2.7 quality points
C+	2.3 quality points
C	2.0 quality points
C-	1.7 quality points
D+	1.3 quality points

| D | 1.0 quality points |
| F | 0.0 quality points |

Semester Grade Point Average or Semester GPA. Semester grade point average is the average of all grades earned by a student in a given semester. All semester grade point averages are calculated using the grading scale of the College of Law.

Cumulative Grade Point Average (GPA or Cum.). The cumulative grade point average is the average of all grades earned by a student while enrolled in the College of Law. All cumulative grade point averages are calculated using the College of Law's grading scale. Only grades earned at the College of Law affect the law school cumulative GPA. Grades for courses taken in other University colleges or at other law schools are not included in the student's cumulative law school GPA.

B.3 COLLEGE OF LAW GRADING POLICY

The College of Law Faculty adopted a grading policy on May 8, 2014, which was amended to added Section F on September 24, 2014.   The Grading Policy is as follows:

I. FIRST YEAR CURVE

A. Curve for First-Year Doctrinal Classes

Mandatory Mean Grade: 2.95 to 3.05

Mandatory Distribution Requirements:

- 5 – 10% of the grades must be A (including A+, which should be rare)
- 5 – 15% of the grades must be A-
- 15 – 25% of the grades must be C+ or below

B. Curve for LRRW I and II

Mandatory Mean Grade: 2.95 to 3.05

Expected Distribution Requirements:

- 5 – 10% of the grades should be A (including A+, which should be rare)
- 5 – 15% of the grades should be A-
- 15 – 25% of the grades should be C+ or below

C. Intro to Legal Research

The 1-credit "Intro to Legal Research" course will not be subject to any curve.

II. UPPER CLASS CURVE

A. Curve for Classes of 30 or more students
(This curve does not apply to clinics, Trial Advocacy and other capstone courses, seminars, or graded study abroad classes. Section II.D below governs these classes.)

Mandatory Mean Grade: 3.15 to 3.25

Expected Distribution Requirements:

- 5 – 15% of the grades should be A (including A+, which should be rare)
- 10 – 15% of the grades should be A-
- 5 – 15% of the grades should be C+ or below

B. Curve for Classes of 11 to 29 students
(This curve does not apply to clinics, Trial Advocacy and other capstone courses, seminars, or graded study abroad classes. Section II.D below governs these classes.)

Mandatory Mean Grade: 3.10 to 3.30

Expected Distribution Requirements:

- 5 – 20% of the grades should be A (including A+, which should be rare)
- 10 – 20% of the grades should be A-
- 5 – 20% of the grades should be C+ or below

C. Curve for Classes with 10 or Fewer Students
(This curve does not apply to clinics, Trial Advocacy and other capstone courses, seminars, or graded study abroad classes. Section II.D below governs these classes.)

For classes this small, mean and distribution requirements are recommended rather than mandatory.

Recommended Mean Grade: 3.10 to 3.30

Recommended Distribution Requirements:

- 5 – 20% of the grades should be A (including A+, which should be rare)
- 10 – 20% of the grades should be A-
- 5 – 20% of the grades should be C+ or below

D. Curve for Clinics, Trial Advocacy and other Capstone Courses, Seminars, and Graded Study Abroad Classes
(This curve governs the class types listed in the heading. If a class falling into one of these categories has 10 or fewer students, the mandatory mean grade range is recommended, but not required.)

Classes with 11 or More Students

Mandatory Mean Grade: 3.10 to 3.50

Expected Distribution Requirements:

- 5 – 20% of the grades should be A (including A+, which should be rare)
- 10 – 20% of the grades should be A-

Classes with 10 or Fewer Students

Recommended Mean Grade: 3.10 to 3.50

Recommended Distribution Requirements:

- 5 – 20% of the grades should be A (including A+, which should be rare)
- 10 – 20% of the grades should be A-

E. Determination of Class Enrollment for Purposes of the Upper Class Curve
As slightly different curves apply to upper level classes depending on enrollment, there needs to be a set day on which a class's official enrollment is determined for purposes of the grading policy. The official enrollment for a class will be the enrollment at midnight on the final day of classes for the term.

F. LL.M. Students
In classes with only LL.M. students, the relevant section of the Upper-Class Curve (II.A-D) will apply. For example, grading in an LL.M. seminar will be governed by Section II.D.

For upper-level classes containing both LL.M. students and J.D. students, each set of students will be treated as a separate cohort for purposes of the grading policy. J.D. class enrollment will be determined by the number of J.D. students in the class, and the relevant section of the upper-class curve will apply to the J.D. students considered as a group. LL.M. enrollment will be determined by the number of LL.M. students in the class, and the relevant section of the upper-class curve will apply to the LL.M. students considered as a group.

Example 1
Energy Law has an enrollment of 32 J.D. students and 12 LL.M. students. The grades for J.D. students must conform to Section II.A; the grades for LL.M. students must conform to section II.B.

Example 2
Energy Law has an enrollment of 25 J.D. students and 8 LL.M. students. The grades for J.D. students must conform to Section II.B; the grades for LL.M. students must conform to section II.C.

G. Default F Grades: No Effect on Curve
This policy is intended to apply only to grades that a professor has given as the result of assessed work in the course and not to "F" grades that have been given as a result of a failure of a student to complete the requirements of the course.

B.4 PASSING GRADES AND GRADUATION CREDIT

To complete most courses satisfactorily and to earn credit toward graduation, a student must receive a grade of D or better. However, a student must receive a grade of C (2.0) or better to earn credit toward graduation in the following courses: Legal Reasoning, Research, and Writing; Appellate Advocacy; the required seminar; and Trial Advocacy as a capstone.

Students must earn a grade of C or better in at least one seminar to satisfy the seminar requirement for graduation. Students may choose to take more than one seminar. As long as the student has satisfied the seminar requirement with a C or better in at least one seminar, the student will receive graduation credit for additional seminars so long as the student attains a passing grade of D or better in the additional seminars.

Students who use Trial Advocacy to satisfy the capstone requirement must obtain at least a C to do so; students who take Trial Advocacy as an elective (*i.e.*, they have taken and passed another capstone course) need only a passing grade of D or better for the Trial Advocacy credits to count toward graduation.

B.5 GRADES OF "INCOMPLETE"

Incomplete Grades

A grade of I (Incomplete) is a temporary grade assignment used when unforeseen, non-academic circumstances arise that prohibits students from completing the last course assignments at the end of the semester. The grade of Incomplete is typically assigned because of an excused absence from assignments that are unavoidably incomplete, as determined by the instructor. Students who are failing a course (exclusive of the incomplete work) may not request an Incomplete.

Students who want to be considered for an Incomplete must apply to their instructor prior to the end of the term. If the instructor agrees, the instructor and the student must negotiate the conditions under which the grade of I will be changed to a letter grade and sign a contract. The date to submit incomplete work cannot be set beyond the last day of class of the following semester. If the student does not complete the terms of the contract then the instructor should submit a grade of F. The instructor must file the contract for Incomplete grades with the Associate Dean for Academic Affairs.

To remove the grade of I, a student does not register for the course again. If the Incomplete grade is not changed no later than the end of the next term (excluding summer), the I grade will be replaced with an F, which is worth 0 quality points.

Shortening Time Limit

A faculty member who assigns an "Incomplete" to a student may shorten the completion deadline to an earlier date than the last day of class of the following semester, but may not extend the deadline beyond the limit.

Semester Awarded

When the student completes the course requirements, the credits are assigned to that semester in which the student originally enrolled in the course.

Shortened Time Limit for Students on Probation

Students who are academic probation and who receive an "Incomplete" on work undertaken during the student's probationary term shall complete requirements for the course and procure the faculty member's removal of the "Incomplete" within eights weeks following the last examination date in the semester in which the student was registered for the course. Except for this reduced time limitation, all other provisions in the subsection and the "Deferment of Exams or Assignment Deadlines" subsection apply in the case of such a student on probation.

B.6 GRADE CHANGES

Administrative Changes. If the Associate Dean for Academic Affairs determines that a computer, data entry, arithmetic error, or similar administrative error has resulted in the reporting of an incorrect grade, the Associate Dean may approve a correction and correct the error so that the student's grade is the one the professor intended to award for that student's work in the course, unless the student has already graduated from the College of Law.

Grade Reviews. A student may request an informal grade review anytime during the thirty day period following the student's receipt of the grade. An instructor may not change a grade following the last day of classes in the semester following that in which a grade was awarded. If the instructor wishes to change the grade after the informal review, the instructor must submit the proposed grade change to the Associate Dean for Academic Affairs with stated reasons for the change. Grade changes due to administrative issues, as described above, may be approved by the Associate Dean. The Faculty must approve any grade change proposed due to changes in evaluation of the student's work.

If the Associate Dean (in the case of an administrative change) or the instructor (in the case of an informal grade review), refuses to change a grade pursuant to this section, then the student may proceed with a formal grade appeal as set forth in B.7, below.

B.7 GRADE APPEALS

A student may initiate a formal grade appeal prior to the end of the seventh week of classes of the semester following the one in which the grade was awarded. Students who fail to begin the grade appeal process by requesting in writing the meeting with the instructor described in Step I below prior to the end of the seventh week of classes of the succeeding regular (*i.e.*, fall or spring) term have waived all rights to a grade appeal. (*E.g.*, a student appealing a grade from a fall class would need to request, in writing, a meeting with the instructor prior to the end of the seventh week of the spring semester in order to preserve his or her right to appeal a grade.)

Step I. The student shall discuss the complaint with the instructor involved prior to the end of the seventh week of classes of the regular (*i.e.*, fall or spring) semester following, whether the student is enrolled or not. If the two parties are unable to resolve the matter satisfactorily, if the instructor is not available to meet, or if the nature of the complaint makes discussion with the instructor inappropriate, the student shall file a written complaint with the Associate Dean for Academic Affairs. The Associate Dean shall assume the role of an informal facilitator and assist in resolution attempts. If the problem is not resolved within fifteen calendar days after the written complaint is first lodged with the Associate Dean, the student may proceed directly to Step II. To mount a successful appeal of a grade under Steps II or III below, a student must demonstrate that the instructor's actions in assigning that grade were arbitrary and capricious.

Step II. The student must prepare and sign a document that states the facts constituting the basis for the appeal within thirty calendar days from when the original complaint was lodged. Copies of this document shall be given to the instructor and to the Associate Dean. If, within fifteen calendar days of receipt of the student's signed document, the Associate Dean does not resolve the problem to the satisfaction of the student, the student may forward the written complaint to the instructor's Dean and proceed to Step III.

Step III. Within fifteen calendar days of receipt of the written complaint by the Dean, the Dean shall make a determination regarding the grade, making any recommendations for a grade change to the instructor involved. If the instructor involved does not act on the Dean's recommendation, or if the student is in disagreement with the decision of the Dean, the Dean will refer the case to a representative committee appointed by the Dean for final resolution. This committee shall consist of three or more faculty members, including at least one university faculty member from outside of the College of Law.

1. Upon receiving an appeal, the committee will provide the grade challenge by written notification to the faculty member involved, which shall include a statement of the facts and evidence to be presented by the student.
2. The committee shall provide the faculty member involved and the student making the appeal written notification of the student's right to appear at a hearing to be held before the department, college, or school representative committee, together with notice of the date, time, and place of the hearing.
3. The administrative procedure is not adversarial in nature; the formal rules of evidence do not apply.
4. The final decision of this committee shall be forwarded to the instructor and to the Dean involved. If the decision requires a change of grade, the instructor shall take action in accordance with the committee's decision.
5. If the instructor does not act within five days, the Dean shall make any necessary grade adjustment.
6. In the case of grade appeals, the Dean functions as the President's designee; therefore, implementation of this decision shall end the appeal procedure.

For purposes of the deadlines set forth in this paragraph, the days counted shall not include the date that that begins the period in question (*e.g.*, if a written notice is received on May 1, the first day in the fifteen day period begins on May 2) and the deadline on that day shall be at the end of the full day (*i.e.*, 11:59:59 p.m) Students with questions about the grade appeal policy or procedure should consult the Assistant Registrar or Associate Dean for Academic Affairs.

C. ACADEMIC STANDING

C.1 ACADEMIC DIFFICULTY

Good Academic Standing. A student is in good academic standing if that student has not been dismissed and is not on academic probation as those terms are defined in this catalog.

Repeating Courses. Receiving an F in a course does not generally require retaking the course. The F simply is added to one's GPA, and no credit hours toward graduation are given. However, if a student receives a failing grade in a course required for graduation, the student must repeat that course and receive a passing grade. The passing grade will be factored into the student's overall GPA and will not replace the F the student received prior to retaking the course. If a student does not pass a required seminar or capstone course, that student may retake that seminar or capstone or take any other. When a course is repeated, both grades appear on the student's transcript, and both grades are calculated into the student's GPA, but credit toward the graduation requirement is awarded for only one enrollment.

Receiving Credit for Less Than an Entire Course. No credit is given for less than an entire course.

C.2 ACADEMIC PROBATION & DISMISSAL

Notification. The Associate Dean for Academic Affairs notifies in writing any student who is not in good academic standing. The notice sets forth the student's academic situation and advises the student of actions available to the student under this section. The notice is sent as soon as possible after the student's academic standing is determined. Students who do not receive notice are nevertheless responsible for knowledge of their academic situation and for taking actions necessary under this section. A student is in good academic standing if that student has not been dismissed and is not on academic probation as those terms are defined in this catalog.

Probation and Dismissal Rules. For all rules regarding academic probation and dismissal, the relevant GPA figures are semester and cumulative law school GPAs. Law school GPA does not include grades earned in other WVU colleges or at other law schools. The following are the probation and automatic dismissal rules:

1. Consultation at the End of First Semester. Students whose first semester grades fall below 2.30 receive a letter from the Associate Dean's Office to that effect, offering consultation and referral to the Academic Excellence Program. Such students must participate in the Academic Excellence Program in the second semester.

2. Dismissal and Probation at the End of the Second Semester Only. Any student whose cumulative average is below 1.85 at any time after his or her second semester in law school is automatically dismissed. If a student dismissed at the end of the second semester has a GPA in any semester during the first year of less than 1.5, that student may be readmitted to the College of Law only by making an initial application through the admissions process. This application is only made in accordance with the regular admissions cycle, so most applicants will be required to wait a year before their application is processed. If readmitted, the applicant begins law school as if she or he were a first-time student. If a student dismissed at the end of the second semester has no GPA in any semester of the first-year curriculum of less than 1.5, that student may apply for readmission by following the procedures set forth in this handbook under "Readmission." A student is placed on academic probation when that student's cumulative grade point average falls below 2.30 but is above 1.85 after the conclusion of his or her first-year curriculum. A student on academic probation has one semester in which to raise his or her cumulative grade point average to 2.30. Failure to meet this requirement results in dismissal.

3. Dismissal and Probation at the End of Third through Sixth Semesters:

a. Cumulative Grade Point Average. Any student whose cumulative grade point average is below 1.85 at any time after his or her third semester in law school is automatically dismissed. A student whose cumulative grade point average falls between 1.85 and 2.30 any time after his or her third semester in law school is placed on academic probation. A student on academic probation has one semester in which to raise his or her cumulative grade point average to 2.30. Failure to meet this requirement will result in dismissal. Under no circumstances will a student be allowed to graduate unless his or her cumulative gradepoint average is 2.30 or better.

b. Semester Grade Point Average.

> **i . General Rule- Full Time Students .** Any student who fails to attain a grade point average of 2.30 in any individual semester of his or her second or third year in law school is placed on academic probation, regardless of his or her cumulative grade point average. This rule shall apply only to students who complete at least eleven semester credit hours of work for which they receive a letter grade (i.e., A, B etc., but not P). For purposes of this rule, first and second summer sessions count as a single semester. Accordingly, a student who took eleven or more graded hours across two summer sessions and whose GPA in those courses fell below 2.30 would be placed on academic probation under this rule.

> **ii. General Rule- Part-Time Students.** A student who earns a semester grade point average lower than 2.30 over fewer than eleven letter-graded credit hours per semester for two consecutive semesters after the first year of law school is placed on academic probation, regardless of his or her cumulative grade point average. For purposes of this rule, first and second summer sessions count as a single semester. Students with a semester grade point average lower than 2.30 over fewer than eleven letter-graded credit hours for one semester must meet with the Associate Dean for Academic Affairs.

> **iii. Additional Next Semester Rule for Full and Part Time Students**. A student placed on academic probation under the General Rule (whether a Full Time or Part Time Student) will be dismissed for failure to meet academic requirements, regardless of his or her cumulative grade point average, if he or she fails to attain a semester grade point average of 2.30 or better in the next regular (*i.e.*, fall or spring) semester. This rule applies regardless of the number of graded credit hours taken in the probationary fall or spring semester, so students who choose to take a low number of graded credit hours do so at their own risk.

4. Dismissal for Failing a Majority of Credit Hours. Any student who, after completing the first-year curriculum in the College of Law, receives failing grades in courses aggregating one-half or more of the student's credit hour load for a given semester is dismissed. For the purposes of this rule, it does not matter what the student's grade point average is for the semester in question, nor does it matter what the student's cumulative grade point average might be. However, this rule does not apply to students taking two or fewer courses in a semester.

5.Transfer Students with a College of Law Grade Point Average below 2.30. A transfer student cannot graduate from the College of Law if the cumulative grade point average of the grades that the student earned at the College of Law is less than 2.30.

6.Readmission. Students seeking readmission after dismissal should file a petition for readmission with the Chair of the Academic Standards Committee. The petitions should demonstrate that the reasons for the student's academic deficiencies no longer exist. The Academic Standards Committee shall review each petition based upon this standard. The Academic Standards Committee will consider a student's participation in the Academic Excellence Program favorably in deciding on any petition for readmission following an academic dismissal. The Committee will view a student's failure to participate in the Academic Excellence Program, despite an invitation or direction to do so, as a negative factor in deciding on a petition for readmission following an academic dismissal. If the Committee denies readmission, the student may appeal to the Dean, who may remand, affirm, or reverse the Committee's decision. The Dean has the discretion to seek the advice and counsel of the full Faculty. A student may petition for readmission for the semester immediately following the semester he or she is dismissed. To do so, the student must deliver a petition for readmission to the Chair of the Academic Standards Committee no later than ten calendar days of his or her receipt of notification of dismissal from the Registrar; however, ff the tenth day is a weekend or holiday, then the student must deliver the petition on the next business day. A student also may petition for readmission after two academic semesters have passed following the student's dismissal (even if the student has already petitioned immediately after his or her dismissal). For purposes of this rule, summer sessions shall not count as academic semesters.

7. Permanent Dismissal. The College of Law shall not readmit any student who has been dismissed twice under these rules for failure to meet academic requirements. In addition, students readmitted through petition to the Academic Standards Committee have two semesters within which to bring their cumulative grade point average up to 2.30, as follows: (1) if the readmitted student fails to earn a 2.30 or better grade point average for the first semester following readmission, the student is permanently dismissed and is not eligible for readmission and (2) if that semester's grade point average is 2.30 or better but the cumulative grade point average remains below 2.30, the student has one additional semester in which to bring the cumulative grade point average up to 2.30. If, after that second semester following readmission by petition to the Academic Standards Committee a 2.30 cumulative grade point average has not been attained, the student is permanently dismissed and is not eligible for readmission.

D. HONORS

D.1 CLASS RANK

The following rules apply to class rank:

Class Ranks. Class ranks are calculated at the completion of each semester, except for 1L students, whose first ranking will not be established until the completion of their first year.

Top 50%. At the completion of each semester, students in the top 50% of the class are individually informed of their class rank in Degree Works. Students outside the top 50% of the class are not ranked. These rankings are not publicly announced. Students who graduate in the top 25% of their class have their class ranks noted on their university transcripts.

Grade Point Averages. The grade point averages that demarcate the top 25%, 33%, and 50% are publicly announced at the end of each semester.

D.2 ORDER OF THE COIF

Order of the Coif is an academic honor conferred by the Faculty upon its graduates from among the top 10% of the graduating class. Coif graduates have this honor noted on their university transcripts. To be eligible for election, students must complete all of their required courses (see above "Courses Required to Graduate) at the College of Law. A student may transfer up to nine credit hours of a law school's regular curriculum taken at an Association of American Law Schools (AALS) approved law school during that school's academic year, summer terms on campus, or summer abroad programs approved by the ABA. For purposes of Coif, the grade(s) earned for these hours will not be averaged into the student's GPA but shall be treated as pass/fail credit. The effect of this rule is that the grade point average used for selection to the Order of the Coif is based solely on the grades earned at the College of Law.

D.3 ORDER OF BARRISTERS

A national honorary organization, the Order of Barristers, encourages oral advocacy and brief writing skills through effective law school moot court programs. Members of the Marlyn E. Lugar Trial Association, the Moot Court Board, and students who have outstanding oral advocacy achievements are eligible for the award. See the Associate Dean's assistant for applications in March.

D.4 PATRICK DUFFY KOONTZ AWARD

The Patrick Duffy Koontz Award is a monetary prize whose recipients are selected by the College of Law scholarship committee. The award is announced at graduation and is given to students from West Virginia who demonstrate excellence in scholarship, character, and leadership potential.

E. GRADUATION

E.1 DEGREE WORKS

Degree Works is an online check sheet (audit) for students to review and monitor progress toward degree completion. It organizes academic coursework into blocks of requirements to help easily identify courses completed and what courses you still need in order to complete the degree. To access Degree Works,

- Log on to your WVU Portal account using your MyID username and password.
- Click on the STAR tab.
- Scroll down to the 'Resources' heading and click the 'Degree Works' link.

The Degree Works audit provides a review of past, current, and planned coursework as well as information about completed and outstanding requirements. The audit is organized by 'blocks.' These blocks show what requirements are needed to graduate and show what is needed to do in order to fulfill the requirements within each block. The following 'blocks' may appear on the audit:

- Degree in Doctor of Jurisprudence: This block verifies that **all** requirements, including required courses, the minimum GPA requirement, and the ninety-one-hour credit requirement, have been met.
- Major in Law - J.D.: This block verifies that all required courses (*i.e.*, first-year courses, Appellate Advocacy, Professional Responsibility, seminar, perspective course, capstone requirement) have been completed and that any applicable grade requirements for those courses (*e.g.*, a grade of C or better in Appellate Advocacy) have been satisfied.
- Law Courses: This block is a summation of all law courses that are being used to meet the ninety-one-hour course requirement.
- Non-Curricular Coursework- This block includes any law course designated under the "outside the classroom" rule to ensure that students do not exceed the 26 credit hour limit.
- AOE- This block verifies that all requirements for the four optional Areas of Emphasis are completed.
- Fallthrough: The Fallthrough block is a block for courses that are not being used to satisfy any other requirements in your audit (*i.e.*, ninety-one-hour requirement, first-year requirements). These courses count towards the total number of degree hours and GPA.
- In-Progress: This block reflects all courses currently in-progress or registered for a future semester.
- Insufficient/Withdrawn/Repeated: This block shows courses that you have withdrawn from or failed, courses that were taken more than once (but were not repeatable for credit), and audited courses.

If you are a joint-degree student (J.D./M.B.A. or J.D./M.P.A.), your Degree Works audit will reflect only work completed in the J.D. program. Because Degree Works cannot be programmed to take into account the credit hours earned for work on the other half of your joint degree, it will not accurately reflect your progress toward your J.D. If you have questions about whether you are on track, please contact the Associate Dean for Academic Affairs. When you have completed your joint-degree program, an annotation will appear on your transcript recording the credit hours you received for completing your joint degree program.

If you believe there is an error in your Degree Works audit, please contact the Office of the University Registrar and/or the Associate Dean for Academic Affairs. For additional information on Degree Works, please visit the website (http://registrar.wvu.edu/dw/) of the University Registrar.

E.2 HOURS TO GRADUATE

Every student must satisfactorily complete (see the "Passing Grades and Graduation Credit" subsection) ninety-one credit hours and must be in good academic standing to graduate. Except in circumstances described in the section "Earning Law School Credit Outside the Law School," all these credits must be earned at the College of Law. In any event, only College of Law courses will count as part of the student's grade point average. All students must have a cumulative grade point average of 2.30 or above (for students admitted as of Fall 2015) in order to graduate from the College of Law.

E.3 COLLEGE OF LAW GRADUATION/HOODING WEBSITE

The Graduation/Hooding website for the College of Law goes live each year in the spring. This contains all forms and information for College of Law graduates.

Externships & Pro-Bono

EXTERNSHIPS/PRO-BONO

1. EXTERNSHIP PROGRAM GUIDELINES

I. GOALS & OVERVIEW

The Externship Program is designed to provide students with an opportunity to gain practical legal experience as part of their legal education. Two general types of externships are available at the College of Law: Public Service Externships (part-time) and Federal Judicial/Federal Agency Externships (full-time). The overarching goals of the Externship program are consistent with and are designed to serve the goals articulated in the mission statement of the College of Law: "Preparing 21st century lawyers and leaders to serve the public, [and] government, . . . —both locally and globally—while focusing on justice, ethics, professionalism, and service in a diverse, vibrant and respectful community."

To that end, the Externship Program offers the opportunity to incorporate practice experience with discussion, critical thinking, reflection, and analysis. The purpose of the program is to help students in the following ways:

1. to develop the art of lawyering, including research, writing, analysis, interviewing, and communication of facts and information;
2. to identify professional goals and reflect on individual professional development;
3. to develop sensitivity to issues of professional responsibility, ethical problem solving,sensitivity to issues of lawyer well-being, stress management and resilience, and the role of the lawyer in providing access to justice in society; and
4. to develop awareness of meaningful career opportunities in public interest and governmental settings and to establish relationships in chosen fields of law.

II. POLICIES & REQUIREMENTS

The Public Service and Federal Judicial/Federal Agency Externships require students to perform substantive legal work to receive academic credit. All externships must be unpaid. Additionally, student externs must be supervised at their placement by a lawyer actively licensed to practice law in the state where the externship is housed. In addition to supervision at their placement, students are also supervised by a faculty member and are required to enroll in a one-hour graded course component. The course component includes class meetings, time-keeping assignments, reflective journals, and other assignments to further the experiential learning. The policies and requirements outlined below are designed to ensure a high-quality experience for students as they work toward their educational goals during their externship.

For academic planning purposes, **only one externship can be counted toward your total graduation requirement**. Further, students may receive no more than 26 total "out of classroom" credits toward graduation. This includes an externship, moot court, law review, independent study, and foreign study. This credit maximum does not include credits earned in the law school clinic. (More complete information is available in the Student Handbook.)

Students interested in any externship opportunity should meet with the Director of the Center for Law and Public Service to discuss the available placement options and eligibility requirements outlined below.

A. Externship Placements

Two general types of placements are available for students. First, students can pursue part-time externship opportunities in various Public Service Externships during the summer, fall, or spring terms. Second, students can pursue full-time externship opportunities in either a Federal Judicial or Federal Agency Externship during the fall or spring terms. A brief summary of the placement options is outlined below.

Part-time Public Service Externships may be performed with government offices or agencies, the judiciary, legal aid offices, or other non-profit or public interest organizations performing legal work. Examples of approved part-time Public Service Externships have included placements with public defenders, prosecutors, judges, legal aid offices, general counsel of universities, general counsel of non-profit hospitals, state agencies, legislatures, and other non-profit or public service organizations.

Full-time Federal Judicial Externships may be performed with any federal judge at the district or circuit court level. **Full-time Federal Agency Externships** may be performed at any approved federal agency. Past full-time federal agency sites have included the National Labor Relations Board,

the Securities and Exchange Commission, and the Mine Safety Administration. Please see the Director of the Center for Law and Public Service for a list of approved local sites.

If there is another externship opportunity that a student wants to pursue that is not on the list of approved sites, then the student should contact the Director of the Center for Law and Public Service for approval first, then apply to the office or organization. If students have questions about placements or need advice about finding a site that best fits with their educational goals, then they should contact the Director of the Center for Law and Public Service at (304) 293-8555.

The Externship Program does not include work in the private sector, and no externships in private sector settings will be approved. All placements must be approved by the Director of the Center for Law and Public Service or the Teaching Professor for the course.

B. Field Placement Work and Credit Requirements

Work performed at the field placement for academic credit **must** be unpaid. Students must have adequate supervision, guidance, and training by a dedicated field supervisor at the site. The field supervisor **must** be a lawyer. Students may choose from three different externship types:

1. **Full-time Federal Agency Externship during the fall or spring semesters**. Externs must work full time (as defined by the site) over the course of the semester to earn 13 credits. Of those 13 credits, 3 are graded and 10 are pass/fail. The graded portion of the course is earned through enrollment in the full-time agency externship course. The pass/fail credits are earned through completing work assignments at the externship site. To qualify for this externship, students must have completed at least one year of law school, submit a letter of recommendation from a law school faculty member recommending the student for the externship, and be in the top 40% of their law school class (3Ls), or top 25% (2Ls).
2. **Full-time Federal Judicial Externship during the fall or spring semesters**. Full-time judicial externs also earn 13 credits over the course of the semester. Of those 13 credits, 3 are graded and 10 are pass/fail. The graded portion of the course is earned through enrollment in the full-time judicial externship course. The pass/fail credits are earned through completing work assignments at the judicial externship site. To qualify for this externship, students must have completed at least one year of law school, submit a letter of recommendation from a law school faculty member recommending the student for the externship, and be in the top 25% of their law school class (2Ls) or top 40% (3Ls).
3. **Part-time Public Service Externship during the summer, fall, or spring terms**. Part-time Public Service Externship opportunities are available with a federal agency or a state agency, federal or state judiciary, legal services office, or other non-profit organization. Students may earn a minimum of 3 to a maximum of 6 credits. Of those, 1 is graded and the rest are pass/fail. Students can choose to earn a variable number of pass/fail credits -- between two (2) and five (5) site placement/field work credits during the summer session or during a fall or spring semester. Students will receive one (1) academic credit for every fifty (50) hours of placement work performed during the chosen academic term. Students are advised to consult with the field placement supervisor to create a suitable work schedule. To be eligible, students must have completed one year of law school and be in good academic standing. Sites may require a higher standard, however.

Placement/Field Work Credits	Total Hours of Work Required	Approx. Hours of Work Per Week	Total Credit Including Course Component
2	100	7	3
3	150	11	4
4	200	14	5
5	250	18	6

C. Externship Class Requirements

Students who are selected for a full-time Federal Agency externship will enroll in Law 655 (the graded course) and in Law 656 for the field-work portion of the externship. Students who are selected for the full-time Federal Judicial externship will enroll in Law 780 (the graded portion of the course) and in Law 780A for the field work portion of the course. Students who enroll in the part-time Public Service Externship course will register for Law 653, which is the one-hour graded course, and Law 654 for the variable number of placement/field work credits.

The externship courses will meet periodically on campus during the semester and, depending on the placement site, other course meetings will be arranged online or through distance-learning technology. During the field placement for each of the externship courses, students will be required to submit the following assignments to successfully complete the course requirements:

- reflective essays or journals related to field work;
- a class presentation on a topic that draws upon the externship experience;
- discussion topics to facilitate student communication and foster experiential learning;
- time sheets documenting hours and work performed;
- supervisor evaluations (including a mid-semester and final evaluation); and
- full-time federal judicial and federal agency externs must write a substantive law-review style paper based upon an issue related to the externship placement and field work.

These assignments are designed to enhance the students' field experiences and are more fully described in the course syllabi.

III. STEPS FOR REGISTRATION AND ENROLLMENT

A. Registration

Students must attend the externship information/registration session when announced. If students cannot attend this meeting, they must set up an individual meeting with the Director of the Center for Law and Public Service. Students interested in the Externship Program must submit a resume, unofficial transcript, cover letter, letter of recommendation (for full-time Federal Judicial or Federal Agency Externships), and a letter stating the name and contact information for the placement (or potential placement if awaiting confirmation.) Please submit a hard copy of these materials to the Director of the Center for Law and Public Service before the deadline announced each semester.

Upon approval, students will register for the appropriate externship course.

B. Receiving credit

Students will submit weekly timesheets, attend any scheduled class meetings or participate in on-line discussions, and complete all course assignments.

Students must submit the signed Externship Supervisor Agreement available on the class TWEN site.

Students must complete all field placement work in a competent and professional manner in accordance with the relevant Rules of Professional Conduct.

Students must submit a Final Evaluation from their supervisors (unless you are working with the Federal Judiciary).

IV. FIELD PLACEMENT SUPERVISION

Field placements are asked to identify one person, who must be a lawyer, who will be the student's primary supervisor and contact person for the externship. The field supervisor at the chosen placement must agree to support the student's educational goals. While a student will often perform assignments for multiple lawyers at an organization, the externship requires that one person is designated as the field supervisor and mentor for the student. The supervisor and student should meet at least once per week to review assignments and discuss questions. The supervisor will complete a midterm and final letter of evaluation to be submitted by the end of the semester.

Students are asked to coordinate with their field placement supervisors to complete the following tasks:

  • meet with the field placement supervisor at the beginning of the placement to discuss the student's learning goals during the placement;

  • meet with the supervisor weekly to review and evaluate assignments, overall performance, and general issues; and

  • set up a final evaluation exit meeting to obtain a final evaluation form from the field supervisor and submit it to the Teaching Professor for the course.

2. PRO-BONO

The Center for Law and Public Service promotes public service opportunities for law students, including opportunities for pro bono work. The term "pro bono" means "for the public good." In the legal profession, pro bono work refers to work that is performed voluntarily and free of charge.   Pro bono service is the responsibility all members of the legal profession. WVU's pro bono program allows law students to begin pro bono service now and encourages students to develop a lifelong commitment to pro bono work.

The WVU College of Law pro bono program partners with legal services organizations and community agencies to provide opportunities for law students to serve those in need.   Pro bono projects will be designed to aid individuals or families of limited means; charitable, community and governmental organizations who provide assistance to those of limited means; and activities for improving the law, the legal system, or the legal profession. Pro bono work may not be for credit and will not include work done for a clinic or externship.   All pro bono work must be approved by the Center for Law and Public Service. If a student documents 25 or more approved pro bono hours during his/her law school career, he/she will be recognized with "pro bono" honors at graduation.

For more information about pro bono opportunities and guidelines, see the Pro Bono guidelines. If you have questions about or suggestions for a pro bono project, please see the Director of the Center for Law and Public Service.

Professional Responsibility and Bar Admission

A. PROFESSIONAL RESPONSIBILITY

1. About the Student Code of Professional Responsibility
2. Dismissal for Misconduct
3. Academic Rights and Responsibilities (WVU)

B. WVU COLLEGE OF LAW STUDENT CODE OF PROFESSIONAL RESPONSIBILITY

C. BAR ADMISSION

A. PROFESSIONAL RESPONSIBILITY

A.1 ABOUT THE STUDENT CODE OF PROFESSIONAL RESPONSIBILITY

The students and faculty of the College of Law have adopted a Code of Professional Responsibility to prevent and punish academic misconduct by students in the College. A copy of that Code is included in this Student Handbook and is binding on all students. Enforcement of the Code rests principally in the hands of the student body with oversight by the faculty and the designee of the President of the University. Infractions are investigated and adjudicated by the Student Ethics Council.

A.2 DISMISSAL FOR MISCONDUCT

In view of its public and professional responsibilities with respect to admission of candidates to the practice of law, the West Virginia University College of Law reserves the right to drop any student from the rolls whenever, by formal decision reduced to writing, the faculty finds that the student is unfit to meet the qualifications and responsibilities of the legal profession. Dismissal is considered whenever a student is involved in serious criminal conduct or conduct that would justify professional disciplinary action if the person were a lawyer. Students remain subject to all general rules and regulations of the University and the West Virginia Board of Governors and to the Student Code of Professional Responsibility.

A.3 ACADEMIC RIGHTS AND RESPONSIBILITIES (WVU)

The Office of Student Conduct, located in Boreman North, is staffed by a member of the Office of Student Life and is available to assist any student, student organization, staff member, faculty member, or administrator in understanding and applying the West Virginia University Campus Student Code (http://studentconduct.wvu.edu/). Should you have any questions or concerns, please contact LiDell Evans or the Office of Student Conduct at 304-293-8111. In case of conflicts, the Law Student Code of Professional Responsibility controls.

B. WVU COLLEGE OF LAW STUDENT CODE OF PROFESSIONAL RESPONSIBILITY

Preamble. The cornerstone of our legal system is the integrity of the individual lawyer. As future lawyers, our conduct is governed by the highest standards of ethics. As students enrolled in the West Virginia University College of Law, we recognize and accept the following standards, obligations, and responsibilities as governing our actions and conduct. This Student Code of Professional Responsibility (the "Student Code") is intended to supplant Article III, B.1., governing acts of academic dishonesty, of the West Virginia University Student Conduct Code for students enrolled in the College of Law.

THE ETHICS COUNCIL

A. COMPOSITION

1. There is hereby created an Ethics Council composed of three members from each class.

2. The members of the Council shall be elected at the end of the spring semester in conjunction with the election of class officers. Any student, full or part time, who is in good academic standing, shall be eligible to run for a seat on the Ethics Council. An elected member of the Ethics Council must relinquish the office if he/she fails to remain a student in good academic standing. First-year members shall be elected in the fall of their entering year. Such elections shall be conducted by the Student Bar Association. The terms of office for the members of the Ethics Council shall run from their election to the election of their successors, with the following qualifications:

   a) The terms of graduating members shall expire on graduation;

   b) The terms of members who are in the process of hearing a case when their successors are elected shall be extended to allow the members to complete the proceeding;

   c) The elected representatives of the second- year class to the Ethics Council not reelected in the spring election and, if necessary, the elected representatives of the first year class not re-elected in the spring election, shall continue to serve until the election of the first- year class members of the Ethics Council. Upon the election of the first-year representatives to the Ethics Council, the holdover members' term shall end.

3. A vacancy on the Ethics Council shall be filled by appointment by the remaining members of the Ethics Council. The individual selected to fill the vacancy shall be a member of the class in which the vacancy occurs. The appointee shall serve for the remainder of the unexpired term.

4. The Chairperson shall be elected from among the third-year class representatives to the Ethics Council within two weeks of the election of the first- year class representative. From the time of the election of the representatives of the Ethics Council in the spring semester until the selection of the Chairperson after the first-year election in the fall semester, the rising third-year student to receive the greatest number of votes in the most recent election shall serve as Chairperson.

B. INVESTIGATIVE PANEL AND HEARING PANEL

1. Composition: Following the elections in the spring semester, after the election of the Chairperson in the fall semester and at the beginning of the second semester, the Chairperson shall appoint from the members of the Ethics Council an Investigative Panel of three persons, no more than two of whom shall be from the same class in law school. The Chairperson of the Ethics Council shall designate one member of the Investigative Panel to serve as its Chairperson.

2. Duties: The Investigative Panel shall investigate and collect evidence and information concerning any complaints involving an alleged violation of this Student Code. Upon completion of the investigation, the Investigative Panel shall take action as set forth in Section III (A)(1).

3. Hearing Panel: The remaining members of the Ethics Council will serve as the Hearing Panel for the purpose set forth in Section III (C).

C. QUORUM AND MARGIN OF DECISION:

1. Two members shall constitute a quorum for the Investigative Panel, and the decision to charge a violation of the Student Code must be concurred upon by two members of the Investigative Panel.

2. Four members shall constitute a quorum of the Ethics Council Hearing Panel, and the vote of sixty percent of those in attendance shall be necessary to find a violation of the Student Code. For all other purposes, a simple majority shall decide issues which may arise, including votes on recommended sanctions.

D. DUTIES OF THE ETHICS COUNCIL:

1. The Ethics Council shall promulgate, consistent with the provisions of this Student Code, such rules and regulations and prescribe such procedures as shall be necessary and proper to fairly and impartially fulfill its obligations under this Student Code. Upon the approval of the faculty, the rules and regulations shall become final unless subsequently amended as provided for in this paragraph.

2. Before each examination period, the Ethics Council shall take appropriate action to remind the student body of its obligation and responsibilities under the Student Code.

3. At the beginning of each school year, the Ethics Council will make a presentation on the Student Code as part of the orientation of incoming students.

4. The Ethics Council shall be responsible for the investigation and adjudication of alleged violations of this Student Code as set forth herein.

ACADEMIC RESPONSIBILITY AND DUTIES

A. ACADEMIC RESPONSIBILITY

The West Virginia University College of Law expects every member of its academic community to share the historic and traditional commitment to honesty, integrity, and the search for truth. In keeping with this spirit, it shall be a violation of this Student Code for any student or applicant for admission to commit any act of academic dishonesty, which is defined to include, but is not limited to, the following:

1. Plagiarism: Plagiarism is defined in terms of proscribed acts: Students are expected to understand that such practices constitute academic dishonesty regardless of motive. Those who deny deceitful intent, claim not to have known that the act constituted plagiarism, or maintain that what they did was inadvertent are nevertheless subject to penalties when plagiarism has been confirmed. Plagiarism includes, but is not limited to, the following:

> a. Submitting as one's own work the product of someone else's research, writing, artistic conception, invention, or design; that is, submitting as one's own work any report, notebook, speech, outline, theme, thesis, dissertation, commercially prepared paper, musical piece or other written, visual, oral or electronic/computerized material that has been copied in whole or in part from the work of others whether such source is published or unpublished;

> b. Incorporating in one's subm ission, without appropriate acknowledgment and attribution, portions of the work of others; that is, failing to use the conventional marks and symbols to acknowledge the use of verbatim and near-verbatim passages of someone else's work or failing to name the source of words, pictures, graphs, etc., other than one's own, that are incorporated into any work submitted as one's own.

> c. A student has a duty to report any other student(s) that he/she sees violating this rule against plagiarism in any way.

Every professor is allowed to establish a collaboration policy for his/her own course. Please refer to the course syllabus to learn what is permissible. However, one should always assume that collaboration is not permitted, unless the syllabus or professor specifically allows it.

2. Cheating and dishonest practice in connection with examinations, papers and projects, including but not limited to:

> a. Obtaining help from another student during examinations;

> b. Knowingly giving help to another student during examinations, taking an examination or doing academic work for another student, or providing one's own work for another student to copy and submit as his/her own;

> c. The unauthorized use of notes, books, or other sources of information during examinations;

> d. Obtaining without authorization an examination or any part thereof;

> e. Obtaining without authorization any help from another student.

> f. Forgery, misrepresentation, or fraud: Forging or altering, or causing to be altered, the record of any grade in a grade book or other educational record; Use of university documents or instruments of identification with intent to defraud; Presenting false data or intentionally misrepresenting one's records for admission, registration, or withdrawal from the university or from a university course; Knowingly presenting false data or intentionally misrepresenting one's records for personal gain; Knowingly furnishing the results of research projects or experiments for the inclusion in another's work without proper citation; Knowingly furnishing false statements in any university academic proceeding. It is a violation of the Code for any student who witnesses a Student Code violation or who has credible information that a violation was committed to fail to report the violation to the Ethics Council, a faculty member, or a dean.

It is a violation of the Student Code for any student or applicant for admission at anytime to intentionally lie, give false information, make material misrepresentations, or omit material facts to the faculty, administration, or any student organization in the course of the academic, extracurricular, co- curricular, admissions, or placement programs of the College of Law. It is a violation of the Student Code for an officer or member of a student organization to (a) discourage observing members from reporting questionable conduct to the Ethics Council, or (b) sanction an organization member for reporting possible violations of the Student Code to the Ethics Council.

It is a violation of the Student Code for any student to refuse to cooperate with the Ethics Council in its conduct of an investigation or hearing.

B. DUTIES

1. Faculty members have a responsibility to support and enforce the Student Code and should report suspected violations to the Ethics Council.

2. If a faculty member reduces a student's grade because of a suspected violation of the Student Code, the faculty member must give the student written notice of the fact and size of the penalty. If the faculty member learns of the suspected violation after grades were submitted, the faculty member may reduce the student's grade upon notice to the student and without faculty approval.

3. If the student elects not to contest the grade reduction, that reduction shall become final and no further action, pursuant to this Code, shall be taken. If the student whose grade has been reduced because of a suspected violation elects to contest the grade, he or she may do so by invoking the procedures described in Part III, below. The faculty member's notice to the student shall then serve as a complaint to the Ethics Council, and the Council shall process the charge as it would any other. Both the Ethics Council and, if review is sought, the faculty, retain the discretion to overrule, decrease, or increase the penalty imposed by the faculty member and to assess any other sanction in addition to or instead of the original penalty. In all cases in which a student challenged a grade that was reduced because of a suspected violation of the Student Code, the procedures in Part III shall supersede the normal grade appeal procedures as to all issues relating to academic dishonesty.

III. ADJUDICATORY PROCEDURES

A. COMPLAINT

1. Initial Inquiry: Upon receipt of a complaint alleging a violation of the provisions of this Student Code, the Chairperson of the Investigative Panel of the Ethics Council will convene a meeting of the Investigative Panel. The Investigative Panel will convene within seven calendar days from receipt of the complaint when classes are in regular session; or within four days after classes resume if the complaint is received during a period in which classes are not scheduled to meet including examination periods. It shall be the duty of the Investigative Panel to conduct such investigations as necessary, being as discrete as possible, into the allegations. When the initial inquiry is completed, the Investigative Panel shall either (1) close the case by recording its findings of fact and conclusion that no violation occurred and providing the charged student(s) with a copy (with the name of any complaining student deleted); or (2) upon a finding concurred in by two or more of its members that there is reason to believe a violation of the Student Code exists, institute a formal investigation of the charges.

2. Formal Investigation: If the Investigative Panel determines there is reason to believe a violation of the Student Code has occurred, it shall select one or more of its members or some other student enrolled within the College of Law to serve as Presenter of the alleged violation. In deciding who should serve as Presenter, the Investigative Panel shall consider:

    a) The student's ability to perform the duties of Presenter with discretion and without prejudice;

    b) Whether personal relations with the accused or known witnesses would inhibit or unduly influence the performance of his or her duties;

    c) Whether the reported violation occurred during a course of activity in which he or she has an interest; and

    d) any other conflict.

3. When the Investigative Panel reports to the Hearing Panel that probable cause for a violation exists, the Ethics Council Hearing Panel will contact the accused in writing and inform him or her:

    a) of the alleged violation and course of conduct to be investigated as a violation of the Student Code; and

    b) that he or she is entitled to be assisted by an advisor of his or her choice, provided, however, the advisor may not be a member of the College of Law faculty. The advisor may fully represent the student in all capacities as the accused finds necessary.

B. PROCEDURE

1. Within twenty regularly scheduled class meeting days after his or her appointment, the Presenter will complete the investigation of the charges and will prepare a written account of the relevant facts.

2. Upon completion of the investigation, the Presenter will meet with the Ethics Council Investigative Panel and present a detailed summary of the result of the investigation. If it is reaffirmed that probable cause for a violation exists, the Investigative Panel shall advise the Chairperson of the Ethics Council Hearing Panel of the formal charges and request a date for a hearing. At least twenty regularly scheduled class days before the hearing date, the Chairperson of the Hearing Panel will notify the accused, in writing:

    a) of the date, time, and place of the hearing;

    b) of the specific charges and course of conduct alleged to constitute a violation of the Student Code; and

    c) that he or she is entitled to the assistance of an advisor of his or her choice provided, however, the advisor is not a member of the College of Law faculty. The advisor may fully represent the student in all capacities as the accused finds necessary or appropriate.

3. If upon hearing the report of the Presenter, the Ethics Council Investigative Panel concludes probable cause for a violation does not exist, it shall dismiss the charges.

4. If the matter is dismissed, the Ethics Council Investigative Panel will notify the accused, in writing, of the final disposition of the complaint. Once a matter is finally disposed of at this stage, it shall not be re-opened by the Ethics Council, but the decision to dismiss may be appealed to the faculty pursuant to III(C)(6).

5. Should a violation occur at the end of a semester, the Ethics Council shall delay the proceedings until the next semester unless the accused makes a written request to expedite the matter and the Ethics Council concludes that the matter may be fairly adjudicated. The accused's ability to prepare and present his or her defense shall be a persuasive factor. If the violation involves a "graduating senior," see sections V and VII.

6. Upon a showing of good cause, the time periods set forth in this section may be altered by the Ethics Council Hearing Panel.

C. HEARING

1. The Chairperson will preside over the hearing which may be attended by all members of the Ethics Council, the accused, the accused's advisor, and testifying witnesses. Members of the Hearing Panel shall have the duty to disqualify themselves from the Hearing Panel if they believe that they cannot reach an impartial decision, if there is a conflict of interest, or if he or she has a personal involvement in the matter. Once a member has disqualified him or herself, he or she shall not participate any further in the proceedings against the accused. In addition, the student accused of a violation of the Student Code shall have the right to challenge a member of the Hearing Panel for good cause shown. Upon such a challenge, the remaining unchallenged members of the Hearing Panel shall decide the merits of the challenge. Except for witnesses, who shall be sequestered, the hearing will be open to the public unless the accused requests a closed hearing. A request for a closed hearing must be made in writing to the Chairperson at least forty-eight hours before the scheduled time of the hearing. It shall be within the discretion of the Hearing Panel to grant the accused's request for a closed hearing.

2. At the hearing, it will be the duty of the Presenter to seek the truth. The accused may rebut any testimony presented and present his or her defense or proof of such mitigating circumstances as the accused deems necessary or appropriate, or both.

3. The hearing will be conducted under the following rules of procedure:

    a) the Ethics Council Hearing Panel may admit and give probative effect to evidence, including hearsay which possesses probative value. It may exclude incompetent, irrelevant, immaterial, and unduly repetitious evidence;

    b) documentary evidence may be received in the form of copies, excerpts, or incorporated by reference;

    c) the accused and the Presenter will have the right on every issue:

        i) to call witnesses and present evidence;

        ii) to cross-examine all witnesses called to present evidence at the hearing;

        iii) to examine and rebut all documents;

        iv) to submit rebuttal evidence; and

        v) to present summation and argument.

    d) The Hearing Panel shall decide the issue of guilt solely upon the evidence presented at the hearing. The burden of proof required to sustain any violation of the Student Code lies with the Presenter. The standard of proof is by a preponderance of the evidence.

4. At the conclusion of the hearing, the Ethics Council Hearing Panel will resolve the issue of guilt of the accused.

    a) Within two regularly scheduled class days, but in no event more than seven days, of the conclusion of the hearing, the Ethics Council Hearing Panel will inform the accused, in writing, of its decision, and if guilty, the sanctions it will recommend.

    b) If the accused is found to be not guilty, the Ethics Council shall set forth its findings in writing and dismiss the charges with prejudice and any and all records except the academic records, examination, or seminar papers of the College of Law, will be sealed and, after the expiration of any appeal time, may be destroyed with the written consent of all parties. A decision of not guilty may be appealed to the faculty by the Presenter or by the faculty member whose course is involved, if any, or the advisor of the co-curricular or extracurricular activity, if one is involved.

    c) If the accused is found guilty of a violation of the Student Code, the Ethics Council Hearing Panel will prepare a complete report of findings of fact, together with a recommendation of sanction, and submit the report, in writing, to the Associate Dean for Academic Affairs (hereinafter the Associate Dean) for faculty action. Notice of such submission and a copy of such shall be given promptly to the accused. The accused may also submit his or her written recommendations of sanctions or explain mitigating circumstances. The accused shall have the right to appeal to the faculty.

d) An appeal to the faculty of the College of Law of a decision by the Ethics Council Hearing Panel shall be made in writing, within thirty calendar days from the date of written decision of the Ethics Council Hearing Panel.

IV. FACULTY REVIEW

A. SCOPE OF REVIEW

It is expressly provided that all findings of guilty or not guilty, dismissal, or the recommended sanctions may be appealed to the College of Law faculty. Upon appeal, the faculty shall have the discretion (1) to review the records from the Ethics Council Hearing Panel, (2) to permit appellate argument on the record of the proceedings before the Ethics Council Hearing Panel, or (3) to hear the case de novo. The faculty may review the legal standards applied by the Ethics Council and procedures it employed.

B. PROCEDURE:

1. The Associate Dean or the Associate Dean's designee shall preside at the faculty hearing.

2. For the purposes of an appeal under the Student Code, the faculty shall consist of those individuals entitled to attend executive sessions of the faculty.

3. Any faculty member who has a conflict of interest or personal involvement in the matter shall excuse himself or herself from hearing the case on appeal. The accused shall have the right to challenge a faculty member for good cause shown. Upon such challenge, the remaining unchallenged members of the faculty shall decide the merits of the challenge.

4. A majority of the faculty entitled to hear the case shall constitute a quorum.

5. A vote of sixty percent of the faculty hearing an appeal shall be necessary to find a student accused of violating the Student Code guilty. All other matters, including a recommendation of sanctions if the student is found guilty, shall be resolved by majority vote.

6. The accused shall have the right to be assisted by an advisor at all proceedings before the faculty on appeal, provided, however, the advisor shall not be a member of the College of Law faculty.

7. If the proceeding before the faculty is a de novo hearing, the rules set forth in III (C) shall apply, including the standard of proof.

8. If the proceeding before the faculty is a review of the record or a review of the record with arguments, the Ethics Council's Hearing Panel shall be affirmed if its decision is supported by substantial evidence.

9. If the appeal from the Ethics Council concerns only the recommended sanction, then all arguments to the faculty shall be submitted in writing and without oral arguments.

10. In the event of an appeal of a decision of the Ethics Council, the Associate Dean for the College of Law shall designate the Presenter, provided, however, the Presenter shall not be a member of the College of Law faculty.

11. The Associate Dean shall establish such additional procedures as necessary and as are consistent with the Student Code for conducting appeals from the Ethics Council Hearing Panel.

C. Faculty Decision. Consistent with the ABA Standards and its Interpretations (Standard 205), the decision of the faculty shall be final subject only to an appeal as set forth in Section VI. If the decision of the faculty is guilty, the faculty shall recommend appropriate sanctions to the Associate Dean.

V. SANCTIONS

A. OVERVIEW

The following sanctions are not intended to constitute the exclusive list of sanctions which may be recommended to the Associate Dean of the College of Law by the Hearing Panel or the faculty.

1. Reconsideration by the professor of the grade or credit to the violator of the specific course involved;

2. Written reprimand to be placed in a student's College of Law academic file;

3. Ineligibility to participate in any co-curricular activity, or to receive a scholarship, loan, grant in aid, or employment, any of which are administered by the College of Law;

4. Suspension for one or two semesters, the first being the semester during which the offense occurred; or

5. Dismissal from the College of Law.

B. IMPOSED SANCTIONS

The sanctions imposed shall be commensurate with the nature of the violation. Failure to report a violation shall constitute grounds for the sanction of public censure, written reprimand placed in a student's academic file, or ineligibility to participate in any co-curricular activities.

VI. APPEAL

An appeal of the faculty's decision or the sanctions imposed by the Associate Dean may be made to the Dean of the College of Law who, pursuant to the provision of Section 6.3.4 of the West Virginia University Board of Governors Policy 15, Student Academic Rights, has been designated by the President of West Virginia University as the President's designee to hear such appeals. Before reaching a decision on the Appeal, the Dean, as the designee of the President, shall consult with University Counsel to assure that all applicable procedural policies and rules have been followed. Following this consultation with University Counsel, the Dean shall render his or her decision within thirty calendar days after the receipt of written notice of the appeal. The decision of the Dean, as designee of the President, shall be final.

VII. COMPLAINTS AGAINST GRADUATING STUDENTS

If a complaint is received by the Ethics Council within the fourteen calendar days preceding the date of graduation of the accused student, the Ethics Council has authority to expedite the procedure outlined so long as the Ethics Council believes that the matter may be fairly adjudicated. If the Council concludes the matter cannot be fairly adjudicated before graduation, the student's diploma will be withheld pending resolution of the charge. If the accused is found guilty of a violation of the Student Code, the Ethics Council may recommend that he or she not be allowed to graduate from the College of Law or that graduation be delayed until prescribed conditions are met.

VIII. MISCELLANEOUS PROCEDURES

All hearings described in Section III will be documented and a record maintained. A permanent record of all documents will be kept for all findings of guilt by the Ethics Council. For findings of not guilty, all such documents, except records the College of Law maintains for all students as a normal part of the records, will be sealed, and, with the written consent of all parties, destroyed after expiration of the appeal period. An audiotape or written transcript of the hearing delineated in Section III (C) shall be made and provided for use on appeal. Thereafter, it may be destroyed.

IX. AMENDMENT OR REPEAL PROCEDURE

A. STUDENT-INITIATED AMENDMENT OR REPEAL

This Student Code may be amended or repealed at any time. In order to initiate such amendment or repeal, a petition which sets forth the proposed amendment or calls for the repeal of this Student Code that contains the signatures of fifteen percent of the entire student body of the College of Law shall be presented to the Ethics Council. The proposed amendment or petition to repeal shall be posted for two weeks upon the appropriate bulletin boards within the College of Law. Approval of sixty percent of the student body shall be required for adoption of the amendment or repeal of the Student Code. The election shall be by secret ballot.

B. ETHICS COUNCIL OR FACULTY-INITIATED AMENDMENT OR REPEAL

Amendment or repeal may also be proposed by a resolution approved by either a majority of all the members of the Ethics Council or a majority vote of the faculty. An amendment or repeal of this Code shall be effective upon ratification by the College of Law faculty.

C. INVALIDATION

Invalidation of any part of this Student Code for any reason shall not affect the validity of the rest of the Student Code.

X. ADOPTION PROCEDURE

This Student Code must be ratified by the faculty of the College of Law followed by approval of sixty percent of the students. The students shall vote in a referendum by secret ballot. The election shall be conducted by the Student Bar Association.

Adopted: April 4, 1991

Last Revised: July 1999

C. BAR ADMISSION

An ex-president of West Virginia University, who now teaches at the College of Law, likes to remind incoming law students that they are not going TO law school, but rather THROUGH law school.[1] He is right. New law students should realize that the first day of law school is actually the first day of a career as a lawyer. The first thousand days of that career (approximately) will be spent in studying how to be a lawyer and making strategic choices that help assure successful completion of a state bar exam and successful admission to practice.

[1] Professor David Hardesty.

C.1 ADMISSION TO PRACTICE

A lawyer may not practice without a license. Because each state establishes its own licensing procedures, the process of admission to practice varies from state to state. Although the application is typically submitted to the state in the spring semester of the third year of law school, some states require early notice of an intent to practice within the state's borders. Some even permit a law student to begin the application process early in the law school career at a significantly reduced price. Obviously, every first-year law student should review the application rules in the states where the student plans to practice.

The National Conference of Bar Examiners (NCBE) maintains a website that includes state-by-state bar admission information that is regularly updated with contact addresses, phone numbers, and web sites where application procedures can be reviewed. Access the NCBE website at this address: www.ncbex.org.

Each state's admission process includes a character and fitness review that takes place after graduation. The character and fitness review is essentially a background check to assure that the applicant will practice law competently and ethically. The review is comprehensive but particularly scrutinizes the applicant's record during the three years of law school. Hence, it is particularly important that incoming law students adopt a professional persona that evolves positively during the law school career. For example, a law student who blemishes his or her reputation with substance abuse offenses may be delayed in the admission process until the state's character and fitness committee is assured that the applicant has resolved all issues that might negatively impact the applicant's ability to practice law competently and ethically. On the other hand, if an applicant has a past history of substance abuse, but has faced and solved that problem, past events are unlikely to prevent the applicant from being admitted to practice.

C.2 THE BAR EXAM

Because each state decides how to structure its bar exam, every first-year law student should research the specifics of the exams in the states where the student will practice. The NCBE creates a national bar admission exam that consists of four parts: the Multistate Bar Exam (MBE) (200 multiple-choice questions); the Multistate Professional Responsibility Exam (MPRE) (50 multiple-choice questions); the Multistate Essay Exam (MEE) (six essay questions); and the Multistate Performance Test (MPT) (two ninety-minute questions that focus on a practical lawyering task). Almost every state has adopted one or more of these national tests as part of the state-specific exam.

Some states also have a state-created component. Thus, a state's bar exam can consist of NCBE components and state-specific components, and a law student who wishes to be prepared for the exam must research the exam format as well as the subjects tested by the exam.

Careful planning of coursework during law school can help assure that the student is well prepared for the exam. Although a student need not take every course tested by the bar exam, the summer bar exam prep period is too short to self-teach all the subjects that are tested. Hence, a law student should plan law school coursework with an eye toward being prepared.

West Virginia's bar exam consists of all four tests created by the NCBE. Most students take the Multistate Professional Responsibility Exam after finishing the second year of law school. The post-graduation bar exam given in February for December graduates, and in July for May graduates consists of the Multistate Bar Exam, Multistate Essay Exam, and Multistate Performance Test. The following subjects are tested:

Subjects tested by the MBE:

- Constitutional Law
- Contracts/Sales
- Criminal Law
- Criminal Procedure
- Evidence
- Federal Civil Procedure
- Real Property
- Torts

Subjects tested by the MEE:

- Business Associations (Agency and Partnership; Corporations and Limited Liability Companies)
- Conflict of Laws
- Constitutional Law

- Contracts
- Criminal Law
- Criminal Procedure
- Evidence
- Family Law
- Federal Civil Procedure
- Real Property
- Torts
- Trusts and Estates (Decedents' Estates; Trusts and Future Interests)
- Uniform Commercial Code (Secured Transactions)

C.3 ACTION CHECKLISTS FOR LAW STUDENTS

The following checklists can help a law student stay on-track for successful completion of the bar exam and the admission to practice process.

1L YEAR:

- Check the state's website for licensing requirements and bar exam information.
- Make a note of the subject matter covered by the state exam and use this information in planning coursework during the three years of law school.
- If your state permits early application, consider applying now to save money.
- If you have character and fitness review concerns because of past or present events, start resolving those issues now. The same advice applies to financial issues that affect your credit history.
- Note whether your state requires the applicant to complete service hours while in law school (some states now require applicants to have completed a certain number of hours in an experiential learning environment prior to application).
- Start saving for the 3L expenses of graduation, admission to practice, and a bar exam prep course. Plan on having at least $8,000 to cover these costs and summer expenses.

2L YEAR:

- Review the 1L Year checklist and update.
- Complete the Professional Responsibility course and take the MPRE during the summer.
- Revisit the state's website to note any possible changes.
- Plan your coursework strategically.

3L YEAR:

- Do a transcript check in the fall. Will you graduate as planned?
- Visit the website of the West Virginia Board of Law Examiners (or the website in the state where you will take the bar).

    1. Print and read the bar application materials.

        A. What are the state's licensing requirements?

        B. What is the deadline for the application?

        C. What fees are applicable? Do I need financial help?

        D. Where will I complete the character review?

        E. What can I do now to start the process?

        F. Are there other deadlines?

    2. Understand the Bar Exam.

        A. What are the dates/location of the bar exam?

        B. What kinds of tests are on the bar?

        C. What subjects will be tested?

        D. How are the tests scored?

E. What is the "passing" score?

- Visit the website of the National Conference of Bar Examiners (http://www.ncbex.org/) at the end of the first semester and begin the application for admission no later than January 1. (The application can take weeks to complete with all the required information.)
- Learn as much as you can about the review programs for the bar exam, e.g., Kaplan, Barbri, and Themis. Choose one comprehensive program, pay for it, and get the books early for an early start!
- Assess the degree to which you are at risk for not passing the bar exam. Then make a plan to build on your strengths and minimize those risks.
- Make a realistic plan for your summer that includes at least 600 hours of on-task study time prior to the exam (the number of hours that most students say it takes to be ready for the exam).

NOTE: If any change to your student record occurs at any point (DUI, arrests, etc.), you must notify the Assistant Dean for Student Affairs and produce the information in written form for your student file. The Board of Bar Examiners will expect the information they review regarding your record to match what the College has on record in your student file.

C.4 BAR PREPARATION COURSES

The College of Law currently offers several for-credit bar exam preparation courses.

Multistate Performance Test Workshop (Law 664): This one-credit course, which encourages students to learn how to apply substantive law in the context of a Performance Test examination, is open to select (by invitation only) upper-level students. The class provides in-depth training in legal reasoning for law school exams, the bar exam, and legal practice. Students receive guidance and feedback on all written work from the professor about ways to improve their legal reasoning skills.

Essay Writing Workshop I (Law 682): This one-credit course is open to all third-year students. The course provides an overview of the bar exam, addresses how to study and spot issues in essay questions, and teaches students how to write responses to essay questions.

Essay Writing Workshop II (Law 683): This one-credit course is occasionally offered in conjunction with Essay Writing Workshop 1 to provide an additional hour of credit for select students who would benefit from supplemental instruction.

MBE Skills Workshop (Law 667): This is a two-credit, pass/fail course, typically offered in the spring semester. The course is designed to provide in-depth training in the legal reasoning needed to successfully answer multiple-choice questions on the bar exam, and assists students with completing their character and fitness applications.

Social Justice Policies

A. NON-DISCRIMINATION AND EQUAL OPPORTUNITY

B. STUDENTS WITH DISABILITIES

C. SEXUAL HARASSMENT

A. NON-DISCRIMINATION AND EQUAL OPPORTUNITY

The West Virginia University College of Law is an affirmative action/equal opportunity institution. The College does not discriminate on the basis of age, color, disability, national origin, race, religion, sex, sexual orientation, or veteran status in the administration of any of its education programs or activities or with respect to admission and employment.

The College neither affiliates knowingly with nor grants recognition to any individual, group, or organization having policies that discriminate on the basis of age, color, disability, national origin, race, religion, sex, sexual orientation, or veteran status as defined by the applicable laws and regulations.

Implementation of this policy is spelled out in the West Virginia University Student Handbook and in other pertinent University documents.

B. STUDENTS WITH DISABILITIES

Students with disabilities receive appropriate accommodation on a case-by-case basis. Any student seeking an accommodation must submit proof of disability to the University Office of Accessibility Services (http://accessibilityservices.wvu.edu/) (304-293-6700) and obtain from that office a letter setting forth recommended accommodations. That student shall present that letter to the Assistant Registrar for the College of Law, who shall arrange appropriate accommodation. If the disability arises from an emergency illness or injury, the student shall notify the Assistant Dean for Student Life as soon as the emergency occurs and shall complete the process under the direction of the Assistant Dean. No student may receive retroactive accommodation for any disability.

C. SEXUAL HARRASSMENT

The College of Law liaison for sexual harassment for faculty, staff, and students is the Assistant Dean for Student Life (304-293-7320). Discussions are in complete confidence, and most problems can be resolved without the involvement of anyone other than the liaison and the persons directly involved. Services are also available to students, staff, and faculty through the liaison's access to educational materials.

Student Organizations, Guidelines, and Services

A. COLLEGE OF LAW ORGANIZATIONS

1. Co-Curricular Organizations
2. Recognized College of Law Student Organizations
3. Directory of Administrative Personnel for Student Organizations
4. Rules and Policies for Student Organizations

B. CONSTITUTION OF THE SBA

C. COLLEGE OF LAW SERVICES

1. Academic Excellence Program
2. Professional Writing Center
3. Meredith Career Services Center
4. College of Law Bookstore and Café
5. Financial Aid
6. Scholarships
7. Technology Services
8. Communications
9. Web Information

D. UNIVERSITY SERVICES

1. General Information
2. Health Services
3. Student Activities and Organizations

A. COLLEGE OF LAW ORGANIZATIONS

1. Co-Curricular Organizations (p. 624)
2. Recognized College of Law Student Organizations (p. 625)
3. Directory of Administrative Personnel for Student Organizations (p. 625)
4. Rules and Policies for Student Organizations (p. 626)

Student organizations are a vital part of the College of Law culture. Involvement promotes contact with other students who share your interests and provides opportunities to develop skills outside the classroom setting.

For any question regarding Student Affairs Services, please contact the Assistant Dean for Student Life or the Associate Dean for Academic Affairs.

Assistant Dean for Student Life
Tina Jernigan
Phone: 304-293-6253
Email: tina.jernigan@mail.wvu.edu

Associate Dean for Academic Affairs
Elaine Waterhouse Wilson
Phone: 304-293-7802
Email: elaine.wilson@mail.wvu.edu (elaine.wilson@mail.wvu.edu)

A.1 CO-CURRICULAR ORGANIZATIONS

1. LAW REVIEW

The West Virginia Law Review is a professional, student-governed legal journal that publishes articles of interest to legal scholars, students, legislators, and members of the practicing bar. Founded in 1894, the West Virginia Law Review is the fourth oldest law review in the United States and publishes three issues each year. Student members of the Law Review write, solicit, select, and edit articles and are involved in all stages of preparing issues for publication.

Membership on the Law Review is available only to second- and third-year students. To be eligible for membership, students must obtain a minimum GPA of 2.5 in first-year courses. Law Review participants who complete membership requirements receive up to four hours of credit.

Invitations for membership are based on a summer writing competition where students must write a short student article on a predetermined issue of law. After the write-on competition, there are two ways in which students are extended membership: 1) academic performance combined with writing score or 2) writing score alone. For students ranking in the top fifteen percent of their class at the end of the first year, the student article accounts for thirty-five percent of the total score, and first-year grades account for sixty-five percent of the total score. For all other students, the student article accounts for 100 percent of the total score. The number of invitations extended in this competition is dependent upon the quality of papers submitted. The maximum Law Review membership is forty-two students.

2. M.E. LUGAR TRIAL ASSOCIATION

The Lugar Trial Association is a co-curricular course designed to assist students in developing litigation skills through a mock trial program. Teams of students compete in a minimum of four mock trials per year, as well as participate in various other trial competitions. Each trial is presided over by a practicing attorney or judge, and following the trial, each advocate is critiqued by the judge. Membership is available to second- and third-year students who have completed the Trial Advocacy course with a grade of B or better. If more than thirty students wish to participate, members will be selected by lottery. Students who successfully complete the requirements receive up to three hours of credit.

3. MOOT COURT BOARD

Moot Court Board is a co-curricular organization designed to recognize and reward students for their oral and written appellate advocacy skills, as well as strengthen and further refine those skills. Board members compete in and manage the George C. Baker Cup intramural appellate moot court competition; participate in various intercollegiate, national, and international moot court competitions; and conduct monthly meetings. Each member is required to compete in an "outside" interscholastic competition.

Early each spring semester, the Moot Court Board invites second-year students to be members of Moot Court Board based upon their work in Appellate Advocacy, a required upper-level course. To be eligible for Moot Court Board, students must have completed Appellate Advocacy during the previous fall semester or in the summer session immediately preceding fall semester. In evaluating Appellate Advocacy student work, the Moot Court Board bases its decisions on appellate brief writing scores and oral advocacy scores earned in the Appellate Advocacy course. A maximum of eighteen members are chosen at that time.

The remaining second-year justices are selected through the Baker Cup Competition, which is held annually each spring semester. The Baker Cup competition is open to all second-year students who have passed Appellate Advocacy in the fall or are currently taking Appellate Advocacy in the spring. Newly selected members must participate in the competition. The Baker Cup competition ranks all competitors, uses that ranking to determine the National Moot Court Team (top six members), awards other prizes such as Best Brief and Best Oralist, and sets priorities for other outside competitions.

Moot Court Board Justices are required to maintain a 2.0 GPA and participate in at least one interscholastic appellate advocacy competition in their third year. Part-time justices must find a competition that does not require full-time status. Justices are awarded up to three hours of credit.

Students who successfully complete all the requirements for Moot Court Board membership receive up to three hours of credit.

4. JESSUP INTERNATIONAL MOOT COURT

Jessup International Moot Court is a co-curricular class in which up to five students prepare for and compete in the Jessup International Moot Court Competition. Participation in Jessup is open to second- and third-year students. Preparing for and participating in the competition begins early in the fall semester and continues until mid-spring. Students participating in Jessup sign up for a one-credit, graded class in the fall and spring semester of that year. (Members who participate in Jessup for two years thus can obtain a total of four hours credit.) Jessup students must have successfully completed or be currently enrolled in International Law.

5. FAMILY LAW QUARTERLY

The purpose of the Family Law Quarterly ("FLQ") is , first, to make a significant contribution to the legal community by publishing material of practical and theoretical importance, and second, to give students an opportunity to work on important legal scholarship. The Board of Editors consists of law professors, judges, and lawyers who specialize in family law. The Board of Editors is responsible for soliciting, choosing topics for publication and finding authors to write articles on those topics. The Editor in Chief serves as the Chair of the Board of Editors. Second and third year students are eligible to be members of FLQ. New members to the FLQ will be considered Junior Members (JM); members who have spent one year as a Junior Member will be considered Senior Members (SM). There will be one position available to an SM to become the students Editor in Chief, and there will be one or two

positions available to an SM to become an Executive Research Editor. The student Editor in Chief and the student Executive Research Editor(s) may be eligible for scholarship money that is awarded by the ABA each year.

A.2 RECOGNIZED COLLEGE OF LAW STUDENT ORGANIZATIONS

The following is a list of organizations that are currently active at the College of Law, subject to official recognition each school year as described below. Full descriptions of the organizations and their purpose can be found on the College of Law website (http://law.wvu.edu/student-life/student-organizations/).

2019-2020

- ACLU - American Civil Liberties Union
- ADR - Alternative Dispute Resolution Society
- Animal Legal Defense Fund
- Asian-Pacific American Law Students Assoc. (APALSA)
- BLSA - Black Law Students Association
- Business Law Society
- Christian Legal Society
- Class of 2021
- Class of 2022
- Class of 2023
- Community Service Council
- Defense Trial Council of West Virginia
- Democratic Law Caucus
- Energy Law Association
- Environmental Law Society
- Family Law Quarterly
- Federalist Society
- Health Law Society
- International Law Students Association (ILSA)
- Labor Law Society
- Marilyn E. Lugar Trial Association
- Moot Court Board
- OutLaw
- Phi Alpha Delta, Willey Chapter
- Public Interest Advocates (PIA)
- Republican Law Caucus
- Sports and Entertainment Law Society
- Student Bar Association
- Tax Law Society
- Veteran & Military Advocacy Group
- Women's Leadership Council
- WV Association for Justice
- WV Intellectual Property Association
- WV Law Review
- WVU Revitalization Association
- WVU Consumer Law & Advocacy Group

A.3 DIRECTORY OF ADMINISTRATIVE PERSONNEL FOR STUDENT ORGANIZATIONS

Assistant Dean for Student Life
Tina Jernigan
Phone: 304-293-6253
Email: tina.jernigan@mail.wvu.edu

The Assistant Dean is the administrative liaison for student organizations. See the Assistant Dean for official recognition and about elections, student organization files, budget, and other issues. The Assistant Dean is the cosigner on checking accounts.

Associate Dean for Academic Affairs
Elaine Waterhouse Wilson
Phone: 304-293-7802
Email: elaine.wilson@mail.wvu.edu

Samantha Stefanov
Office Administrator
Phone: 304-293-0064
Email: samantha.stefanov@mail.wvu.edu
Ms. Stefanov is responsible for distributing keys. Building maintenance issues may also be discussed with her.

Receptionist
Phone: 304-293-5301
The master building key sign-out log is also maintained at the front desk.

A.4 RULES AND POLICIES FOR STUDENT ORGANIZATIONS
RESPONSIBILITIES

1. Approval. All student organizations must petition the University for official recognition. All student organizations must also get annual approval from the University to be a recognized College of Law student organization. To obtain approval, the organization must submit an "Officer Update Form" online. The Petition and Officer Update Form, as well as additional information, is also available at the University Student Engagement and Leadership website.

2. Recordkeeping. The College of Law's Assistant Dean for Student Life maintains a file for each student organization. This file must contain copies of all materials pertaining to the student organization, a list of officers, the constitution, and recognition form for filing. Student organizations also may store their checkbooks and financial records in this file over the summer.

3. Elections. Elections for new class officers must be held before March 15 each year. Election results must be delivered to the Assistant Dean for Student Life within two days of the election. The third-year class president runs the ballot box for the selection of Professor and Staff Member of the year. This election must be held three weeks before Honors Weekend.

4. Other. The new SBA president is responsible for recruiting students for appointment to faculty committees and working with the Assistant Dean for Student Life to accomplish this. The SBA also is responsible for providing the Assistant Dean for Student Life with information for the College of Law's summer newsletter.

ROOMS/EQUIPMENT

1. Room Reservations. To reserve a room, you must contact the Assistant Dean for Student Life or Samantha Stefanov. Additionally, if it is a major event with outside attendance, you may also request that no parking tickets be issued during the event. Do not schedule an event opposite a major event in the courtroom.

2. Audio-Visual. Audio-visual equipment requests should be made at least one week in advance. Contact Ken Price by phone at 304-293-4657. You may also email him at kenneth.price@mail.wvu.edu. Any audio-visual problems should be reported to Ken. Available equipment includes TVs, VCRs, camcorders, computers, LCD projectors for presentations, etc. Questions concerning information technology may be addressed to Keith Walton.

3. Furniture/Equipment Needs. Tables and chairs are normally set up in the main lobby for student use. If you need more tables and chairs, please request them from Samantha Stefanov at least one week in advance. The Law School has a limited number of tables and chairs and must request additional equipment from the University Physical Plant.

COLLEGE OF LAW BUILDING POLICIES

1. Building Hours. The College of Law building hours are the same as the Law Library hours, which are available online (http://law.wvu.edu/library/). After hours, students may use their WVU ID to swipe into the building and Library. Custodial staff and WVU Public Safety Officers have authority to ask you to leave if you are in the building after hours. If you have planned a weekend activity and need to be in the building prior to the library opening, please see Samantha Stefanov one week in advance, and she will make arrangements to have the building unlocked.

2. Bulletin Boards / Posting Notices. Please post items on designated bulletin boards. Each board will have a label which indicates the appropriate posting for that board. DO NOT post materials on the doors, walls, or windows of the Law School. There are University regulations prohibiting this. NOTICES POSTED ON GLASS AND DOORS WILL BE REMOVED.

GENERAL SUPPLIES AND OPERATING EXPENSES

Stenja McVicker is the designated budget officer for the College of Law under West Virginia University rules and regulations. Basic office supplies are available from Diane Bragg. If your organization has need to make long distance calls or use the mail services, see Stenja McVicker. The items mentioned above are provided to the student organizations for reasonable usage. However, if you are planning an activity that requires the use of supplies, phone, or postage services beyond a reasonable amount, you should include those costs in the expenditure section of your event proposal.

B. CONSTITUTION OF THE STUDENT BAR ASSOCIATION OF WEST VIRGINIA UNIVERSITY COLLEGE OF LAW

PREAMBLE.

In order to represent the law school student body individually and organizationally; to further organizational communication and cooperation; and to maximize student involvement in academic and administrative processes; we, the students of West Virginia University College of Law, do hereby ordain and ratify this Constitution.

ARTICLE I: NAME OF ORGANIZATION

This organization shall be known as the Student Bar Association (hereinafter, "the S.B.A.") of the West Virginia University College of Law (hereinafter, "the Law School" or "the College of Law").

ARTICLE II: PURPOSE, DUTIES, STRUCTURE, AND MEMBERSHIP

SECTION ONE: ORGANIZATION AND PURPOSE.

The S.B.A. is the student government of the Law School. The S.B.A. Executive Board (hereinafter, "the Executive Board") is comprised of the elected officers, representatives, and appointed persons. Its purpose is to:

1. Promote a community among the Members of the Law School (students, faculty, staff, and the administration);
2. Formally advocate for and represent the student body of the Law School to the faculty, staff, alumni, and administration of the Law School and West Virginia University, as well as the public;
3. Promulgate rules and exercises rulemaking authority over groups, organizations, offices, property, and effects under its jurisdiction; and
4. Sponsor and host events for the Law School community.

SECTION TWO: DUTIES AND RESPONSIBILITIES.

The S.B.A. has the authority and responsibility to:

1. Oversee every student organization within the Law School, including each organization's budget;
   - Specific rules and regulations governing definition, formation, conduct, and expectations of student organizations are subject to the WVU College of Law Student Handbook.
2. Allocate S.B.A. funds;
3. Execute and regulate all Law School student government elections, including (but not limited to), class officer elections and Ethics Council elections;
4. Execute and oversee the biannual Visiting Committee student round table;
5. Host the Annual Barrister's Ball; and
6. Assume all other duties not detailed by this Constitution as may be delegated to the S.B.A. by the Students, Faculty or Administration of the Law School.

SECTION THREE: MEMBERSHIP.

All students enrolled in the Law School are Members of the S.B.A. and shall be represented by the S.B.A. Executive Board. All students enrolled in the Law School are permitted to vote in S.B.A. elections. There is to be no Membership fee.

SECTION FOUR: COMMITTEES

1. **Standing Committees**. The S.B.A. shall maintain three standing committees; (1) The Social Committee; (2) The Fundraising Committee; and (3) The Community Service Committee. These Committees are to be chaired by elected Members of the Executive Board. The Standing Committees may only be dissolved through Constitutional Amendment.
2. **Working Committees**. The President has the authority to create working committees, with the advice and consent of the majority of the Executive Board. Once the Executive Board approves a working committee, the President may select a chairperson and Members of the working committee from the student body. Chairpersons and members of working committees serve at the pleasure of the President. A working committee may be dissolved at any time by a simple majority vote of the Executive Board.

ARTICLE III: THE EXECUTIVE BOARD

SECTION ONE: MEMBERSHIP

1. The Executive Board shall consist of eleven board Members:
   - President
   - Vice-President
   - Secretary
   - Treasurer
   - Social Committee Chairperson
   - Fundraising Committee Chairperson
   - Community Service Chairperson
   - 3L Class Vice President
   - 2L Class Vice President
   - 1L Class Vice President; and
   - Bar Association Liaison
     - The Executive Board may include the working committee chairpersons by a simple majority vote of the Executive Board.
2. The S.B.A. Executive Officers (herein after "Executive Officers") are:
   - President
   - Vice-President
   - Secretary
   - Treasurer

SECTION TWO: PRESIDENT

The President is the director of the S.B.A.. The President shall convene and preside over all meetings of the S.B.A. and shall supervise and direct all S.B.A. activities. In addition, the President shall represent the concerns of the student body and S.B.A. to the Law School administration and deans.

Duties and Responsibilities

The President shall:

- Call and preside at all scheduled and emergency meetings of the S.B.A. and Executive Board;
- Attend all faculty meetings and representation of the S.B.A. thereto;
- Liaise to the Student Administration of West Virginia University;
- Create a budget to properly allocate all available funds for the academic year;
- Appoint student Members to law school student-faculty committees, with the advice of and consent by the majority of the Executive Board;
- Appoint officers to any vacancy on the Executive Board, with the advice of and consent by the majority of the Executive Board;
- Appoint S.B.A. committees as the need arises, with the advice of and consent by the majority of the Executive Board; and
- To call matters before the Executive Board to vote;
- To be a registered signer on the S.B.A. bank account and, when called upon by the Executive Board to do so, provide account details, statements, etc;
- When called upon to do so by the Treasurer, make deposits into the S.B.A. bank account within two business days of receiving funds; and
- Carry out all other ceremonial and administrative functions ordinarily assumed by the President

Election

The President shall be elected by a simple majority of all ballots cast by the student body. Any student currently enrolled at the Law School shall be eligible to vote for the President.

Term of Office

The President shall be elected to a one-year term of office. The President's term shall begin at the end of the Law School's Spring Commencement Ceremony that follows the President's election and shall end at the conclusion of the following academic year's Law School Spring Commencement Ceremony.

Eligibility

To be eligible to hold office, the President must be a student at the Law School, enrolled fulltime and in good academic standing, as defined by WVU College of Law Student Handbook.

SECTION THREE: VICE-PRESIDENT

The Vice-President is the deputy director of the S.B.A.. The Vice President shall support the President, convening and presiding over the S.B.A. and meetings when the President is not able or present.

1. **Duties and Responsibilities**. The Vice-President shall:
   • Ascend to the Presidency in the event of the President's death, removal, or withdrawal during the President's term of office;
   • Preside at S.B.A. meetings in the event of absence of the President; and
   • Represent the President at any ceremonial or administrative functions at the President's request.
2. **Election and Appointment**. The Vice-President shall be elected by a simple majority of all ballots cast by the student body. Any student currently enrolled at the Law School shall be eligible to vote for the Vice-President. In the case of a vacancy, the President, with the advice and consent of the majority of the Executive Board, may appoint a student to this position.
3. **Term of Office**. The Vice-President shall be elected to a one-year term of office. The Vice-President's term shall begin at the end of the Law School's Spring Commencement Ceremony that follows the Vice-President's election and shall end at the conclusion of the following academic year's Law School Spring Commencement Ceremony.
4. **Eligibility**. To be eligible to hold office, the Vice-President must be a student at the Law School, enrolled fulltime and in good academic standing, as defined by WVU College of Law Student Handbook.

SECTION FOUR: SECRETARY

The Secretary is the chief administrative officer of the S.B.A.

1. **Duties and Responsibilities**. The Secretary shall:
   • Attend, record, and disseminate the minutes of all S.B.A. meetings;
   • Maintain copies of minutes of all S.B.A. meetings until the conclusion of his or her term, at which point copies of the minutes shall be turned over to the incoming secretary and stored in the President's office;
   • Assist the President in formulation of meeting agendas and advance notice to the Executive Board thereof;
   • Provide personal notice to all Executive Board Members of the scheduling of emergency Executive Board meetings;
   • Keep record of all S.B.A. resolutions and bylaws;
   • Conduct official correspondence of the S.B.A.; and
   • Maintain a student event calendar and S.B.A. website.
2. **Election and Appointment.** The Secretary shall be elected by a simple majority of all ballots cast by the student body. Any student currently enrolled at the Law School shall be eligible to vote for the Secretary. In the case of a vacancy, the President, with the advice and consent of the majority of the Executive Board, may appoint a student to this position.
3. **Term of Office.** The Secretary shall be elected to a one-year term of office. The Secretary's term shall begin at the end of the Law School's Spring Commencement Ceremony that follows the Secretary's election and shall end at the conclusion of the following academic year's Law School Spring Commencement Ceremony.
4. **Eligibility.** To be eligible to hold office, the Secretary must be a student at the Law School, enrolled fulltime and in good academic standing, as defined by WVU College of Law Student Handbook.

SECTION FIVE: TREASURER

The Treasurer is the chief financial officer of the S.B.A.

1. **Duties and Responsibilities**. The Treasurer shall:
   • Maintain the S.B.A. Treasury;
   • Manage the S.B.A. bank account;
   • Record all receipts and disbursements;
   • Provide the Executive Board with a bank account summary (including detailed account statements) no less than once a month, or upon request by the President or Vice-President;
   • Deposit funds into S.B.A. bank account within two business days of receiving funds;
   • Maintain record of and provide oversight of the S.B.A.'s petty cash account; and
   • Ensure that no more than $100 is kept in petty cash at any given time (unless otherwise approved by Executive Board resolution)
2. **Election and Appointment.** The Treasurer shall be elected by a simple majority of all ballots cast by the student body. Any student currently enrolled at the Law School shall be eligible to vote for the Treasurer. In the case of a vacancy, the President, with the advice and consent of the majority of the Executive Board, may appoint a student to this position.
3. **Term of Office.** The Treasurer shall be elected to a one-year term of office. The Treasurer's term shall begin at the end of the Law School's Spring Commencement Ceremony that follows the Treasurer's election and shall end at the conclusion of the following academic year's Law School Spring Commencement Ceremony.

4. **Eligibility.** To be eligible to hold office, the Treasurer must be a student at the Law School, enrolled fulltime and in good academic standing, as defined by WVU College of Law Student Handbook.

SECTION SIX: SOCIAL COMMITTEE CHAIRPERSON

The Social Committee Chairperson is the Chair of the S.B.A.'s Social Committee.

1. **Duties and Responsibilities**. The Social Committee Chairperson shall:
   - Appoint Members to the S.B.A. Social Committee, with the advice and consent of the President;
   - Manage and supervise the Social Committee in planning and organizing various social events to be hosted by the S.B.A.;
   - Manage and supervise the Social Committee in planning and organizing the annual Barrister's Ball;
   - Collect, distribute and manage all money used in furtherance of or raised through social events until such a time that the money can be turned over to the President or Treasurer; and
   - Give the money raised by social events or the remainder of the money used in planning the event to the President or Treasurer for deposit within two business days of the event.
2. **Election and Appointment.** The Social Committee Chairperson shall be elected by a simple majority of all ballots cast by the student body. Any student currently enrolled at the Law School shall be eligible to vote for the Social Committee Chairperson. In the case of a vacancy, the President, with the advice and consent of the majority of the Executive Board, may appoint a student to this position.
3. **Term of Office.** The Social Committee Chairperson shall be elected to a one-year term of office. The Social Committee Chairperson's term shall begin at the end of the Law School's Spring Commencement Ceremony that follows the Social Committee Chairperson's election and shall end at the conclusion of the following academic year's Law School Spring Commencement Ceremony.
4. **Eligibility.** To be eligible to hold office, the Social Committee Chairperson must be a student at the Law School, enrolled fulltime and in good academic standing, as defined by WVU College of Law Student Handbook.

SECTION SEVEN: FUNDRAISING COMMITTEE CHAIRPERSON

The Fundraising Committee Chairperson is the Chair of the S.B.A.'s Fundraising Committee.

1. **Duties and Responsibilities**. The Fundraising Committee Chairperson shall:
   - Appoint Members to the S.B.A. Fundraising Committee, with the advice and consent of the President;
   - Manage and supervise the Fundraising Committee in planning and organizing fundraisers for the S.B.A.;
   - Collect, distribute and manage all money used in furtherance of or raised through fundraising events until such a time that the money can be turned over to the President or Treasurer; and
   - Give the money raised by fundraisers or the remainder of the money used in planning the fundraiser to the President or Treasurer for deposit within two business days of the fundraiser.
2. **Election and Appointment.** The Fundraising Committee Chairperson shall be elected by a simple majority of all ballots cast by the student body. Any student currently enrolled at the Law School shall be eligible to vote for the Fundraising Committee Chairperson. In the case of a vacancy, the President, with the advice and consent of the majority of the Executive Board, may appoint a student to this position.
3. **Term of Office.** The Fundraising Committee Chairperson shall be elected to a one-year term of office. The Fundraising Committee Chairperson's term shall begin at the end of the Law School's Spring Commencement Ceremony that follows the Fundraising Committee Chairperson's election and shall end at the conclusion of the following academic year's Law School Spring Commencement Ceremony.
4. **Eligibility.** To be eligible to hold office, the Fundraising Committee Chairperson must be a student at the Law School, enrolled fulltime and in good academic standing, as defined by WVU College of Law Student Handbook.

SECTION EIGHT: COMMUNITY SERVICE COMMITTEE CHAIRPERSON

The Community Service Committee Chairperson is the Chair of the S.B.A.'s Community Service Committee.

1. **Duties and Responsibilities**. The Community Service Committee Chairperson shall:
   - Appoint Members to the S.B.A. Community Service Committee, with the advice and consent of the President;
   - Manage and supervise the Community Service Committee in planning and organizing volunteer opportunities for the S.B.A. and student body;
   - Collect, distribute, and manage all money used in furtherance of or raised through community service events until such a time that the money can be turned over to the President or Treasurer;
   - Give the money raised by community service events or the remainder of the money used in planning the event to the President or Treasurer for deposit within two business days of the event;
   - Ensure that any money raised as a charitable contribution is given to the charity for which it is raised, in the form of a check or money order, by the President or Treasurer, within five business days of the fundraiser;
   - Report failures to comply with Article III, Section Eight, Subsection A(v) to the President and Assistant Dean of Student Affairs of the College of Law (hereinafter "the Assistant Dean of Student Affairs") within two business days of noticing the compliance failure;
   - Keep detailed records of all spending and earnings raised for charitable contributions including (but not limited to) ledger, carbon copies of checks and receipts; and

- Present the aforementioned records to the Executive Board upon request of the President or Vice-President at the meeting immediately following the request.

2. **Election and Appointment.** The Community Service Committee Chairperson shall be elected by a simple majority of all ballots cast by the student body. Any student currently enrolled at the Law School shall be eligible to vote for the Community Service Committee Chairperson. In the case of a vacancy, the President, with the advice and consent of the majority of the Executive Board, may appoint a student to this position.

3. **Term of Office.** The Community Service Committee Chairperson shall be elected to a one-year term of office. The Community Service Committee Chairperson's term shall begin at the end of the Law School's Spring Commencement Ceremony that follows the Community Service Committee Chairperson's election and shall end at the conclusion of the following academic year's Law School Spring Commencement Ceremony.

4. **Eligibility.** To be eligible to hold office, the Community Service Committee Chairperson must be a student at the Law School, enrolled fulltime and in good academic standing, as defined by WVU College of Law Student Handbook.

SECTION NINE: CLASS VICE PRESIDENTS

Class Vice Presidents are voting Members of the Executive Board who are tasked with representing their Law School class in the S.B.A..

1. **Duties and Responsibilities**. Class Vice Presidents shall:
   - Attend all S.B.A. meetings on behalf of their class;
   - Represent the interests of each individual class at S.B.A. meetings;
   - Vote on behalf of their class regarding S.B.A. matters;
   - Liaise to individual classes on behalf of the S.B.A.;
   - Liaise between the S.B.A. and their respective class officers; and
   - Serve as Vice-Chairperson of an S.B.A. Standing Committee, in this role Class Vice Presidents will assist and serve at the pleasure of the Chairperson. The President, with the advice and consent of the Chairpersons, shall make appointment of Class Vice Presidents to committees.

2. **Appointment.** At the beginning of his or her term, the President, shall appoint Class Presidents to this position.

3. **Term of Office.** The President shall appoint the Class Vice Presidents to a one-year term of office. The Class Vice Presidents' term shall begin immediately upon confirmation by the Executive Board and shall end at the conclusion of the academic year's Law School Spring Commencement Ceremony.

4. **Eligibility.** To be eligible to hold office, the Class Vice President must be students at the Law School, enrolled full-time and in good academic standing, as defined by WVU College of Law Student Handbook.

SECTION TEN: BAR ASSOCIATION LIAISON

The Bar Association Liaison serves as a pipeline between the Law School and federal, state, and local bar associations.

1. **Duties and Responsibilities**. The Bar Association Liaison shall:
   - Serve as liaison between the S.B.A. and the A.B.A. as well as state, and local bar associations;
   - Promote and help to organize events held by bar associations at the Law School;
   - Serve as a resource for students seeking information about future recruitment into the bar;
   - Attend all S.B.A. meetings and vote on S.B.A. matters; and
   - Carry out any functions or duties assigned by the President.

2. **Appointment.** At the beginning of his or her term, the President, with the advice and consent of the majority of the Executive Board, may appoint a student to this position.

3. **Term of Office.** The President shall appoint the Bar Association Liaison to a one-year term of office. The Bar Association Liaison's term shall begin immediately upon confirmation by the Executive Board and shall end at the conclusion of the academic year's Law School Spring Commencement Ceremony.

4. **Eligibility.** To be eligible to hold office, the Senators must be students at the Law School, enrolled fulltime and in good academic standing, as defined by WVU College of Law Student Handbook.

SECTION ELEVEN: REMOVAL OF S.B.A. OFFICERS

This section shall apply to S.B.A. Executive Board Members. Removal from office consists of two steps; impeachment and removal from office.

Impeachment.

An Executive Board Member may be impeached through one of two methods:

1. **Voting Method:**
   a. With cause, an Executive Officer may call for a special meeting in order to request impeachment against a Member of the Executive Board.
   b. All Executive Board Members, including the subject of impeachment, must be given notice no later than 72 hours prior to the meeting.
   c. Quorum for the impeachment meeting is 8 of 11 Executive Board Members.

    d. The President shall preside over the meeting. However, neither the accuser nor the accused shall preside. If the President is subject to impeachment or the accuser, the Vice-President shall preside. If the Vice-President is the accuser against the President or subject to impeachment and being accused by the President, the Secretary shall preside.

    e. At the meeting, the Executive Officer calling for impeachment may make his or her case to the Executive Board; the subject of the impeachment hearing may then present a rebuttal case. The presider in the interest of justice may determine methods of presenting evidence.

    f. After the cases are presented the Executive Board may sequester the accused and the accuser in order to deliberate.

    g. After deliberations, the Executive Board may vote on impeachment; the accuser and the accused do not vote.

    h. Executive Board Members must be present to vote.

    i. An Absolute majority (75%) of the voting Executive Board is required to impeach an Executive Board Member.

    j. This vote is subject to veto by the Assistant Dean of Student Affairs: this veto may be overridden by a unanimous vote of the Executive Board (excluding the vote of the person or persons subject to impeachment).

    k. Cause for which an Executive Officer may call for impeachment is
       i. Violation of this Constitution
      ii. Violation of the terms of the WVU College of Law Student Handbook for the Student Code of Professional Responsibility;
     iii. Stealing or misallocating S.B.A. funds;
     iv. Substantial nonperformance of duties which includes, but is not limited to, (i) continual failure to cooperate with matters approved by the Executive Board; (ii) dereliction of duties; or (iii) continual conduct or behavior that frustrates the purpose of the Executive Board's mission.
      v. Failure to attend at least 75% of S.B.A. meetings without cause (i.e. death in family, exam following day, illness, etc);
     vi. Failure to meet eligibility requirements; and/or
    vii. Committing an offense that would be a violation of the West Virginia University Campus Student Code
        1. Such a violation need not be proven in accordance with the procedures set forth by the West Virginia University Campus Student Code, but rather in accordance with the procedures set forth by this Constitution.

2. **Petitioning Method**
    a. With or without cause, an S.B.A. Executive Board Member may be impeached if the S.B.A. President or Vice-President is presented with a petition for impeachment including the signature of two-thirds of all Law School Students.

Removal from Office.

Once impeached, an Executive Board Member is subject to a public hearing to determine removal from office.

1. The hearing is to be presided over by the Chairperson of the College of Law Ethics Council.
2. Quorum for the hearing is the entirety of the Executive Board.
3. The Executive Officer who initiated impeachment or the proponent of the petition for impeachment shall be permitted to make a case to the Executive Board in support of removal.
4. The accused shall be permitted to make a rebuttal case.
5. The presider shall admit evidence and testimony as is required in the interest of justice.
6. During the hearing, the proponent of removal must show cause for impeachment beyond a reasonable doubt.
7. Once cases are made, the Executive Board (excluding the accused and accuser) is to vote as to whether the proponent has proven cause beyond a reasonable doubt.
8. Cause for removal is limited to:
    a. Violation of this Constitution;
    b. Violation of the terms of the WVU College of Law Student Handbook or the Student Code or Professional Responsibility;
    c. Stealing or misallocating S.B.A. funds;
    d. Substantial nonperformance of duties;
    e. Failure to attend at least 75% of S.B.A. meetings in one semester without cause;
    f. Three consecutive absences from regularly scheduled meetings without cause;
    g. Failure to meet eligibility requirements as defined by this Constitution; and/or
    h. Committing an offense that would be a violation of the West Virginia University Campus Student Code
      i. Such a violation need not be proven in accordance with the procedures set forth by the West Virginia University Campus Student Code, but rather in accordance with the procedures set forth by this Constitution.
9. A unanimous vote is needed to remove a Board Member from office.
10. If a unanimous verdict for removal is reached, the removal is immediate and not subject to appeal and the Board Member shall be replaced subject to the provisions of this Constitution.

ARTICLE IV: MEETINGS

SECTION ONE: REGULARLY SCHEDULED MEETINGS

A regularly scheduled meeting of the Executive Board may be called to discuss any matters before the S.B.A.

1. **Quantity.** The Executive Board shall meet not less than once monthly for a minimum of eight meetings during the academic year. Regularly scheduled meetings of the Executive Board may occur more commonly as needed.
2. **Scheduling.** The President may call a regularly scheduled meeting by providing notice of the time and location of the meeting to members of the Executive Board at least three days in advance.
3. **Precedence.** The President shall preside over all regularly scheduled meetings. The Vice-President shall preside in the President's absence. Meetings shall not proceed without the presence of either the President or Vice-President.
4. **Structure.** The presider of the meeting may determine the structure of each meeting.
5. **Quorum.** Fifty percent plus one Member of the Executive Board shall constitute a quorum.
6. **Voting,** Matters before the Executive Board at regularly scheduled meetings may be decided through a simple majority vote pursuant to Article VI and other Articles of this Constitution.
7. **Attendance.** All Members of the Executive Board shall attend all regularly scheduled meetings unless circumstances beyond his or her control prevent attendance. Members of the Board who fail to attend 75% of the regularly scheduled meetings in a single semester or three consecutive regularly scheduled meetings, without cause, shall be subject to removal from office.

SECTION TWO: EMERGENCY MEETINGS

Emergency meetings of the Executive Board may be called to discuss matters that require the immediate attention of the S.B.A..

1. **Scheduling.** The President or Vice-President may call an emergency meeting by providing 24 hours notice of time, location and purpose of the meeting to members of the Executive Board.
2. **Presiding Officer.** The President shall preside over emergency meetings. The Vice-President shall preside in the President's absence. Emergency meetings shall not proceed without the presence of either the President or Vice-President.
3. **Structure.** The presider of an emergency meeting may determine the structure of an emergency meeting. No more than two matters may be considered at an emergency meeting.
4. **Quorum.** Fifty percent plus one Member of the Executive Board shall constitute a quorum.
5. **Voting.** Matters before the Executive Board at any Emergency Meeting may be decided through a simple majority vote pursuant to Article VI and other Articles of this Constitution.
6. **Attendance.** There will be no sanctions for failure to attend an emergency meeting.
7. **Proxy Voting.** If a Member of the Executive Board cannot attend an emergency meeting, the Member may authorize another Member of the Executive Board to act as a proxy and vote on the absent Member's behalf. Notice of a designated proxy must be submitted to the President before the emergency meeting begins.
8. **Robert's Rules of Order.** Robert's Rules of Order shall govern any procedure not contained in this Constitution.

ARTICLE V: RESOLUTIONS AND BYLAWS

SECTION ONE: DEFINITIONS

1. **Resolutions.** An S.B.A. Resolution is a formal decision or determination as to an official and binding course of action of the S.B.A. or a formal statement that shall serve as S.B.A. policy.
2. **Bylaws.** S.B.A. bylaws are rules created by members of the S.B.A. that bind the Student Bar Association and its members.

SECTION TWO: CREATION AND ENACTMENT

The Executive Board may create S.B.A. resolutions and bylaws that are in accordance with this Constitution through a simple majority vote. Bylaws may be proposed by any Executive Officer at a regularly scheduled meeting and shall be enacted following a majority vote of the Executive Board. Resolutions may be proposed by any executive board member at any meeting and shall be enacted following a majority vote of the Executive Board.

SECTION THREE: MODIFICATION, REPEAL, AND EXPIRATION

Resolutions and bylaws may be modified or repealed by a simple majority vote of the Executive Board, following proposed modification or repeal by any Executive Officer at any meeting. Resolutions and bylaws expire at the end of each academic year but may be renewed by a majority vote of the incoming Executive Board.

SECTION FOUR: RECORDING RESOLUTIONS AND BYLAWS

The S.B.A. Secretary is responsible for keeping records of all resolutions and bylaws and presenting the records to the S.B.A. President-Elect upon election.

SECTION FIVE: QUORUM

Quorum for enactment, modification or repeal of a resolution or bylaw is 50 % plus one member of the Executive Board.

SECTION SIX: VOTING

Voting on enactment, modification, repeal, and renewal of resolutions and bylaws, unless otherwise provided by this section, shall be conducted pursuant to Article VI of this Constitution.

ARTICLE VI: VOTING

Matters before the S.B.A. are to be resolved through a democratic vote of the Executive Board.

SECTION ONE: VOTING RIGHTS

All Executive Board Members shall be entitled to one vote on any matter before the S.B.A. with the exception of the President.

SECTION TWO: QUORUM

Unless otherwise provided by this Constitution or an S.B.A. bylaw, quorum for voting on all matters shall be 50 % plus one member of the Executive Board.

SECTION THREE: INITIATING VOTING

A vote on a matter before the S.B.A. may be added to the agenda of any regular scheduled meeting or emergency meeting by the President or Vice-President.

SECTION FOUR: DEBATE AND DISCUSSION

The presider of the meeting may allocate time for debate and discussion of the matter prior to a vote.

SECTION FIVE: VOTING PROCESS

When a vote is initiated the presider of the meeting shall call roll in the following order:

1. Vice-President
2. Secretary
3. Treasurer
4. Social Committee Chairperson
5. Fundraising Committee Chairperson
6. Community Service Committee Chairperson
7. 3L Class Vice President
8. 2L Class Vice President
9. 1L Class Vice President
10. Bar Association Liaison

Upon being called, each Member shall cast a spoken public vote. The Secretary shall record each member's vote in the minutes of the proceeding. At the conclusion of voting, the Secretary shall read the results of the vote.

SECTION SIX: VOTING RESULTS

A matter before the S.B.A. for vote shall be passed or voted down by a simple majority, unless otherwise provided by this Constitution.

SECTION SEVEN: TIES

In the case of a tie, the President shall cast a single tie breaking vote.

SECTION EIGHT: FINALITY

Upon the reading of the results of a vote or the casting of a tie breaking vote, the vote shall be final and the result shall go into effect immediately.

ARTICLE VII: ELECTIONS
SECTION ONE: JURISDICTION

The provisions of Article VII shall govern all S.B.A. and class officer elections. Class officer constitutions may not displace, supersede or modify this Article.

SECTION TWO: TIME OF ELECTIONS

- **Upperclassmen Elections.** S.B.A. Executive Board Elections and 2L and 3L class officer elections shall be held in the second half of the spring semester of an academic year.
- **1L Elections.** 1L Class Officers shall be elected within the first month of the fall semester of an academic year.

SECTION THREE: ELIGIBLE VOTERS

All currently enrolled Law School students may vote in S.B.A. Elections. All currently enrolled Law School students may vote in their individual class's elections for class officers and Senators. No student may vote for class officers or Senators of another class.

SECTION FOUR: ELIGIBLE CANDIDATES

All candidates are subject to the eligibility requirements of this Constitution. In addition, class officer candidates must be members of their respective class. All candidates must be a currently enrolled, full-time student at the College of Law. All candidates must have a grade point average of 2.2 or higher at the time of his or her nomination.

SECTION FIVE: ELECTION PROCESS:

1. **Elections Commissioner**. The President, with the advice and consent of the Executive Board, shall appoint the Election Commissioner to preside over the Election Process.
   a. **Duties and Responsibilities.** The Election Commissioner shall oversee the Election Process, as provided in this section.
   b. **Appointment.** At the beginning of the election process, the President, with the advice and consent of the majority of the Executive Board, may appoint a student to this position.
   c. **Term of Office.** The President shall appoint the Election Commissioner to serve for the duration of the next election. The Election Commissioner's term shall begin immediately upon confirmation by the Executive Board and shall end once the newly elected S.B.A. Executive Board assumes their roles.
   d. **Eligibility.** To be eligible to hold office, the Election Commissioner must be a student at the Law School, enrolled full-time and in good academic standing, as defined by WVU College of Law Student Handbook.
2. **Nominations.** Election proceedings shall begin with the opening of nominations, which shall be announced at least one week in advance through e-mail announcements and posters throughout the Law School. The email shall include dates of the; nomination period, campaigning period, forum, election, and run-off. The nomination period shall last three business days, opening at 8 A.M. and closing at 4:30 P.M. each day. During this time, a nomination book shall be put in the Law School Reception Office. A candidate may be nominated by writing his or her name in the nomination book on the page of the position for which he or she is being nominated. A candidate may only be nominated for one position.
3. **Campaigning.** At the end of nominations campaigning may begin. The campaign period shall last for one week following the close of nominations. Each candidate will be permitted to display in the Law School two posters of no greater size than 12×18 inches. Hand billing is to be encouraged through the use of the student mailboxes. Campaigning may also be conducted through face-to-face petitioning, social media, text messages, and e-mail. Neither candidates nor their surrogates may exchange money, alcohol, or sexual favors for votes. Neither candidates nor their surrogates may coerce votes or unduly pressure voters during the campaigning period or polling hours. Further campaign rules may be created through S.B.A. resolutions or bylaws. Violation of campaign rules is grounds for disqualification.
4. **Candidate Forum.** During the campaign period, at a time and place determined by the Elections Commissioner and approved by the President, all candidates must attend a candidate forum and give a speech in support of his or her candidacy. Speeches shall not exceed three minutes. Failure to give a speech during the specified time results in automatic disqualification.
5. **General Elections.** The General election will be held within one week following the close of nominations. Polling hours will be held in the Law School lobby. Suggested polling hours are 9 A.M. to 2 P.M.. Polling hours may not be fewer than four hours and may not exceed eight hours. Notice of polling hours must be given to the student body. Each currently enrolled College of Law student may fill out no more than one complete ballot. While the polls are open campaigning may continue, however candidates may not solicit votes within 30 feet of the polling table. The Elections Commissioner may impose further prohibitions on campaigning during polling hours as is needed to preserve the integrity of the election. Upon receiving notice of the prohibition, failure to abide by the Elections Commissioner's ruling shall be grounds for disqualification. Rulings of the Elections Commissioner may be appealed to the Assistant Dean of Student Life, however deference should be given to the Elections Commissioner's ruling, provided it is not arbitrary and capricious.
6. **Ballot Tallying.** Within 12 hours of the close of polling hours, votes are to be counted by the Elections Commissioner and the Assistant Dean for Student Life or the Assistant Dean's surrogate.
7. **Election Results.** The winner of the general election will be the candidate with a simple majority of the votes (50 % plus one vote) on the first ballot. In the event that no candidate obtains a simple majority on the first ballot, a run-off election will be held.
8. **Run-Off Elections.** The run-off election will be held in the Law School lobby at a time determined by the Elections Commissioner, with the advice and consent of the President and Assistant Dean of Student Life, in the interest of facilitating a fair election that affords all College of Law Students the opportunity to vote. The two candidates who received the most votes in the general election shall be placed on the run-off ballot. In the event of a tie or a percentage difference of 3 % or less, a candidate with the third highest number of votes may be placed on the run-off ballot. The Elections Commissioner, with the advice and consent of the President and Assistant Dean of Student Life, may extend the campaign period to correlate with a run-off election. The candidate with the highest number of votes is to be declared the winner of the run-off election, even if a simple majority is not reached. Unless otherwise provided by this subsection, all other rules of this Constitution and Article apply to run-off elections.

9. **Certification of Elections.** Upon completion of vote tallying, election results must be certified as accurate and true by the signature of the Assistant Dean of Student Life. The Election Commissioner shall present the results, the certification, and the ballots to the Assistant Dean of Student Life. If the election results are not challenged in a timely manner, as defined by this Constitution, the certification is finalized and the results of the election become official.

10. **Results Announcement.** It is the President's duty to announce the results to the Law School student body in a timely manner.

11. **Challenges and Recounts.** Election process or results may be challenged within two business days of certification.

    a. **Challenges.**

    Any student of the College of Law may make challenges in writing to the Elections Commissioner and the Assistant Dean of Student Life. A challenge can be made to the process of the election or levying that a candidate's conduct warrants disqualification (on grounds defined by Article VII, Section Five(K)(ii) of this Constitution). Once a challenge is made, certification may not occur until an investigation is completed.

    Upon receiving a challenge the Elections Commissioner shall consider the merits of the challenge and make a decision within 24 hours of receiving the challenge. If meritorious, so that a reasonable panel of four could possibly find misconduct, the investigation phase shall be initiated. If no merit is found, the Elections Commissioner shall dismiss the challenge. The decision to dismiss may be appealed by the challenger to the President and Associate Dean of Academic Affairs, however deference should be given to the Elections Commissioner's ruling, provided it is not arbitrary and capricious.

    Within 24 hours of the investigation phase being initiated, the challenge shall be presented to the Chairperson of the Ethics Council and a single member Ethics Council's investigative panel. The Investigative Panel member shall conduct the investigation, during which all relevant parties shall be notified and interviewed. The Investigative Panel member shall present his or her findings to the President, Associate Dean of Academic Affairs, Elections Commissioner, and Ethics Council Chairperson within one week of receiving the challenge. At this time, the President, Associate Dean of Academic Affairs, Ethics Council Chairperson, and Elections Commissioner shall discuss and vote on the merits of the challenge. All facts in question shall be viewed in the light most favorable to the nonmoving party. 3 of 4 votes shall be required to uphold a challenge and overturn the results of an election. The result of this vote shall be final and is not subject to appeal. If an election is overturned, the candidate whose misconduct resulted in the challenge shall be disqualified and a new election shall be held. The disqualified candidate may not be present on the ballot of the second election.

    b. **Recounts.** Any candidate may request that the Elections Commissioner, President, and a member of the Ethics Council conduct a recount. The recount shall be conducted in the presence of the candidate who has requested the recount. The candidate who has won the election shall be invited to observe the recount as well.

- **Disqualification.** A candidate may be disqualified from the ballot prior to the election. Any student of the College of Law may request to the President or Elections Commissioner that a candidate be disqualified. However, the President or Elections Commissioner must initiate a formal disqualification investigation at his or her discretion, based on the merits of the claim. If an objectively reasonable panel of four could possibly find in favor of disqualification, a formal investigation shall be initiated.< >
    - **Disqualification Investigation.** Upon initiating a disqualification investigation, the President or Elections Commissioner must notify the candidate being challenged, the Ethics Council Chairman, the Assistant Dean of Student Life and a single member of the Ethics Council Investigative Panel. The Investigative Panel Member shall investigate the claim and present the evidence to a panel consisting of the President, the Ethics Council Chairman, the Assistant Dean of Student Life and the Elections Commissioner. This panel shall consider the evidence in the light most favorable to the accused. Following discussion the panel shall vote. 3 of 4 votes are required to disqualify a candidate from the ballot. This vote shall be final and is not subject to appeal.
    - **Grounds for Disqualification.** The following shall be grounds for disqualification from the ballot, as well as grounds for post-election disqualification through the challenge process laid out by Article VII, Section Five(J)(i);
        - Violation of this Constitution;
        - Lack of eligibility as defined by this Constitution;
        - Violation of campaign rules;
        - Violation of the terms of the WVU College of Law Student Handbook or the Student Code of Professional Responsibility; and/or
        - Committing an offense that would be a violation of the West Virginia University Campus Student Code
            - Such a violation need not be proven in accordance with the procedures set forth by the West Virginia University Campus Student Code, but rather in accordance with the procedures set forth by this Constitution.

- **Write-In Votes.** Write-in candidates are prohibited and all write-in votes shall be discarded.

ARTICLE VIII: AMENDMENTS

SECTION ONE: PROPOSAL OF AMENDMENTS

Amendments may be proposed through one of two methods:

1. Petitioning. Any student currently enrolled at the College of Law may present the S.B.A. a petition bearing the proposed amendment and the signature of at least fifty percent of the student body; or

2. Resolution. The Executive Board may pass an amendment resolution. Such a resolution must receive approval of at least two-thirds of the Executive Board.

SECTION TWO: RATIFICATION

This Constitution shall be amended upon the approval of the proposed amendment described in the preceding paragraph and the support of a simple majority (50 % plus one vote) of currently enrolled students who vote in an election to be held at least one week after its approval in Section One. The vote must be open to all currently enrolled students at the College of Law. However, a majority of all students is not required for the Amendment to pass, rather only a majority of those who vote.

ARTICLE IX: AUTONOMY

All student organizations shall enjoy political, physical, and administrative autonomy. The S.B.A. is not empowered to control the member organizations' internal affairs in any way, aside from those specifically defined by this Constitution.

ARTICLE X: STUDENT CODE OF PROFESSIONAL RESPONSIBILITY

The S.B.A., as an organization, its officers, and members agree to abide by the Student Code of Professional Responsibility.

ARTICLE XI: NON-DISCRIMINATION

The S.B.A. shall not discriminate against any person on any basis prohibited by the United States Constitution or the Constitution of the State of West Virginia.

ARTILE XII: UNIVERSITY AFFILIATION

 S.B.A is not a separate entity form West Virginia University (WVU) and its component-parts, and, therefore, S.B.A. is subject to WVU's and its component-parts' rules, policies, and regulations.

Ratified: April 1, 2019

C. COLLEGE OF LAW SERVICES

C.1 ACADEMIC EXCELLENCE PROGRAM

Kirsha Trychta, Director of Academic Excellence
Academic Excellence Center
Phone: 304-293-3882
Email: kirsha.trychta@mail.wvu.edu

 The Academic Excellence Program (AEP) seeks to enhance the academic performance of all students in their first year of law school. Because new law students must rapidly adjust to the heightened expectations of a professional school, the Academic Excellence Center provides an array of services designed to empower first-year students to quickly integrate "how to learn" with "what to learn." The Center's ultimate goal is to help students thrive in their first year of law school, not merely survive. To this end, the Center provides (1) weekly workshops on critical skills such as notetaking, outlining, time management, and test taking; (2) helpful handouts with tips for success and other important information about resources available to law students; and (3) individual counseling to address the needs of students who could benefit from personalized assistance.

Open by invitation only: An early orientation and fall small group program is conducted for incoming students who would benefit from additional support activities. Enrollment in the fall small group program is limited and participation is by invitation only. Several factors are considered in choosing students to participate, e.g., whether the student has been out of school for a significant time, has a nontraditional background for law, has learning disabilities, speaks English as a second language, or has a GPA or LSAT score below the average of the incoming class. The goal of small group is to assist students in achieving maximum performance in legal writing assignments and casebook examinations.

A different kind of AEP program is offered in the spring for students whose first-semester GPA is at 2.3 or below. Because first-time bar passage has been statistically linked to performance in law school, the common goal of the College of Law and AEP is to improve analytical and writing skills of students before the end of the first year of law school. The spring small group program therefore concentrates on the Property, Civil Procedure, Legislation and Regulation, and Constitutional Law classes that first-year students are taking in second semester (content areas tested by the bar examination).

Students who participate in spring small group attend weekly study sessions that provide opportunities for review of important legal concepts covered in the spring courses, as well as guidance about how to create strong study outlines and write exams.

Open to all students: The Academic Excellence Center also offers Dean's Fellow review sessions for all first-year courses and select upper-level courses. Dean's Fellows are specially trained student teaching assistants, who volunteer to lead small study sessions. The Deans Fellows work closely with the course professor to lead the study group through review materials and practice tests.

C.2 WRITING CENTER

Director of the Writing Center
Melanie Stimeling
Phone: 304-293-2008

Email: wvulawwriting@mail.wvu.edu

Website: law.wvu.edu/writingcenter (https://www.law.wvu.edu/writingcenter/)

Part of the College of Law Academic Excellence Center, the Writing Center helps students become better writers and offers an encouraging environment to discuss, develop, and experiment with writing techniques. The Writing Center is staffed by a full-time director as well as upper-level students who serve as Peer Writing Consultants. Individual writing consultations and group workshops are available to assist students in developing stronger writing skills or to improve a specific piece of writing. Students can seek assistance at any point in the writing process on all legal writing assignments and projects, unless an instructor explicitly prohibits it. Writing Center staff members are also available to help students with other kinds of professional writing, such as scholarship and job application materials.

C.3 MEREDITH CAREER SERVICES CENTER

Meredith Career Services Center's website (http://law.wvu.edu/career-services/)

Assistant Director
Rosalind Lister, M.S.Ed.
Phone: 304-293-7750
Email: rosalind.lister@mail.wvu.edu

The Meredith Career Services Center is open year round. Office hours are Monday through Friday from 8:15 a.m. until 4:45 p.m (appointments are recommended).

Students must register with the Career Services Center to use its services and participate in on-campus interviews. As part of the registration process, students must provide Career Services with current contact information and give permission to release resume and other employment information to prospective employers.

Students should schedule an appointment with the staff member of their choice, either via email or Symplicity, the Center's online career management system. The Assistant Dean and Assistant Director will work individually with each student to assist with career development, to write or revise a resume or cover letter, to discuss interviewing skills, or to implement job search strategies.

1. **Career Center Workshops**. There are a series of workshops held for students each semester. Frequently offered topics include

    *Resume writing and cover letter writing

    *Interview preparation and interview skills workshops; mock interview program

    *Job search strategies beyond on-campus interviews

    *Using Web-based resources in the job search

    *Working in public interest law

    *Alternative careers for lawyers

    *Working as a judicial clerk

*How to have a successful summer work experience

*Career exploration presentations

Many of these workshops are co-sponsored and given by the hiring partners of local law firms, public interest organizations, and corporations. Additionally, Career Services is responsible for conducting the Professional Development Institute (PDI), a series of targeted programs to help students hone their "soft" professional skills. Presently, the PDI is sponsored by the law firm of Steptoe and Johnson, PLLC.

A mandatory "Orientation to Career Services" workshop is held in mid-October, and all first-year students are required to attend. First-year students will register to use the Career Services Center at this time. The Assistant Dean for Career Services and the Assistant Director conduct this workshop each year.

2. On-Campus Interviewing. The Career Services Center invites law firms, public interest organizations, government agencies, businesses, and corporations to interview WVU law students for summer and permanent positions. On-campus interview season occurs in the fall semester for second- and third-year students, and generally begins in mid-August. The spring on-campus interview season is for all students and begins in February. Many employers come to campus to interview students; others ask to review student credentials through a resume collection service.

A master schedule of interviews is posted on the WVU Career Services Symplicity website (https://law-wvu-csm.symplicity.com/students/). The schedule is updated frequently each semester. Students should register for the Symplicity site and check it often.

Students should participate in on-campus interviewing but should also consider alternative methods of finding a job. Between 20-25% of students find their permanent jobs through on-campus interviewing each year; most students find work through a self-directed job search. Career Services is here to help with either.

Additionally, dozens of jobs are posted on Symplicity, and students are encouraged to apply directly with these employers.

3. Job Research. The Career Services Center has many Web-based and print resources for student use. Handouts and books are available for students both in career services and the library. Students may use Martindale Hubbell, the National Association for Law Placement Directory of Employers, and many other job-related texts and websites to find a job. See Career Services for updated passwords.

C.4 COLLEGE OF LAW BOOKSTORE AND CAFÉ

Manager
Mary Jo Fugera
Phone: 304-293-2492
Email: bkswvulaw@bncollege.com

The WVU Law Center Bookstore and Café is located off the main lobby of the Law Center. Regular operating hours are 8:00 a.m. to 4:00 p.m., Monday through Friday. Summer hours are 8:00 a.m.- 2:00 p.m. Monday through Thursday and 8:00 a.m.- 1:00 p.m. on Friday.

The Bookstore is also open the Saturday prior to the first day of class. The WVU Law Center Bookstore offers new and used textbooks, reference books, school supplies, and imprinted clothing and giftware. Software can be ordered online (http://thinkedu.com/bn/). Special order service is available at no extra charge. To order textbooks online, visit the Bookstore homepage (http://wvulaw.bncollege.com/webapp/wcs/stores/servlet/BNCBHomePage/?storeId=15066&catalogId=10001&langId=-1). Textbook Rentals and price matching are also available, offering great savings on selected titles. Contact the Store Manager for details.

C.5 FINANCIAL AID AND SCHOLARSHIPS

Financial Aid Contacts

Beth Pierpont
Phone: 304-293-7320
Email: beth.pierpont@mail.wvu.edu

Elissa Momen
Phone: 304-293-0456
Email: elissa.momen@mail.wvu.edu

To be eligible for all types of financial aid, a student must complete the Free Application for Federal Student Aid (FAFSA). This form can be completed online (http://www.fafsa.ed.gov/) each year. Because West Virginia University is a direct lending institution, no loan applications will be accepted from lenders or banks. After all necessary forms have been completed by the student, the Financial Aid Office will determine a student's eligibility for student loans and federal work study. Financial aid awards are to be viewed, accepted, declined, or reduced online through the WVU STAR System. Each student will receive a letter or email when his or her financial aid award has been processed. First-time loan borrowers are required to complete a master promissory note and entrance counseling. Both are to be completed online at https://studentloans.gov/.

Deadlines for financial aid are as follows:

1. **Federal Work Study: March 1**

A written request must be submitted to the Law School Financial Aid Office by this date.

2. **Scholarships: March 1**

FAFSA results must be received by WVU by March 1 for first-round scholarship consideration.

3. **Student Loans: No deadline**

The necessary documentation must be completed in a timely manner in order for the funds to be available for disbursement in August and January. WVU must receive your FAFSA results by June 1 to insure timely processing. Information regarding additional loans, such as private loans, is available on the Financial Aid website at http://financialaid.wvu.edu/loans/private. Graduating students must complete Loan Exit Counseling if they borrowed from the William D. Ford Federal Direct Loan program.

Financial Aid Processing is a detail-oriented process. Please keep the following seven steps in mind when applying for and receiving financial aid:

1. Make sure all applications are complete, correct, and submitted on time.

2. Read completely and respond quickly to all financial aid requests.

3. The following steps must be taken to have financial aid completely processed:

   a. Submit all required documents so that your file is complete, which consists of a current FAFSA. If you are selected by the Department of Education for verification, you also must submit the WVU Verification Form and a signed copy of your most recent Federal Income Tax Return. The WVU financial aid office will post a verification form in STAR if you are selected.

   b. View, accept, decline, or reduce your financial aid award online through the WVU STAR system. There is a separate application for the GraduatePlus Loan, which is completed online (https://studentloans.gov).

   c. If you are a first-time borrower, you must sign your master promissory note and complete entrance counseling prior to disbursement of funds. Both can be done online at studentloans.gov.

4. The Financial Aid Office may be contacted at the email and phone numbers listed above.

   Any correspondence must be sent to: WVU College of Law, Financial Aid Office, P.O. Box 6130, Morgantown, WV 26506-6130

   NOTE: Any correspondence sent to other financial aid offices at West Virginia University will delay the processing.

5. Be sure to notify the Registrar's Office of all address changes. Students can make address changes through their MIX account and the WVU Star System. Refund checks are sent to the local address on file with the Registrar's Office. Make sure the office has the correct address so your check will get to you in a timely manner. You can sign up for direct deposit using Tuition Management Systems (TMS) at studentaccounts.wvu.edu/refunds. Call 888-425-1138 with questions.

6. Keep records of your loans. You are responsible for knowing how much you borrowed, and you will need that information if you decide to consolidate your loans once you have graduated.This information is available at the National Student Loan Data System (https://nsldsfap.ed.gov/nslds_FAP/).

7. Notify the financial aid office if you are awarded a late scholarship, tuition waiver, or some other benefit, such as VA benefits. This could affect your financial aid package, and you may have to repay some of the money you received.

Scholarship information offered at the College of Law is available online (https://admissions.law.wvu.edu/apply/financial-aid/). Scholarships available from outside sources can be found at www.fastweb.com and other helpful sites.

C.6 TECHNOLOGY SERVICES

Director, Law School Technology
Keith Walton
Phone: 304-293-8556
Email: keith.walton@mail.wvu.edu

Professional Technologist I
Kenneth Price
Phone: 304-293-4657

Email: kenneth.price@mail.wvu.edu

The College of Law's Director of Technology Services manages all computer and networking operations for the law school and law library. Duties include maintaining the law school network, wireless access, office computers, library computers, and printers. The College of Law's Professional Technologist manages all audio-visual equipment and classroom technology at the College of Law. The consultant's duties include maintaining the law school distance learning classroom, AV equipment scheduling, event taping, and AV equipment maintenance.

C.7 COMMUNICATIONS

Director of Marketing and Communications
James Jolly
Phone: 304-293-7439
Email: james.jolly@mail.wvu.edu

Communication Specialist
Chelsi Baker
Phone: 304-293-0457
Email: chelsi.baker@mail.wvu.edu

The Director of Communications for the College of Law works with the administration, faculty, staff, and students in strategic communication activities using the internet, publication and the media to increase enrollment, institutional reputation, fundraising, and internal communication.

C.8 WEB INFORMATION

The College of Law website (http://www.law.wvu.edu) offers a wide range of current information on the law school, its curriculum, programs, news, events, and people. Helpful content is organized primarily in the following categories: Academics, Admission, Career Services, Clinical Law, Faculty and Staff, Student Life and the Law Library.

D. UNIVERSITY SERVICES

1. General Information (p. 641)
2. Health Services (p. 641)
3. Student Activities and Organizations (p. 642)

D.1 GENERAL INFORMATION

Information regarding University services such as ID cards (Mountaineer Card), parking, Health Services, and Disability Services, as well as University student life and affairs, can be found at the WVU Division of Student Life website (https://studentlife.wvu.edu/).

D.2 HEALTH SERVICES

Illness. Student Health Service offers medical assessment, treatment, referrals, family planning services, and educational programs for tuition and fee-paying WVU students. Students make a co-payment for each visit. Student Health is located on the ground floor of the Robert C. Byrd Health Sciences Center, next to Ruby Memorial Hospital and near the Law School. Students should enter through the Mary Babb Randolph Cancer Center and follow the blue signs that say "Student Health Service." To make an appointment, call 304-293-2311. For more information, see the Student Health Service website (http://wvumedicine.org/ruby-memorial-hospital/services/wvu-specialty-clinics/student-health/). This is an extremely helpful website.

Mental Health and Counseling Services. Students who seek personal counseling may call the Carruth Center on the main campus at 304-293-4431 for appointments. Counseling services are also available at Student Health Psychiatry in the basement of the Health Science Center. To make a psychiatric appointment, call 304-293-6972.

Please contact the College of Law's Assistant Dean for Student Life at 304-293-6253 if you need assistance in making an appointment.

Insurance. For information on University insurance programs, call 304-293-2315 or visit the web (http://studentinsurance.wvu.edu/).

Alcoholism, Drug Prevention, Rape and Domestic Violence. For specialized help in any of these areas, call 304-293-6972.

D.3 STUDENT ACTIVITIES AND ORGANIZATIONS

A complete list of all student activities and organizations sponsored by the University is available at the WVU website (http://studentengagement.wvu.edu/?utm_source=admissions-website&utm_medium=web&utm_content=/life&utm_campaign=Admissions%2520Website%2520Site%2520Links). Information regarding student organizations at the College of Law is available online (http://law.wvu.edu/student-life/student-organizations/).

Library Guide

A. LAW LIBRARY GUIDE

A.1 SCHEDULE

FALL AND SPRING SEMESTER HOURS

Monday – Thursday, 8:00 a.m. – 8:00 p.m.

Friday, 8:00 a.m.-5:00 p.m.

Saturday/Sunday, 12:00 p.m. – 5:00 p.m.

*Twenty-four hour swipe access is available to law students with limited exceptions

*The Law Library will be closed on all home football game Saturdays. Due to parking restrictions at the College of Law on these weekends, the Law Library will be closed from 8:00 p.m. on Friday evenings until 9:00 a.m. on Sunday morning.

SUMMER HOURS

Monday —Friday 8:00 a.m. – 5:00 p.m.

Saturday —12:00 p.m. – 5:00 p.m.

Sunday Closed

HOLIDAY AND INTERSESSION HOURS

Generally, 9:00 a.m. to 5:00 p.m.

*The Law Library is closed on New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. It also may be closed additional days throughout the year in accordance with the University holiday schedule.

A.2 LOCATION OF MATERIALS

First Floor. Reserve Collection, Reference Collection, United States Core Collection, West Virginia Core Collection, Legal Journals, Rare Book Collection

Second Floor. General Books on American Law and Other Subjects: (AKF), Legal Loose Leaf Collection, Legal Forms Collection, Anglo-American Collection, Foreign and International Collection

A.3 LAW LIBRARY POLICY/REGULATIONS

Food, tobacco and vaping products are not allowed in the Library. Drinks are permitted in containers with lids.

A.4 BORROWING LAW LIBRARY MATERIALS

Circulation Policy. Many items in the Law Library collection, including bound journals, do not circulate. Please inquire at the Circulation Desk for circulation information regarding the particular materials you wish to use.

Law students may check out circulating books for the full semester. Books may be renewed three times. Renewals should be made online using WorldCat.

It is the responsibility of the borrower to know when Library materials are due and to return or renew them on or before the due date. If material is lost or damaged, the amount of the fine will be equal to the replacement price plus a processing fee.

Law Library Student ID Number. To borrow Library materials, all students must have a current WVU student ID card (Mountaineer Card). The Mountaineer Card allows students to check out materials at all of the Libraries on campus and to print off materials at Library Pharos stations.

A.5 SERVICES

Contact Information. Visit the Circulation Desk on the first floor of the Library, call the Circulation Desk at 304-293-5300, or email the Circulation Desk at wvulawbooks@mail.wvu.edu.

Reserve. The Reserve Collection contains selected commercial study aids, course reserve materials, AV materials, and frequently used titles.

WVU College of Law Examinations. Copies of some exams that are administered in the College of Law courses are compiled and available in the exam repository available from the Law Library homepage. Access to the exam repository is limited to currently enrolled students.

WorldCat. WorldCat is the WVU Library's online catalog and information network. The holdings of all WVU campus Libraries and worldwide libraries are included in WorldCat. Library materials are accessible by author, title, keyword, and Library of Congress subject heading. WorldCat is available anywhere you have Internet access.

InterLibrary Loan. You may borrow materials not found in our collection from other Libraries through EZBorrow, PALsci, and ILLiad. These requests should be made online via WorldCat. Books normally arrive within two weeks and articles within several days. Inquiries concerning this service can be made at the Circulation Desk .

Computers. The Law Library provides 15 networked computers. Each computer is connected to the Internet, networked to a printer, and contains the latest versions of commonly used software. Wireless access is also available throughout the College of Law.

Printing and Photocopies. Two printer/copiers are available on the floor of the Library and one printer/copier is available on the second floor of the Library. These printers will accept your WVU ID card via Pharos stations.

Online Legal Databases. Bloomberg Law, Lexis Advance, and Westlaw Edge are available to all law students. Documents accessed on Lexis Advance may be printed free of charge on the Lexis printer available on the first floor of the Library.

For Children. If it is necessary to bring children to the Law School, there are a number of books and toys available for quiet play that can be requested at the Circulation Desk.

Media - Reed College of

Degrees Offered

- Master of Science in Journalism
- Master of Science

Majors

- Data Marketing Communications (M.S.)
- Integrated Marketing Communications (M.S)
- Journalism (M.S.J)
- Media Solutions and Innovation (M.S.J)

The College of Media has two prime locations on campus: its "home" is located on the downtown campus in Martin Hall, WVU's oldest building (constructed in 1870), and its new 10,000 square-foot Media Innovation Lab is located on the nearby Evansdale campus, close to programs focusing on the arts, engineering and health care.

Established in 1939, the College of Media is among the oldest journalism programs in the United States. The college has approximately 5,000 graduates, the majority of whom have careers in newspaper journalism, broadcasting, advertising, public relations, or related fields. With its first graduate in 1962, the master of science in journalism program has had a significant number of graduates go on to earn Ph.D.s and teach at the college level.

Both the online master of science in integrated marketing communications program and the online master of science in data marketing communications, launched in fall 2017, were among the first of their kind. Both offer leading edge course work taught by highly experienced and engaged faculty.

Master of Science in Journalism Program

The master's program offers students the choice of two tracks: the teaching research track for persons who may want to pursue a doctoral degree, and the professional track for those who wish to enhance their professional opportunities in some area of mass communications.

This program, designed to help each student reach his/her potential as a practitioner, teacher, or scholar in mass communications, prepares a graduate not only for a first job but also for long-term productive career development through the study of mass communications and related fields. Curricular areas of emphasis (AOEs) and available skills courses allow the student to excel in his/her chosen profession.

Master of Science in Integrated Marketing Communications Program

The Integrated Marketing Communications (IMC) graduate program--http://imc.wvu.edu/--was the first online graduate program in integrated marketing communications in the world. Established in 2003 by the Reed College of Media, the program's curriculum requires an introductory course, three core courses, two specialty courses (taken from four options), three electives (chosen from around 30 options) and a capstone experience. Students may choose to focus in a particular professional area of emphasis (AOE) as well.

Master of Science in Data Marketing Communications Program

The Data Marketing Communications (DMC) graduate program (http://dmc.wvu.edu/) is offered exclusively online with no on-campus classroom attendance required. The DMC curriculum currently consists of 10 courses and is always evolving and changing to stay current with the industry. Students move through the program in 16 months as a cohort, taking the prerequisite course and the related quantitative assessment exam, followed by eight core courses and one capstone course.

Assistantships

A small number of competitive assistantships are available through the college each year. These positions pay stipends, cover health insurance, and provide tuition remission. College of Media graduate assistants help professors with teaching courses, service learning projects, research, managing equipment, and supervising broadcast and computer laboratories. A number of assistantships also are available in other units across WVU's campus, where students help with communications-related activities.

ADMINISTRATION

PROVOST

- Maryanne Reed - M.S. (Northwestern University)
  Professor

DEAN

- Diana Martinelli - Ph.D. (University of North Carolina at Chapel Hill)
  Professor

ASSISTANT DEANS

- Chad Mezera - M.S. (West Virginia University)
  Online Programs
- Tricia Petty - M.Ed. (University of Georgia)
  Student and Enrollment Services

DIRECTOR OF GRADUATE STUDIES

- Steve Urbanski - Ph.D. (Duquesne University)
  Associate Professor

Degree Designation Learning Outcomes

MASTER OF SCIENCE IN DATA MARKETING COMMUNICATIONS (MS)

Upon completion of this program students will be able to:

1. Understand the basic principles of data marketing communications, media and web analytics.
2. Understand the differences between reporting and analysis.
3. Recognize how metrics and analysis inform marketing communications decision making.
4. Explain how marketing communicators use current analytic methods such as segmentation, profiling, and recency, frequency and monetary (RFM) analysis to deliver return on investment (ROI) for their clients.
5. Communicate key insights gleaned from data to marketing communications decision makers.
6. Make marketing communications decisions informed by data.

MASTER OF SCIENCE IN INTEGRATED MARKETING COMMUNICATIONS (MS)

Upon successful completion of the IMC curriculum, students will be able to:

1. Illustrate critical thinking, creativity and innovation in collaboration with colleagues and in the completion of written assignments.
2. Demonstrate a global and multicultural awareness in the development and implementation of marketing communications strategies.
3. Compare and contrast the benefits and limitations of various qualitative and quantitative research methods relevant to marketing communications.
4. Recognize the roles and implications of law and ethics in marketing communications.
5. Design and organize marketing communications materials in a professional manner consistent with contemporary industry-specific standards.

MASTER OF SCIENCE IN JOURNALISM (MSJ)

Upon successful completion of the MSJ curriculum, students will be able to:

1. Understands economic, ethical, historical, legal, political, social, and technological forces that shape the roles and structures of the media.
2. Has mastered sufficient writing, researching, and editing skills to be a professional in the student's chosen field.
3. Has an ability to articulate journalistic concepts and skills.
4. Understands methodology used in areas such as historical, legal, intercultural, qualitative and quantitative research.
5. Has an ability to conduct original research that contributes to knowledge in the field.
6. Has an ability to communicate, orally and in writing, research methodology and results.
7. Has an ability to place research results in perspective.

MASTER OF SCIENCE IN MEDIA SOLUTIONS AND INNOVATION (MSJ)

Upon completion of this program students will be able to:

1. Understand the basic principles of innovation theories as applied to media practice.
2. Understand current and emerging technology and digital platforms and their implications for media practice.
3. Understand problems in law and ethics in media practice related to new technology.
4. Solve problems in content acquisition and creation in media production using new technology.
5. Solve problems in audience development, monetization and distribution using new technology.
6. Practice advanced project management across diverse teams in media organizations.

7. Produce innovative media products using advanced digital storytelling techniques such as Virtual Reality, Augmented Reality, Artificial Intelligence, and other interactive media.

8. Design and conduct research to solve current and emerging industry problems.

9. Communicate key insights and forecasting data regarding adoption of new technology and new digital practice to decision makers.

10. Explain how media organizations use current methods such as social media, mobile-first content, algorithms, AI and 'bots', and a range of industry-standard analytics tools to conduct audience-building.

Admissions

Those interested in learning about and applying to the master of science in journalism program should contact the Director of Graduate Studies via e-mail (steve.urbanski@mail.wvu.edu). Prospective graduate students specifically seeking information about the master of science in integrated marketing communications or master of science in data marketing communications should contact imcprogram@mail.wvu.edu. The WVU Admissions online catalog is available at https://graduateadmissions.wvu.edu/. Written requests for answers may also go to WVU, Reed College of Media, 112 Martin Hall, P.O. Box 6010, Morgantown, WV 26506-6010.

The College of Media telephone number is (304) 293-3505. The IMC program's office number is (304) 293-6783.

Certificate Programs

- Creative Strategy (p. 49)
- Data Marketing Communications (p. 50)
- Digital and Social Media (p. 51)
- Healthcare Communication (p. 56)
- Higher Education Marketing (p. 57)
- Integrated Marketing Communications (p. 58)
- Public Relations Leadership (p. 64)

Data Marketing Communications, M.S.

Department website: https://marketingcommunications.wvu.edu/academics/ms-data-marketing-communications (https://marketingcommunications.wvu.edu/academics/ms-data-marketing-communications/)

Degree Offered

- Master of Science

Nature of the Program

As more organizations recognize the need for data-driven marketing campaigns, marketers are working alongside data specialists who collect data at all stages of the marketing process. Marketing communications professionals then use that data to predict future behaviors, make data-driven decisions to attract and retain consumers, and measure outcomes to determine what's successful — and what isn't.

The WVU Reed College of Media's Data Marketing Communications graduate program (http://dmc.wvu.edu) is designed for professionals who are passionate about the marketing communications profession — we bring together those who aspire to be leaders in the field of using data to achieve marketing communications results. In this program, students earn a practical, in-demand degree focused on bridging the gap between data scientists and communicators to reach key audiences.They understand how technology and users are changing and are dedicated to learning the skills needed to make data-driven decisions in order to measure productivity and increase ROI. Many academic programs that address this emerging industry need focus on statistics professionals or computer programmers. The Data Marketing Communications program is neither; it is completely designed to support today's marketer.

The Data Marketing Communications program is completely online with no on-campus classroom attendance required. Curriculum consists of 10 courses and can be completed in 16 months. Requirements include the prerequisite course and quantitative assessment exam, followed by eight core courses, and finally a capstone course.

The program offers a specialization with an Area of Emphasis in Integrated Marketing Communications (https://dmc.wvu.edu/curriculum/aoe-imc/).

Data Marketing Communications instructors are recognized leaders in their fields. These scholar-practitioners provide a carefully balanced blend of academic theory and the practical skills today's marketers need. They teach our "learn-it-today, use-it-tomorrow" curriculum, which provides valuable, practical knowledge that can be immediately applied to a student's current career. Most students continue to work full-time while earning their degree.

All courses are asynchronous, allowing students to participate at any time, from anywhere in the world. While no on-campus residency is required to complete the degree, the program hosts an annual Integrate conference to provide students and faculty an opportunity to network in-person and

explore the latest innovations in the ever-changing marketing communications landscape. Learn more about the program's Integrate Conference (http://integrate.wvu.edu).

Graduate Assistantships

Students in the Data Marketing Communications program who secure a graduate assistant position at any academic or non-academic unit on campus will be eligible to receive a waiver equivalent to the University tuition portion of their total tuition for coursework, as well as any stipend/compensation offered by the unit hosting the position. Payment of the remaining Program Tuition and Online Learning Fee is the student's responsibility. For complete information on graduate assistant options at WVU, please visit the Graduate Education Assistantships webpage (http://graduateeducation.wvu.edu/funding-and-cost/graduate-assistantships/).

Program Format

The program's academic year consists of five accelerated terms: Early Fall (August–October), Late Fall (October–December), Early Spring (January–March), Late Spring (March–May) and Summer (May–July).

Admissions

Admission to the Data Marketing Communications online graduate program at West Virginia University is competitive and the total number of available seats for each entry term is limited. Admission is based on a holistic review of each applicant's academic history, years of relevant professional experience, writing ability and intent (personal statement) and references/letters of recommendation.

Students are currently admitted twice per year, in Early Fall (August) and Early Spring (January).

Visit the program website (http://dmc.wvu.edu) for comprehensive information, including faculty bios, curriculum and course information, details on the application and admissions process, and to register for a free online information session.

Completion of DMC 660 and related quantitative assessment exam is required before students can proceed to the core courses.

Degree Requirements

Minimum cumulative GPA of 2.75 required.

Minimum grade of C- required in all courses provided that a cumulative 2.75 GPA is maintained.

Introductory Course		
DMC 660	Introduction to Data Marketing Communications	3
Core Courses		
DMC 661	Audience Segmentation	3
DMC 662	Message Customization	3
DMC 663	Brand Data Collection & Visualization	3
DMC 664	Social Media Optimization	3
DMC 671	Data Management Platforms	3
DMC 672	Campaign Planning & Programmatic Media Buying	3
DMC 673	Campaign Metrics and Assessment	3
DMC 674	Messaging for Customer Relationship Management	3
Capstone Course		
DMC 680	Data Marketing Communications Campaigns	3
Total Hours		30

* Students complete the DMC 660 course and quantitative assessment test in their first term in the program. Following successful completion of DMC 660, students will proceed through the eight core courses. Campaigns course is taken in the final semester. Upon successful completion of DMC 680 in the student's final term, the student will graduate from the program.

It should be noted that the plan of study listed below relies on condensed parts of term where two parts of term can be completed within the traditional fall and spring semesters.

First Year

Fall	Hours	Spring	Hours	Summer	Hours
Early Fall Part of Term		Early Spring Part of Term		DMC 671	3
DMC 660	3	DMC 663	3	DMC 672	3
Late Fall Part of Term		DMC 664	3		

DMC 661	3		
DMC 662	3		
	9	6	6
Second Year			
Fall	**Hours**		
Early Fall Part of Term			
DMC 673	3		
DMC 674	3		
Late Fall Part of Term			
DMC 680	3		
	9		

Total credit hours: 30

Integrated Marketing Communications Area of Emphasis Requirements

The Integrated Marketing Communications AOE is intended to prepare non-IMC students for careers utilizing an integrated marketing communications strategy. Students will be exposed to course work focused in IMC, audience insight and behavior, brand management and emerging media.

Course Requirements. To satisfy the requirements of the Integrated Marketing Communications Area of Emphasis, a student must complete the four required courses below.

- For MBA students, two of the courses required for an AOE in IMC may also be applied to a student's elective requirement, with the other two taken in addition to their MBA degree requirements. Note that a cumulative GPA of 3.0 is required for graduation from the Online Hybrid MBA program. The courses and grades from the Area of Emphasis will be counted towards a student's cumulative GPA (a C- or better is required in courses, with an overall cumulative GPA of 3.0) in the MBA program.
- For DMC students, one of the courses required for an AOE may also be applied to an DMC student's elective requirement, with the other three taken in addition to the general IMC master's degree requirements. Note that a cumulative GPA of 2.75 is required for graduation from the DMC program. Courses and grades from the Area of Emphasis will be counted towards a student's cumulative GPA (a C- or better is required in courses, with an overall cumulative GPA of 2.75) in the IMC program.

IMC 610	Introduction to Integrated Marketing Communications	3
IMC 612	Audience Insight	3
IMC 613	Brand Equity Management	3
IMC 619	Emerging Media and the Market	3
Total Hours		12

EMBA students who elect to enroll in this Area of Emphasis will be required to complete IMC 610 before moving on to the other courses in the Area of Emphasis.

Major Learning Outcomes

DATA MARKETING COMMUNICATIONS

Marketing communications professionals have been relying on data in various forms since the early days of media. However, new technologies are having a dramatic effect on how marketing communications campaigns are planned and assessed. With unprecedented access to individual transaction-level data, marketing communicators can now use available information to customize a target consumer's exposure to advertisements and other promotional communications. While much of the data processing is automated, marketing communicators increasingly must be adept at managing vast amounts of information to glean key insights and give their organizations a competitive advantage.

Upon completion of this program students will be able to:

- Understand the basic principles of data marketing communications, media and web analytics.
- Understand the differences between reporting and analysis.
- Recognize how metrics and analysis inform marketing communications decision making.
- Explain how marketing communicators use current analytic methods such as segmentation, profiling, and recency, frequency and monetary (RFM) analysis to deliver return on investment (ROI) for their clients.
- Communicate key insights gleaned from data to marketing communications decision makers.
- Make marketing communications decisions informed by data.

Digital Marketing Communications, M.S.

Degree Offered

- Master of Science

Nature of the Program

The Digital Marketing Communications graduate program is offered exclusively online with no on-campus classroom attendance required.

In the digital marketing communications master's program, students will gain the knowledge and skills to communicate and create dialogue with today's modern audience. Program topics also include building trust, selling, and maximizing customer long-term value/creating customer advocates who bring you more customers.

The program is taught by a diverse faculty who are recognized leaders in their fields.

Graduate Assistantships

Students in the Digital Marketing Communications major who secure a graduate assistant position at any academic or non-academic unit on campus will be eligible to receive a waiver of University tuition for their courses, as well as any stipend/compensation offered by the unit hosting the position. For complete information on graduate assistant options at WVU, please visit the Graduate Education Assistantships webpage.

Double Majors

Due to overlapping curricula and an accelerated course load students are not permitted to double-major in Digital Marketing Communications and Integrated Marketing Communications or Data Marketing Communications.

Program Format

The program's academic year consists of five accelerated terms corresponding to the University's existing parts of term: Early Fall (August–October), Late Fall (October–December), Early Spring (January–March), Late Spring (March–May) and Summer (May–July).

Admissions

Like all premier academic programs, admission to the Digital Marketing Communications online graduate program at West Virginia University is highly competitive and the total number of available seats for each entry term is limited. Admission to the program is based on a holistic, case-by-case analysis of the applicant's WVU Graduate Application for Admission, academic record (undergraduate transcript), GRE or GMAT scores, years of relevant professional experience (resume), and writing ability and intent (personal statement).

Students are admitted to the DMC program twice per year, in the Early Fall (August) and Early Spring (January)) admission terms. All applications received by the application priority deadline will be considered, and accepted students will be notified by the corresponding priority acceptance notification date. However, the IMC program operates on a rolling admissions basis and qualified applicants may be accepted earlier than the priority acceptance notification date.

Students who apply for Early Fall (August) admission may apply by the priority deadline of June 15 and will be notified of acceptance no later than July 15. Students who apply for Early Spring (January) admission may apply by the priority deadline of November 15 and will be notified of acceptance no later than December 15.

Visit the DMC website for comprehensive information about the online graduate program, including faculty biographies, curriculum and course information, details on the application and admissions process, and to register for a free online information session.

Degree Requirements

Minimum cumulative GPA of 2.75 required.

Minimum grade of C- required in all courses provided that a cumulative 2.75 GPA is maintained.		
IMC 640	Introduction to Digital Marketing Communication [*]	3
DMC 661	Audience Segmentation	3
DMC 673	Campaign Metrics and Assessment	3
DMC 665	Customer Engagement Strategy	3
IMC 629	Mobile Marketing	3
IMC 641	Social Media and Marketing	3
IMC 642	Web Metrics and Search Engine Optimization	3
IMC 634	Digital Storytelling	3
IMC 643	Digital Video Production	3

IMC 644	Digital Media Communication Campaigns [**]	3
Total Hours		30

*   Completion of DMC 640 Digital Marketing Communications students can proceed to the rest of the curriculum.

**   Upon successful completion of IMC 644 in the student's final term, the student will graduate from the program.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours	Summer	Hours
IMC 640		3 IMC 642		3 IMC 643	3
DMC 661		3 DMC 673		3 IMC 644	3
IMC 641		3 IMC 634		3	
DMC 665		3 IMC 629		3	
		12		12	6

Total credit hours: 30

*   It should be noted that the plan of study above relies on accelerated semesters where two accelerated semesters can be completed within the "traditional" fall and spring semesters.
Note: Spring admits will take the same courses in the same order but will start in a Spring term and graduate at the conclusion of the following Fall term

Major Learning Outcomes
DIGITAL MARKETING COMMUNICATIONS

Graduate of the Digital Marketing Communications program will:

- Evaluate the importance of digital media and how they are reshaping the world we communicate in.
- Identify how individuals are using digital media for entertainment, WOM, information and community building.
- Assess how companies are using digital media for marketing purposes.
- Recognize the changing codes of practice, ethical and legal issues regarding digital media.
- Identify and define a vast array of digital media terms and technologies.
- Explain how consumers interact socially, via word-of-mouth, and what information spreads/diffuses over social networks and how it spreads.
- Develop basic video editing skills including splitting, transitions, titles and more.
- Produce an original short marketing video using digital production, audio integration and editing techniques learned in class.
- Devise a comprehensive digital media marketing strategy, plan, budget and schedule.

Integrated Marketing Communications, M.S.

Department website: https://marketingcommunications.wvu.edu/academics/ms-integrated-marketing-communications (https://marketingcommunications.wvu.edu/academics/ms-integrated-marketing-communications/)

Degree Offered

- Master of Science

Nature of the Program

Rooted in the tradition of academic excellence of WVU, the Reed College of Media's Integrated Marketing Communications (IMC) graduate program (http://imc.wvu.edu/) has developed a national reputation for hands-on, industry relevant education. The program was recognized as Online Learning Consortium's 2015 Program of the Year.

The IMC program is offered exclusively online with no on-campus classroom attendance required. The program is constantly evolving to reflect our changing industry and ensure a relevant, highly-customizable graduate experience for students. At the center of the curriculum are an introductory course and three core courses, which provide all students with a solid marketing communications foundation. The degree is enhanced by selecting two of four "specialty" course options and three of nearly 30 elective course options. Through the extensive specialty and elective courses, students are able to focus their graduate studies on their individual areas of interest or to position them for a specific career path. The capstone course is taken in the student's final term. In this final course, students apply their knowledge to create an IMC campaign for a real-world client. They can choose to work on a client of their preference or on a national client provided by the instructor.

The program offers specializations in the following Areas of Emphasis (https://imc.wvu.edu/curriculum/areas-of-emphasis/):

- Creative Strategy
- Data Marketing Communications
- Digital and Social Media
- Healthcare
- Higher Education Marketing
- Management
- Public Relations Leadership

IMC instructors are recognized leaders in their fields. These scholar-practitioners provide a carefully balanced blend of academic theory and practical skills. They teach our "learn-it-today, use-it-tomorrow" curriculum, which provides valuable, practical knowledge that can be immediately applied to a student's current career. Most WVU IMC students continue to work full-time while earning their degree.

All IMC courses are asynchronous, allowing students to participate at any time, from anywhere in the world. While no on-campus residency is required to complete the degree, the program hosts an annual Integrate conference to provide students and faculty an opportunity to network in-person and explore the latest innovations in the ever-changing IMC landscape. Learn more about the program's Integrate Conference (http://integrate.wvu.edu).

Graduate Assistantships

Students in the IMC program who secure a graduate assistant position at any academic or non-academic unit on campus will be eligible to receive a waiver equivalent to the University tuition portion of their total tuition for IMC coursework, as well as any stipend/compensation offered by the unit hosting the position. Payment of the remaining Program Tuition and Online Learning Fee is the student's responsibility. For complete information on graduate assistant options at WVU, please visit the Graduate Education Assistantships webpage (http://graduateeducation.wvu.edu/funding-and-cost/graduate-assistantships/).

Program Format

The program's academic year consists of five accelerated terms: Early Fall (August–October), Late Fall (October–December), Early Spring (January–March), Late Spring (March–May) and Summer (May–July).

Due to the rigor of IMC program courses, students should register for no more than two courses in any IMC term. Most students who work full-time indicate that one to two course(s) per term is manageable. Students are encouraged to work with their advisor to create a customized a course schedule that fits their life and supports their professional aspirations. Most students complete the IMC master's degree in approximately two years. However, University policy allows students up to eight years to complete a master's degree; the IMC program model supports students in taking terms off as needed to balance their graduate studies with personal and professional obligations.

Those who wish to complete IMC coursework but either already have a master's degree or are not planning to pursue a full master's degree are invited to apply to one of the college's online certificate programs in integrated marketing communications, creative strategy, data marketing communications, digital & social media, healthcare, higher education marketing or public relations leadership.

Admissions

Admission to the IMC online graduate program at West Virginia University is competitive and the total number of available seats for each entry term is limited. Admission is based on a holistic review of each applicant's academic history, years of relevant professional experience, writing ability and intent (personal statement) and references/letters of recommendation.

Students may be admitted to the IMC program five times per year, in Early Fall (August), Late Fall (October), Early Spring (January), Late Spring (March), and Summer (May). Please contact the program for more information on upcoming admission terms. The IMC program utilizes a rolling admissions process and qualified applicants will be reviewed and admitted as their applications are received.

Visit the IMC website (http://imc.wvu.edu/) for comprehensive information about the online graduate program, including faculty bios, curriculum and course information, details on the application and admissions process, and to register for a free online information session (http://imc.wvu.edu/admissions/info-sessions/).

Degree Requirements

Minimum GPA of 2.75 required.

Minimum grade of C- required in all courses.		
Core Courses		
IMC 610	Introduction to Integrated Marketing Communications [*]	3
IMC 611	Marketing Research and Analysis	3
IMC 612	Audience Insight	3

IMC 613	Brand Equity Management	3
Complete a minimum of two of the following [**]		6
IMC 615	Creative Strategy and Execution	
IMC 616	Direct & Digital Marketing	
IMC 618	Public Relations Concepts and Strategy	
IMC 619	Emerging Media and the Market	
IMC Elective Courses		
Select at least three IMC courses 600-level and above.		9
IMC 636	Integrated Marketing Communication Campaigns [***]	3
Total Hours		30

[*]   Students complete the IMC 610 course in their first term in the program. Following successful completion of IMC 610, students are able to take courses in virtually any order, ensuring a fully customized path of study.

[**]   IMC students are often admitted to the program with substantial work experience and are able to opt out of the core course that is most reflective of their professional experience. Specifically, PR practitioners are encouraged to opt out of IMC 618, direct marketers are encouraged to opt out of IMC 616, and creative/graphic designers are encouraged to opt out of IMC 615. All students must complete at least two of these courses.

[***]   IMC students are able to take more than 30 credit hours if their personal and/or professional interests require (including additional elective courses or opting to complete all the core courses to ensure a comprehensive graduate experience). However, all additional courses taken must be completed before the student registers for the capstone course (IMC 636).
Upon successful completion of IMC 636 in the student's final term, the student will graduate from the program.

First Semester	Hours	
IMC 610	3	
	3	
Second Semester	**Hours**	
IMC 611	3	
IMC 612	3	
	6	
Third Semester	**Hours**	
IMC 613	3	
Select one of the following:	3	
IMC 615		
IMC 616		
IMC 618		
	6	
Fourth Semester	**Hours**	
Select one of the following:	3	
IMC 615		
IMC 616		
IMC 618		
IMC 619		
	3	
Fifth Semester	**Hours**	
Select two 600-level or higher IMC courses	6	
	6	
Sixth Semester	**Hours**	
IMC 636	3	
Select one 600-level or higher IMC course	3	
	6	

Total credit hours: 30

Areas of Emphasis

West Virginia University's Integrated Marketing Communications graduate program allows students to specialize with an Area of Emphasis (AOE). These seven specializations broaden a student's knowledge base, making them more competitive in the job market. Included on their academic transcript, an AOE demonstrates expertise in that specific area of specialization.

The IMC program currently offers the following AOEs:

- Creative Strategy (p. 653)
- Data Marketing Communications (p. 653)
- Digital and Social Media (p. 653)
- Healthcare (p. 654)
- Higher Education Marketing (p. 654)
- Management (p. 654)
- Public Relations Leadership (p. 655)

CREATIVE STRATEGY AREA OF EMPHASIS REQUIREMENTS

The Creative Strategy Area of Emphasis in is intended to prepare Reed College of Media IMC graduate students for careers focusing on the creative aspects of integrated marketing communications planning and execution. Students will engage in course work focused on advanced creative concepts, digital storytelling, visual information design and content creation.

Course Requirements. To satisfy the requirements of the Creativity Area of Emphasis, a student must complete the four required courses below. Three of the courses required for an AOE may also be applied to an IMC student's elective requirement, with the fourth taken in addition to the general IMC master's degree requirements. Note that a cumulative GPA of 2.75 is required for graduation from the IMC program. Courses and grades from the Area of Emphasis will be counted towards a student's cumulative GPA (a C- or better is required in courses, with an overall cumulative GPA of 2.75) in the IMC program.

IMC 625	Advanced Creative Concepts	3
IMC 634	Digital Storytelling	3
IMC 635	Visual Information Design	3
IMC 639	Content Marketing	3
Total Hours		12

DATA MARKETING COMMUNICATIONS AREA OF EMPHASIS REQUIREMENTS

The Data Marketing Communications AOE is intended to provide access to data-driven coursework for IMC students whose career aspirations include utilizing available data as part of a greater integrated marketing communications strategy. Students will be exposed to course work focused in overarching data marketing communications strategy, audience segmentation, campaign planning and programmatic media buying, and campaign metrics and assessment.

Course Requirements. To satisfy the requirements of the Data Marketing Communications Area of Emphasis, a student must complete the four required courses below. Three of the courses required for an AOE may also be applied to an IMC student's elective requirement, with the fourth taken in addition to the general IMC master's degree requirements. Note, that a cumulative GPA of 2.75 is required for graduation from the IMC program. Courses and grades from the Area of Emphasis will be counted towards a student's cumulative GPA (a C- or better is required in courses, with an overall cumulative GPA of 2.75) in the IMC program.

DMC 660	Introduction to Data Marketing Communications	3
DMC 661	Audience Segmentation	3
DMC 672	Campaign Planning & Programmatic Media Buying	3
DMC 673	Campaign Metrics and Assessment	3
Total Hours		12

* *DMC 660 includes a quantitative assessment and is a prerequisite of all remaining DMC coursework.*

DIGITAL AND SOCIAL MEDIA AREA OF EMPHASIS REQUIREMENTS

The Digital and Social Media AOE is intended to prepare IMC students for careers utilizing digital and social media as part of a greater integrated marketing communications strategy. Students will be exposed to course work focused in social media, web metrics and search engine optimization, digital storytelling and video production.

Course Requirements. To satisfy the requirements of the Digital and Social Media Area of Emphasis, a student must complete the four required courses below. Three of the courses required for an AOE may also be applied to an IMC student's elective requirement, with the fourth taken in addition

to the general IMC master's degree requirements. Note, that a cumulative GPA of 2.75 is required for graduation from the IMC program. Courses and grades from the Area of Emphasis will be counted towards a student's cumulative GPA (a C- or better is required in courses, with an overall cumulative GPA of 2.75) in the IMC program.

IMC 634	Digital Storytelling	3
IMC 641	Social Media and Marketing	3
IMC 642	Web Metrics and Search Engine Optimization	3
IMC 643	Digital Video Production	3
Total Hours		12

HEALTHCARE AREA OF EMPHASIS REQUIREMENTS

The Healthcare AOE is intended to prepare IMC students for careers utilizing digital and social media as part of a greater integrated marketing communications strategy. Students will be exposed to course work focused in social media, web metrics and search engine optimization, digital storytelling and video production.

Course Requirements. To satisfy the requirements of the Healthcare Area of Emphasis, a student must complete the four required courses below. Three of the courses required for an AOE may also be applied to an IMC student's elective requirement, with the fourth taken in addition to the general IMC master's degree requirements. Note, that a cumulative GPA of 2.75 is required for graduation from the IMC program. Courses and grades from the Area of Emphasis will be counted towards a student's cumulative GPA (a C- or better is required in courses, with an overall cumulative GPA of 2.75) in the IMC program.

IMC 624	Cause Marketing	3
IMC 627	Healthcare Marketing	3
IMC 639	Content Marketing	3
IMC 693	Special Topics (Augmented Reality and Virtual Reality in IMC)	3
Total Hours		12

HIGHER EDUCATION MARKETING AREA OF EMPHASIS REQUIREMENTS

The Higher Education Marketing AOE is intended to prepare IMC students for careers utilizing integrated marketing communications strategies for student recruitment and institutional branding initiatives. Students will be exposed to course work focused in higher education marketing, multicultural marketing or diversity and inclusion, content marketing and social media.

Course Requirements. To satisfy the requirements of the Higher Education Area of Emphasis, a student must complete the four required courses below. Three of the courses required for an AOE may also be applied to an IMC student's elective requirement, with the fourth taken in addition to the general IMC master's degree requirements. Note, that a cumulative GPA of 2.75 is required for graduation from the IMC program. Courses and grades from the Area of Emphasis will be counted towards a student's cumulative GPA (a C- or better is required in courses, with an overall cumulative GPA of 2.75) in the IMC program.

IMC 639	Content Marketing	3
IMC 641	Social Media and Marketing	3
IMC 647	Higher Education Marketing	3
Select one of the following:		3
IMC 622	Multicultural Marketing	
IMC 645	Diversity & Inclusion in IMC	
Total Hours		12

MANAGEMENT AREA OF EMPHASIS REQUIREMENTS

The Area of Emphasis in Management is intended to prepare IMC students to apply their skills in a traditional business administrative setting. Students will be exposed to course work in leadership, ethic, negotiations and management information systems.

Course Requirements. In order to satisfy the requirements of the Area of Emphasis, a student must complete the required courses below. Note, that a cumulative GPA of 2.75 is required for graduation from the IMC program. The courses and grades from the Area of Emphasis will be counted towards a student's cumulative GPA (a C- or better is required in courses, with an overall cumulative GPA of 2.75) in the IMC program.

Minimum grade of C- is required.

BADM 622	Financial Statements Analysis	3
BADM 623	Strategy	3
BADM 644	Legal Environment and Ethics	3

ILR 543	Negotiation Strategy	3
Total Hours		12

PUBLIC RELATIONS LEADERSHIP AREA OF EMPHASIS REQUIREMENTS

The Public Relations Leadership Area of Emphasis in is intended to prepare Reed College of Media IMC graduate students for careers leading the public relations department for a company or running their own PR firm. Students will be exposed to course work focused in applied public relations, crisis communication, internal communications and C-suite leadership.

Course Requirements. To satisfy the requirements of the Public Relations Leadership Area of Emphasis, a student must complete the four required courses below. Three of the courses required for an AOE may also be applied to an IMC student's elective requirement, with the fourth taken in addition to the general IMC master's degree requirements. Note, that a cumulative GPA of 2.75 is required for graduation from the IMC program. Courses and grades from the Area of Emphasis will be counted towards a student's cumulative GPA (a C- or better is required in courses, with an overall cumulative GPA of 2.75) in the IMC program.

IMC 628	Applied Public Relations	3
IMC 631	Crisis Communication	3
IMC 637	Internal Brand Communication	3
IMC 648	Executive Communication & Leadership	3
Total Hours		12

Major Learning Outcomes

INTEGRATED MARKETING COMMUNICATIONS

In the WVU IMC program, communications professionals learn to re-align their marketing activities to ensure a constant flow of information to consumers from a variety of media. Upon successful completion of the IMC curriculum, students will be able to:

1. Illustrate critical thinking, creativity and innovation in collaboration with colleagues and in the completion of written assignments.
2. Demonstrate a global and multicultural awareness in the development and implementation of marketing communications strategies.
3. Compare and contrast the benefits and limitations of various qualitative and quantitative research methods relevant to marketing communications.
4. Recognize the roles and implications of law and ethics in marketing communications.
5. Design and organize marketing communications materials in a professional manner consistent with contemporary industry-specific standards.

Journalism, M.S.J.

Degree Offered

- Master of Science in Journalism

Nature of the Program

The master of science in journalism (M.S.J.) program in the Reed College of Media is designed to help persons involved in various aspects of mass communication to better understand and to cope not only with the increased complexity of their own majors but also with fields outside mass communications.

The program, created to assist each student in reaching his/her potential as a worker, teacher, or scholar in mass communications, prepares a master's candidate not only for a first job but also for long-term and productive career development through the study of mass communications and related fields. Students who obtain the M.S.J. degree should excel in professional skills.

The M.S.J. program is intended to afford liberal arts graduates an opportunity to concentrate on advanced study in mass communications; to provide intensive study for persons who have undergraduate journalism training and who wish to pool their journalistic skills with extensive knowledge in another substantive area or areas (e.g., political science, economics, science); and to give persons who have had considerable professional experience an opportunity to broaden their academic bases through carefully selected advanced studies.

Assistantships and Tuition Waivers

A limited number of graduate assistantships are available in the College of Media each academic term. Graduate assistants may manage equipment, teach laboratories, and/or assist professors with their courses and research. Interns work in mass communications-related jobs on- or off-campus to obtain solid professional experience.

Students may receive stipends for the academic term and may apply for tuition remission for the entire year. Although sometimes renewed for a second or third term, assistantships and internships are granted for one academic term. Graduate assistants and interns work an average of twenty hours per week during the academic year.

Persons who wish to be considered for assistantships or internships should have their applications on file with the Director of Graduate Studies before March 1 of the same year.

Tracks

The College of Media offers two tracks—the teaching/research track and the professional track—within the M.S.J. program. In either track, the M.S.J. program offers five Areas of Emphasis (AOEs) that students may pursue, if desired, to obtain additional focus in a specific curricular area. AOEs are available in Advocacy & Public Interest Communications, Media Innovation, Digital Publishing, Visual Journalism, Reporting & Writing, and Television.

Teaching/Research

The teaching/research track is generally a program for persons who wish to pursue a Ph.D., to teach at the college/university level, and to conduct research in areas of mass communications. Persons in this track normally take research and theory courses both inside and outside the College of Media, as well as social science courses. The program culminates in a thesis, which is a scholarly theoretical study of an important aspect of mass communications.

Professional

The professional track is designed primarily for persons who wish to become excellent practitioners in some field of mass communications and who have less desire to teach or to become mass communications researchers. Persons in the professional track normally take communication and outside area courses that will help them to become better practitioners. The program culminates in a professional project, which helps a student to extend his/her practical and theoretical knowledge about a given aspect of mass communications and should be a non-routine project on which the student could work as a professional.

Time Limitation

Students must complete all graduate degree requirements, including either a thesis or a professional project, within eight years of beginning the initial coursework of the program. After this period, courses must be revalidated according to the procedures set forth in the WVU Graduate Catalog.

Maintenance of Scholarship

A journalism graduate student must maintain satisfactory progress toward the M.S.J degree. The candidate's graduate record begins with the first course credited toward the master's and includes all subsequent courses. Every graduate student must maintain at least a 2.75 grade point average and complete all requirements within eight years. Anyone who fails to meet this standard will be subject to academic probation and possible dismissal from the program.

Each person working toward the M.S.J. should register for at least one hour during every regular (fall and spring) term. This enrollment may be in coursework or in research.

International Students

Believing that mutual benefit is derived when scholars from other countries study in the Reed College of Media, the faculty welcomes international students. At the same time the faculty recognizes that journalism, more than any other field, requires language skills. To profit from journalism study, international students must have a ready understanding of English. International students, for whom English is not their official language, must include TOEFL scores. The minimum TOEFL scores needed for consideration at WVU are 550 (paper test), 213 (computer test), or a 79 (internet test). A minimum IELTS score of 6.5 also is required.

FACULTY

PROFESSORS

- Joel Beeson - Ph.D. (Union College)
  Visual Journalism
- Diana Martinelli - Ph.D. (University of North Carolina at Chapel Hill)
  Dean, Widmeyer Professor in Public Relations
- Maryanne Reed - M.S. (Northwestern University)
  Provost, Television Journalism
- John Temple - M.F.A. (University of Pittsburgh)
  Print and Narrative Journalism

ASSOCIATE PROFESSORS

- Alison Bass - M.L.A. (Harvard University)
  Print Journalism
- Dana Coester - M.A. (University of Missouri-Columbia)
  Media Innovation
- Rita Colistra - Ph.D. (University of North Carolina at Chapel Hill)
  Public Relations, Strategic Communications, Community Branding
- Sang Lee - Ph.D. (Pennsylvania State University)
  Advertising and Strategic Communications
- Geah Pressgrove - Ph.D. (University of South Carolina)
  Public Relations, Strategic Communications, Advocacy
- Steve Urbanski - Ph.D. (Duquesne University)
  Graduate Director; Print Journalism, Media Ethics and Law

TEACHING ASSOCIATE PROFESSORS

- Robert Britten - Ph.D. (University of Missouri-Columbia)
  Print and Experimental Journalism
- Elizabeth Oppe - Ph.D. (Ohio University)
  Mass Communications, Service Learning, Public Relations

ASSISTANT PROFESSORS

- Julia Fraustino - Ph.D. (University of Maryland)
  Public Interest Communications, Strategic Communications
- Jennifer Harker - Ph.D. (University of North Carolina at Chapel Hill)
  Public Relations and Sports Communications

VISITING ASSISTANT PROFESSOR

- Jasper Fessman - Ph.D. (University of Florida)
  Public Interest Communications, Public Relations, Strategic Communications

Admissions

Admission to the M.S.J. program is limited to recipients of baccalaureate or equivalent degrees from institutions of higher learning. Applicants should have combined verbal and quantitative Graduate Record Examination (GRE) Aptitude Test scores of 153 Verbal and 144 Quantitative and should have earned at least a 3.0 cumulative grade point average (GPA) on a 4.0 scale. Each applicant should submit to the College of Media Director of Graduate Studies a detailed statement of purpose explaining why the student wishes to undertake graduate study in journalism, what the student hopes to glean from the graduate journalism program, what his/her long-term goals are, and how graduate education in journalism can help achieve those goals.

An applicant who does not meet the minimum GRE and/or GPA requirement(s) may be accepted only if the low GPA or GRE scores are offset by extraordinary factors. Excellent recommendations, unusual grading patterns (e.g., a steady rise of grades), an outstanding statement of purpose, or examples of professional accomplishment sometimes can offset low GRE scores or a low GPA.

Students applying for admission to the M.S.J. program are encouraged to send nonreturnable supporting written/multimedia work products/samples to the College of Media Director of Graduate Studies. All other materials (e.g., transcripts, GRE scores, application forms) should be sent to the Office of Admissions.

Students may also apply online at: https://app.applyyourself.com/AYApplicantLogin/ApplicantConnectLogin.asp?id=wvugrad.

Degree Requirements

A minimum GPA of 3.0 is required in all courses

JRL 600	Introduction to Graduate Studies	1
JRL 604	Mass Media and Society	3
JRL 620	Advanced Journalistic Writing and Research	3
JRL 689	Ethics of Mass Communication	3
JRL 697	Research	3
College of Media electives		9
Electives Outside the College of Media [*]		5

Research	3-6
Total Hours	30

*   A minimum of 18 credit hours must be earned in the College of Media. Remaining credit hours should be taken outside of the College of Media. Students who choose to write a thesis must register for at least 6 credits of Research (JRL 697). Students who write a professional project must register for at least 6 credits of Research (JRL 697).

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
JRL 600	1	JRL 620	3
JRL 604	3	JRL 689	3
Electives*	6	Electives*	3
	10		9

Second Year

Fall	Hours	Spring	Hours
JRL 697**	3	JRL 697**	3
Electives*	6	Electives*	3
	9		6

Total credit hours: 34

*   Various electives. In both programs, sixty percent of the graduate credits submitted for the degree (eighteen credits) must be in courses numbered 500–799

**   Students who choose to write a thesis must register for at least 6 credits of Research (JRL 697) . Students who write a professional project must register for at least 6 credits of Research (JRL 697).

Students should note that the majority of credits submitted for the degree must be in courses numbered 500 or above.

The thesis or professional project will be graded as an S or U (satisfactory or unsatisfactory).

Except for thesis, professional project, and internship courses, no student may take a course on a P/F or S/U grade basis without prior approval of the Director of graduate studies.

THESIS/PROFESSIONAL PROJECT

Each student must complete a thesis or a professional project involving original work in his/her area of interest. The master's candidate should have a thesis or professional project proposal written by the end of the academic term in which the first nineteen hours of coursework are completed.

Each student is responsible for developing ideas for the thesis or professional project. Through consultations with journalism faculty, the student can determine faculty interests and areas of expertise; he/she then refines a preliminary idea to a significant, feasible thesis/project topic.

Normally students will enroll for six credit hours of research courses. The Director of Graduate Studies must approve any deviations from this norm.

In addition to this six-hour limit, no graduate student will be permitted to enroll in more than six hours of research courses without approval from the director of graduate studies.

ADVISORY COMMITTEE

The student, with approval of the director of graduate studies, selects a journalism graduate faculty member who would be best able to chair his/her Advisory Committee, subject to the agreement of the faculty member. If questions arise about a faculty member's interest or knowledge, the student should consult the director of graduate studies. With the chairperson, the student further refines the topic to a "preliminary proposal" stage, in which concepts and appropriate methodology are on paper but not necessarily in formal proposal form.

After the student has written a preliminary proposal and selected a faculty chairperson, the student should select other members of his/her committee, subject to their willingness to serve. The committee must consist of no fewer than four members (including the chair) and at least two persons must be members of the WVU faculty; others may be from other departments at WVU. Committee chairs must be members of the College of Media graduate faculty. The fourth member of all thesis committees must be affiliated with the graduate program at an accredited university (or another department at WVU). The fourth member of professional project committees may be from the professional realm.

PROPOSALS

At this point, students in the thesis/professional track must submit proposals to their committee, which must approve all topics (but not research methods, specific research questions, or hypotheses, etc.). After securing committee approval, students schedule a proposal defense date. Proposal defenses are required of all students.

Working under the committee's guidance, each student revises the thesis or project proposal, extended from the preliminary proposal. Guidance for designing a proposal is available from the Director of Graduate Studies.

Once the committee agrees that the proposal is ready, a proposal defense is scheduled.

FINAL THESIS/PROJECT APPROVAL

After the thesis/project proposal defense, the committee votes to accept (often with revisions) or to reject a proposal. The student whose proposal is approved works closely with the committee chair to complete his/her final thesis or project. A master's candidate must inform his/her committee and consult its members for advice (as needed and as desired by them) as the thesis or project develops.

After each advisory committee member is satisfied with the thesis or project, a final defense is scheduled. Announcements of the defense should be posted in Martin Hall. (Interested students and faculty may attend the presentation portion.) Students also should make certain that they file their thesis/project signature form with the director of graduate studies (and the University Libraries) two weeks before their defense date.

Only committee members may vote on acceptance or rejection of a thesis. Although someone may cast a recorded dissenting vote, a majority vote is sufficient to approve a thesis/project. Furthermore, at least three signatures (two of which must belong to College of Media faculty members) must appear on the approval sheet. Often, only small changes are required prior to final submission to the committee chair and then to the Electronic Thesis and Dissertation system.

Master's candidates should follow APA (or another chair-approved stylebook) during preparation of a thesis or professional project.

Each committee chairperson will ultimately decide whether the candidate has properly made the requested corrections (after the final defense); that chairperson also will check the style and form of the final version. Every graduate student is responsible for delivering a copy of a final thesis or professional project to the director of graduate studies; he/she also must file a thesis or professional project electronically (to the University Library) before the academic term's deadline.

Areas of Emphasis

- Advocacy and Public Interest Communication (p. 659)
- Digital Publishing (p. 659)
- Media Solutions and Innovation (p. 660)
- Reporting and Writing (p. 660)
- Television (p. 660)
- Visual Journalism (p. 660)

ADVOCACY AND PUBLIC INTEREST COMMUNICATION AREA OF EMPHASIS REQUIREMENTS

Students are expected to maintain at least a 2.75 GPA

Select three of the following:		9
JRL 458	Interactive Media and Audience Building	
PR 593	Special Topics (Advocacy Communication)	
PR 593	Special Topics (Crisis Communication)	
PR 593	Special Topics (Audience Development/Engagement)	
PR 593	Special Topics (Public Interest Communication)	
JRL 695	Independent Study (must be approved by grad director)	
Total Hours		9

DIGITAL PUBLISHING AREA OF EMPHASIS REQUIREMENTS

Students are expected to maintain at least a 2.75 GPA

Select three of the following:		9
ADV 451	Interactive Marketing Commctns	
JRL 411	Experimental Journalism	
JRL 431	Multimedia Storytelling	

JRL 440	Visual Storytelling for the Media	
JRL 493	Special Topics (Data Journalism for a Better Story)	
JRL 593	Special Topics (Ethics in an AI Society)	
JRL 493	Special Topics (Digital Publication: Social Media Video)	
JRL 559	Multimedia News Publication	
JRL 695	Independent Study (must be approved by grad director)	
Total Hours		9

MEDIA SOLUTIONS AND INNOVATION AREA OF EMPHASIS REQUIREMENTS

Students are expected to maintain at least a 2.75 GPA

Select three of the following:		9
ADV 451	Interactive Marketing Commctns	
JRL 411	Experimental Journalism	
JRL 431	Multimedia Storytelling	
JRL 440	Visual Storytelling for the Media	
JRL 458	Interactive Media and Audience Building	
JRL 493	Special Topics (Data Journalism for a Better Story)	
JRL 593	Special Topics (Ethics in an AI Society)	
JRL 593	Special Topics (Audience Development/Engagement)	
JRL 559	Multimedia News Publication	
JRL 695	Independent Study (must be approved by grad director)	
Total Hours		9

REPORTING AND WRITING AREA OF EMPHASIS REQUIREMENTS

Students are expected to maintain at least a 2.75 GPA

Select three of the following:		9
JRL 426	Investigative Reporting	
JRL 424	Adventure Travel Writing & Photography	
JRL 412	Sport Journalism	
JRL 493	Special Topics (e.g. Science/Health Journalism; Nonfiction Storytelling)	
JRL 695	Independent Study (must be approved by grad director)	
Total Hours		9

TELEVISION AREA OF EMPHASIS REQUIREMENTS

Students are expected to maintain at least a 2.75 GPA

Select three of the following:		9
JRL 435	Live Sports Video Production	
JRL 493	Special Topics (e.g. Digital Publication; Social Media Video)	
JRL 587	Advanced Video Reporting and Producing [*]	
JRL 559	Multimedia News Publication	
JRL 593	Special Topics (e.g. Audience Development/Engagement)	
JRL 695	Independent Study (must be approved by grad director)	
Total Hours		9

[*]   WVU News requires JRL 488 as a prerequisite.

VISUAL JOURNALISM AREA OF EMPHASIS REQUIREMENTS

Students are expected to maintain at least a 2.75 GPA.

Select three of the following:		9
JRL 431	Multimedia Storytelling	
JRL 440	Visual Storytelling for the Media	
JRL 445	International Media 1	

JRL 458	Interactive Media and Audience Building	
JRL 493	Special Topics (e.g. Digital Publication; Social Media Video)	
JRL 587	Advanced Video Reporting and Producing [*]	
JRL 559	Multimedia News Publication	
JRL 695	Independent Study (must be approved by grad director)	
Total Hours		9

[*]   WVU News requires JRL 488 as a prerequisite

BSJ - Journalism Degree Requirements

MDIA 191	First-Year Seminar	2
General Education Requirements		
GEF 1, 2, 3, 5, 6, and 7		22
Non-Journalism/Media Requirements		
ECON 200	Survey of Economics	3
BCOR 350	Principles of Marketing	3
HIST 153	Making of Modern America: 1865 to the Present	3
POLS 102	Introduction to American Government	3
STAT 111	Understanding Statistics	3
English literature or Creative Writing course		3
Two semesters of any foreign language/computer coding course or one language/coding course +study abroad		6
Select one of the following:		3
PSYC 101	Introduction to Psychology	
SOCA 101	Introduction to Sociology	
SOCA 105	Introduction to Anthropology	
Media College Core		
A grade of C- or higher must be earned in all major courses.		
MDIA 101	Media and Society	3
MDIA 215	Media Writing	3
MDIA 225	Media Tools & Applications	3
JRL 528	Media Ethics and Law	3
Journalism Major Core		
Select three one-credit-hour JRL skills courses, which include, but are not limited to, the following options:		3
JRL 236	Podcast Producing	
JRL 237	Adobe Video Editing	
JRL 238	Voice Performance for Broadcasting	
JRL 240	Immersive Storytelling: AR/VR	
Take each of the following:		
JRL 318	Beat Reporting	3
JRL 319	Editing and Curation	3
JRL 341	Data and Design	3
JRL 458	Interactive Media and Audience Building	3
Select one of the following capstones:		3
JRL 531	Multimedia Reporting	
JRL 559	Multimedia News Publication	
JRL 587	Advanced Video Reporting and Producing	
Select two advisor-approved "track" electives from the following or from other advisor-approved upper-level JRL electives:		6
JRL 320	Advanced Photojournalism	
JRL 340	Advanced Video Storytelling	
JRL 440	Visual Storytelling for the Media	
JRL 418	Advanced Reporting	
JRL 331	Infographics and Data Visualization	

JRL 430	Social Media and Journalism	
JRL 426	Investigative Reporting	
JRL 335	Video and Audio News Writing	
NOTE: JRL 488 must be taken concurrently with JRL 335 and counts as a required one-credit JRL skills course		
JRL 386	Beginning Video Reporting	
JRL 593	Special Topics	
Required Minor		**15**
General Electives		**18**
Total Hours		120

MSJ Degree Requirements

A minimum GPA of 3.0 is required in all courses

JRL 500	Introduction to Graduate Studies	1
JRL 504	Mass Media and Society	3
JRL 520	Advanced Journalistic Writing and Research	3
JRL 689	Ethics of Mass Communication	3
JRL 697	Research	3
JRL 698	Thesis or Dissertation	3
Electives (Internal or External to College of Media)		9
Total Hours		25

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)	3	ENGL Literature or Creative Writing course	3
MDIA 101 (GEF 4)	3	GEF 3	3
MDIA 215 (GEF 4)	3	Language Course	3
Language Course	3	Select one of the following:	3
MDIA 191	2	PSYC 101	
		SOCA 101	
		SOCA 105	
		GEF 2B	4
	14		16

Second Year

Fall	Hours	Spring	Hours
MDIA 225	3	Elective	2
GEF 5	3	GEF 6	3
ENGL 102 (GEF 1)	3	HIST 153	3
ECON 200	3	JRL 319	3
JRL 318	3	Minor Course	3
		Select a one-credit-hour JRL skills course	1
	15		15

Third Year

Fall	Hours	Spring	Hours
GEF 7	3	STAT 111 (3)	3
POLS 102	3	Minor Course	3
Minor Course	3	BCOR 350	3
Elective	3	Select one-credit-hour JRL skills course	1
Select one-credit-hour JRL skills course	1	300- or 400-level JRL "track" elective	3
JRL 341	3	Elective	3
	16		16

Fourth Year

Fall	Hours	Spring	Hours
JRL 528		3 JRL capstone course:	3
Minor Course		3 JRL 531	
JRL 500		1 JRL 559	
JRL 504		3 JRL 587	
JRL 458		3 JRL Elective	3
Elective		3 Minor Course	3
		undefined	
		JRL 520	3
	16		12

Fifth Year

Fall	Hours	Spring	Hours
Elective[*]		3 JRL 689	3
Elective[*]		3 JRL 697 or 698	3
JRL 697		3 Elective[*]	3
	9		9

Total credit hours: 138

[*]   These electives should be at the 500- or 600-level and may come from within or external to the College of Media.

BSJ - Advertising and Public Relations Degree Requirements

MDIA 191	First-Year Seminar	2
General Education Requirements		
GEF 1, 2, 3, 5, 6, and 7		22
Non-Journalism/Media Requirements		
ECON 200	Survey of Economics	3
BCOR 350	Principles of Marketing	3
HIST 153	Making of Modern America: 1865 to the Present	3
POLS 102	Introduction to American Government	3
STAT 111	Understanding Statistics	3
English literature or Creative Writing course		3
Two semesters of any foreign language/computer coding course or one language/coding course +study abroad		6
Select one of the following:		3
PSYC 101	Introduction to Psychology	
SOCA 101	Introduction to Sociology	
SOCA 105	Introduction to Anthropology	
Media College Core		
A grade of C- or higher must be earned in all major courses.		
MDIA 101	Media and Society	3
MDIA 215	Media Writing	3
MDIA 225	Media Tools & Applications	3
JRL 528	Media Ethics and Law	3
Advertising & Public Relations Core		
ADPR 215	Introduction to Advertising and Public Relations	3
ADPR 421	Advertising & PR Audience Insights & Analysis	3
Choose a capstone:		3
ADPR 457	Martin Hall Agency Experience	
ADPR 559	Advertising and Public Relations Campaigns	
Select one of the following Areas of Emphasis (details below):		12
Advertising (ADV)		
ADV 315	Advertising Copywriting	

Choose three 300- or 400-level Advertising, STCM or advisor-approved electives:

ADV 401	Creative 1
ADV 403	Media Planning/Strategy
ADV 450	Audience Psychology and Behavior
ADV 451	Interactive Marketing Communications
ADV 493	Special Topics
ADV 593	Special Topics
ADPR 452	Strategic Communication Strategy and Management
STCM 493	Special Topics
STCM 593	Special Topics
Public Relations (PR)	
PR 324	Public Relations Writing and Applications

Choose of the following:

PR 319	Creative Design and Strategy
PR 333	Web Development

Choose two 300- or 400-level PR, STCM or advisor-approved electives:

PR 410	Integrated Marketing Communications for Public Relations
PR 412	IMC for Sport
PR 455	Strategic Event Planning and Promotion
PR 493	Special Topics
PR 522	Public Relations Case Studies
PR 593	Special Topics
ADPR 438	Branded Content and Narrative
ADPR 439	Strategic Social Media
Required Minor	**15**
General Electives	**14**
Total Hours	113

MSJ Degree Requirements

A minimum GPA of 3.0 is required in all courses

JRL 500	Introduction to Graduate Studies	1
JRL 504	Mass Media and Society	3
JRL 520	Advanced Journalistic Writing and Research	3
JRL 689	Ethics of Mass Communication	3
JRL 697	Research	3
JRL 698	Thesis or Dissertation	3
Electives (Internal or External to College of Media)		9
Total Hours		25

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)	3	ENGL Literature or Creative Writing course	3
ADPR 215	3	GEF 3	3
MDIA 101 (GEF 4)	3	MDIA 215	3
Language Course	3	Language Course	3
MDIA 191	2	Select one of the following:	3
		PSYC 101	
		SOCA 101	
		SOCA 105	
	14		15

Second Year

Fall	Hours	Spring	Hours
GEF 2B	4	STAT 111	3
GEF 5	3	GEF 6	3
MDIA 225	3	HIST 153	3
ENGL 102 (GEF 1)	3	PR 324 or ADV 315	3
ECON 200	3	Elective	2
	16		14

Third Year

Fall	Hours	Spring	Hours
GEF 7	3	400-Level AOE Course	3
POLS 102	3	BUSA 330	3
Minor Course	3	Minor Course	3
Elective	3	Elective	6
PR 319 or 333 (or ADV AOE Elective)	3		
	15		15

Fourth Year

Fall	Hours	Spring	Hours
ADPR 421	3	ADPR 559	3
300- or 400-Level AOE Course	3	JRL 528	3
Minor Course	3	Minor Course	3
Minor Course	3	Elective	3
JRL 500	1	JRL 520	3
JRL 504	3		
	16		15

Fifth Year

Fall	Hours	Spring	Hours
Elective[*]	3	JRL 689	3
Elective[*]	3	JRL 697 or 698	3
JRL 697	3	Elective[*]	3
	9		9

Total credit hours: 138

[*]   These electives should be at the 500- or 600-level and may come from within or external to the College of Media.

Major Learning Outcomes

JOURNALISM

Whether students in the M.S.J. program are interested in teaching and research or strictly professional pursuits, upon completing the program, they will be able to:

1. Understand economic, ethical, historical, legal, political, social and technological forces that shape the roles and structures of the media.
2. Employ writing, researching and editing skills to be a professional in the graduate's chosen field.
3. Articulate journalistic concepts, values and skills.
4. Understand methodology used in historical, legal, cultural and other types of qualitative and quantitative research.
5. Conduct original research that contributes to knowledge in the field.
6. Effectively communicate orally, through writing, and through various media.
7. Understand and critically evaluate public opinion polls and other types of quantitative and qualitative research.

Media Solutions and Innovation, M.S.J.

Department website: https://mediacollege.wvu.edu/graduate/media-solutions-innovation (https://mediacollege.wvu.edu/graduate/media-solutions-innovation/)

Degree Offered

- Master of Science in Journalism

Nature of the Program

The Media Solutions and Innovation graduate program explicitly prepares students to become media strategists and futurists who can function as change agents and adaptive leaders within the industry. Our 12-month online master's degree program helps students learn about the disruptions in the media industry and how to build industry partners to assist in research and development, discovery, and creating targeted solution pathways to address some of the most challenging media problems.

This master's program is designed to fill an identified need in the market by offering a distinct innovation program that focuses on individual entrepreneurship as an alternative to existing skills-focused "new media" programs, and as a unique graduate-level program that challenges/extends existing "teaching hospital" models in schools of journalism. The program is taught by a diverse faculty who are recognized leaders in their fields.

Publisher Path

Students complete the program in a NewStart (https://newstart.wvu.edu) cohort, taking classes sequentially. Students will first complete an introductory course, followed by eight core courses taken in thematically-paired blocks of two. After completing their core courses, students will take the capstone course, which includes a hands-on research immersion into a news organization. The program's capstone course synthesizes all students have learned into one comprehensive project — researching and creating a business plan and audience development strategy for a real-world media publication.

Graduate Assistantships

Students in the Media Solutions program who secure a graduate assistant position at any academic or non#academic unit on campus will be eligible to receive a waiver of University tuition for Media Solutions courses, as well as any stipend/compensation offered by the unit hosting the position. For complete information on graduate assistant options at WVU, please visit the Graduate Education Assistantships webpage (http://graduateeducation.wvu.edu/funding-and-cost/graduate-assistantships/).

Program Format

The program's academic schedule consists of 6 terms completed over one calendar year: Summer (June-August), Early Fall (August–October), Late Fall (October-December, Early Spring (January–March), Late Spring (March-May) and Summer (May–June).

Admissions

Admission to the Innovations and Media Solutions – Publishing Path program is based on a holistic, case-by-case analysis of the applicant's WVU Graduate Application for Admission, academic record (undergraduate transcript), years of relevant professional experience (resume), and writing ability and intent (personal statement)..

Students are admitted to the program once per year in the Summer admission term. All applications received by the application priority deadline will be considered, and accepted students will be notified by the corresponding priority acceptance notification date.

Degree Requirements

Minimum cumulative GPA of 3.0 is required for graduation.

A grade of C# or better is required in all courses.		
MDIA 610	Disruptions & Trends in Media Enterprise	3
MDIA 612	Emergent Issues in Media Ethics and Law	3
MDIA 614	Audience Development	3
MDIA 618	Community Journalism	3
MDIA 619	Coding for Newsrooms	3
MDIA 620	Next Gen News Analytics	3
Community Based Field Experience		6
MDIA 689	Community Based Field Experience	
MDIA 695	Independent Study	2
MDIA 697	Research	4
Total Hours		30

Major Learning Outcomes
MEDIA SOLUTIONS AND INNOVATION

Upon completion of this program students will be able to:

1. Understand the basic principles of innovation theories as applied to media practice.
2. Understand current and emerging technology and digital platforms and their implications for media practice.
3. Understand problems in law and ethics in media practice related to new technology.
4. Solve problems in content acquisition and creation in media production using new technology.
5. Solve problems in audience development, monetization and distribution using new technology.
6. Practice advanced project management across diverse teams in media organizations.
7. Produce innovative media products using advanced digital storytelling techniques such as Virtual Reality, Augmented Reality, Artificial Intelligence, and other interactive media.
8. Design and conduct research to solve current and emerging industry problems.
9. Communicate key insights and forecasting data regarding adoption of new technology and new digital practice to decision makers.
10. Explain how media organizations use current methods such as social media, mobile-first content, algorithms, AI and 'bots', and a range of industry-standard analytics tools to conduct audience-building.

Medicine

Degrees Offered

- MD, Doctor of Medicine
- MD/PhD, Dual Doctor of Medicine and Doctor of Philosophy
- PhD, in Biochemistry and Molecular Biology
- PhD in Cancer Cell Biology
- PhD in Cellular and Integrative Physiology
- MS, PhD in Clinical and Translational Science
- PhD in Immunology and Microbial Pathogenesis
- PhD in Neuroscience
- MHS, in Pathologists' Assistant
- MHS, in Physician Assistant
- MS, PhD, Exercise Physiology
- MOT, Master of Occupational Therapy
- OTD, Occupational Therapy Doctorate
- DPT, Doctor of Physical Therapy
- PhD, Pharmaceutical and Pharmacological Sciences
- MS, Biomedical Sciences
- MS, Health Sciences
- MS, in Athletic Training

Introduction

The West Virginia University School of Medicine is a part of the Robert C. Byrd Health Sciences Center, a comprehensive academic health system with three campuses in the state, a network of affiliated hospitals and practice plans, and a mission of education, research, clinical care, and service to the state. On the main campus in Morgantown, students have access to a full range of research and clinical facilities, including a relatively new, four-story laboratory building and a wide range of advanced research centers. West Virginia University Hospitals feature sophisticated medical technology, including magnetic resonance imagery, lithotripsy, and laser surgery; the campus includes a large and busy tertiary hospital, a Level 1 trauma center, a children's hospital, cancer center, a psychiatric hospital, primary care and specialty clinics, a rehabilitation hospital, and many other patient care facilities.

Graduate study in the biomedical sciences is in seven PhD graduate programs: biochemistry and molecular biology; cancer cell biology; cellular and integrative physiology; exercise physiology; immunology and microbial pathogenesis; neuroscience; and pharmaceutical and pharmacological sciences (a collaboration with the School of Pharmacy). Biomedical sciences graduate students take a common core curriculum the first semester and match with a faculty mentor and select one of the seven PhD training programs after the first semester or by the end of year one. There is also a M.S. degree in the Biomedical Sciences. Core coursework for this M.S. degree is similar to that of the first semester of PhD training in the biomedical sciences.

There is also a combined MD/PhD dual degree option for students interested in pairing medical and basic science education at the doctoral level.

The Department of Human Performance and Applied Exercise Sciences offers graduate degrees in the clinical areas of athletic training, exercise physiology, physical therapy, physician assistant and occupational therapy. There is also a master's of health sciences degree (MHS) for the pathologist's assistant available through the Department of Pathology. All graduate and professional programs in the School of Medicine complement other existing programs in health professions offered through other schools (dentistry, nursing, and pharmacy and public health) that are part of the Health Sciences Center.

The MS and PhD programs in Clinical and Translational Science, housed within the West Virginia Clinical and Translational Science Institute, foster the training and career development in clinical and translational research.

The MS in Health Sciences is a 12-month, non-thesis master's program that targets students who desire to enhance their competitiveness for entry into advanced professional or graduate programs or who are interested in more in-depth study in biomedical or public health disciplines.

ADMINISTRATION

DEAN

- Clay Marsh - M.D. (West Virginia University School of Medicine)

VICE DEAN FOR MEDICAL EDUCATION & ACADEMIC AFFAIRS

- Norman D. Ferrari III - M.D. (West Virginia University School of Medicine)

VICE DEAN-PROFESSIONAL & UNDERGRADUATE PROGRAMS

- MaryBeth Mandich - Ph.D. (West Virginia University School of Medicine)

VICE DEAN FOR CLINICAL SERVICES & CMO WVU HEALTHCARE

- Judie Charlton - M.D. (West Virginia University School of Medicine)

ASSOCIATE DEANS

- Scott A. Cottrell - Ed.D. (West Virginia University College of Education and Human Services)
  Student Services and Curriculum
- Robert Gustafson (Interim) - M.D. (West Virginia University School of Medicine)
  Faculty Services
- James P. Griffith - M.D. (West Virginia University School of Medicine)
  Charleston Campus Student Services
- Stephen Hoffmann - MD (University of Cincinnati)
  Clinical Programs
- Rosemarie Cannarella Lorenzetti - M.D. (West Virginia University School of Medicine)
  Eastern Campus Student Services

ASSOCIATE DEAN FOR RESEARCH

- Laura F. Gibson - PhD (West Virginia University School of Medicine)

ASSISTANT DEANS

- Kathleen Bors - M.D. (West Virginia University School of Medicine)
  Charleston Campus
- Julie Green
  Finance
- Linda Nield - M.D. (Dartmouth Medical School)
  Admissions for the MD degree program
- Becky Stauffer - CPA
  Finance
- Manuel Vallejo - MD, DMD (West Virginia University School of Medicine)
  Graduate Medical Education and DIO
- Dorian Williams - M.D. (West Virginia University School of Medicine)
  Technology & Simulation

ASSOCIATE VICE PRESIDENT FOR HEALTH SCIENCES

- John Linton - PhD. (Kent State University)
  Dean, Charleston Campus
- Emma Morton Eggleston - MD (University of North Carolina)
  Dean, Eastern Campus

Degree Designation Learning Outcomes

MASTER OF SCIENCE (MS) IN THE BIOMEDICAL SCIENCES

This program is designed to assist in the selection of a career path, albeit industry, teaching, or a professional program, and/or for the transition to a biomedical Ph.D. program. The first-year curriculum imparts a fundamental understanding of the functional components of a cell and the basis for regulation of cellular processes and organ systems. After selecting a mentor, students take additional courses that align with their research interests.

Students will:

- Integrate molecular, cellular, and integrative systems concepts
- Critically interpret the current scientific literature
- Develop critical thinking and problem-solving skills
- Design and interpret experiments to test molecular, cellular, and integrative systems mechanisms
- Demonstrate technical skills in conducting scientific experimentation

- Articulate, verbally and in writing, their understanding of concepts during scientific discussions
- Discuss relevant scientific ethical issues presented as case studies
- Engage with fellow students and faculty and demonstrate teamwork

MASTER OF SCIENCE (MS) IN CLINICAL AND TRANSLATIONAL SCIENCE

This program is designed to foster the training and career development of health professionals in clinical and translational research. The target group for this program is junior faculty, fellows, residents, and PhDs. Trainees acquire a well-rounded education in the areas of biostatistics, epidemiology, translational science, clinical trials, scientific ethics, and scientific writing (grant and manuscript) and obtain research training in a mentored environment.

Students will:

- Differentiate between parametric and nonparametric methodologies
- Test hypotheses, using statistical software (SAS, R) to perform basic biostatistical analyses
- Examine mortality and morbidity trends
- Measure frequency and association
- Design research studies and interpret data
- Screen from an epidemiological perspective
- Translate research discoveries into policies and practices that promote health
- Critically evaluate the clinical trial literature
- Design an original clinical trial
- Write a grant proposal and manuscript
- Discuss relevant scientific ethical issues presented as case studies

MASTER OF SCIENCE (MS) IN EXERCISE PHYSIOLOGY

This program is designed with a clinical and a thesis track. The clinical track specializes in working with persons with diseases such as obesity, cardiovascular disease, and diabetes and aging. The thesis track provides opportunities for students to study mechanisms leading to and contributing to health diseases and disparities and to understand the impact of exercise on these health issues. The graduates of the masters program will become leaders who will supervise Exercise Physiologists in hospitals, rehabilitation, aquatic therapy programs, fitness, or academic settings.

Students will:

- Critically apply theories, methodologies, and knowledge to address fundamental questions in health specific issues related to exercise physiology
- Demonstrate skills in written and oral communication and critical thinking by critically analyzing research that is significant and novel in exercise physiology and within the sub-discipline associated with it
- Plan and conduct this research or implement this project under the guidance and approval of their research mentors while developing the intellectual independence that typifies true scholarship (thesis track students)
- Critically evaluate published research data and demonstrate clinical skills in working with patients and evaluating health and exercise-stress test data for appropriate exercise treatment (clinical track students)
- Follow the principles of ethics associated with appropriate research conduct (thesis track students) or clinical treatment of patients (clinical track students)
- Interact productively with people from diverse backgrounds including mentors and team members/peers with integrity and professionalism

MASTER OF SCIENCE (MS) IN THE HEALTH SCIENCES

This is a terminal degree program targeting students interested in developing their skills toward a career requiring knowledge in the biomedical sciences. The objectives of this program are to:

- Provide integrative scientific education in the biomedical and public health sciences to graduates from an accredited undergraduate institution
- Develop integrative and critical thinking skills to allow application of scientific knowledge to traditionally non-scientific fields
- Train students in the rudiments of research on a basic science, public health, or clinical topic, including hypothesis testing, data collection, and manuscript preparation
- Enhance students' competitiveness for admission to a health professional and/or Ph.D. program
- Provide the opportunity to explore career options in various health professional disciplines
- Enhance skills for job placement including resume and cover letter evaluation, and interviewing preparation

Students will:

- Demonstrate mastery of basic science information in at least two basic science courses
- Demonstrate mastery of core public health knowledge

- Be able to learn new information via reading the scientific literature and attending seminars
- Demonstrate mastery of public speaking and written communication skills
- Be able to develop novel hypotheses, collect data to test this hypothesis, and report their findings
- Enhance their competitiveness for career placement

MASTER OF OCCUPATIONAL THERAPY (MOT)

This program is designed to meet the needs of rapidly changing and dynamic health and human services delivery systems that require the occupational therapist to possess basic skills as a direct care provider, consultant, educator, manager, researcher, and advocate for the profession and the consumer.

Students will:

- Successfully complete the coursework and fieldwork components of the program; completing the program with a grade point average of 3.0 or higher and a passing grade on all fieldwork
- Graduate within a time frame of three years following acceptance to the program; completing all academic work, clinical fieldwork, and community service within that time frame
- Demonstrate professional behaviors, attitudes, and values that are in agreement with and as outlined in the West Virginia Student Occupational Therapy Program Handbook and the American Occupational Therapy Association (AOTA) Occupational Therapy Code of Ethics and Ethics Standards
- Demonstrate an appreciation for the attitudes, values, and behaviors of peoples of various cultures and backgrounds
- Utilize an occupation and evidence-based approach as components of occupational therapy practice.
- Successfully complete all elements of a master degree level research project including an oral presentation.
- Demonstrate the ability to adapt to appropriate, varying, and novel situations and circumstances within their educational and clinical environments.
- Demonstrate the ability to frame issues and problems of human occupation that are consistent with and reflective of current frames of reference and theoretical models and approaches within the profession of Occupational Therapy.
- Demonstrate an appreciation for and understanding of the value of professional advocacy and promotion of the profession of Occupational Therapy
- Demonstrate entry-level competence in areas of evaluation, treatment, communication, critical reasoning, and leadership upon graduation
- Develop the skills necessary, as well as an appreciation, for becoming a life-long learner

All graduates must:

- Have acquired, as a foundation for professional study, a breadth and depth of knowledge in the liberal arts and sciences and an understanding of issues related to diversity
- Be educated as a generalist with a broad exposure to the delivery models and systems used in settings where occupational therapy is currently practiced and where it is emerging as a service
- Have achieved entry-level competence through a combination of academic and fieldwork education
- Be prepared to articulate and apply occupational therapy theory and evidence-based evaluations and interventions to achieve expected outcomes as related to occupation
- Be prepared to articulate and apply therapeutic use of occupations with individuals or groups for the purpose of participation in roles and situations in home, school, workplace, community, and other settings
- Be able to plan and apply occupational therapy interventions to address the physical, cognitive, psychosocial, sensory, and other aspects of performance in a variety of contexts and environments to support engagement in everyday life activities that affect health, well-being, and quality of life
- Be prepared to be a lifelong learner and keep current with evidence-based professional practice
- Uphold the ethical standards, values, and attitudes of the occupational therapy profession
- Understand the distinct roles and responsibilities of the occupational therapist and occupational therapy assistant in the supervisory process
- Be prepared to effectively communicate and work inter-professionally with those who provide care for individuals and/or populations in order to clarify each member's responsibility in executing components of an intervention plan
- Be prepared to advocate as a professional for the occupational therapy services offered and for the recipients of those services

Be prepared to be an effective consumer of the latest research and knowledge bases that support practice and contribute to the growth and dissemination of research and knowledge

DOCTOR OF PHYSICAL THERAPY (DPT)

This program is designed to educate individuals with the knowledge, skills, and behaviors consistent with professional excellence. Working as part of a community of professionals, the program strives to advance practice characterized by independence, professional judgment, and involvement.

Graduates will:

- Demonstrate basic and applied knowledge necessary to practice PT as a member of the health care team in diverse settings
- Demonstrate the ability to make sound clinical decisions using information literacy skills, critical thinking, and scientific evidence
- Find employment with special emphasis on recruitment and retention of graduates in WV
- Adhere to core professional values
- Demonstrate the ability to practice independently
- Adhere to legal and ethical standards
- Demonstrate a life-long commitment to the profession by activity in professional organizations, scholarship, education, and advocacy
- Deliver high quality physical therapy services to individuals and communities across a continuum of care, including rural settings.
- Demonstrate sound, independent clinical decisions utilizing information literacy, critical thinking skills, and scientific evidence
- Function as a unique member of the health care team, including receiving and providing appropriate referrals
- Provide culturally sensitive care distinguished by advocacy, trust, respect, and an appreciation for individual differences
- Demonstrate a commitment to the health of the community through participation in primary and secondary prevention programs
- Actively engage in local and professional advocacy in a changing health care environment

DOCTOR OF MEDICINE (MD)

This program is designed for students to develop knowledge, skills, and attitudes across six (6) competency areas: Patient Care, Medical Knowledge, Practice-Based Learning and Improvement, Interpersonal and Communication Skills, Professionalism, and Systems-Based Practice.

Students will:

Provide patient care that is compassionate, appropriate, and effective and promote life-styles that promote improved health:

- Gather essential and accurate patient information, including a complete and appropriately organized medical history and physical examination
- Evaluate patient information in order to formulate complete and accurate differential diagnoses and apply appropriate diagnostic tests to confirm diagnoses
- Develop patient management plans that are evidenced-based and considerate of cultural and ethnic preferences
- Counsel and educate patients and their families about prevention strategies, diagnostic tests, treatment options/plans, and patient orders/prescriptions
- Perform medical procedures appropriately and professionally
- Partner with patients to prevent health problems and improve health status

Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences and apply this knowledge to patient care:

- Describe normal structure and function of the human body and each organ system over the lifespan
- Describe molecular, cellular, and biochemical mechanisms of homeostasis
- Describe and apply normal cognitive and social growth and development of humans to diagnose abnormal cognitive and social development
- Describe causes of altered structure and function of organ systems and tissues that result in disease (genetic, developmental, nutritional, toxic, infectious, inflammatory, neoplastic, degenerative, traumatic, and behavioral)
- Describe foundations of diagnostic methods, therapeutic interventions, outcomes, and prevention with respect to specific disease processes in individuals and populations
- Describe genetic and physiologic basis of individual patient response to drugs
- Describe and apply foundational principles of epidemiology, statistics, and ethics to diagnosis and treatment of disease
- Explain the effect of social determinants, health behaviors, and preventative measures on health status and disease of individuals and populations
- Demonstrate use of scientific method and critical evaluation of scientific literature in establishing causation, diagnosis, and therapy of disease

Demonstrate the ability to investigate and evaluate their role in the care of patients, to appraise and assimilate scientific evidence, and to continuously improve their role in patient care based on constant self-evaluation and learning:

- Locate, appraise and assimilate evidence from scientific studies including basic, clinical, translational, and community (population) based research
- Apply knowledge of study designs and statistical methods to appraise studies
- Use information technology to manage information and support patient care decisions
- Develop the skills necessary for lifelong learning, as evidence by demonstrating independent and self-directed study
- Utilize strategies to identify and analyze strengths, deficiencies, and limits in one's knowledge, collaboration skills, and professionalism

Demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, peers, and health professionals:

- Communicate effectively and demonstrate caring and respectful behaviors with patients and families across a broad range of socioeconomic and cultural backgrounds
- Collaborate with a team of health care professionals to provide patient-focused, preventive, acute, chronic, continuing, rehabilitative, and end-of-life care
- Provide an accurate and complete oral presentation of a patient encounter
- Demonstrate effective communication and collaboration with all members of a health care team
- Write timely, legible, accurate and complete documentation of a clinical encounter in written or electronic format

Demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles:

- Demonstrate respect, compassion, integrity, responsiveness to needs of patients, society, and profession that supersedes self-interest
- Demonstrate a commitment to ethical principles, including provision or withholding of care, confidentiality, informed consent, and respect for patient privacy and autonomy
- Demonstrate sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in culture, age, gender, race, religion, disabilities, sexual orientation, and health
- Create and sustain a therapeutic and ethically sound relationship with patients
- Demonstrate timeliness and punctuality in the execution of learning and clinical duties

Demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to learn about other resources in the system to promote optimal health care:

- Define the roles of health care professionals and demonstrate how inter-professional collaboration improves patient safety, patient-centered outcomes, and system performance
- Describe and distinguish effective methods of organizing, financing, and providing health care
- Describe how the prevention and treatment of healthcare disparities may affect individual patients, populations, and the healthcare system
- Advocate for quality patient care, as evidenced by recognizing system limitations and failures and contributing to healthcare safety and improvement

DOCTOR OF PHILOSOPHY (PHD)

PhD in the Biomedical Sciences

Students in the first semester of year one in the Biomedical Sciences Graduate Programs take a common core curriculum that covers topics important to all biomedical sciences graduate programs. In addition, they begin training in the responsible conduct of research, and they conduct three short lab experiences to assist in the selection of a faculty mentor for dissertation research. The intended outcomes the first year in graduate school are to match with a faculty investigator who will guide the student to completion of dissertation research, and to successfully transfer into one of the Ph.D. degree-granting biomedical sciences programs.

By the end of the first year students will:

- Integrate molecular, cellular, and integrative systems concepts
- Identify the relevant scientific literature for their proposed area of research
- Conduct and optimize select laboratory procedures
- Develop an oral presentation on a topic that is new to them
- Discuss relevant scientific ethical issues presented as case studies
- Apply responsible research practices to the conduct of their experiments
- Engage with fellow students and faculty and demonstrate teamwork

PhD in Biochemistry & Molecular Biology

Students will:

- Identify and summarize the basic concepts of biochemistry and molecular biology including: molecular genetics, protein structure and function, metabolism, cell biology and biophysics.
- Discuss, interpret and critique the research literature in biochemistry and molecular biology.
- Demonstrate deep insight when discussing research in their specific field of study.
- Integrate broad, fundamental knowledge in the basic concepts of biochemistry and molecular biology with detailed knowledge of the student's specific field of study.
- Identify the major questions and gaps in their specific field of study. When challenged, be able to identify significant gaps in our collective knowledge of biochemistry and molecular biology.
- Acquire, develop and use standard biochemical laboratory techniques as well as those necessary to successfully perform state of the art experiments in the student's area of research.

- Design experimental protocols and conduct self-directed research that is well-controlled, rigorous and produces results with unequivocal interpretation.
- Conduct research to produce novel results that are presented at scientific meetings and published in peer-reviewed journals.
- Demonstrate oral, written and visual communication skills that result in clear and organized dissemination of material at a level appropriate for the audience.

PhD in Cancer Cell Biology

Student learning outcomes in the CCB Graduate Program have been partially adapted from the guidelines set forth by Cancer Biology Training Consortium (CABTRAC), along with recommendations from the CCB Scholarship Committee and Faculty.

Students will:

- Independently plan and implement a research project that emphasizes cancer in the context of human disease and health.
- Understand cancer biology at the population, individual, cellular and molecular levels.
- Demonstrate knowledge of subject-specific techniques and methods in self-directed bench science that incorporates scientific rigor and transparency in the application of knowledge.
- Analyze and critique experimental questions, to become proficient at technical troubleshooting, and to objectively evaluate scientific data (their own and that published in the literature) with high ethical standard.
- Evaluate the scientific literature with scholarly aptitude within their chosen discipline.
- Apply their skills in written, oral and visual communication to foster effective communication of research.
- Apply and expand their knowledge while engaged in experiential learning in areas outside of their discipline.

PhD in Cellular & Integrative Physiology

The student learning and programmatic outcomes of the Cellular and Integrative Physiology Graduate Program are similar to those put forth by the Human Anatomy & Physiology Society (HAPS) and the American Physiological Society (APS). They are as follows:

Fundamental Content & Process Goals

1. Recognize the anatomy and explain physiological functions of body systems.

2. Recognize and explain the principle of homeostasis and the use of feedback loops to control physiological systems.

3. Use anatomical knowledge to predict physiological consequences, and use knowledge of function to predict the features of anatomical structures.

4. Recognize and explain the interrelationships within and between anatomical and physiological systems of the body.

5. Synthesize ideas to make a connection between knowledge of anatomy and physiology and real-world situations, including healthy lifestyle decisions and homeostatic imbalances.

Broader Process Goals

6. Demonstrate information literacy skills to access, evaluate, and use resources to stay current in the field of physiology.

7. Examine issues related to physiology from an evidence-based perspective.

8. Communicate clearly and in a way that reflects knowledge and understanding of physiology and demonstrates the ability to adapt information to different audiences and applications.

PhD in Exercise Physiology

Students will:

- Attain a comprehensive understanding of the biophysical, biomechanical and biochemical processes that contribute to movement production and disease progression
- Learn to apply theories and methodologies to address fundamental questions in health-specific issues related to exercise physiology
- Obtain independent and critical thinking skills requisite for designing, conducting, and interpreting research data in an effort to advance knowledge related to health and disease through creative and innovative research
- Effectively communicate knowledge through oral and written means by disseminating research findings that have the potential to improve health and quality of life
- Demonstrate principles of ethics associated with appropriate research conduct
- Acquire technical skills requisite for conducting experimental procedures

PhD in Immunology and Microbial Pathogenesis

Students will:

- Identify and summarize the basic concepts of microbiology, microbial pathogenesis, and immunology.
- Integrate detailed knowledge in microbiology, microbial pathogenesis, and immunology with the knowledge of student's area of research.
- Discuss, critique, and interpret primary research literature in microbiology, microbial pathogenesis, immunology, and in the student's area of research.
- Identify meaningful problems and questions for research in microbiology, microbial pathogenesis, and immunology.
- Acquire expertise and use laboratory techniques required to perform experiments in the student's area of research.
- Design experimental protocols and conduct self-directed research that results in presentations at scientific meeting and publications.
- Demonstrate oral, written, and visual communication skills that result in clear and organized dissemination of material at a level appropriate for the audience.

PhD in Neuroscience

Students will:

- Independently design experimental protocols, conduct the experiments, analyze the results, and defend the experimental approach to other scientists.
- Develop and plan the test of hypotheses regarding significant problems in neuroscience.
- Ability to effectively reference the relevant literature in support of the student's research project. Ability to identify significance gaps in knowledge on a scientific topic in neuroscience. Ability to critically evaluate the strengths and weaknesses of the scientific literature.
- Effectively communicate research in abstracts written for research presentations, manuscripts for publication, research grant proposals, and the final dissertation.
- Effectively communicate both the student's research and general scientific topics in both informal and formal settings.
- Develop experimental rigor and strategies for conducting reproducible research.
- Demonstrate principles of ethics associated with appropriate research conduct.

PhD in Pharmaceutical & Pharmacological Sciences

Students will:

- Demonstrate competency in the 5 content areas of pharmaceutical and pharmacological sciences:
  - Drug Chemistry
  - Pharmacokinetics
  - Principles of Drug Action
  - Approaches to Drug Discovery
  - Biopharmaceutics
- Independently design experimental protocols that include the principles of rigor and reproducibility, conduct the experiments, analyze the results, and defend the experimental approach to other scientists.
- Develop and plan the test of hypotheses regarding significant problems in the student's chosen area of specialization
- Demonstrate critical thinking/problem solving ability by effectively criticizing the neuroscience literature and by asking relevant questions in seminars.
- Ability to effectively reference the relevant literature in support of the student's research project. Ability to identify significant gaps in knowledge on this scientific topic.
- Effectively communicate scientific information in written abstracts for research presentations, manuscripts for publication, research grant proposals, and the dissertation.
- Effectively communicate scientific information in both formal and informal oral presentations.

Doctoral Degrees

Policies for the Doctor of Medicine (MD) degree may be found in the MD Degree Student Handbook. This includes but is not limited to policies for evaluation and advancement as outlined in the Policy on Academic and Professional Standards Governing the MD Degree program.

The policies for the Doctor of Philosophy degree in the School of Medicine include program specific requirements, School of Medicine specific requirements and University wide requirements. Students should become familiar with the WVU graduate catalog and the handbooks provided to them by their graduate program and upon entry into graduate school.

Required Research Participation

Because the Doctor of Philosophy is a research degree, students will be expected to be involved in research from the beginning of their programs. Doctoral students participate in research rotations with faculty during the first, and if necessary, the second semester of enrollment. Students may choose a dissertation advisor in the first semester of study or by the end of year one. With the aid of the student's advisor a dissertation committee is chosen in the second year of enrollment. Students should work with their dissertation advisor to design appropriate pilot studies and with the data identify a dissertation project and appropriate research questions/hypothesis to be tested by the proposed research. All approved research projects must be hypothesis-based, and whenever possible, the research questions should address mechanistic questions that explain biological phenomenon relevant to the field of study.

Research is conducted throughout the doctoral program with the requirement that one manuscript, based on the student's dissertation research, is accepted for publication in a peer-reviewed scientific journal before defense of PhD dissertation research. Students should strive to present their research findings at a minimum of one national/international meeting annually beginning in the second year of enrollment in the doctoral program.

Directed Research

All preliminary research must be collected under the supervision and approval of the dissertation chair, which is most graduate programs is the student's advisor. The student is expected to engage in directed research under the supervision of the dissertation advisor to learn techniques and collect pilot data that will be the basis of a future dissertation project. Studies to obtain pilot data should be presented to the dissertation committee to demonstrate the student's competency in research skills and that his/her research ideas and hypotheses are appropriate and justified. This process facilitates progression through the program in a timely and efficient manner. Nevertheless, the dissertation committee may require the student to obtain additional pilot data or research skills prior to approving the research proposal as a dissertation topic. The student's directed research efforts should be progressing towards approval of a dissertation topic from the members of the dissertation committee, once they have been identified (before the end of the first semester of year two). This research training will provide the student background data/information from which to base a pre-doctoral grant proposal and dissertation topic as part of the requirements for completing the defense of the Dissertation Proposal.

Comprehensive/Qualifying Examination

The comprehensive (qualifying/candidacy) examination is usually given after most formal coursework has been completed and, in general, will test the scientific knowledge pertinent to the student's chosen Ph.D. training program. The individual graduate programs conduct these examinations at different times and use different formats. Depending on the graduate program, the qualifying exam is scheduled either at the end of year one or year two or in association with the proposal defense.

Requirements of the Dissertation Proposal/Candidacy Examination

Graduate students are admitted to Ph.D. candidacy after successfully defending the Dissertation Proposal. The candidacy examination consists of writing a grant proposal, formatted similar to a National Institutes of Health pre-doctoral grant, and orally defending the dissertation proposal to the student's dissertation committee. Advancement to candidacy means that in the judgment of the faculty, the doctoral student has an adequate knowledge of their research area, knows how to use academic resources, and has potential to do original independent research . In other words, the student is qualified to complete the doctoral dissertation. No student with a grade point average of less than 3.0 will be eligible to take this examination.

Failure to successfully complete the Comprehensive Examination or the Dissertation Proposal by the end of the third year in graduate school is grounds for dismissal. A student has two attempts to pass the exam. Failure on the first attempt requires the student petition and receive approval from the dissertation committee to retake either exam a second time.

General Dissertation Requirements

The student must complete a dissertation in which they have obtained original data that makes a novel and important contribution to knowledge in the field of study and submit all manuscripts containing these data to peer-reviewed journals. At least one manuscript with the student as first author must be accepted for publication prior to defense of the dissertation. The dissertation must be constructed in a format suitable to the graduate school and the advisor. Preferable formats will include writing the data chapters as if they have been submitted to peer-reviewed journals (including abstract, introduction, methods and materials, results, discussion, and literature cited in each chapter). In addition, the final one to two chapters of the dissertation should include an integrative discussion concerning the total research project and evaluation of hypotheses that were tested.

Completion of the PhD degree requires a written dissertation that is presented orally in front of a public forum and defended in private to the student's dissertation committee. To pass, the student must receive the approval of 4 of the 5 members on the dissertation committee.

Student Evaluations

Students are formerly evaluated annually by the dissertation committee and the program faculty with respect to courses, research, teaching, professional development, and progress through the program. The student also annually completes an Individual Development Plan that is reviewed by the student's advisor.

Certificate Program

- Clinical and Translational Science (p. 46)

Accreditation

The MD program within the School of Medicine has specialized accreditation through the Liaison Committee on Medical Education (LCME).

The MHS in Pathologist's Assistant program within the School of Medicine has specialized accreditation through the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).

The PhD in Physical Therapy program within the School of Medicine has specialized accreditation through the Commission on Accreditation in Physical Therapy Education.

The following list are Residency specialty training programs for MD degree holders include:

Addiction Medicine and Addiction Psychiatry within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and the Residency Review Committee for Psychiatry.

Anesthesiology within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Anesthesiology.

Child and Adolescent Psychiatry within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Psychiatry.

Dermatology within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Dermatology.

Emergency Medicine within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Emergency Medicine.

Family Medicine within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) with Residency Review Committee for Family Medicine.

Forensic Psychiatry within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Psychiatry.

Geriatrics-Rural within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education with (ACGME) Residency Review Committee for Family Medicine.

Hematopathology within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review for Pathology.

Neonatology/Perinatal Medicine Fellowship within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Pediatrics.

Neurology within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Neurology.

NeuroRadiology Fellowship within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Radiology.

Neurosurgery within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) with Residency Review Committee for Neurological Surgery.

Obstetrics and Gynecology within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Obstetrics and Gynecology.

Ophthalmology within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Ophthalmology.

Ophthalmic Plastic and Reconstructive Surgery within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Ophthalmology.

Orthopedic Surgery within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Orthopedic Surgery.

Otolaryngology within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Otolaryngology .

Pathology within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review for Pathology.

Pediatrics within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Pediatrics.

Plastic Surgery within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Plastic Surgery.

Psychiatry within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Psychiatry.

Radiation Oncology within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Radiation Oncology.

Radiology Diagnostic within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Radiology.

Rural Family Medicine (Harper's Ferry) within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) with Residency Review Committee for Family Medicine.

Surgery within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Surgery.

Sports Medicine within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Emergency Medicine.

Transitional Year within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) with Residency Review Committee for Transitional Year.

Urology within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) with Residency Review Committee for Urology.

Vascular Surgery within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Surgery.
Thoracic Surgery within the School of Medicine has specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for Thoracic Surgery.

*The following programs within the School of Medicine have specialized accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and Residency Review Committee for **Internal Medicine**: Core Internal Medicine, Cardiovascular Disease, Gastroenterology, Endocrinology, Hematology/Oncology, Hospice/Palliative Care, Infectious Diseases, Interventional Cardiology, Nephrology, Pulmonary/Critical Care Medicine, and Rheumatology.*

Athletic Training, M.S.

Department website: https://medicine.hsc.wvu.edu/athletic-training (https://medicine.hsc.wvu.edu/athletic-training/)

Degree Offered

- Master of Science

Nature of the Program

The WVU athletic training program has a rich history of educating and preparing extraordinary Sports Medicine professionals for over 44 years. Over 500 athletic training students have graduated from the program and have gone on to pursue careers in medicine, college athletics, professional sports, Olympic training centers, military, preforming arts and other clinical settings.

The Master of Science in Athletic Training degree program is a two year program consisting of classroom, laboratory, and clinical education rotations. Clinical rotations, spanning both years, include working with WVU Big 12 athletic teams, high school athletes, professional sports, performing arts and in hospital emergency departments. Graduates of the MSAT program are eligible to sit for the national BOC examination to become a certified athletic trainer.

Accreditation

The WVU Athletic Training program is currently accredited by the Commission on Accreditation of Athletic Training Education (CAATE), 6850 Austin Center Blvd., Suite 100, Austin, TX 78731-3101. The program is currently applying to the CAATE for a change in level of degree and is pending approval.

FACULTY

CHAIR

- Anh-Dung Nguyen - PhD, ATC (University of North Carolina at Greensboro)
  Professor

Admissions

Applications for the Master of Science in Athletic Training are accepted via ATCAS from August 1 - May 1 each year. The program is 24 continuous months and begins in June.

In order to be eligible for admission, students must complete the following requirements:

1. **Completion of a baccalaureate degree**

   Applicants must have earned a baccalaureate degree, or plan on completing a baccalaureate degree by May of the year entering the program. Students may apply with an undergraduate degree in any major.

2. **Overall cumulative GPA of 2.75 or greater (3.0 or greater preferred)**

   The cumulative GPA includes all previous undergraduate coursework at all institutions the student has attended.

3. **Required clinical observation**

   A minimum of 50 hours of clinical observation under the direct supervision of a certified athletic trainer is required.

4. **Three letters of recommendations**

   One letter must be from a board-certified athletic trainer with whom the applicant has worked in a clinical setting.

5. **Pre-requisite GPA of 3.0 or greater, earning a grade of C or higher in all pre-requisite courses.**

   Biology including lab
   Human Anatomy including lab
   General Chemistry including lab
   Human Physiology
   General Physics including lab
   Biomechanics/Kinesiology
   Exercise Physiology or Physiology of Science
   Psychology
   Nutrition

6. **Required current certification**

   Required current certification in either American Red Cross Professional Rescuer CPR or American Heart Association Basic Life Support for Health Care Providers. Proof of certification required at time of interview.

7. **On-campus interview**

   Successful completion of an on-campus interview with the MSAT Admissions Committee (invitation only)

8. **Non-native speakers of English**

   Non-native speakers of English with international transcripts, regardless of U.S. citizenship, must validate proficiency in the English language. Applicants may submit a satisfactory score on the TOEFL language proficiency test. The minimum required score depends on the form of the exam taken (internet based – 79, or paper based – 550).

Curriculum Requirements

A minimum grade of "C" is required in EACH didactic course. A minimum GPA of 3.0 cumulative will be required to progress and graduate from the program. It is possible for a semester GPA to fall below 3.0. In such a case, the student would be placed on probation and required to raise the cumulative GPA the following semester or face possible suspension or dismissal. A Committee on Academic and Professional Standards will be established to oversee academic progress of students.

PT 706	Advanced Clinical Anatomy	5
AT 511	Managing Athletic Medical Trauma	2
AT 512	Foundations of Professional Practice	1
AT 513	Fundamental Skills in Athletic Training	2
AT 520	Musculoskeletal Assessment & Diagnosis 1	3
AT 521	Musculoskeletal Assessment & Diagnosis 2	3
AT 522	Clinical Decision Making 1	2
AT 523	Evidence Based Practice 1	1
AT 524	Pediatric Sports Medicine Clinical Rotation	3
AT 530	Therapeutic Interventions 1	3
AT 531	Therapeutic Interventions 2	3
AT 532	Clinical Decision Making 2	2
AT 533	Evidence Based Practice 2	1
AT 534	Collegiate Sports Medicine Clinical Rotation	3
AT 610	General Medical Conditions	2
AT 611	Pathophysiology	2
AT 613	Sports Medicine Clinical Rotation 1	2
AT 620	Leadership & Management in Athletic Training	2
AT 621	Advanced Neuromuscular Concepts	2
AT 622	Optimizing Athletic Performance	2
AT 623	Sports Medicine Clinical Rotation 2	9
AT 630	Professional Practice in Athletic Training	1
AT 631	Clinical Topics in Sports Medicine	2
AT 632	Evidence Based Practice 3	2
AT 633	Sports Medicine Clinical Rotation 3	8
Total Hours		68

Suggested Plan of Study

First Semester	Hours
PT 706	5
AT 511	2
AT 512	1
AT 513	2
	10

Second Semester	Hours
AT 520	3
AT 521	3
AT 522	2
AT 523	1
AT 524	3
	12

Third Semester	Hours
AT 530	3
AT 531	3
AT 532	2
AT 533	1

AT 534	3
	12
Fourth Semester	**Hours**
AT 610	2
AT 611	2
AT 613	2
	6
Fifth Semester	**Hours**
AT 620	2
AT 621	2
AT 622	2
AT 623	9
	15
Sixth Semester	**Hours**
AT 630	1
AT 631	2
AT 632	2
AT 633	8
	13

Total credit hours: 68

Major Learning Outcomes

ATHLETIC TRAINING

1. Program graduates will be proficient, evidence-based and patient-centered athletic training professionals.
2. Program graduates will demonstrate effective collaboration in an inter-professional healthcare model.
3. Program graduates demonstrate the ability to engage in practice-based research to improve patient care.
4. Program graduates will have created a customized plan to formulate strategies for life-long learning to ensure contemporary expertise through ongoing professional development, engagement in professional organizations, and advocacy for the profession.
5. Program graduates will be able to critically appraise the ethical and practical aspects of patient care and research.

Biochemistry and Molecular Biology, Ph.D.

Degrees Offered

- Doctor of Philosophy
- Combined Degrees, Doctor of Medicine and Doctor of Philosophy

Nature of the Program

A major goal of the **Biochemistry and Molecular Biology Program** is to foster ability for independent thought. To this end, our faculty cultivates an open, collegial relationship with one another and with our students. Close collaboration between scientists, the sharing of ideas, and open inquiry are critical components of our training plan.

The hallmarks of graduate training in biochemistry and molecular biology are the emphasis placed on the use of the scientific literature in advanced coursework and on protecting time for laboratory research. In addition, students will have time for professional development through seminar presentation, attendance at national meetings, teaching opportunities, and seminar programs both within the department and throughout the Health Sciences Center.

This doctoral program focuses on the understanding of biology by exploring function of the molecular components of cells. The student's ability for independent thought is critical in preparation for a career as an independent scientist. During the second year, specialized courses in biochemistry are offered as students continue their research projects. During subsequent years, students emphasize independent dissertation research, and a few formal courses may be taken. Completion of the Ph.D. degree is realized when the student successfully presents the research results to faculty of the graduate dissertation committee and program/department. Typically, four to five years are required to realize this goal. A fast-track option is available to West Virginia University undergraduate students who have excelled in undergraduate prerequisite courses relevant to biochemistry, and began their research in a Program member's laboratory during their junior year.

Faculty research in the program can provide the student with training in multiple basic sciences areas including:

- Epigenetic regulation of chromatin structure and gene expression
- RNA processing
- Cell survival mechanisms
- Regulation of metabolism
- Proteosome function
- Cell proliferation and cell cycle regulation
- Cell adhesion
- Kinases and phosphatases in signal transduction and in cancer cell metabolism
- Oxidant-induced cellular stress
- Structural biology and structure/function relationships of macromolecules such as RNA and/or proteins
- Molecular genetics of visual and auditory development
- G protein-mediated signaling by retinal photoreceptors
- Molecular basis of age-related blindness
- Development and application of new magnetic resonance approaches to biomedicine

These research areas provide fundamental knowledge toward the normal health-state and aim toward the amelioration of important diseases: atherosclerosis, blindness, cancer, deafness, diabetes, and metabolic disorders.

FACULTY

GRADUATE PROGRAM DIRECTOR

- Visvanathan Ramamurthy, Professor - Ph.D. (Wesleyan University)

PROFESSORS

- Brad Hillgartner - Ph.D. (Michigan State University)
- Steven Frisch - Ph.D. (University of California-Berkeley
- Valery Khramtsov - Ph.D.
  (Institute of Chemical Kinetics and Combustion)
- Gregory Konat - Ph.D. (University of Southern Denmark)
- Qiang Ma - Ph.D. (Rutgers University)
- Vazhaikkurichi Rajendran - Ph.D. (University of Madras)
- Mike Ruppert - M.D., Ph.D. (Johns Hopkins University)
- Lisa Salati - Ph.D. (University of Minnesota)
- Michael Schaller, Chair - Ph.D. (McMaster University)

ASSOCIATE PROFESSORS

- Yehenew Agazie - Ph.D. (University of Saskatchewan)
- Michael Gunther - Ph.D. (Colorado State University)
- Jun Liu - Ph.D. (University of Oxford)
- Pete Mathers - Ph.D. (California Institute of Technology)
- Elena Pugacheva - Ph.D. (Russian Academy of Science)
- Andrew Shiemke - Ph.D. (Oregon Graduate Institute)
- David Smith - Ph.D. (University of South Florida)
- Maxim Sokolov - Ph.D. (Weizmann Institute of Science)
- Peter Stoilov - Ph.D. (Friedrich Alexander University)
- Scott Weed - Ph.D. (Yale University)

ASSISTANT PROFESSORS

- U. Brandon Choi - PhD
  North Carolina State University
- Jinahai Du - Ph.D. (Peking University)
- Saravanan Kolandaivelu - Ph.D.
  All India Institute of Medical Sciences

- Roberta Leonardi - Ph.D. (University of Southampton)
- Aaron Robart - Ph.D. (University of Calgary)
- Mark Tseytlin - Ph.D.
  (Russian Academy of Sciences)
- Eric Tucker - Ph.D. (University of Arizona)
- Bradley Webb - Ph.D. (Queen's University)

RESEARCH ASSISTANT PROFESSOR

- Andrey Bobko - Ph.D.
  (Institute of Chemical Kinetics and Combustion)
- Alexey Ivanov - Ph.D. (Russian Academy of Sciences)

Doctor of Philosophy

MAJOR REQUIREMENTS - STANDARD TRACK

A minimum GPA of 3.0 is required.

BMS 700	Scientific Integrity	1
BMS 701	Scientific Rigor and Ethics	1
BMS 702	Biomedical Lab Experience	2
BMS 706	Biomedical Research Methods	1
BMS 707	Experiential Learning for Biomedical Trainees	2
BMS 715	Molecular Genetics	3
BMS 720	Scientific Writing	2
BMS 747	Foundations for Contemporary Biomedical Research I	4
BMS 777	Foundations for Contemporary Biomedical Research II	4
Journal Club		7
BIOC 785	Biochemistry and Molecular Biology Journal Club	
Graduate Seminar		1
BIOC 796	Graduate Seminar	
Research		52
BIOC 797	Research	
Advanced Graduate Course - select one of the following:		4
BIOC 750	Protein Chemistry/Enzymology	
BIOC 751	Advance Molecular Biology	
CCB 701	Biochemical and Oncogenic Signaling	
Advanced Graduate Course - select one of the following:		3-5
CCB 701	Biochemical and Oncogenic Signaling	
BIOC 750	Protein Chemistry/Enzymology	
PSIO 750	Graduate Physiology and Pharmacology 1	
BIOC 751	Advance Molecular Biology	
MICB 784B	Special Problems in Microbiology	
Qualifying Exam		
Candidacy Exam		
Dissertation Defense		
Total Hours		87-89

MAJOR REQUIREMENTS - FAST TRACK

A minimum GPA of 3.0 is required.

BMS 700	Scientific Integrity	1
BMS 701	Scientific Rigor and Ethics	1
BMS 707	Experiential Learning for Biomedical Trainees	2
BMS 715	Molecular Genetics	3
BMS 720	Scientific Writing	2

Journal Club		7
BIOC 785	Biochemistry and Molecular Biology Journal Club	
Graduate Seminar		1
BIOC 796	Graduate Seminar	
Research		52
BIOC 797	Research	
Advanced Graduate Course - select one of the following:		4
BIOC 750	Protein Chemistry/Enzymology	
BIOC 751	Advance Molecular Biology	
CCB 701	Biochemical and Oncogenic Signaling	
Advanced Graduate Course - select one of the following:		3-5
CCB 701	Biochemical and Oncogenic Signaling	
BIOC 750	Protein Chemistry/Enzymology	
PSIO 750	Graduate Physiology and Pharmacology 1	
BIOC 751	Advance Molecular Biology	
MICB 784B	Special Problems in Microbiology	
Qualifying Exam		
Candidacy Exam		
Dissertation Defense		
Total Hours		76-78

Seminars and Research Forum

Students will present three seminars during their graduate study. The first seminar is on a topic outside of the student's research area. The second seminar is the public presentation of the dissertation proposal, which is the background and proposed research for the dissertation project. The third seminar is the public presentation of the dissertation defense.

Journal Club

Students are required to enroll in Journal Club each semester. The course involves the presentation and discussion of current research papers and will help acquaint students with the variety of methods used in scientific research.

Doctoral Research

Students will conduct research with a dissertation mentor during time in the program. Students register for research credits each semester, and their performance is graded by their dissertation mentor.

Qualifying and Dissertation Proposal/Ph.D. Candidacy

The written qualifying exam is given at the end of the first year of study. The candidacy is completed in the second year of study. Admission to Ph.D. candidacy occurs following the successful defense of the dissertation proposal.

Dissertation Defense and First-Author Paper Requirement

Students are allowed to defend their dissertation when a minimum of one manuscript with the student as first author, based on dissertation research, is accepted in a peer-reviewed journal. The final examination for the Ph.D. degree consists of orally defending a written dissertation in a public seminar and then in private to the dissertation committee. Satisfactory performance in the oral defense will result in recommendation for granting of the PhD.

Suggested Plan of Study*

First Year

Fall	Hours	Spring	Hours	Summer	Hours
BMS 700		1 BMS 701		1 BIOC 797	3
BMS 706		1 BMS 715		3 Qualifying Exam	
BMS 702		2 BIOC 785		1	
BMS 747		4 BIOC 797		4	
BMS 777		4			
		12		9	3

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
BIOC 785		1 BIOC 785		1 BMS 720	2
BIOC 797		5 BIOC 797		4 BIOC 797	1
Advanced Course		3 Advanced Course		4 Candidacy Exam	
		9		9	3

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
BIOC 785		1 BIOC 785		1 BIOC 797	1
BIOC 797		8 BIOC 796		1 BMS 707	2
		BIOC 797		7	
		9		9	3

Fourth Year

Fall	Hours	Spring	Hours	Summer	Hours
BIOC 785		1 BIOC 785		1 BIOC 797	3
BIOC 797		8 BIOC 797		8	
		9		9	3

Total credit hours: 87

NOTE: The graduate curriculum is finalized with a plan of study once the mentor and laboratory have been selected in the first year. The plan of study is developed by the graduate committee in consultation with the student. The courses listed above include the required and elective coursework necessary for the student to finalize his/her plan of study. When the student enters the laboratory of his/her doctoral dissertation mentor repetitive enrollments in research, seminars, and colloquia are typical and will determine total hours necessary for degree completion.

*This is a suggested plan of study. Course sequences and length of time in program may vary depending on student and altered total credit hours.

Major Learning Outcomes

BIOCHEMISTRY AND MOLECULAR BIOLOGY

Students will:

- Identify and summarize the basic concepts of biochemistry and molecular biology including: molecular genetics, protein structure and function, metabolism, cell biology and biophysics.
- Discuss, interpret and critique the research literature in biochemistry and molecular biology.
- Demonstrate deep insight when discussing research in their specific field of study.
- Integrate broad, fundamental knowledge in the basic concepts of biochemistry and molecular biology with detailed knowledge of the student's specific field of study.
- Identify the major questions and gaps in their specific field of study. When challenged, be able to identify significant gaps in our collective knowledge of biochemistry and molecular biology.
- Acquire, develop and use standard biochemical laboratory techniques as well as those necessary to successfully perform state of the art experiments in the student's area of research.
- Design experimental protocols and conduct self-directed research that is well-controlled, rigorous and produces results with unequivocal interpretation.
- Conduct research to produce novel results that are presented at scientific meetings and published in peer-reviewed journals.
- Demonstrate oral, written and visual communication skills that result in clear and organized dissemination of material at a level appropriate for the audience.

Biomedical Sciences, M.S., Ph.D.

Degrees Offered

- Master of Science
- Doctor of Philosophy

Lisa M. Salati, Ph.D., Program Director and Assistant Vice President for Graduate Education at the WVU Health Sciences Center; lsalati@hsc.wvu.edu

Nature of the Program

The Masters of Science (M.S.) in the **Biomedical Sciences** is designed to assist in the selection of a career path, such as industry, teaching, or a professional program, and/or for the transition to a biomedical Doctor of Philosophy (Ph.D.) program. The M.S. degree has a thesis and non-thesis option, the latter with additional elective coursework that should align with career goals. Completion of the M.S. degree is realized when the student successfully presents the research results to faculty of the student's graduate thesis committee. Typically, two to three years are required to realize this goal.

A Ph.D. in the **Biomedical Sciences** at West Virginia University offers the student the unique opportunity to explore multiple disciplines and areas of research in the biomedical sciences but to also fast track into a dissertation laboratory and a graduate program within one semester. Earning the Ph.D. will be through one of the 7 degree granting programs in the Biomedical Sciences: Biochemistry and Molecular Biology, Cancer Cell Biology, Cellular and Integrative Physiology, Exercise Physiology, Immunology and Microbial Pathogenesis, Neuroscience, and Pharmaceutical and Pharmacological Sciences. These programs share a common admission's process and a common core curriculum in the first semester. Students will rotate through 3 laboratories during the fall semester with the potential to select a dissertation adviser by the end of the semester.

Doctoral study in these graduate programs allows the development of research and critical thinking skills as well as preparation in career development to prepare the student for entry into a myriad of careers in research, teaching, industry, government, and other positions that require specialized training at the graduate level.

All students will:

- start with an orientation that will prepare him/her to successfully transition into graduate studies, and to interact with an orientation adviser, faculty investigators, and current students;
- have the opportunity to match with a faculty mentor, or thesis or dissertation adviser through laboratory rotations during the first semester;
- have formal training in scientific writing;
- have the opportunity to participate in seminar series, workshops, experiential learning, and career-development sessions.

FACULTY

ASSISTANT VP FOR GRADUATE EDUCATION

- Lisa M. Salati - Ph.D.

DIRECTOR M.D./PH.D. PROGRAM

- Albert Berrebi - PhD

PROGRAM COORDINATOR

- Joseph Andria
- Connor Ferguson

Admissions

All applications are accepted electronically and must be submitted electronically via the official WVU Graduate Education application: https://westvirginia.force.com/wvugrad/TX_SiteLogin?startURL=%2Fwvugrad%2FTargetX_Portal__PB (https://westvirginia.force.com/wvugrad/TX_SiteLogin/?startURL=%2Fwvugrad%2FTargetX_Portal__PB).

Applications are reviewed beginning in November by a Common Admissions Committee comprised of the graduate directors or faculty representatives of our seven Ph.D. graduate training programs and a senior graduate student representing the Graduate Student Organization. The Assistant Vice President for Graduate Education is an *ex officio* member. The deadline for receipt of applications is December 15 for admission in the Fall semester of the next academic year. Students are not admitted for the spring semester.

All students interested in one of the 7 Biomedical Ph.D. programs must apply through a common admissions portal. Choice of a specific graduate program occurs during the first year of graduate study after selection of an adviser for your dissertation research and choosing one of the degree granting programs. Applications to both the Ph.D. and M.S. programs include a Personal Statement, transcripts from all Colleges or Universities attended, and 3 letters of recommendation. Applicants must arrange to have official copies of transcripts sent directly to the WVU Office of Graduate Admissions and Recruitment, PO Box 6510, Morgantown, WV 26506-6510.

Additional Information:

To review the programs and application process, please visit:

For Ph.D. applicants: http://www.hsc.wvu.edu/resoff/graduate-education/phd-programs/biomedical-sciences/prospective-students/

For M.S. applicants: http://www.hsc.wvu.edu/resoff/graduate-education/ms-programs/biomedical-sciences/

Qualified Ph.D. applicants are invited to an all-expense paid, 2.5 day visit/interview to the campus. Qualified M.S. applicants may be interviewed in person or by phone. Students with excellent credentials and who can clearly describe their past research and demonstrate passion for research at the interview are seriously considered for acceptance. Decisions of acceptance are made on a rolling basis, and all decisions made by the Admissions Committee are final. For maximum admissions consideration and eligibility for graduate merit fellowships with enhanced benefits, we recommend that you apply as early as possible.

Master of Science

MAJOR REQUIREMENTS

BMS 700	Scientific Integrity	1
BMS 701	Scientific Rigor and Ethics	1
BMS 706	Biomedical Research Methods	1
Select one of the following:		3
BMS 715	Molecular Genetics (Recommended)	
Elective (approved by advisor and advisory committee)		
BMS 720	Scientific Writing	2
Program- specific elective		3
Journal Clubs		3
BMS 702	Biomedical Lab Experience	2
BMS 747	Foundations for Contemporary Biomedical Research I	4
BMS 777	Foundations for Contemporary Biomedical Research II	4
Select either the thesis or non-thesis option:		18
Thesis Option		
Elective (3 hours)		
Research (15 hours)		
BMS 797	Research	
Thesis Proposal		
Thesis Defense		
Non-Thesis Option		
Electives (12 hours)		
Research (6 hours)		
BMS 797	Research	
Total Hours		42

Seminars and Research Forum

It is recommended that students attend a weekly seminar in their chosen research area during each semester enrolled in the program.

Journal Club

Students are required to enroll in three Journal Clubs during their M.S. studies. The course involves the presentation and discussion of current research papers and will help acquaint students with the variety of methods used in scientific research.

Masters Research

Students will conduct research with a thesis mentor during time in the program. Students register for research credits each semester, and their performance is graded by their thesis mentor.

Thesis Proposal

The thesis proposal is completed in the beginning of the second year of study.

Thesis Defense

The final examination for the M.S. degree consists of orally defending a written thesis in private to the thesis committee – a prior public presentation is encouraged. Satisfactory performance in the oral defense will result in recommendation for granting of the M.S. degree.

Suggested Plan of Study

THESIS OPTION

First Year

Fall	Hours	Spring	Hours	Summer	Hours
BMS 700	1	BMS 701	1	BMS 797	3
BMS 706	1	BMS 715	3		
BMS 702	2	Program Specific Elective	3		
BMS 747	4	Journal Club	1		
BMS 777	4	BMS 797	1		
	12		9		3

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
Elective	3	Journal Club	1	BMS 720	2
Journal Club	1	BMS 797	6	BMS 797	1
BMS 797	4				
Thesis proposal					
	8		7		3

Total credit hours: 42

NON THESIS OPTION

First Year

Fall	Hours	Spring	Hours	Summer	Hours
BMS 700	1	BMS 701	1	BMS 797	3
BMS 706	1	BMS 715	3		
BMS 702	2	Program-specific elective	3		
BMS 747	4	Elective	3		
BMS 777	4	Journal Club	1		
	12		11		3

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
Elective	3	Elective	3	BMS 720	2
Elective	3	Journal Club	1	BMS 797	1
Journal Club	1	BMS 797	1		
BMS 797	1				
	8		5		3

Total credit hours: 42

NOTE: The graduate curriculum is finalized with a plan of study once the mentor and laboratory have been selected in the first year. The plan of study is developed by the graduate committee in consultation with the student. The courses listed above include the required and elective coursework necessary for the student to finalize his/her plan of study.

Major Learning Outcomes

BIOMEDICAL SCIENCES

This program is designed to assist in the selection of a career path, albeit industry, teaching, or a professional program, and/or for the transition to a biomedical Ph.D. program. The first-year curriculum imparts a fundamental understanding of the functional components of a cell and the basis for regulation of cellular processes and organ systems. After selecting a mentor, students take additional courses that align with their research interests.

Students will:

- Integrate molecular, cellular, and integrative systems concepts
- Critically interpret the current scientific literature

- Develop critical thinking and problem-solving skills
- Demonstrate technical skills in conducting scientific experimentation
- Design and interpret experiments to test molecular, cellular, and integrative systems mechanisms
- Articulate, verbally and in writing, their understanding of concepts during scientific discussions
- Discuss relevant scientific ethical issues presented as case studies
- Engage with fellow students and faculty and demonstrate teamwork

Doctor of Philosophy (Ph.D.) in one of 7 biomedical Ph.D. programs

Students in the first semester of year one in the Biomedical Sciences Graduate Programs take a common core curriculum that covers topics important to all biomedical sciences graduate programs. In addition, they begin training in the responsible conduct of research, and they conduct three short lab experiences to assist in the selection of a faculty mentor for dissertation research. The intended outcomes the first year in graduate school are to match with a faculty investigator who will guide the student to completion of dissertation research, and to successfully transfer into one of the Ph.D. degree-granting biomedical sciences programs.

By the end of the first year students will:

- Integrate molecular, cellular, and integrative systems concepts
- Identify the relevant scientific literature for their proposed area of research
- Conduct and optimize select laboratory procedures
- Develop an oral presentation on a topic that is new to them
- Discuss relevant scientific ethical issues presented as case studies
- Apply responsible research practices to the conduct of their experiments
- Engage with fellow students and faculty and demonstrate teamwork

The individual PhD programs have additional learning outcomes specific to the advanced skills required of a PhD and the specific discipline of that program and the student's research.

Cancer Cell Biology, Ph.D.

scweed@hsc.wvu.edu (sweed@hsc.wvu.edu)

Degrees Offered

- Doctor of Philosophy
- Joint Doctor of Medicine and Doctor of Philosophy

Nature of the Program

Students in the doctoral program in **Cancer Cell Biology** receive comprehensive in-depth training in modern areas of cancer biology, with a strong emphasis on cellular and molecular aspects of cancer origin, progression and treatment and a focus on cancer types and issues relevant to international, national and West Virginia populations. The program is designed to produce scholarly researchers with aptitude in public speaking, community service, clinical engagement, and critical thinking. Completion of the Ph.D. degree is realized when the student successfully presents the research results to faculty of the graduate dissertation committee and program, and publishes original peer-reviewed research as the primary author. Typically, five years are required to realize this goal.

Research interests include biochemical, molecular, and cellular basis of cancer origin and progression. Current research areas include the following:

- *Tumor Microenvironment*: Tumor cell resistance to anoikis, effects of microenvironment on dormancy, stem cell regulation, leukemia/stromal interactions.
- *Mechanisms of Metastasis*: Role of proteases in cell motility, signaling pathways in invasion and metastasis, imaging of metastasis in animal models.
- *Genetic Regulation of Cancer*: Tumor suppressor genes and transcriptional regulation, post-translational modifications in transcriptional regulation, miRNA regulatory pathways in progression, epigenentics, HPV-driven cancers.
- *Nanotechnology and Cancer*: Effects of nanoparticles on signal transduction pathways governing cancer growth and progression.
- *Signal Transduction in Cancer*: Receptor tyrosine kinase signaling in cancer growth and metastasis, non-receptor tyrosine kinases in cell adhesion and proliferation, ROS in tumor progression.
- *Cancer Bioinformatics*: Biomarker classification in cancer, predictive models of carcinogenesis, secondary analysis of existing databases.
- *Systems Biology in Cancer*: Modeling signaling nodes in breast cancer, oncogenic pathway analysis.
- *Cancer Disparities in Appalachia*: Biological models of Appalachian disparities, prevention and control, cancer registry analysis.

- *Cancer Therapeutics*: High-throughput screening and novel drug discovery, applications and formulations, pre-clinical evaluation in animal models, immunotherapy.

Cancer cell biology investigators working in these research areas routinely incorporate biochemical, molecular, cellular, animal, and computational-based techniques that are currently utilized at the forefront of leading basic cancer research laboratories around the world. The main tumor types that are the current focus of cancer cell biology investigators are based on cancers with disproportionate incidences in West Virginia, including breast, leukemia, ovarian, cervical, lung, colorectal and head and neck cancers.

The doctor of philosophy program in cancer cell biology is designed to expose Ph.D. and M.D./Ph.D. level graduate students to a wide spectrum of opportunities available in basic and translational cancer research. In addition to mechanistic and therapeutic approaches to studying problems in cancer at the bench, students have the opportunity for exposure to more clinical elements of cancer practice, including participation in tumor boards, shadowing clinicians, and participation in the design and approval of clinical trials. The cancer cell biology program at WVU is a member of the Cancer Biology Training Consortium (CABTRAC), a national organization of similar cancer-specific Ph.D. programs that interact through annual regional and national meetings to improve and refine Ph.D. cancer training. Graduates of the cancer cell biology program are therefore well-equipped to enter into a number of different career paths. These include postdoctoral research, biotechnology, industry, government, science writing, core facilities management, and legal counsel as examples.

FACULTY

GRADUATE PROGRAM DIRECTOR

- Scott Weed - Ph.D. (Yale University)

CO-DIRECTOR

- Linda Vona-Davis - Ph.D. (West Virginia University)

PROFESSORS

- Steven Frisch - Ph.D. (University of California, Berkeley)
- Nancy Lan Guo - Ph.D. (West Virginia University)
- Lori Hazlehurst - Ph.D. (University of Vermont)
- Paul Lockman - Ph.D. (Texas Tech University)
- Mark McLaughlin - Ph.D. (Georgia Institute of Technology)
- William Petros - Pharm. D (Philadelphia College of Pharmacy)
- Yon Rojanasakul - Ph.D. (University of Wisconsin)
- Michael Ruppert - M.D./Ph.D. (Johns Hopkins University)
- Michael Schaller - Ph.D. (McMaster University)

ASSOCIATE PROFESSORS

- Yehenew Agazie - Ph.D. (University of Saskatchewan)
- Timothy Eubank - Ph.D. (Ohio State University)
- Werner Geldenhuys - Ph.D. (North-West University)
- David Klinke - Ph.D. (Northwestern University)
- Jun Liu - Ph.D. (University of Oxford)
- Malcom Mattes - MD
  (University of California, Los Angeles)
- Ed Pistilli - Ph.D. (West Virginia University)
- Elena Pugacheva - Ph.D. (Russian Academy of Sciences)
- Mohamad Salkeni - M.D. (University of Damascus)
- Peter Stoilov - Ph.D. (Max Plank Institute)

ASSISTANT PROFESSORS

- Brian Boone - MD
  (University of South Florida)
- Cristopher Cifarelli - M.D./Ph.D. (Thomas Jefferson University)
- Wei Du - M.D./Ph.D. (Tohoku University)
- Brock Lindsay - M.D. (University of Cincinnati)
- Ivan Martinez - Ph.D. (University of Pittsburgh)

RESEARCH ASSOCIATE PROFESSOR

- Karen Martin - Ph.D. (Duke University)

RESEARCH ASSISTANT PROFESSOR

- Amanda Gatesman Ammer - PhD
  (West Virginia University)
- Alexey Ivanov - Ph.D. (Russian Academy of Sciences)

Doctor of Philosophy

MAJOR REQUIREMENTS

Cancer Cell Biology Major Requirements

BMS 700	Scientific Integrity	1
BMS 701	Scientific Rigor and Ethics	1
BMS 702	Biomedical Lab Experience	2
BMS 706	Biomedical Research Methods	1
BMS 707	Experiential Learning for Biomedical Trainees	2
BMS 720	Scientific Writing	2
BMS 747	Foundations for Contemporary Biomedical Research I	4
BMS 777	Foundations for Contemporary Biomedical Research II	4
CCB 700	Selected Topics in Cancer Cell Biology	3
CCB 701	Biochemical and Oncogenic Signaling	3
CCB 702	Cancer Pharmacologic and Therapeutics	3
Journal Club		7
CCB 705	Journal Club	
CCB 730	Cancer Cell Biology	3
Graduate Seminar		7
CCB 796	Graduate Seminar	
Research		44
CCB 797	Research	
Elective Courses - select one of the following:		3
BIOC 751	Advance Molecular Biology	
BMS 715	Molecular Genetics	
MICB 720	Cellular Immunobiology	
Candidacy Exam		
Dissertation Defense		
Total Hours		90

Seminars and Research Forum

Students attend seminar each semester. These seminars are either given by invited faculty or students.

Journal Club

Students are required to enroll in Journal Club each semester. The course involves the presentation and discussion of current research papers and will help acquaint students with the variety of methods used in scientific research.

Doctoral Research

Students will conduct research with a dissertation mentor during time in the program. Students register for research credits each semester, and their performance is graded by their dissertation mentor.

Dissertation Proposal/Ph.D. Candidacy

The candidacy exam is completed in the third year of study. Admission to Ph.D. candidacy occurs following the successful defense of the candidacy exam.

Dissertation Defense and First-Author Paper Requirement

Students are allowed to defend their dissertation when a minimum of one manuscript with the student as first author, based on dissertation research, is accepted in a peer-reviewed journal. The final examination for the Ph.D. degree consists of orally defending a written dissertation in a public seminar and then in private to the dissertation committee. Satisfactory performance in the oral defense will result in recommendation for granting of the Ph.D. degree.

Suggested Plan of Study*

First Year

Fall	Hours	Spring	Hours	Summer	Hours
BMS 700	1	BMS 701	1	CCB 797	3
BMS 706	1	CCB 730	3		
BMS 702	2	CCB 705	1		
BMS 747	4	CCB 796	1		
BMS 777	4	CCB 797	1		
		Electives Course	3		
	12		10		3

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
CCB 700	3	CCB 702	3	BMS 720	2
CCB 701	3	CCB 705	1	CCB 797	1
CCB 705	1	CCB 796	1		
CCB 796	1	CCB 797	4		
CCB 797	1				
	9		9		3

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
CCB 705	1	CCB 705	1	BMS 707	2
CCB 796	1	CCB 796	1	CCB 797	3
CCB 797	7	CCB 797	7		
	9		9		5

Fourth Year

Fall	Hours	Spring	Hours	Summer	Hours
CCB 705	1	CCB 705	1	CCB 797	3
CCB 796	1	CCB 796	1		
CCB 797	7	CCB 797	7		
	9		9		3

Total credit hours: 90

NOTE: The graduate curriculum is finalized with a plan of study once the mentor and laboratory have been selected in the first year. The plan of study is developed by the graduate committee in consultation with the student. The courses listed above include the required and elective coursework necessary for the student to finalize his/her plan of study. When the student enters the laboratory of his/her doctoral dissertation mentor repetitive enrollments in research, seminars, and colloquia are typical and will determine total hours necessary for degree completion.

*This is a suggested plan of study. Course sequences and length of time in program may vary depending on student and altered total credit hours.

Major Learning Outcomes

CANCER CELL BIOLOGY

Student learning outcomes in the CCB Graduate Program have been partially adapted from the guidelines set forth by Cancer Biology Training Consortium (CABTRAC), along with recommendations from the CCB Scholarship Committee and Faculty.

Students will:

- Independently plan and implement a research project that emphasizes cancer in the context of human disease and health.
- Understand cancer biology at the population, individual, cellular and molecular levels.
- Demonstrate knowledge of subject-specific techniques and methods in self-directed bench science that incorporates scientific rigor and transparency in the application of knowledge.

- Analyze and critique experimental questions, to become proficient at technical troubleshooting, and to objectively evaluate scientific data (their own and that published in the literature) with high ethical standard.
- Evaluate the scientific literature with scholarly aptitude within their chosen discipline.
- Apply their skills in written, oral and visual communication to foster effective communication of research.
- Apply and expand their knowledge while engaged in experiential learning in areas outside of their discipline.

Cellular and Integrative Physiology, Ph.D.

smhileman@hsc.wvu.edu (shileman@hsc.wvu.edu)

Degrees Offered

- Doctor of Philosophy
- Joint Doctor of Medicine and Doctor of Philosophy

Nature of the Program

Physiology is a dynamic life science that focuses on the study of biological systems at many levels of complexity, ranging from genes and molecules to cells and organisms. Thus, training in physiology has the ultimate goal of linking molecular and cellular information to functional outcomes. Currently, groundbreaking research and discovery in the life sciences are more interdisciplinary than ever, and students studying within the realm of physiology can expect to work with a wide range of scientists, including pharmacologists who are focused in a complementary field: namely, the study of how drugs affect biological systems and how biological systems affect drugs.

The goal of the doctoral program in **Cellular and Integrative Physiology** is to engage students in creating a new approach to the life sciences, with the aim of explaining how the higher-level properties of complex systems appear from the interactions amongst their parts and environmental inputs. Our program provides a multidisciplinary approach to modern life sciences, drawing on faculty expertise from several departments and centers in the Schools of Medicine and Pharmacy.

Completion of the Ph.D. degree is realized when the student publishes at least one original, peer-reviewed manuscript in the biomedical research literature and successfully presents this original research to faculty of the graduate dissertation committee and the program/department. Typically, four to five years are required to realize this goal.

The program's participating research faculty consists of scientists from the Department of Physiology & Pharmacology, NIOSH/CDC, and the Rockefeller Neurosciences Institute. As a result, this multidimensional program includes activities in the following:

- Inhalation Toxicology
- Integrative and Systems Physiology
- Pathophysiology
- Translational Research
- Pharmacology

It also integrates information from genetics, functional genomics, and proteomics into whole animal and human physiology.

This interactive and cross-disciplinary environment, together with an atmosphere filled with enthusiasm and passion for scientific discovery, makes our program a uniquely exciting place for doing research and the training of students. Specific topics of research emphasis include the following:

- Protein Regulators of Hormone and Neurotransmitter Signal Transduction
- Free Radical Biology in Diabetes and Obesity
- Impact of Toxicants on Cardiovascular Function and Health
- Respiratory Function and Control in Health and Disease
- Neuroendocrine Control of Reproduction
- Stroke Physiology

Students will leave our program better able to identify important unsolved scientific problems and with an appreciation of how to select problems for which quantitative and theoretical approaches will be most productive.

ADMINISTRATION
CHAIR

- Tim Nurkiewicz - Ph.D.

ADMINISTRATOR

- Tammy McPherson -
  (Sr. Administrative Official)

ASSOC. CHAIR FOR RESEARCH

- Eric Kelley - Ph.D.

ASSOC. CHAIR FOR EDUCATION

- Mark Paternostro - Ph.D.

FACULTY

GRADUATE PROGRAM DIRECTOR

- Stan Hileman - Ph.D.
  (Director)
- Robert Brock - Ph.D.
  (Assistant Director)

CHAIR

- Tim Nurkiewicz - Ph.D.

REGULAR MENTORS

- Paul Chantler - Ph.D.
  (Cardiovascular)
- Robert Goodman - Ph.D.
  (Endocrine & Neuroscience)
- Stanley Hileman - Ph.D.
  (Endocrine & Neuroscience)
- Salik Hussain - Ph.D.
  (Respiratory Toxicology)
- Eric Kelley - Ph.D.
  (Redox Physiology)
- Timothy Nurkiewicz - Ph.D.
  (Cardiovascular)
- Mark Olfert - Ph.D.
  (Cardiovascular & Respiratory)
- Vazhaikkurichi Rajendran - Ph.D.
  (Gastrointestinal Electrophysiology)
- David Siderovski - Ph.D.
  (G-Protein Coupled Receptors)
- James Simpkins - Ph.D.
  (Cardiovascular)

NIOSH MENTORS

- Patti Erdely - Ph.D.
- Aaron Erdely - Ph.D.
- Jeffrey Fedan - Ph.D.
- Richard Johnson - Ph.D.
- Dale Porter - Ph.D.
- Anna Shvedova - Ph.D.

RESEARCH ASSISTANT PROFESSOR

- Elizabeth Bowdridge - Ph.D.

Doctor of Philosophy
MAJOR REQUIREMENTS

BMS 700	Scientific Integrity	1
BMS 701	Scientific Rigor and Ethics	1
BMS 706	Biomedical Research Methods	1
BMS 707	Experiential Learning for Biomedical Trainees	2
BMS 720	Scientific Writing	2
Graduate Seminar		4
PSIO 744	Graduate Seminar	
PSIO 750	Graduate Physiology and Pharmacology 1	3
PSIO 751	Graduate Physiology and Pharmacology 2	3
BMS 702	Biomedical Lab Experience	2
BMS 747	Foundations for Contemporary Biomedical Research I	4
BMS 777	Foundations for Contemporary Biomedical Research II	4
Research		47
PSIO 797	Research	
Electives:		15
BMS 715	Molecular Genetics	
CCB 730	Cancer Cell Biology	
PHAR 779	Drug Discovery	
MICB 784B	Special Problems in Microbiology	
MICB 784C	Special Problems in Microbiology	
PSIO 790	Teaching Practicum	
PSIO 793	Special Topics (Physiology Issues)	
PSIO 793	Special Topics	
PSIO 793	Special Topics	
PSIO 795	Independent Study	
Qualifying Exam		
Candidacy Exam		
Dissertation Defense		
Total Hours		89

Seminars and Research Forum

Students register for one credit of seminar each academic year while in residence.

Journal Club

Students are required to enroll in Journal Club each semester. The course involves the presentation and discussion of current research papers and will help acquaint students with the variety of methods used in scientific research.

Doctoral Research

Students will conduct research with a dissertation mentor during time in the program. Students register for research credits each semester, and their performance is graded by their dissertation mentor.

Qualifying and Dissertation Proposal/Ph.D. Candidacy

The oral qualifying exam is given at the end of the second year of study. The candidacy exam is completed in the third year of study. Admission to Ph.D. candidacy occurs following the successful defense of the dissertation proposal.

Dissertation Defense and First-Author Paper Requirement

Students are allowed to defend their dissertation when a minimum of one manuscript with student as the first author, based on dissertation research, is accepted in a peer-reviewed journal. The final examination for the Ph.D. degree consists of orally defending a written dissertation in a public seminar and then in private to the dissertation committee. An external examiner, a distinguished scientist external to WVU, is required to participate at the dissertation defense. Satisfactory performance in the oral defense will result in recommendation for granting of the Ph.D. degree.

Suggested Plan of Study*

First Year

Fall	Hours	Spring	Hours	Summer	Hours
BMS 700	1	Electives	3	PSIO 797	3
BMS 706	1	BMS 701	1		
BMS 702	2	PSIO 744	1		
BMS 747	4	PSIO 750 or 751	3		
BMS 777	4	PSIO 797	3		
	12		11		3

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
PSIO 750 or 751	3	Electives	6	BMS 720	2
PSIO 797	3	PSIO 744	1	PSIO 797	1
Electives	3	PSIO 797	2		
	9		9		3

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
Elective (as needed)	3	PSIO 797	9	PSIO 797	1
PSIO 744	1			BMS 707	2
PSIO 797	5				
	9		9		3

Fourth Year

Fall	Hours	Spring	Hours	Summer	Hours
PSIO 744	1	PSIO 797	9	PSIO 797	3
PSIO 797	8				
	9		9		3

Total credit hours: 89

NOTE: The graduate curriculum is finalized with a plan of study once the mentor and laboratory have been selected in the first year. The plan of study is developed by the graduate committee in consultation with the student. The courses listed above include the required and elective coursework necessary for the student to finalize his/her plan of study. When the student enters the laboratory of his/her doctoral dissertation mentor repetitive enrollments in research, seminars, and colloquia are typical and will determine total hours necessary for degree completion.

*This is a suggested plan of study. Course sequences and length of time in program may vary depending on student and altered total credit hours.

Major Learning Outcomes

CELLULAR AND INTEGRATIVE PHYSIOLOGY

The student learning and programmatic outcomes of the Cellular and Integrative Physiology Graduate Program are similar to those put forth by the Human Anatomy & Physiology Society (HAPS) and the American Physiological Society (APS). They are as follows:

Fundamental Content & Process Goals

1. Recognize the anatomy and explain physiological functions of body systems.

2. Recognize and explain the principle of homeostasis and the use of feedback loops to control physiological systems.

3. Use anatomical knowledge to predict physiological consequences, and use knowledge of function to predict the features of anatomical structures.

4. Recognize and explain the interrelationships within and between anatomical and physiological systems of the body.

5. Synthesize ideas to make a connection between knowledge of anatomy and physiology and real-world situations, including healthy lifestyle decisions and homeostatic imbalances.

Broader Process Goals

6. Demonstrate information literacy skills to access, evaluate, and use resources to stay current in the field of physiology.

7. Examine issues related to physiology from an evidence-based perspective.

8. Communicate clearly and in a way that reflects knowledge and understanding of physiology and demonstrates the ability to adapt information to different audiences and applications.

Clinical and Translational Science, M.S., Ph.D.

Degrees Offered

- Master of Science
- Doctor of Philosophy
- Joint Doctor of Medicine and Doctor of Philosophy

Certificate Offered

- Clinical and Translational Science

Nature of the Program

Clinical and Translational Science is a high priority for the National Institute of Health (NIH). Clinical research encompasses the following research areas: 1) Research with human subjects that attempts to determine disease mechanisms, therapies, clinical trials and new techniques; 2) Epidemiology & Behavioral research and 3) Outcomes research. Translational research, sometimes referred to as "bench to bedside to community," is a concept beginning in the laboratory developing and testing interventions impacting human health, taking that information into trial studies on human subjects and finally, determining best practices for community health. West Virginia University has a Clinical and Translational Science Institute (WVCTSI) which is funded in part from the NIH Institutional Development Award Program for Clinical & Translational Research (IDeA-CTR). The WVCTSI, in partnership with other institutions, has a mission to focus on research that will address the health issues of individuals and communities specifically as they affect West Virginia and the Appalachian region. The mission of this institute is in alignment with the land grant mission of West Virginia University (WVU) and the strategic plan of the WVU Health Sciences Center.   An overview of recent projects undertaken by the WVCTSI is available at the following web site: http://wvctsi.org/.

As part of the WVCTSI, educational programs at the graduate level prepare trainees to participate in clinical and translational research. WVU offers a **Doctor of Philosophy (Ph.D.), Masters of Science (M.S.), and Certificate in Clinical and Translational Science** which is designed to develop the next generation of clinical and translational scientists through education and mentored research training.

PH.D. IN CLINICAL AND TRANSLATIONAL SCIENCE

The goal of the **Ph.D. program** is to develop biomedical researchers who can integrate findings, information, and observations across basic, population, and clinical sciences, to accelerate and transform how we improve the health of individuals and populations. By the completion of this degree, students will be able to:

1. Design, implement, conduct, analyze and interpret research projects using the techniques unique to basic science, clinical research, and population science research
2. Demonstrate mastery of research in a focused area as evidenced by academic and scientific presentations and publications
3. Read, understand and critique the scientific literature of the basic, clinical, and population sciences
4. Work effectively with and create collaborative, productive research partnerships with clinicians, population scientists, and basic / laboratory scientists
5. Be able to communicate with and understand the research challenges and perspectives of each of the three branches of clinical and translational science (basic, clinical, and population sciences)
6. Work with communities to translate scientific findings into programs and policies that improve the health of individuals and populations.

The **Ph.D. program** is suitable for students with:

- An undergraduate degree (preferably with some research or allied health work experience).
- Already completed graduate work (at the master or doctoral level)
- Medical students in the MD/PhD program
- Practicing clinicians
- Other biomedical professionals seeking expertise in and preparation for careers in clinical and translational research (e.g. Doctoral programs for Physical Therapy, Pharmacy, etc.)

Information on the **Ph.D. degree** may be found at the program web http://wvctsi.org/programs/education-mentoring-career-development/phd-in-clinical-translational-science/

MASTERS OF SCIENCE IN CLINICAL AND TRANSLATIONAL SCIENCE

Typically, **M.S. trainees** have an undergraduate degree in a health care discipline or a field of study complementary to research in health. The master's degree may also be considered as part of a dual degree program, such as MD/MS. The M.S. degree expands upon Certificate coursework in biostatistics and epidemiology to provide mentored, research training with required and elective courses, the latter to complement research needs and interests. The degree emphasizes a research project(s) that can be clinical (study of medications, devices, diagnostic products, and treatments; may include clinical trials) and/or translational research (defined as research with human subjects or with populations or with direct application to human health). Completion of the M.S. degree requires a written grant proposal defended orally to three graduate faculty members. The degree can be completed in three semesters, although typically clinical trainees are part-time and complete the program in two to three years. Information on the **M.S. degree** may be found at the program website: http://wvctsi.org/programs/education-mentoring-career-development/ms-in-clinical-translational-science/

FACULTY

MASTERS AND CERTIFICATE GRADUATE PROGRAM DIRECTOR

- Julie Lockman - Ph.D.

PH.D. GRADUATE PROGRAM DIRECTOR

- I. Mark Olfert - PhD, FAHA
- Paul Chantler - PhD

Admissions

PH.D.IN CLINICAL AND TRANSLATIONAL SCIENCE

For the Ph.D. in Clinical and Translational Science, the minimum requirements for admission consideration are as follows:

- Completed undergraduate degree with a cumulative GPA of 3.0 or higher
- GRE score of 300 (total; minimum of 150 verbal and 150 quantitative) or MCAT of 28 (total). In the instances where the applicant is a clinician, successful completion of the USMLE Step 1 and Step 2 board exams may be accepted *in lieu* of the GRE or MCAT scores.
- TOEFL score where applicable (minimum score requirement depends upon the test taken; standards established by the WVU Office of Admissions, International Graduate Students)
- Significant undergraduate coursework in the physical or biological sciences is strongly recommended (1 year of biology, 1 year of math, 1 year of chemistry, and 1 year of social sciences) as is research experience

Applicants for the Ph.D. in Clinical and Translational Science **must**:

Submit WVU Graduate application for admission, found at http://admissions.wvu.edu/how-to-apply (http://admissions.wvu.edu/how-to-apply/). Applications must be dated, completed, and received in the department by **January 15, 2021**. Make sure to **upload** all required information listed below.

- A personal statement that addresses their desire to complete a doctoral program in clinical and translational science, a career in biomedical research, and how their background, including their research experiences, have prepared them for this doctoral program
- A résumé or CV that indicates relevant experience and the years and location (institution) of completion of undergraduate degrees and any graduate or professional coursework or degrees
- Three letters of recommendation from professional and / or academic referees, in which the referees clarify how long and in what capacity they have known the applicant and their assessment of the student's likelihood of success in doctoral-level work.

Applications to this program will be reviewed by a program-specific admissions committee comprised of representatives from the WVU HSC Interdisciplinary Research Centers (Center for Cancer Cell Biology, Center for Cardiovascular and Respiratory Sciences, Center for Neuroscience, and the WV Stroke Center), the WV-CTSI, and the WVU HSC Office of Research and Graduate Education. A senior student in the program will be a representative on the committee.

It is anticipated that admission to this program will be competitive; meeting the minimum admission requirements will not assure acceptance to this program.

MASTERS OF SCIENCE IN CLINICAL AND TRANSLATIONAL SCIENCE

The M.S. in Clinical and Translational Science is targeted to faculty, medical residents, fellows, clinicians, and scientists with health-related professional degrees, those seeking a dual degree (such as MD/MS or PhD/MS), or health professional students. Prospective students must have an earned bachelor's degree from an accredited university with an overall GPA of at least 3.0.

Applicants for the M.S. in Clinical and Translational Science **must**:

Submit WVU Graduate application for admission, found at http://admissions.wvu.edu/how-to-apply (http://admissions.wvu.edu/how-to-apply/). All applications should be dated, completed, and received by the department by the dates below.

- The application deadline for **Fall semester is July 1**
- The application deadline for **Spring semester is December 1**
- The application deadline for **Summer semester is April 1**

Make sure to **upload** all required information listed below.

- Official transcripts from all undergraduate institutions attended.
- TOEFL scores, if applicable (may be waived in some circumstances)
- A personal statement outlining past accomplishments (with an emphasis on research, future research interests, and a clear career vision of how becoming a clinical/translational researcher is part of a long-term career plan)
- Three letters of recommendation that evaluate potential as a clinician scientist
- A list of potential research mentors
- A Curriculum Vitae or resume

For faculty applicants, a support letter from the Department Chairperson is required stating how research activities integrate with other responsibilities.

For clinicians, support letters from the department Chair and fellowship or residency director (if applicable) are required.

Student applicants must be in good academic and professional standing.

Any other interested applicants should follow the WVU requirements for application to graduate programs as described below.

Prospective graduate trainees interested in one of the above programs are urged to initiate application for admission as early as possible. The first step of a student interested in a degree program should be to ask for information from the department, division, school, or college offering the program desired; the reply to such an inquiry will include instructions for applying to the particular program.

Application for admission to graduate study must be made online or on standard forms provided online at https://graduateadmissions.wvu.edu/. If using a paper application, the completed form may be returned to the Office of Admissions, PO Box 6009, West Virginia University, Morgantown, WV 26506, and must be accompanied by payment of a nonrefundable special service fee of $60. Applicants who have attended another institution, other than WVU, must request that the registrar or records office of the college(s) attended send an official transcript directly to the Office of Admissions. No one is admitted to graduate study that does not hold a baccalaureate degree from an accredited college or university.

If the applicant meets the minimum admission requirements of WVU, a copy of the application is forwarded to the faculty of the program of interest. Any graduate degree program is permitted to set admission requirements which go beyond the minimum admission standards of the University. No one can pursue an advanced degree at WVU unless admitted to the appropriate degree program.

Master of Science

MAJOR REQUIREMENTS

BIOS 601	Applied Biostatistics 1	4
EPID 601	Public Health Epidemiology	3
EPID 625	Principles of Clinical Trials	3
CTS 600	Foundations of Scientific Integrity	1
CTS 610	Clinical Research: Ethics and Regulatory Aspects	2
CTS 620	Scientific Manuscript Writing and Publishing	2
CTS 695	Independent Study (*Grant Proposal Prep)	1
Research		9
CTS 697	Research	
Electives		9
Grant Proposal Defense [*]		
Total Hours		34

[*]   **Grant Proposal Defense or Thesis Defense**
The degree culminates with a written grant proposal or thesis defended orally to three graduate faculty members. Satisfactory performance in the oral defense will result in recommendation for granting of the M.S. degree.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours	Summer	Hours
BIOS 601		4 CTS 600		1 CTS 620	2
CTS 610		2 CTS 697		1 CTS 695 (*Grant Proposal Prep)	1
CTS 697		2 EPID 625		3 CTS 697	6
EPID 601		3 Elective		3	
Elective		3 Elective		3	
		14		11	9

Total credit hours: 34

NOTE: The graduate curriculum is finalized with a plan of study once the mentor and laboratory have been selected in the first year. The plan of study is developed by the graduate committee in consultation with the student. The courses listed above include the required and elective coursework necessary for the student to finalize his/her plan of study.

Doctor of Philosophy

MAJOR REQUIREMENTS

Core Courses		**16**
BMS 700	Scientific Integrity	
BMS 720	Scientific Writing	
CTS 700	Fundamentals of Clinical and Translational Sciences	
PSIO 750	Graduate Physiology and Pharmacology 1	
BIOC 531	General Biochemistry	
500-level higher Statistical Methods Course		
Elective Courses		**12**
Core Elective List (Select nine hours from the following): [*]		
EPID 601	Public Health Epidemiology	
EPID 611	Concepts and Methods of Epidemiology	
EPID 625	Principles of Clinical Trials	
PHAR 757	Patient Reported Outcomes	
PHAR 758	Ethical and Regulatory Aspects of Clinical Research	
PUBH 662	Clinical Research Methods and Practices	
Research Experiences [**]		**12**
CTS 780	Clinical and Translational Science Research Experience	
CTS Journal Club [***]		**6**
CTS 707	Seminar: CTS Journal Club	
Examinations		
Candidacy Examination		
Comprehensive Examination		
Dissertation Research [****]		**40**
CTS 797	Research	
Peer-Reviewed Publication		
Total Hours		86

[*]   Selection of Core and Additional Electives (for a total 12 hours) should be made in consultation with the Program Director and/or guidance of the Dissertation Committee. Selected Elective Courses should include 2 of three branches of clinical and translational science. These courses are intended to allow the students to develop expertise and focus in an area of interest, and to prepare students to be able to successfully complete their dissertation research. These courses may also serve as the basis for a portion of the Comprehensive Exam (discussed in additional detail below). If recommended by the Dissertation Committee, a student may replace these courses with additional research hours when appropriate.

[**]   Complete 12 hours of research experiences in each of the T1, T2, and T3 research areas.

***   Students must complete a minimum of 6 credit hours, 1 credit hour in 6 different semesters, in a journal club specific to their program. Participation in the CTS Research Journal Club is required for every semester the student is in residence.

****   Complete minimum 40 credit hours of dissertation research.

PROGRAM DESCRIPTION

This degree program was developed in response to the fundamental changes taking place in biomedical science research and education worldwide, with an increasing and stronger emphasis on interdisciplinary research to improve clinical care and population health outcomes. Achieving this requires much closer collaboration, integration and alignment of basic, clinical and population sciences. Consistent with this increasingly integrative and interdisciplinary paradigm for clinical and translational science, all aspects of this degree program, including didactic coursework and research experiences, will emphasize the integration of basic, population, and clinical sciences.

This program is intended for full-time students only. Student receiving institutionally-supported stipends are expected to devote full-time effort to their studies and research should not be employed elsewhere. Any exceptions must be approved by CTS Program Director in advance.

Coursework is organized around the three main branches of clinical and translational science: Basic/Laboratory Science, Population Science, and Clinical Science. Research experiences are organized around the three translational (T) research domains:

- **T1 research** expedites the movement between basic research and patient-oriented research that leads to new or improved scientific understanding or standards of care
- **T2 research** facilitates the movement between patient-oriented research and population-based research that leads to better patient outcomes, the implementation of best practices, and improved health status in communities
- **T3 research** promotes interaction between laboratory-based research and population-based research to stimulate a robust scientific understanding of human health and disease

JOURNAL CLUB

Students are required to enroll in Journal Club each semester. The course involves the presentation and discussion of current research papers and will help acquaint students with the variety of methods used in scientific research.

DOCTORAL RESEARCH

Students will conduct research with a dissertation mentor during time in the program. Students register for research credits each semester, and their performance is graded by their dissertation mentor.

QUALIFYING AND DISSERTATION PROPOSAL/PH.D. CANDIDACY

The written qualifying exam is given typically at the end of the second year of study. The dissertation proposal is completed in the third year of study. Admission to Ph.D. candidacy occurs following the successful defense of the dissertation proposal.

DISSERTATION DEFENSE AND FIRST-AUTHOR PAPER REQUIREMENT

Students are allowed to defend their dissertation when a minimum of one manuscript with the student as first author, based on dissertation research, is accepted in a peer-reviewed journal. The final examination for the Ph.D. degree consists of orally defending a written dissertation in a public seminar and then in private to the dissertation committee. Satisfactory performance in the oral defense will result in recommendation for granting of the PhD.

PEER-REVIEWED PUBLICATION

Consistent with existing standards at the Health Sciences Center, all students in this program must have one first-authored, peer-reviewed, original research publication relevant to their dissertation research accepted for publication ("in press") before they may defend their dissertation. This manuscript must represent original research; a review article, even a systematic review, will not fulfill this requirement.

Major Learning Outcomes

DOCTOR OF PHILOSOPHY (PH.D.) IN CLINICAL AND TRANSLATIONAL SCIENCE

The goal of the Ph.D. program is to develop biomedical researchers who can integrate findings, information, and observations across basic, population, and clinical sciences, to accelerate and transform how we improve the health of individuals and populations.

By the completion of this degree, students will be able to:

- Design, implement, conduct, analyze and interpret research projects using the techniques unique to basic science, clinical research, and population science research
- Demonstrate mastery of research in a focused area as evidenced by academic and scientific presentations and publications
- Read, understand and critique the scientific literature of the basic, clinical, and population sciences
- Work effectively with and create collaborative, productive research partnerships with clinicians, population scientists, and basic / laboratory scientists

- Be able to communicate with and understand the research challenges and perspectives of each of the three branches of clinical and translational science (basic, clinical, and population sciences)
- Work with communities to translate scientific findings into programs and policies that improve the health of individuals and populations.

MASTER OF SCIENCE (M.S.) IN CLINICAL AND TRANSLATIONAL SCIENCE

This program is designed to develop the next generation of clinical and translational scientists through education and mentored research training. The degree emphasizes a research project(s) that can be clinical (study of medications, devices, diagnostic products and treatments; may include clinical trials) and/or translational research (defined as research with human subjects or with populations or with direct application to human health). The degree culminates with a written grant proposal or thesis defended orally to three graduate faculty members.

Students will:

- Apply theories, methodologies, and knowledge to address questions in specific clinical and/or translational science
- Design and conduct research in clinical and/or translational science
- Engage with other students, faculty, and mentors to demonstrate teamwork
- Develop scientific writing skills and knowledge to develop a grant proposal

Exercise Physiology

Degrees Offered

- Doctor of Philosophy
- Joint Doctor of Medicine and Doctor of Philosophy
- Master of Science

Chair and Director of Undergraduate Education

Randall W. Bryner, Ed.D., Associate Professor, rbryner@hsc.wvu.edu; (rbryner@hsc.wvu.edu) https://medicine.hsc.wvu.edu/ep/students/bachelor-of-science/

Senior Assistant Dean for Research and Graduate Education

John M. Hollander, Ph.D., Professor, jhollander@hsc.wvu.edu; (johollander@hsc.wvu.edu)
https://medicine.hsc.wvu.edu/ep/students/phd-program/

Director of M.S. Studies and Director of Human Performance Lab

Paul D. Chantler, Ph.D., Associate Professor, pchantler@hsc.wvu.edu
https://medicine.hsc.wvu.edu/ep/students/master-of-science/

Nature of the Program

DOCTORAL PROGRAM

Exercise physiology is the comprehensive study of the biophysical, biomechanical and biochemical processes that contribute to movement production and disease progression. Advances in exercise physiology research have provided the foundation for human enhancement and medical treatment. The focus of the program is to promote student innovation and foster the development of independent thought. Students and faculty interact in a collegial fashion facilitating open inquiry and collaborative science.

Students entering the Exercise Physiology doctoral program have the ability to select a specialization in one of three research tracks: 1) Cardiovascular and Metabolic Diseases (CMD); 2) Muscle Pathophysiology (MPP); and 3) Rehabilitation Science and Engineering (RSE).

- ***Cardiovascular and Metabolic Diseases (CMD):*** Cardiovascular and respiratory function/dysfunction are studied at cellular, molecular, genetic and whole organ level in human and animal models that mimic chronic diseases, such as obesity, diabetes mellitus, stroke, and environmental exposure. Mitochondrial dysfunction, vascular remodeling, blood flow disruption, exercise and metabolic dysfunction are specific interests.

- ***Muscle Pathophysiology (MPP):*** Muscle function and dysfunction are studied under conditions of aging, cancer, disuse and obesity at the cellular, molecular, genetic and whole organ levels. Mechanisms contributing to dysfunction and therapeutic interventions are tested utilizing appropriate pre-clinical and clinical experimental models.

- ***Rehabilitation Science and Engineering (RSE):*** The research focus is on enhancing the understanding of the basic processes associated with sensorimotor control of reaching movements, balance, and locomotion after central or peripheral damage using tissue engineering, neurophysiology, biomechanics and computational neuroscience methodologies.

The philosophy of the program is to provide flexibility in coursework to support the student's research interest in accordance with the selected track. The student and faculty mentor will define an individualized curriculum to address specific requirements for accomplishing the dissertation research. The program fosters a high degree of collaboration among faculty with interests in clinical medicine and basic research. Completion of the doctoral degree is realized when the student successfully disseminates the research results in peer-reviewed journals, national/international conferences, and to the dissertation committee. Typically, five years are required to realize this goal.

Current areas of scientific inquiry among the faculty in exercise physiology include the following:

- Aging and repetitive use injury in skeletal muscle
- Cancer cachexia and muscle wasting diseases
- Mitochondria dysfunction in pathophysiological states
- Metabolic syndrome and diabetes mellitus
- Control of movement in health and disease
- Development of assisted technologies and wearable devices
- Assessment and enhancement of human performance
- Microvascular dysfunction in disease states
- Physiologic basis of angiogenesis in pulmonary and skeletal muscle tissue
- Stem cell biology and mechanical signal and tissue regeneration
- Mechanisms of stoke and post-stroke recovery

Upon completion of the doctoral degree, the student will be capable of undertaking a career in a traditional research setting (academic, industrial, government, etc…). The acquired training will also prepare students for careers outside of a traditional research setting. Students will be periodically exposed to diverse opportunities for career development.

MASTER OF SCIENCE

The master's of science has two track emphases, clinical and thesis.

Clinical track students engage in an intensive curriculum consisting of 35 (summer, fall, spring, summer) required credits. Didactic coursework in biological and health sciences comprise a significant portion of the curriculum. Students gain experience working with individuals with cardiovascular, metabolic, neuromuscular, cancer etc. in which exercise has been shown to be an effective treatment. Another aspect of the clinical track is the clinical internships which are performed in Phase I (inpatient), Phase II (outpatient), and Phase III (maintenance) cardiac rehabilitation programs as well as observation opportunities within in the WVU Heart and Vascular Institute, and Bariatric Surgery. Students are also encouraged to become involved with any of the various clinically related research projects being performed within the Division of Exercise Physiology. From this hands-on experience, and the didactic coursework, the clinical master students are well prepared to take the Clinical Exercise Physiologist (CEP) exam as well as serve the clinical populations. Clinical Master Students also assist clinical faculty in the WVU Human Performance Laboratory with functional assessment, risk factor modification, exercise prescription, and monitoring hemodynamic responses in populations with various medical conditions.

Thesis track is a two-year program and it is designed for students who wish to engage in an intensive research training experience, in preparation for further training in a Ph.D., or MD or similar postgraduate program. The thesis track student selects a research mentor and committee from faculty within the division of exercise physiology (or an afflicted group) based on their research interests. The first year consists of didactic coursework, while learning the necessary research skills and tools to conduct research. In the second year, the thesis track student can focus heavily on all aspects of research, the production and oral defense of a research thesis.
The faculty who will act as primary mentors in exercise physiology have research and/or clinical expertise in:

- Heart disease

- Motor unit recruitment in stroke and disability

- Biomechanical and motor control for gait in stroke or spinal cord injury

- Muscle injury and repair

- Cancer cachexia and muscle wasting diseases

- Aging and sarcopenia in skeletal muscle

- Cardiac and skeletal muscle growth and function

- Vascular dysfunction with the metabolic diseases

- Physiologic basis of lung disease

- Exercise-induced angiogenesis

- Stem cell biology and mechanical signal and tissue regeneration

- Arthritis control and exercise

- Aquatic Therapy applications to health and disease

Learning Objectives for Clinical Track

To prepare clinical exercise physiologists who:

1. Are proficient, evidence-based and patient-centered exercise physiology professionals.
2. Demonstrate effective collaboration in an interprofessional healthcare model.
3. Demonstrate integrative and critical thinking skills to allow application of scientific knowledge for clinical applications.
4. Demonstrate professionalism and career skills in clinical settings.
5. Demonstrate proficiency in modern applications in patient care.

Learning Objectives for Thesis Track

To prepare research based exercise physiologists who:

1. Demonstrate proficiency in applying theories, and knowledge to address fundamental questions in health specific issues related to exercise physiology
2. Develop technical skills for conducting experimental procedures.
3. Develop skills in critical thinking in order to state research hypotheses, and to analyze and interpret research data using appropriate methodology and statistics.
4. Demonstrate skills in scientific written and oral communication.
5. Develop and apply key scientific traits such as professionalism and integrity, while understanding the principles of ethics associated with appropriate research conduct.

FACULTY

PROFESSOR

- John M. Hollander - Ph.D. (University of Wisconsin-Madison)
  Diabetes, Mitochondria Dysfunction, Molecular Regulation of Heart Disease

ASSOCIATE PROFESSORS

- Daniel E. Bonner - MS (West Virginia University)
  Clinical Exercise Physiology
- Randall W. Bryner - Ed.D. (West Virginia University)
  Diabetes, Exercise, and Cancer
- Paul D. Chantler - Ph.D. (Liverpool John Moores University)
  Metabolic Syndrom, Vascular Biology, Effects of Aging and CV Dieases on Arterial and Venticular Structure and Function
- David Donley - MS (West Virginia University)
  Exercise and Metabolic Syndrome
- Diana Gilleland - MS (West Virginia University)
  Clinical Exercise Physiology
- Jean McCrory - Ph.D. (Penn State University)
  Biomechanics, gait, foot injuries
- Beth Nardella - M.A. (West Virginia University)
  Writing Instructor, Global Engagement Coordinator
- I Mark Olfert - Ph.D. (Loma Linda)
  Angiogenesis, respiratory physiology, toxicology
- Emidio E. Pistilli - Ph.D (West Virginia University)
  Muscular Dystrophy, Muscle Injury, Cytokines, Cancer Biology
- Lori Sherlock - Ed.D. (West Virginia University)
  Aquatic Therapy in Obesity
- Sergiy Yakovenko - Ph.D. (University of Alberta)
  Neuromuscular Integration of Movement

ASSISTANT PROFESSORS

- James Thomas - M.S. (West Virginia University)
  Exercise, Children, Strength Training
- Emily Ryan - Ph.D. (Kent State University)
  Obesity Exercise

ADJUNCT ASSOCIATE PROFESSOR

- Ming Pei - Ph.D. (Beijing University, China)
  Stem Cells, Cartilage Repair

ADJUNCT ASSISTANT PROFESSOR

- Brent Baker - Ph.D. (West Virginia University)
  Muscle injury, rehabilitation, genomics

Master of Science

Degree Requirements

A minimum GPA of 3.0 is required in all courses

A grade of B or higher must be earned in all required courses		
EXPH 567	Exercise Physiology 2	4
PSIO 593	Special Topics	4
Complete 1 of the following Tracks		27-37
Thesis Track (37 Hours)		
EXPH 682	Research Design and Methods	
STAT 511	Statistical Methods 1	
AGBI 514	Animal Biotechnology	
EXPH 697	Research (22 hours)	
Electives (4 hours)		
Clinical Track (27 Hours)		
EXPH 661	Clinical Research Methods 1	
EXPH 662	Clinical Research Methods 2	
EXPH 670	Lab Techniques and Methods 2	
EXPH 672	Professional Field Placement	
EXPH 680	Advanced Clinical Exercise Physiology	
EXPH 681	Clinical Exercise Prescription	
Electives (4 hours)		
Total Hours		35-45

Doctor of Philosophy

Degree Requirements

Minimum overall GPA of 3.0 required. [*]

Minimum GPA of 3.0 in all EXPH courses required.		
A grade of B- must be earned in all required courses.		
BMS 700	Scientific Integrity	1
BMS 701	Scientific Rigor and Ethics	1
BMS 702	Biomedical Lab Experience	2
BMS 706	Biomedical Research Methods	1
BMS 707	Experiential Learning for Biomedical Trainees	2
BMS 720	Scientific Writing	2
BMS 747	Foundations for Contemporary Biomedical Research I	4
BMS 777	Foundations for Contemporary Biomedical Research II	4
EXPH 786	Musculoskeletal Biology	3
EXPH 787	Cardiopulmonary Physiology	3

Graduate Seminar		3
EXPH 796	Graduate Seminar	
Research		55
EXPH 797	Research	
Electives		6
BMS 715	Molecular Genetics (recommended)	
PSIO 750	Graduate Physiology and Pharmacology 1	
PSIO 751	Graduate Physiology and Pharmacology 2	
Candidacy Exam		
Dissertation Defense		
Total Hours		87

Students will complete the BMS course sequence including the laboratory rotations before beginning to work with a dissertation research mentor and starting the specialized doctoral courses in the Exercise Physiology program.

Seminars and Research Forum

Students will present three seminars during their graduate study. The first seminar is on a topic outside of the student's research area. The second seminar is the public presentation of the dissertation proposal, which is the background and proposed research for the dissertation project. The third seminar is the public presentation of the dissertation defense.

Journal Club

Students are required to enroll in Journal Club each semester. The course involves the presentation and discussion of current research papers and will help acquaint students with the variety of methods used in scientific research.

Doctoral Research

Students will conduct research with a dissertation mentor during time in the program. Students register for research credits each semester, and their performance is graded by their dissertation mentor.

Dissertation Proposal/Ph.D. Candidacy

The candidacy exam is completed in the third year of study. Admission to Ph.D. candidacy occurs following the successful defense of the dissertation proposal.

Dissertation Defense and First-Author Paper Requirement

Students are allowed to defend their dissertation when a minimum of one manuscript with the student as first author, based on dissertation research, is accepted in a peer-reviewed journal. The final examination for the Ph.D. degree consists of orally defending a written dissertation in a public seminar and then in private to the dissertation committee. Satisfactory performance in the oral defense will result in recommendation for granting of the PhD.

First Year

Fall	Hours	Spring	Hours	Summer	Hours
BMS 700		1 BMS 701		1 EXPH 797	3
BMS 702		2 BMS 715		3	
BMS 706		1 EXPH 797		5	
BMS 747		4			
BMS 777		4			
		12		9	3

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
EXPH 787		3 EXPH 786		3 BMS 720	2
EXPH 797		6 EXPH 796		1 EXPH 797	1
		EXPH 797		2	
		Elective		3	
		9		9	3

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
EXPH 797		9 EXPH 796		1 BMS 707	2
		EXPH 797		8 EXPH 797	1
		9		9	3

Fourth Year

Fall	Hours	Spring	Hours	Summer	Hours
EXPH 797		9 EXPH 796		1 EXPH 797	3
		EXPH 797		8	
		9		9	3

Total credit hours: 87

NOTE: The graduate curriculum is finalized with a plan of study once the mentor and laboratory have been selected in the first year. The plan of study is developed by the graduate committee in consultation with the student. The courses listed above include the required and elective coursework necessary for the student to finalize his/her plan of study. When the student enters the laboratory of his/her doctoral dissertation mentor repetitive enrollments in research, seminars, and colloquia are typical and will determine total hours necessary for degree completion.

*This is a suggested plan of study. Course sequences and length of time in program may vary depending on student and altered total credit hours.

Major Learning Outcomes

DOCTOR OF PHILOSOPHY (PHD) IN EXERCISE PHYSIOLOGY

Students will:

- Attain a comprehensive understanding of the biophysical, biomechanical and biochemical processes that contribute to movement production and disease progression
- Learn to apply theories and methodologies to address fundamental questions in health-specific issues related to exercise physiology
- Obtain independent and critical thinking skills requisite for designing, conducting, and interpreting research data in an effort to advance knowledge related to health and disease through creative and innovative research
- Effectively communicate knowledge through oral and written means by disseminating research findings that have the potential to improve health and quality of life
- Demonstrate principles of ethics associated with appropriate research conduct
- Acquire technical skills requisite for conducting experimental procedures

MASTER OF SCIENCE (MS) IN EXERCISE PHYSIOLOGY

This program is designed with a clinical and a thesis track. The clinical track specializes in working with persons with diseases such as obesity, cardiovascular disease, and diabetes and aging. The thesis track provides opportunities for students to study mechanisms leading to and contributing to health diseases and disparities and to understand the impact of exercise on these health issues. The graduates of the masters program clinical track will become leaders who will supervise Exercise Physiologists in hospitals, rehabilitation, aquatic therapy programs, fitness, or academic settings. Some will use the clinical training in this degree to strengthen their application to medical school or another professional program. The MS clinical track will provide students the research basis from which to launch additional training in a research intensitve doctoral or professional program.

Students will:

- Critically apply theories, methodologies, and knowledge to address fundamental questions in health specific issues related to exercise physiology
- Demonstrate skills in written and oral communication and critical thinking by critically analyzing research that is significant and novel in exercise physiology and within the sub-discipline associated with it
- Plan and conduct this research or implement this project under the guidance and approval of their research mentors while developing the intellectual independence that typifies true scholarship (thesis track students)
- Critically evaluate published research data and demonstrate clinical skills in working with patients and evaluating health and exercise-stress test data for appropriate exercise treatment (clinical track students)
- Follow the principles of ethics associated with appropriate research conduct (thesis track students) or clinical treatment of patients (clinical track students)
- Interact productively with people from diverse backgrounds including mentors and team members/peers with integrity and professionalism

Health Sciences

lvdavis@hsc.wvu.edu

Degree Offered

- Master of Science

Nature of the Program

The Master of Science (M.S.) program in the **Health Sciences** emphasizes enhancing knowledge in the biomedical and public health disciplines to increase the student's competitiveness for admission to professional or graduate programs and/or to augment the student's career potential. The program is a one-year, non-thesis masters. Completion of the M.S. degree is realized when the student has fulfilled all course requirements and the independent study project. Students can enter the program in either the Fall semester or the Summer Session. The Master of Science (M.S.) in the Health Sciences is a terminal degree program targeting students interested in developing their skills toward a career requiring basic science knowledge. The objectives of this program are to:

1. provide integrative scientific education in the biomedical and public health sciences to graduates from an accredited undergraduate institution
2. provide the opportunity to explore career options in various health professional disciplines
3. develop integrative and critical thinking skills to allow application of scientific knowledge to traditionally non-scientific fields
4. train students in the rudiments of research on a basic science, public health or clinical topic; these include hypothesis testing, data collection, manuscript preparation
5. enhance competitiveness for admission to a health professional and/or Ph.D. program
6. enhance skills for job placement including resume and cover letter evaluation, and interviewing preparation.

To achieve these objectives, the program has two areas of emphasis: (1) advancement of basic science and public health knowledge for career enhancement and (2) partnering basic science with other disciplines. In the first area of emphasis, the student will augment his/her scientific skills with advanced coursework emphasizing critical thinking and application of that knowledge to problems facing human health. This area targets students interested in pursuing professional or advanced academic degrees. In the second area of emphasis, the student can expand their knowledge to allow them to direct a non-scientific career toward one that relies on a scientific skill set. Students in this area of emphasis may be teachers wishing to teach science in secondary schools, individuals interested in eventually achieving other professional degrees such as a J.D. or M.B.A. to pursue patent law or a position in a biotech/pharmaceutical company, or positions as a scientific liaison translating scientific knowledge to the general public in a community organization or a for profit company, a position sometimes called a knowledge broker.

Proposed coursework is designed to build the foundation knowledge common to first-year curricula in medical and dental schools and biomedical and public health Ph.D. programs. The common core curriculum will include coursework in the basic sciences course such as physiology and biochemistry and courses in public health, biostatistics, epidemiology, and social and behavioral theory. The director of the M.S. in the Health Sciences works with each student to tailor electives to fit the student's career goals. In addition to coursework, the student will participate in a series of activities:

- Participation in an independent study project with a research mentor for three semesters
- Training in reading, writing, and evaluation of the scientific literature
- Enrichment activities to enhance career development skills, such as preparation to take entrance exams, preparation of resumes and cover letters, seminar presentation skills, and interviewing skills
- Attendance at seminars to learn cutting edge advancements in science
- Cross-disciplinary approach to the acquiring and application of scientific knowledge

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FACULTY
PROGRAM DIRECTOR

- Linda Vona-Davis - PhD
  lvdavis@hsc.wvu.edu

ADMINISTRATOR

- Mary Veselicky
  mveselic@hsc.wvu.edu

Admissions

All applications to the M.S. in the Health Sciences program are accepted electronically and must be submitted electronically via the official WVU Graduate Education application:

https://app.applyyourself.com/AYApplicantLogin/fl_ApplicantConnectLogin.asp?id=wvugrad.

M.S. in the Health Sciences applications are reviewed beginning in January by a Common Admissions Committee comprised of the Director of the M.S. in Health Sciences, the School of Medicine Assistant VP for HSC Graduate Education, the School of Medicine Associate Dean for Student Services and Curriculum, the School of Dentistry Associate Dean for Admissions, Recruitment and Access, and the Director of HSTA & HCOP or their designee.

Students may apply for admission beginning in either the summer (May) session or the fall (August) semester of that year. Decisions of acceptance are made on a rolling basis until all slots are filled. All decisions made by the Admissions Committee are final. For maximum admissions consideration, we recommend that you apply as early as possible.

Please visit https://www.hsc.wvu.edu/resoff/graduate-education/ms-programs/master-of-science-in-health-sciences/how-to-apply/ (http://www.hsc.wvu.edu/resoff/graduate-education/ms-programs/master-of-science-in-health-sciences/) to review the application process.

Master of Science
MAJOR REQUIREMENTS

Minimum overall grade point average of 3.0 is required.

Minimum grade of C is required.		
PSIO 743	Fundamentals of Physiology	5
EPID 601	Public Health Epidemiology	3
BIOS 601	Applied Biostatistics 1	4
BIOC 531	General Biochemistry	4
or PCOL 549	Applied Pharmacology	
BMS 684	Journal Club and Seminar	1
BMS 685	Professionalism in Health Care	2
SBHS 601	Social and Behavioral Theory	3
BMS 695 (taken 3 times)		6
Electives (Courses numbered 400-799) [*]		9
Presentation of independent study project		
Total Hours		37

*Credit toward a MS in Health Sciences graduate degree may be obtained only for elective courses listed in the graduate catalog.

Independent Study

Students are required to register for independent study each semester and during summer session. The student will conduct an independent project under the guidance of a faculty advisor. The project can involve data collection, retrospective analysis of patient data, a comprehensive literature review, or other activity approved by the graduate director that is consistent with the student's career goals. During the final semester in residence, the student presents a short talk of the results or culmination of his/her project.

Seminar: Journal Club

Students are required to register for seminar: journal club at least once during the course of the degree. Regardless of registration in this course, students still participate in the sessions. The fall semester emphasizes learning to read the scientific literature and gain new knowledge by attending seminars. The spring semester emphasizes learning how to present a seminar.

Additional Enrichment Activities

To enhance the attainment of his/her career goal, the student may take a preparative course for the MCAT, DAT or GRE exams. Students may shadow a professional in their field of interest. Additional activities can include: preparation for interviewing, resume preparation, writing the personal statement, and career development. These activities can occur throughout the degree program.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours	Summer	Hours
PSIO 743		5 BIOC 531		4 BMS 685	2
EPID 601		3 SBHS 601		3 BMS 695	2
BIOS 601		4 Elective		3 Elective	3
BMS 695		2 Elective		3	

BMS 684	1	BMS 695	2	
	15		15	7

Total credit hours: 37

Major Learning Outcomes

HEALTH SCIENCES

The Master of Science (M.S.) in the Health Sciences is a terminal degree program targeting students interested in developing their skills toward a career requiring basic science knowledge.The objectives of this program are to:

- provide integrative scientific education in the biomedical and public health sciences to graduates from an accredited undergraduate institution
- provide the opportunity to explore career options in various health professional disciplines
- develop integrative and critical thinking skills to allow application of scientific knowledge to traditionally non-scientific fields
- train students in the rudiments of research on a basic science, public health or clinical topic; these include hypothesis testing, data collection, manuscript preparation
- enhance competitiveness for admission to a health professional program
- enhance skills for job placement including resume and cover letter evaluation, and interviewing preparation.

Immunology and Microbial Pathogenesis, Ph.D.

Degrees Offered

- Doctor of Philosophy
- Joint Doctor of Medicine and Doctor of Philosophy

Nature of the Program

The Doctor of Philosophy degree in Immunology and Microbial Pathogenesis will prepare students from diverse backgrounds to serve as professionals that are knowledgeable about the immune system of humans and other mammals, how the immune system functions, and the consequences of its malfunction on the health of the host. Knowledge of the immune system will be fully integrated with an excellent understanding of the diversity of microorganisms that cause disease in humans and other mammals and mechanisms of disease pathogenesis. Students in the program will apply this knowledge to broad areas of research including the understanding of pathogen-host interactions and development of immunotherapies and vaccines. Graduates will possess the laboratory skills and knowledge needed to assess the functional status of the immune system and to assess the mechanism used by microbial agents to cause disease in mammals.   Graduates will be qualified to pursue several professional career paths in private industry, state and federal government, and academic institutions.

The doctoral program in Immunology and Microbial Pathogenesis emphasizes extensive laboratory research in microbiology, immunology, microbial pathogenesis, and/or cell biology, i.e. the major purpose of graduate education in the program is research training. The basic philosophy of the program is that students acquire a strong foundation in the basic concepts of immunology and microbial pathogenesis and have flexibility in choosing advanced coursework in their specific areas of interest. Each student will complete an original, in-depth research investigation. Its learner-centered curriculum integrates both classroom and hands-on research experiences to produce students capable of designing and doing independent research and teaching.

Completion of the Ph.D. degree is realized when the student successfully presents the research results to faculty of the graduate dissertation committee and program/department. Typically, four to five years are required to realize this goal.

Faculty members and students explore diverse areas of inquiry related to the medical implications of microbes and the human body's response to them.

Current Research Areas

IMMUNOLOGY

- Vaccines and immunotherapies against bacterial pathogens
- Autoimmune diseases and neuroimmunology
- Effects of stroke on the immune system
- Influence of sex chromosomes on immunity
- Biochemistry of inflammatory cytokines
- Immune response in bacterial and viral diseases
- Antibody function and use as therapeutics
- Regulation of signal transduction in immune responses
- Molecular aspects of cell signaling as it relates to cancer chemotherapy and cell growth

- Genomics studies of the immune system
- Effects of man-made pesticides and herbicides on the immune system
- Effects of heavy metals on the immune system

MICROBIOLOGY

- Physiology of pathogenic microbes
- Microbial genetics
- Mechanisms of bacterial pathogenesis
- Chemotaxis and motility
- Interactions between microbes and their hosts
- Vaccines and immunotherapies against bacterial pathogens
- Molecular mimicry and structure-function relationship of bacterial virulence factors
- Microbial biofilms

FACULTY

GRADUATE PROGRAM DIRECTOR

- John Barnett - Ph.D. (University of Louisville)

PROFESSORS

- Nyles Charon (Emeritus) - Ph.D. (University of Minnesota)
- Christopher Cuff - Ph.D. (Temple University)
- Laura F. Gibson - Ph.D. (West Virginia University)

ASSOCIATE PROFESSORS

- Tim Eubank - Ph.D. (The Ohio State University)
- Slawomir Lukomski - Ph.D. (University of Lodz, Poland)
- Karen Martin - Ph.D. (Duke University)
- Edmidio Pistilli - Ph.D. (West Virginia University)
- Cory Robinson - Ph.D. (Miami University of Ohio)
- Rosana Schafer - Ph.D. (Temple University)
- James M. Sheil (Emeritus) - Ph.D. (University of Kentucky)

ASSISTANT PROFESSORS

- Amanda Ammer - Ph.D. (West Virginia University)
- Mariette Barbier - Ph.D. (Universitat de les Illes Balears)
- Kathy Brundage - Ph.D. (University of Pennsylvania)
- Jonathan Busada - Ph.D. (East Carolina University)
- Duaa Dakhallah - Ph.D. (The Ohio State University)
- F. Heath Damron - Ph.D. (Marshall University)
- Meenal Elliott - Ph.D. (University of Alabama)
- Jennifer Franko - Ph.D. (Case Western Reserve University)
- Michael Hu - Ph.D. (Peking University)
- Ivan Martinez - Ph.D. (University of Pittsburgh)
- Gordon Meares - Ph.D. (University of Alabama)
- Edwin Wan - Ph.D. (City University of Hong Kong)
- Valerie Watson - M.S. (West Virginia University)

ADJUNCT PROFESSORS

- Don Beezhold - Ph.D. (University of Illinois Medical Center)
- John Noti - Ph.D. (Purdue University)
- David Weissman - M.D. (Northwestern University)

ADJUNCT ASSISTANT PROFESSORS

- Stacey Anderson - Ph.D. (West Virginia University)
- Candice Brown - PhD (Duke University)
- Alexandra Elliott - Ph.D. (West Virginia University)
- Brett J. Green - Ph.D.(University of Sydney)
- David Klinke - Ph.D. (Northwestern University)
- Yong Qian - Ph.D. (West Virginia University)
- Xuefang Sophie Ren - MD(Ullm University, Germany)
- Jenny Roberts - Ph.D. (West Virginia University)

LECTURER

- Michelle Witt - M.S. (Virginia Tech)

Doctor of Philosophy

MAJOR REQUIREMENTS - STANDARD TRACK

BMS 700	Scientific Integrity	1
BMS 701	Scientific Rigor and Ethics	1
BMS 702	Biomedical Lab Experience	2
BMS 706	Biomedical Research Methods	1
BMS 707	Experiential Learning for Biomedical Trainees	2
BMS 720	Scientific Writing	2
BMS 747	Foundations for Contemporary Biomedical Research I	4
BMS 777	Foundations for Contemporary Biomedical Research II	4
Advanced MICB Courses - 2 from the following:		5-7
MICB 781	Advanced Immunology	
MICB 782	Advanced Microbiology	
MICB 793	Special Topics (Vaccinology)	
MICB 785	Immunology and Microbiology Journal Club (Minimum of 7; Every semester until graduation)	7
MICB 790	Teaching Practicum	2
MICB 796	Graduate Seminar (Minimum of 7; Every semester until graduation)	7
MICB 797	Research (1-15 per semester)	45
Qualifying Exam		
Dissertation Proposal		
Dissertation Defense		
Total Hours		83-85

MAJOR REQUIREMENTS - FAST TRACK

BMS 700	Scientific Integrity	1
BMS 701	Scientific Rigor and Ethics	1
BMS 707	Experiential Learning for Biomedical Trainees	2
BMS 720	Scientific Writing	2
Advanced MICB Courses - 2 from the following:		5-7
MICB 781	Advanced Immunology	
MICB 782	Advanced Microbiology	
MICB 793	Special Topics (Vaccinology)	
MICB 785	Immunology and Microbiology Journal Club (Minimum of 7; Every semester until graduation)	7
MICB 790	Teaching Practicum	2

MICB 796	Graduate Seminar (Minimum of 7; Every semester until graduation)	7
MICB 797	Research (1-15 per semester)	45
Qualifying Exam		
Dissertation Proposal		
Dissertation Defense		
Total Hours		72-74

Seminars and Research Forum

Students are required to register for MICB 796 each semester of residence and are required to present at least one seminar during each school calendar year (Fall – Spring semesters).

Journal Club

Students are required to enroll in Journal Club each semester. The course involves the presentation and discussion of current research papers and will help acquaint students with the variety of methods used in scientific research.

Doctoral Research

Students will conduct research with a dissertation mentor during time in the program. Students register for research credits each semester, and their performance is graded by their dissertation mentor.

Qualifying and Dissertation Proposal/Ph.D. Candidacy

The written qualifying exam is given at the end of the first year of study. The dissertation proposal is completed in the third year of study. Admission to Ph.D. candidacy occurs following the successful defense of the dissertation proposal.

Dissertation Defense and First-Author Paper Requirement

Students are allowed to defend their dissertation when a minimum of one manuscript with the student as first author, based on dissertation research, is accepted in a peer-reviewed journal. The final examination for the Ph.D. degree consists of orally defending a written dissertation in a public seminar and then in private to the dissertation committee. Satisfactory performance in the oral defense will result in recommendation for granting of the PhD.

Suggested Plan of Study*

First Year

Fall	Hours	Spring	Hours	Summer	Hours
BMS 700		BMS 701	1	MICB 797	3
BMS 706		MICB 785	1	Qualifying Examination	
BMS 702		MICB 796	2		1
BMS 747		MICB 797	4		3
BMS 777			4		
	12		6		3

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
MICB 785		MICB 781	1	BMS 720	3
MICB 790		MICB 785	1	MICB 797	1
MICB 782 or 793		MICB 790	2 to 4		1
MICB 796		MICB 796	1		1
MICB 797		MICB 797	3		3
		Dissertation Proposal			
	8-10		9		3

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
MICB 785		MICB 785	1	MICB 797	1
MICB 796		MICB 796	1	BMS 707	2
MICB 797		MICB 797	7		7
	9		9		3

Fourth Year

Fall	Hours	Spring	Hours	Summer	Hours
MICB 785		1 MICB 785		1 MICB 797	3
MICB 796		1 MICB 796		1	
MICB 797		7 MICB 797		7	
		9		9	3

Total credit hours: 83-85

NOTE: The graduate curriculum is finalized with a plan of study once the mentor and laboratory have been selected in the first year. The plan of study is developed by the graduate committee in consultation with the student. The courses listed above include the required and elective coursework necessary for the student to finalize his/her plan of study. When the student enters the laboratory of his/her doctoral dissertation mentor repetitive enrollments in research, seminars, and colloquia are typical and will determine total hours necessary for degree completion.

*This is a suggested plan of study. Course sequences and length of time in program may vary depending on student and altered total credit hours.

Major Learning Outcomes
IMMUNOLOGY AND MICROBIAL PATHOGENESIS

Students will:

- Identify and summarize the basic concepts of microbiology, microbial pathogenesis, and immunology.
- Integrate detailed knowledge in microbiology, microbial pathogenesis, and immunology with the knowledge of student's area of research.
- Discuss, critique, and interpret primary research literature in microbiology, microbial pathogenesis, immunology, and in the student's area of research.
- Identify meaningful problems and questions for research in microbiology, microbial pathogenesis, and immunology.
- Acquire expertise and use laboratory techniques required to perform experiments in the student's area of research.
- Design experimental protocols and conduct self-directed research that results in presentations at scientific meeting and publications.
- Demonstrate oral, written, and visual communication skills that result in clear and organized dissemination of material at a level appropriate for the audience.

Medicine, M.D.

Degrees Offered

- Doctor of Medicine
- Joint Doctor of Medicine and Doctor of Philosophy
- Joint Doctor of Medicine Jurisprudence Degree
- Joint Doctor of Medicine and MBA

The degree of doctor of medicine (MD) is granted to students who have completed the prescribed curriculum and who have been recommended for the degree by the faculty of the School of Medicine.

The MD/PhD program is available to students who show exceptional interest and scholarly promise. All admission requirements of the School of Medicine and the specific graduate program apply. An MD/MPH program is available for those interested in public health issues.

The following information applies only to students in the School of Medicine who are enrolled in the prescribed curriculum which culminates in the MD degree.
All other students, undergraduates, or graduates enrolled in other programs in the School of Medicine are governed by the policies found elsewhere in this catalog.

Accreditation

The West Virginia University School of Medicine is accredited by the Liaison Committee on Medical Education (LCME).

Promotion and Graduation Requirements
EVALUATION OF STUDENT PROGRESS

Promotion of a student in the MD degree program is evaluated in four major areas: (1) successful completion of all required work, (2) successful completion of Step 1 and Step 2 of the United States Medical Licensure Examination (USMLE), (3) successful completion of the WVU School of

Medicine Clinical Performance Exam, and (4) successful fulfillment of the professional standards of the School of Medicine, including 100 hours of community service.

The following information is only a brief outline of the School of Medicine policies and procedures. Detailed requirements and policies for evaluation of student progress and graduation may be found in the Policy on Academic and Professional Standards Governing the MD degree program at WVU School of Medicine on the Student Services website. The Committee on Academic and Professional Standards administers all promotion and dismissal rules.

Academic Coursework Review

The Committee on Academic and Professional Standards of the School of Medicine reviews the performance of each student in every course at the end of each academic period. If a student has been found to have an unsatisfactory performance in grade or narrative evaluations in any of the required courses, the student will be required to remediate the deficiency or be dismissed from the program in the school. In selected circumstances, the committee may require remedial work of all or a portion of the curriculum.

The Committee on Academic and Professional Standards may require a student to complete remedial work or dismiss the student even though no failing (F) grade has been received in a required course. Such an event would occur only if, in the opinion of the committee, the student's overall performance does not meet the academic/professional standards of the School of Medicine.

Readmission of a dismissed student is the prerogative of the Admissions Committee after careful review of the student's performance, including but not limited to, actions taken by the Committee on Academic and Professional Standards.

Grading Policy

Courses required for the M.D. degree are graded as honors (H), pass (P), or fail (F) at the completion of the course in lieu of other letter grades. The H, P, and F designations are accompanied by a narrative report of the student's progress, noting any factors requiring remedial work or counseling. The narrative is submitted by each course and filed in the student portfolio. A grade of F shall be regarded as a failing grade. The Honors designation is limited to no more than the top 15% of students completing the course in that academic year.

The grade of incomplete (I) is given when the instructor believes that the work is unavoidably incomplete or that a supplementary examination is justifiable. If a grade of I is not removed by satisfactory completion of the work before the end of the next semester in which the student is in residence, it becomes a failure unless special permission to postpone the work is obtained from the Committee on Academic and Professional Standards (University rule). All students who have a health problem which they feel may be causing difficulty with their academic progress are strongly advised to notify an associate dean for student services. It is the responsibility of the student to consult the instructor about the means and schedule for making up incomplete courses.

No student will be permitted to register for any work of the second or subsequent year until all courses for the year before have been completed successfully.

United States Medical Licensure Examination (USMLE)

All states require that physicians be licensed to practice medicine. Satisfactory completion of all portions of the United States Medical Licensing Examination (USMLE) is the only examination mechanism by which this license may be obtained for allopathic physicians. The School of Medicine requires a passing grade on both Step I and Step 2 for promotion and graduation. A failing grade will delay progress and require remediation. Students are limited to three attempts on each step. Failure on the third attempt will result in dismissal from the program.

Step I is required upon successful completion of all foundational and basic science coursework. A passing grade on USMLE Step 1 is required for promotion into the clinical rotations. USMLE Step 2 (clinical knowledge and clinical skills) is required after successful completion of third-year clinical rotations. A passing score on USMLE Step 2 is required before a recommendation can be made to grant the MD degree by the School of Medicine faculty and Committee on Academic and Professional Standards.

Licensure examinations are administered using a computer-based testing format.

Professional Standards Review

All non-disciplinary matters are governed by the concept of academic due process.

In view of public and professional responsibilities, the faculty of each of the professional schools of WVU has the authority to recommend to the president of the University the removal of any student from its rolls whenever, by formal decision reduced to writing, the faculty finds that the student is unfit to meet the qualifications and responsibilities of the profession. For further information the reader is referred to the Policy on Academic and Professional Standards Governing the MD Degree Program at West Virginia University School of Medicine, which is available at the School of Medicine Student Services website and in the student handbook.

Departure from Scheduled Work

Medical students are registered for all prescribed courses for each term except by special permission from the Committee on Academic Standards and an associate dean for student services of the School of Medicine. This permission is not valid until it has been reported to the assistant director of admissions and records, Health Sciences Center, and Student Services School of Medicine.

Admissions

For the most up-to-date information, please refer to our admissions website at: https://medicine.hsc.wvu.edu/md-admissions/

Mission

The West Virginia University School of Medicine (WVU SoM) is a connected community of students, teachers, practitioners and researchers who value health and wellness. We provide a culture of purpose accountability, honesty and gratitude that prepares our learners to be resilient and confident as they care for people, conduct research and transform lives.

The Committee on Admissions (COA) must select students who provide evidence that they will fulfill the mission of the WVU SoM. Applicants must have strong experiences in patient care (including physician shadowing), roles as educator and leader, research and service to the state of West Virginia and beyond.

The COA practices holistic review of each applicant, including the incorporation of competency-based admissions. Although the WVU SoM MD program no longer requires specific coursework, all applicants must be able to provide evidence of a strong scientific fund of knowledge and strong social/interpersonal skills.

Required Core Competencies for Entering Medical Students

Please review the required core competencies on the AAMC website through the link provided

https://students-residents.aamc.org/applying-medical-school/article/core-competencies/

Mastery of competencies can be demonstrated by a strong performance in the preferred courses (listed below and on the MCAT. Other ways to provide evidence of competency is through specialized experiences which have developed he required knowledge base such as research, employment, military courses and self-study.

Medical College Admissions Test (MCAT)

All applicants are required to take the MCAT

- Scores will be accepted from exams taken between September 2017 and September, 2020 for the cycle that opens in June 2020.
- Applications will be put on hold until the most recent MCAT score is posted
- The most recent MCAT total and sub-section scores are what is reported to the committee, while all scores are reviewed
- To identify what scores may be competitive for regular decision, please refer to our Class Profile (https://medicine.hsc.wvu.edu/md-admissions/2023-class-profile/) for more information
- Early Decision applicant must have at least a MCAT total of 506. Please refer to the Early Decision Program (https://medicine.hsc.wvu.edu/md-admissions/programs/early-decision-program/) page for more information.

Academic Experience

Minimum of 90 Credit Hours PLUS three years of higher education post-high school (at the undergraduate or graduate level) from an accredited US or Canadian academic institution are **required**. It is **preferred** that at least 30 hours are in the courses listed below.

An AMCAS calculated BCPM and Total GPA is **required** to apply

Preferred coursework in:

- **Biological Sciences**
- **Biochemistry**
- **Chemistry**
- **Organic Chemistry**
- **Engineering Sciences**
- **Physics**
- **Statistics**
- **Laboratory experiences**

Successful completion of these courses with a grade of "C" or higher is the most common method in which applicants can demonstrate science competency

Letters of Recommendation

- A committee letter provided by your undergraduate institution
- **or a minimum** of 3 letters of recommendation from persons of your choice
- Letters of recommendation should be uploaded to your AMCAS application at least two weeks prior to your interview

Secondary Application

All AMCAS verified applicants will have the opportunity to complete a secondary application. Applicants will be notified via email with instructions on how to submit the secondary application. Please refer to the Admissions Timeline (https://medicine.hsc.wvu.edu/md-admissions/admissions-timeline/) for important deadlines for the secondary application.

Once we receive an applicants' completed secondary application, the applicant will then be place on a roster to be holistically reviewed.

CASPer Test: CASPer™ Test (Computer Based Assessment for Sampling Personal Characteristics)

All Applicants who receive a secondary application are encouraged to complete the CASPer^TM evaluation to assist with our Admissions process. Your CASPer^TM results will provide the Admissions Team with additional information about you as an applicant. It is permissible to sign up for a CASPer^TM test date and complete the evaluation after your medical school application has been submitted. Please note that CASPer^TM results will be available to our Team three weeks from your test date. Please be mindful that applicants will be invited for interviews with or without CASPer^TM results, as testing for **the 2021 cycle is optional. Please be aware that if an applicant has a CASPer^TM score, it will be considered during waitlist pull decisions.**

Our Admissions Team is unable to answer any informational calls, emails, or communications about CASPer™. Any queries should be directed to CASPer™ at https://takecasper.com/contact-us (https://takecasper.com/contact-us/)

More information is available at the following link: https://takecasper.com/aboutcasper/

Functional Technical Standards

In accordant with section 504 of the Rehabilitative Act of 1973 (PL93-112) and following careful review of the 199 report by a Special Advisory panel on Technical Standards of the Association of American Medical Colleges, and incorproating the guidelins of the Americans with Disabilities Act (ADA PL 1010-336) enacted by Congress in 1990, the West Virginia University School of Medicine has adopted minimal technical standards for the assessment of all applicants to the School of medicine. Please see the Functional Technical Standards Policy here. (https://medicine.hsc.wvu.edu/media/364432/functional-technical-standards.pdf)

Ineligible Applicants

- Medical Students who have been dismissed or have been terminated by any allopathic or osteopathic school will **not** be considered for admittance.
- Individuals who have previously earned an allopathic or osteopathic medical degree, whether in this country or abroad, will **not** be considered for admittance.

Doctor of Medicine

CURRICULUM REQUIREMENTS

CCMD 801	Medical Biochemistry and Cellular Function	8
PALM 801	Human Structure	7
CCMD 802	Professional Development	1
CCMD 803	Problem Based Learning 1	1
CCMD 811	Physical Diagnosis/Clinical Integration (PDCI) 1	5
MICB 812	Immunity, Infection and Disease (MICRO) 1	4
PALM 812	Mechanisms of Human Disease (PATH) 1	3
PCOL 812	Medical Pharmacology 1	3
CCMD 812	Physical Diagnosis and Clinical Integration (PDCI) 2	3
CCMD 813	Neuroscience and Human Behavior	7
CCMD 814	Health Care Ethics	2
CCMD 815	Career and Professional Development Experiences	6
CCMD 816	Public Health	2

MICB 820	Immunity, Infection and Disease (MICRO) 2	4
PALM 820	Mechanisms of Human Disease (PATH) 2	7
PCOL 820	Medical Pharmacology 2	5
PSIO 820	Principles of Medical Physiology	5
CCMD 821	Physical Diagnosis and Clinical Integration (PDCI) 3	5
CCMD 823	Problem Based Learning 2	3
CCMD 824	Comprehensive Basic Medical Science Exam	3
CCMD 825	United States Medical Licensing (USMLE) Step 1 Prep	6
BMP 830	Clinical Clerkship in Psychiatry	6
FMED 830	Clinical Clerkship in Family Medicine	8
MED 830	Clinical Clerkship in Internal Medicine	8
NEUR 830	Clinical Clerkship in Neurology	2
OBST 830	Clinical Clerkship in Obstetrics and Gynecology	8
PEDI 830	Clinical Clerkship in Pediatrics	8
SURG 830	Clinical Clerkship in Surgery	8
CCMD 841	Independent Study	20
CCMD 842	Subl Hospital Care	4
CCMD 843	Anesthesiology Clerkship	2
CCMD 844	Critical Care and ICU Clerkship	2
CCMD 845	United States Medical Licensing USMLE Step-2 Clinical Knowledge Preparation	2
CCMD 846	United States Medical Licensing (USMLE) Step-2 Clinical Skills Preparation	1
CCMD 847	Clinical Performance Examination (CPX)	1
CCMD 848	Rural Community-based Health Care	4
Total Hours		174

FIRST YEAR CURRICULUM

The first-year curriculum includes fall, spring and summer terms that total to approximately 52 hours of academic credit. There are approximately 20 scheduled instructional contact hours per week. Students must take courses in a specific order.

The fall term includes CCMD 801 Medical Biochemistry and Cellular Function (integration of biochemistry and genetics), PALM 801 Human Structure (integration of human anatomy and histology), CCMD 811 Physical Diagnosis and Clinical Integration (PDCI) 1 and CCMD 802 Professional Development, which includes a full week of professional development activities designed to help students transition into the medical school curriculum.

The spring term includes an introduction to the foundation of several basic sciences and begins aligning content areas across organ systems, starting with the nervous system. Students enroll in several courses, including MICB 812 Immunity, Infection and Disease 1, PALM 812 Mechanisms of Human Disease 1, PCOL 812 Medical Pharmacology 1, CCMD 812 Physical Diagnosis and Clinical Integration (PDCI) 2, CCMD 813 Neurosciences and Human Behavior, CCMS 814 Health Care Ethics, and CCMD 803 Problem-based Learning.

The summer term includes two courses: CCMD 815 Career and Professional Development Experience and CCMD 816 Public Health.

SECOND YEAR CURRICULUM

Medical students' second academic year includes a fall and spring term. There are approximately 20 scheduled instructional contact hours per week. Students must take courses in a specific order. The fall term is a unique term, which stretches into the early spring term. The fall term includes approximately 22 week of instruction, which continues to align courses' content across organ systems. This term includes MICB 820 Immunity, Infection and Disease (microbiology) 2, PALM 820 Mechanisms of Human Disease (pathology) 2, PCOL 820 Medical Pharmacology 2, PSIO 820 Physiology, CCMD 821 Physical Diagnosis and Clinical Integration (PDCI) 3, and CCMD 823 Problem-based Learning.

The spring term is designed to prepare students to complete the first step to being a licensed physician: the United States Medical Licensing Examination (USMLE) Step 1. Students are enrolled in CCMD 824 Basic Science Medical Examination, which includes a standardized exam prepared by the National Board of Medical Examiners (NBME). Students engage in approximately 2 weeks of self-directed learning to prepare for the examination. After completing this exam, students are given a profile and a report to help develop a study plan that targets knowledge gaps prior to taking the USMLE Step 1 licensure exam. Students also enroll in CCMD 825 Step Prep, which includes approximately 6-8 weeks of self-directed study time to prepare and pass the USMLE Step 1 examination.

THIRD AND FOURTH YEAR CURRICULUM

The third-year and fourth-years of the curriculum are characterized as the "clinical years," which include required clerkships and elective clinical rotations across 82 weeks of instruction. Students must earn passing grades in all first- and second-year courses, including a passing score on USMLE Step 1,

to enroll in clerkships and clinical rotation electives. While some required clerkships and rotation electives have prerequisites, students may complete the clerkships and clinical rotations in a variety of orders. Students must complete the following required clerkships in any order: MED 830 Internal Medicine (8 weeks), SURG 830 Surgery (8 weeks), BMP Psychiatry (6 weeks), PEDI 830 Pediatrics (8 weeks), FMED 830 Family Medicine (8 weeks), OBST 830 Obstetrics and Gynecology (8 weeks). Students who graduate in May must complete all required clerkships by August 30th of the fourth-year curriculum, allowing enough time to figure the clerkship narratives into the Medical Student Performance Evaluation (MSPE). The MSPE is a required component of residency applications. Students must earn a passing grade on all required clerkships prior to completing CCMD 845 USMLE Step 2 Clinical Knowledge (CK) (2 weeks), CCMD 846 USMLE Step 2 Clinical Skill (CS), CCMD 847 CPX Exam, CCMD 842 SubI Hospital Care (4 weeks) and CCMD 844 Critical Care and ICU (2 weeks). Students may also complete NEURO 830 Neurology (2 weeks), CCMD 843 Anesthesiology (2 weeks), CCMD 848 Rural/Community-based Care (4 weeks) at any time during the third- and fourth-year of the curriculum. CCMD 841 Electives (20 weeks) includes rotations that may or may not have prerequisites. A catalog is available online that lists the approved electives (http://medicine.hsc.wvu.edu/ms4catalog/).

SUGGESTED PLAN OF STUDY*

First Year

Fall	Hours	Spring	Hours	Summer	Hours
CCMD 801	8	MICB 812	4	CCMD 815	6
PALM 801	7	PALM 812	3	CCMD 816	2
CCMD 811	5	PCOL 812	3		
CCMD 802	1	CCMD 812	3		
		CCMD 813	7		
		CCMD 814	2		
		CCMD 803	1		
	21		23		8

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
MICB 820	4	CCMD 824	3	MED 830	8
PALM 820	7	CCMD 825	6	SURG 830	8
PCOL 820	5				
PSIO 820	5				
CCMD 821	5				
CCMD 823	3				
	29		9		16

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
BMP 803	6	FMED 830	8	CCMD 841	4
NEUR 830	2	OBST 830	8	CCMD 845	2
PEDI 830	8			CCMD 843	2
				CCMD 841	4
				CCMD 842	4
				CCMD 847	1
	16		16		17

Fourth Year

Fall	Hours	Spring	Hours
CCMD 844	2	CCMD 848	4
CCMD 841	2	CCMD 841	4
CCMD 846	1	CCMD 841	4
CCMD 841	2		
	7		12

Total credit hours: 174

*This is a Suggested Plan of Study. Sequence may vary depending on student.

Major Learning Outcomes
MEDICINE

Medical Knowledge: Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, and apply this knowledge to patient care.

Graduating Students of the WVUSOM program will be able to:

- Describe the normal structure, development, function, and relationships among the organ systems of the human body.
- Describe the role of biochemical, physiological, neurological and immunological mechanisms in maintaining homeostasis.
- Describe and recognize normal and abnormal psychosocial development and cognitive function across the human lifespan.
- Describe the alterations of structure and function or organ systems and tissues that characterize disease (e.g., genetic, developmental, environmental, nutritional, toxic, infectious, inflammatory, neoplastic, degenerative, traumatic, and behavioral).
- Describe foundations of diagnostic methods, therapeutic interventions, and prevention with respect to specific disease processes in individuals and populations.
- Describe genetic and physiologic basis of individual patient responses to medical therapeutics.
- Describe and apply foundational principles of epidemiology, statistics, and ethics to the diagnosis and treatment of disease.
- Explain the effect of social determinants, nutrition, health behaviors, and preventive measures on health status and disease of individuals and populations.
- Describe the scientific method and demonstrate a critical and ethical evaluation of basic, epidemiological, clinical and translational research findings and their application to societal problems and acute, chronic, rehabilitative, end-of-life and primary care.

Patient Care: Provide patient care that is compassionate, appropriate, and effective.

Graduating Students of the WVUSOM program will be able to:

- Gather and interpret a complete and appropriately organized medical history, which incorporates cultural features for comprehensive patient care.
- Perform accurate, relevant, comprehensive and focused physical and mental status examinations.
- Gather, interpret, and prioritize information for patients requiring urgent or emergent care and initiate appropriate critical interventions.
- Select and interpret appropriate physical examination findings, diagnostic tests, laboratory tests, ultra sonographic imaging and standard imaging studies to formulate a complete and accurate differential diagnosis.
- Develop patient treatment and management plans that are evidenced-based and consider cultural, ethnic and individual patient preferences for shared decision-making.
- Counsel and educate patients and their families about prevention strategies, diagnostic tests, prognostic data, treatment options/plans, evidenced-based literature and patient orders/prescriptions.
- Provide patient care that is compassionate, safe, appropriate, and effective for the treatment of health problems.
- Perform basic medical procedures appropriately and professionally.
- Employ opportunities for early interventions to educate patients about disease prevention strategies taking into account barriers to change.
- Collaborate with an interprofessional team to provide preventive, acute, chronic, rehabilitative, and end-of-life care that is patient-focused and cost-effective.

Interpersonal and Communication Skills: Demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, peers, and health professionals.

Graduating Students of the WVUSOM program will be able to:

- Communicate effectively and demonstrate caring and respectful behaviors with patients and families across a broad range of health literacy, socioeconomic and cultural backgrounds.
- Create and sustain a therapeutic and ethically sound relationship with patients and their families.
- Explain the key elements of informed consent to patients and their families, including the indications, contraindications, risks, benefits, alternatives, and potential complications of interventions and procedures.
- Provide and interpret accurate, prioritized, relevant and complete oral presentations of a patient encounter to effectively transition patient care.
- Demonstrate effectively the following communication skills to maintain a professional and safe healthcare environment: negotiation of conflicts within a healthcare team and maintain respect for all members of a healthcare team.
- Communicate timely, accurate, relevant, complete, succinct and confidential documentation of clinical encounters and patient transitions in written or electronic format.

Practice-Based Learning and Improvement: Demonstrate the ability to investigate and evaluate their role in the care of patients, to appraise and assimilate scientific evidence, and to continuously improve their contributions to patient care based through reflective and self-directed learning.

Graduating Students of the WVUSOM program will be able to:

- Locate, evaluate and assimilate evidence from scientific studies including basic, epidemiological, clinical, and translational-based research.
- Apply knowledge of study designs and statistical methods to appraise evidenced-based literature.
- Use information technology appropriately to manage information and support patient care decisions.
- Demonstrate lifelong and self-directed learning by analyzing strengths, identifying learning needs, and incorporating feedback in reflective learning to improve all six core competencies.

Systems-Based Practice: Demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to learn about other resources in the system to promote optimal health care.

Graduating Students of the WVUSOM program will be able to:

- Describe the larger context and system of healthcare and identify how physicians may take a leadership role in its development.
- Demonstrate the ability to evaluate and mobilize resources, interpret extant and emerging policies, and identify forces in the healthcare system that influence disparities in health, access to healthcare and promotion of optimal healthcare.
- Define the roles of healthcare professionals and demonstrate how interprofessional collaboration improves patient safety, patient-centered outcomes, and system performance.
- Describe and distinguish effective methods of organizing, financing, and providing healthcare.
- Describe how the prevention and treatment of healthcare disparities may affect individual patients, populations, and the healthcare system.
- Recognize system limitations and failures, and identify ways to report patient safety concerns and potential solutions in a timely manner.

Professionalism: Demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

Graduating Students of the WVUSOM program will be able to:

- Demonstrate respect, compassion, integrity, and responsiveness in all interactions with interprofessionals, colleagues, patients and their families and society.
- Demonstrate a commitment to ethical principles, including provision or withholding of care, confidentiality, informed consent, and respect for patient privacy and autonomy.
- Demonstrate sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in culture, national origin, age, gender, race, religion, disabilities, sexual orientation, veteran status and health.
- Create and sustain a therapeutic and ethically sound relationship with patients.
- Demonstrate the qualities and practices required to maintain personal wellness and resilience while pursuing lifelong learning and professional growth.
- Demonstrate honesty, timeliness, punctuality, integrity and accountability in the process of learning and completing professional and clinical responsibilities.
- Demonstrate a commitment to uphold and sustain the WVUSOM Code of Professionalism.

Neuroscience, Ph.D.

Randy Nelson, Ph.D., Ph.D. (University of California, Berkeley) randy.nelson@hsc.wvu.edu

Degrees Offered

- Doctor of Philosophy
- Joint Doctor of Medicine and Doctor of Philosophy

Nature of the Program

The doctoral program in **Neuroscience** is committed to training the next generation of researchers and educators. Successful completion of degree requirements is based on research and scholarly achievement. Students will have opportunities to experience and acquire the skills needed for successful careers as independent scientists, including critical thinking, problem solving, writing, public speaking, and leadership. After completion of core coursework, students conduct an original research project culminating in a doctoral dissertation. Research experiences include evaluating scientific literature, identifying critical scientific issues, experimental design, grant and manuscript writing, publication of scientific papers, and presentations at national meetings. Students with career interests in teaching will have the opportunity to gain experience in innovative teaching methods and techniques, including problem-based learning, computer-assisted learning, and integrated teaching approaches. Faculty members have appointments in basic and clinical departments with expertise that spans all neuroscience sub-disciplines, including structural, cellular, molecular, behavioral, and developmental.

The neuroscience graduate program emphasizes research on the function and dysfunction of the brain and nervous system, providing students with innovative approaches to understanding neural mechanisms responsible for diseases such as Alzheimer's disease, stroke, brain injury and repair, as

well as fundamental understanding of cellular and molecular neurobiology, neural circuits, motor and sensory systems, neural processing, cognition, behavior, and neural development.

Completion of the Ph.D. degree is realized when a minimum of one first-authored manuscript, based on dissertation research, and one additional manuscript is accepted in a peer-reviewed journal, and the student successfully presents the research results to faculty of the graduate dissertation committee and program/department. Typically, four to five years are required to realize this goal.

Research Areas

Addiction. West Virginia is on the front lines of the opiate and alcohol addiction with the highest age-adjusted rate opiate and alcohol abuse. The mission of this research group is to understand the neurobiology of addiction and evaluate addiction prevention, treatment, and harm reduction strategies.

Alzheimer's Disease and Neurodegeneration. Neurodegeneration diseases such as Alzheimer's Disease, Huntington's Disease, Multiple Sclerosis and Parkinson's Disease plague the citizens of West Virginia and elsewhere. The Center for Neurodegenerative Diseases (CND) is a synergistic group of researchers who study neurodegenerative diseases across multiple approaches, from the behavioral to the molecular.

Applied Neuroscience & Human Performance. The mission of this research group ranges from improving brain health, performance, and resilience to advancing the care of brain disorders, in collaboration with the Rockefeller Neuroscience Institute, this group aims to bring the same level of success and rapid advances that have occurred in areas such as heart disease and cancer to brain health. This group is also developing partnerships and accelerating innovative technologies, treatments, and protocols, primarily using humans as experimental participants.

Neural Circuits. The mission of this research group is to seek common mechanisms of representing the world across sensory and motor systems, understand their development, and develop therapies for congenital and acquired sensory and motor disorders.

Stroke. West Virginia ranked the 7th highest in the nation in the prevalence of stroke (4.4%). To help combat the risk for stroke, WVU has established a *Center for Basic and Translational Stroke Research*. The mission of this Center is to understand and develop treatments for brain inflammation and cell death that result from stroke or other neural injuries, such as traumatic brain injury.

FACULTY

GRADUATE PROGRAM DIRECTOR

- Randy Nelson - Ph.D., Ph.D. (University of California, Berkeley)

ASSOCIATE GRADUATE PROGRAM DIRECTOR

- Bernard G. Schreurs - Ph.D. (University of Iowa)

Doctor of Philosophy

MAJOR REQUIREMENTS - STANDARD TRACK

BMS 700	Scientific Integrity	1
BMS 701	Scientific Rigor and Ethics	1
BMS 702	Biomedical Lab Experience	2
BMS 706	Biomedical Research Methods	1
BMS 707	Experiential Learning for Biomedical Trainees	2
BMS 720	Scientific Writing	2
BMS 747	Foundations for Contemporary Biomedical Research I	4
BMS 777	Foundations for Contemporary Biomedical Research II	4
Research Forum		7
NSCI 761	Neuroscience Research Forum	
NSCI 770	Fundamentals of Neuroscience 1	6
NSCI 772	Fundamentals of Neuroscience 2	4
Research		46
NSCI 797	Research	
Journal Club		5
NSCI 760	Neuroscience Journal Club	
Electives		3
Qualifying Examination		
Dissertation Proposal		

Dissertation Defense		
Total Hours		88

MAJOR REQUIREMENTS - FAST TRACK

BMS 700	Scientific Integrity	1
BMS 701	Scientific Rigor and Ethics	1
BMS 707	Experiential Learning for Biomedical Trainees	2
BMS 720	Scientific Writing	2
Research Forum		7
NSCI 761	Neuroscience Research Forum	
NSCI 770	Fundamentals of Neuroscience 1	6
NSCI 772	Fundamentals of Neuroscience 2	4
Research		46
NSCI 797	Research	
Journal Club		5
NSCI 760	Neuroscience Journal Club	
Electives		3
Qualifying Examination		
Dissertation Proposal		
Dissertation Defense		
Total Hours		77

Seminars and Research Forum

Students are required to register for seminar in each semester of residence.

Journal Club

Students are required to enroll in Journal Club each semester. The course involves the presentation and discussion of current research papers and will help acquaint students with the variety of methods used in scientific research.

Doctoral Research

Students will conduct research with a dissertation mentor during time in the program. Students register for research credits each semester, and their performance is graded by their dissertation mentor.

Qualifying and Dissertation Proposal/Ph.D. Candidacy

The oral qualifying exam is given at the end of the second year of study. The dissertation proposal is completed during the third year of study. Admission to Ph.D. candidacy occurs following the successful defense of the dissertation proposal.

Dissertation Defense and First-Author Paper Requirement

Students are allowed to defend their dissertation when a minimum of one manuscript with the student as first author, based on dissertation research, is accepted in a peer-reviewed journal. A second manuscript is also required, but does not have to be first-authored or on the dissertation research. The final examination for the Ph.D. degree consists of orally defending a written dissertation in a public seminar and then in private to the graduate dissertation committee. Satisfactory performance in the oral defense will result in recommendation for granting of the Ph.D. degree.

Suggested Plan of Study*

First Year

Fall	Hours	Spring	Hours	Summer	Hours
BMS 700		1 BMS 701		1 NSCI 797	3
BMS 702		2 NSCI 770		6	
BMS 706		1 NSCI 760		1	
BMS 747		4 NSCI 761		1	
BMS 777		4 NSCI 797		1	
		12		10	3

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
NSCI 772	4	NSCI 760	1	BMS 720	2
NSCI 760	1	NSCI 761	1	NSCI 797	1
NSCI 761	1	NSCI 797	7		
NSCI 797	3	Qualifying Examination			
	9		9		3

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
NSCI 760	1	NSCI 760	1	NSCI 797	1
NSCI 761	1	NSCI 761	1	BMS 707	2
NSCI 797	4	NSCI 797	7		
Elective	3				
Dissertation Proposal					
	9		9		3

Fourth Year

Fall	Hours	Spring	Hours	Summer	Hours
NSCI 761	1	NSCI 761	1	NSCI 797	3
NSCI 797	8	NSCI 797	8		
	9		9		3

Total credit hours: 88

NOTE: The graduate curriculum is finalized with a plan of study once the mentor and laboratory have been selected in the first year. The plan of study is developed by the graduate committee in consultation with the student. The courses listed above include the required and elective coursework necessary for the student to finalize his/her plan of study. When the student enters the laboratory of his/her doctoral dissertation mentor repetitive enrollments in research, seminars, and colloquia are typical and will determine total hours necessary for degree completion.

*This is a suggested plan of study. Course sequences and length of time in program may vary depending on student and altered total credit hours.

Major Learning Outcomes
NEUROSCIENCE

- Independently design experimental protocols, conduct the experiments, analyze the results, and defend the experimental approach to other scientists.
- Develop and plan the test of hypotheses regarding significant problems in neuroscience.
- Ability to effectively reference the relevant literature in support of the student's research project. Ability to identify significance gaps in knowledge on a scientific topic in neuroscience. Ability to critically evaluate the strengths and weaknesses of the scientific literature.
- Effectively communicate research in abstracts written for research presentations, manuscripts for publication, research grant proposals, and the final dissertation.
- Effectively communicate both the student's research and general scientific topics in both informal and formal settings.
- Develop experimental rigor and strategies for conducting reproducible research.
- Demonstrate principles of ethics associated with appropriate research conduct.

Occupational Therapy

Introduction

In the fall of 1993, the West Virginia Board of Trustees approved the establishment of a new master's degree program at WVU, leading to an entry-level master's degree in occupational therapy. WVU accepted its first students into the professional program in the fall semester of 1996. The academic and fieldwork program requires three years to complete. Prior to application, students are required to complete several hours of prerequisite courses, which in most instances will take two years to fulfill.

In response to the rapidly changing environment in Occupational Therapy, the WVU Division of Occupational Therapy has added an OTD degree to their educational offerings. The Division of OT anticipates accepting their class of doctoral students in May 2021. Students entering WVU in the fall of 2019 or later who want to pursue the OTD degree must complete a bachelor's, apply and be accepted to the program before beginning classes in the

OT program. The Exercise Physiology major, Pre-OTD track will have all the necessary prerequisite courses. Students with other degrees who have completed 75% of the pre-requisite courses at the time of application will receive equal consideration in admission decisions.

Students will typically apply at the beginning of their senior year prior to completion of the Bachelor's degree. However, if accepted, all students must complete all pre-requisite courses with at least a "B" prior to the beginning of classes in the OTD program.

The Profession of Occupational Therapy

Occupational therapy is the only profession that helps people across the lifespan to do the things they want and need to do through the therapeutic use of meaningful daily activities (occupations). Occupational therapists use the "occupations" of self-care, work, and play/leisure activities to increase independence, enhance development, and/or prevent disability. To achieve these goals occupational therapists may also adapt the task or the environment. Occupational therapists enable people of all ages to live life to its fullest by helping them promote health, and prevent—or live better with —injury, illness, or disability. Common occupational therapy interventions include helping children with disabilities to participate fully in school and social situations, helping people recovering from injury to regain skills, and providing supports for older adults experiencing physical and cognitive changes.

Occupational therapists work in a variety of settings. These could include hospitals, rehabilitation centers, nursing facilities, home health, outpatient clinics, private practice, school systems, private organizations, industry, and community agencies such as return to work programs, prisons, and community settings. The number of different places where therapists work is growing every year.

Accreditation Status OTD

The West Virginia University entry-level occupational therapy doctoral degree program has applied for accreditation by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 6116 Executive Boulevard, Suite 200, North Bethesda, MD 30852-4929. ACOTE's telephone number c/o AOTA is (301) 652-AOTA and its Web address is www.acoteonline.org.

The program must be granted Candidacy Status, have a pre-accreditation review, complete an on-site evaluation, and be granted Accreditation Status before its graduates will be eligible to sit for the national certification examination for the occupational therapist administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be an Occupational Therapist, Registered (OTR). In addition, all states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination. Note that a felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure.

The timeline for the Accreditation process for the OTD is as follows:

- August 14, 2020 - Candidacy Application Due
- December 2020 - ACOTE Candidacy Application Decision
- December 2020 - Students may be Notified of Acceptance into the Program
- May 2021 - First Class Starts
- November 1, 2021 - Initial Report of Self-Study Due
- April 2023 - ACOTE Decision on Pre-accreditation Review of Self-Study
- June 2023 - First Class Begins Level II Fieldwork
- August-November 2023- Initial On-Site Evaluation Timeframe
- December 2023 - ACOTE Review of ROSE and Accreditation Decision
- January 2024 - First Class Begins Doctoral-Level Capstone Component
- May 2024 - First Class Graduates
- 2024 - NBCOT Certification Examination

Since the OTD program has not admitted students as of the publication of this catalog there is no program data on performance of OTD student on the national certification exam. Prospective students, applicants, and interested parties can review WVU MOT program data results for the National Board for Certification in Occupational Therapy (NBCOT) exam at: https://secure.nbcot.org/data/schoolstats.aspx. (https://secure.nbcot.org/data/schoolstats.aspx)

Accreditation Status MOT

WVU's Division of Occupational Therapy has been granted accreditation status by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA) located at 6116 Executive Boulevard, Suite 200, North Bethesda, MD 20852-4929. ACOTE's phone number, c/o AOTA, is (301) 652-AOTA. The OT program at WVU was initially awarded accreditation in 1998 and awarded re-accreditation in 2013. The next scheduled onsite visit for accreditation will be in 2023-2024. ACOTE information may be accessed at www.acoteonline.org (http://www.acoteonline.org/).

Graduates of the program are able to sit for the national certification examination for the occupational therapist administered by the National Board for Certification in Occupational Therapy Inc. (NBCOT). The address for NBCOT is: National Board for Certification in Occupational Therapy, Inc., 12 South Summit Avenue, Suite 100, Gaithersburg, MD 20877-4150. For more information, NBCOT can be contacted at (301) 990-7979 or at http://www.nbcot.org/. After successful completion of this exam, the individual will be an occupational therapist, registered (OTR). All states require licensure

in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination. Note: A felony conviction may impact a graduate's ability to sit for the NBCOT examination and/or obtain a state license.

Prospective students, applicants, and interested parties can review WVU OT program data results for the National Board for Certification in Occupational Therapy (NBCOT) exam at: https://secure.nbcot.org/data/schoolstats.aspx

What to Expect

Like many professional programs, the curriculum in the occupational therapy program is fixed and intense. The first professional year, begins in the summer - with basic science coursework relevant to the profession and practice of occupational therapy. Students are immersed in practice from the first fall semester onward through involvement in clinical activities, simulated scenarios and integrated Level I and Level II fieldwork experiences. Coursework includes hands-on learning and interprofessional experiences that are directly linked to academic content, theory, and research.

Students in the program are required to participate in community service activities and the School of Medicine's laptop computer purchase lease-to-own program, which provides each student with a state-of-the-art computer that contains course and program-relevant software.

Students in occupational therapy must obtain a grade of at least C or a Satisfactory (S) in all professional courses. In addition, occupational therapy students must maintain an OT coursework GPA of 3.0 or higher while in the OT Program. Since professional courses are offered once per year and are specifically sequenced, course failure may result in program dismissal or the delay of fieldwork and graduation.

Students in the OT Program must complete all didactic coursework and all fieldwork within a period of five years after commencing the occupational therapy program. Furthermore, all Level II Fieldwork must be completed within eighteen months following completion of academic coursework while remaining within the five-year time frame.

Housing and Travel for Clinical Fieldwork

The professional curriculum includes two off-campus, full-time clinical experiences known as Level II Fieldwork and the doctoral curriculum includes an additional 14 week full time Doctoral experiential. Clinical fieldwork and the Doctoral experiential are an essential part of professional training. Students are assigned to Level I and Level II fieldwork sites locally, and at locations around the United States. Assignment to the Doctoral Experiential is done based on student interest and site availability. Students can expect that at least some of their placements will be at a distance from home. Students are responsible for any related fieldwork or experiential expenses (Background checks, physicals, etc) as well as transportation, housing, and meal expenses. Students are also responsible for making their own housing and travel arrangements for clinical fieldworks and the Experiential. Information about housing options for affiliations is available from the academic fieldwork coordinator.

Background Checks

A felony conviction may impact a graduate's ability to take the NBCOT (National Board for Certification in Occupational Therapy, Inc.) examination and/or obtaining a state license. For further information on NBCOT's Character Review Program, interested parties can obtain information from that Board on their web site at: http://www.nbcot.org (http://www.nbcot.org/).

Students enrolled in the WVU OT education program must complete drug testing and background checks to qualify for clinical and fieldwork experiences.

FACULTY

CHAIR
- Steven Wheeler - PhD, OTR/L, CBIS (Virginia Commonwealth University)
  Professor and Program Director

PROFESSOR
- Anne Cronin - Ph.D., OTR/L, ATP, FAOTA (University of Florida)

ASSOCIATE PROFESSORS
- Amanda Acord-Vira - Ed.D., OTR/L (West Virginia University)
- Diana Davis - Ph.D., OTR/L (West Virginia University)
  Vice-Chairperson
- Randy P. McCombie - Ph.D., OTR/L (Loyola University, Chicago)
- Rondalyn Whitney - Ph.D., OTR/L, FAOTA (Trident International University)

ASSISTANT PROFESSORS
- Brandy Brown - OTD, OTR/L (Chatham University)
- Amy Burt - MOT, OTR/L (University of Pittsburgh)

- Garth Graebe - MOT, OTR/L (West Virginia University)
- Brian Scaife - OTD, OTR/L (Chatham University)
  Fieldwork Coordinator
- SueAnn Woods - MOT, OTR/L (West Virginia University)

Admissions for the 2021 MOT

Students typically spend the first two years of undergraduate study completing pre-requisite courses. The recommended undergraduate degree is Exercise Physiology as it contains all of the pre-requisite courses.

Students may apply to the MOT using the OTCAS application system. The application will be open from November 15 – February 15 each year and each class starts in May.

Course information for the master of occupational therapy degree can be found on the following website: http://medicine.hsc.wvu.edu/ot. (http://medicine.hsc.wvu.edu/ot/)

Admissions Requirements

In order to be eligible for admission and an interview for the MOT 2021 program, students must complete the following:

- MOT application through OTCAS between November 15-February 15
- Completion of 40 hours of observation with at least two different occupational therapists in at least two different sites
- Recommendations from two occupational therapists supervisors from observation hours
- Overall and pre-requisite GPA of 3.0
- The following courses must be completed prior to admission to the program. Course work will only be accepted from an accredited institution in the United States. Applicants must complete each course with a grade of "C" or higher (including any remaining GEF courses).

Students applying to the program may only be enrolled in a maximum of 2 pre-requisite courses in the Spring semester prior to the start of the program. This does not include any remaining GEF courses.

- English Composition - 6 credits
- Introduction to Psychology - 3 credits
- Developmental Psychology - 3 credits
- Abnormal Psychology - 3 credits
- Principles of Human Communication - 3 credits
- Introduction to Sociology or Anthropology - 3 credits
- Biology with lab - 8 credits
- Physics with lab - 4 credits
- Statistics - 3 credits
- Physiology - 3 or 4 credits
- Medical Terminology - 1 credit
- Completion of General Education Foundations - 3-6 credits

Note: Some of the courses may have their own departmental pre-requisite requirements. Please check with individual departments to ensure that you have completed all requirements.

Admissions for the 2021 OTD

The application will open in August of 2020 for admission to the first class in May of 2021 and close at the end of October. Students will apply using the OTCAS application system.

Admission Requirements

To apply, students must meet the following criteria:

- Completion of a baccalaureate degree
- An overall 3.00 grade point average on all college course work
- An overall pre-requisite course work grade point average of 3.0
- No more than two pre-requisite courses left to complete during the spring semester preceding admission in May (does not include OTH 410)
- Competition of all three sections of the GRE

- A minimum of 40 hours of observation at a minimum of two locations (more sites and hours are recommended)
- Two recommendations. One recommendation must be from a licensed OT supervisor from your observation hours and one from a professor
- The following pre-requisite courses:
    - Biology with lab - 8 credits
    - Physiology – 3 or 4 credits
    - Development Psychology – 3 credits
    - Abnormal Psychology – 3 credits
    - Introduction to Sociology or Anthropology
    - Physics – 4 credits
    - Statistics - 3
    - Medical Terminology – 1 credit

Note:

All requirements are pending final University approval and are subject to change.

Degree Requirements

Minimum grade of C required in all courses. [*]

Minimum GPA of 3.0 required.		
OTH 500	Health Care Issues in Occupational Therapy	3
OTH 501	Management for Occupational Therapy Practice	4
OTH 503	Occupational Therapy in Pediatrics	3
OTH 520	Occupational Therapy in the Work Environment	3
OTH 540	Level 2 Fieldwork 1	6
OTH 550	Education in Occupational Therapy	3
OTH 551	Occupational Therapy in Prevention & Wellness	3
OTH 570	Advanced Theory in Occupational Therapy	3
OTH 593	Special Topics (Seminar)	1
OTH 640	Level 2 Fieldwork 2	6
OTH 697	Research (Yr III Fall 2 credits, Spr 2 credits)	4
Total Hours		39

[*]   Excludes OTH 540, OTH 640, and OTH 697.

PROGRAM TIME FRAME

Students must complete all didactic coursework and Level II Fieldworks within a period of five years after commencing the occupational therapy program. Furthermore, all Level II Fieldwork must be completed within eighteen months following completion of academic coursework while remaining within the five-year time frame.

Curriculum Requirements

A minimum cumulative GPA of 3.0 is required.

OTH 550	Education in Occupational Therapy	3
OTH 601	Disruption in Occupational Performance	4
OTH 602	Critical Reasoning in OT 1	2
OTH 603	Foundations of Intervention in OT	3
OTH 605	Critical Reasoning in OT 2	2
OTH 606	Occupational Performance Eval 1	3
OTH 611	Anatomic Foundations in OT	4
OTH 612	Functional Kinesiology in OT	2
OTH 660	Scientific Inquiry for OT 1	3
OTH 661	Scientific Inquiry for OT 2	3
OTH 670	Theories and Science of OT	3
OTH 684	Level 1 Fieldwork 1	2
OTH 686	Level 1 Fieldwork 3	2

OTH 687	Level 1 Fieldwork 2	2
OTH 697	Research	1
OTH 703	Functional Movement Across the Lifespan	2
OTH 704	Interventions Across the Lifespan 1	4
OTH 705	Occupational Performance Eval 2	4
OTH 706	Occupational Performance Eval 3	4
OTH 707	Interventions Across the Lifespan 2	4
OTH 708	Leadership in OT	2
OTH 709	Critical Reasoning in OT 3	3
OTH 723	Developmental Life Tasks	3
OTH 727	Neurobiologic Foundations	4
OTH 740	Level 2 Fieldwork 1	6
OTH 788	Dir St: Doctoral Capstone	2
OTH 789	Capstone Planning	2
OTH 797	Research	2
OTH 806	Critical Reasoning in OT 4	3
OTH 807	Entrepreneurship and Management in OT	3
OTH 809	Capstone Thesis	2
OTH 810	Doctoral Experiential	7
OTH 811	Professional Development	1
OTH 823	Interventions Across the Lifespan 3	4
OTH 824	Interventions Across the Lifespan 4	4
OTH 840	Level 2 Fieldwork 2	6
Total Hours		111

Major Learning Outcomes

MOT OCCUPATIONAL THERAPY

PRACTICE OUTCOMES

- Graduates will be reflective, competent, creative, flexible, and resourceful occupational therapists.
- Graduates will have an understanding of the distinct value of occupational therapy's unique role in promoting health, wellness, and quality of life at the individual, community, and population level.
- Graduates will be able to develop client-centered, evidence-based assessment plans and perform evaluations that reflect the Occupational Therapy Process and Domain.
- Graduates will be able to develop and implement client-centered, evidence-based, theory-driven interventions and discharge plans that reflect the Occupational Therapy Process and Domain.
- Graduates will be able to develop client-centered, evidence-based, theory-driven outcomes that reflect the Occupational Therapy Process and Domain.

LEADERSHIP & ADVOCACY

- Graduates will identify the leadership skills for engagement in professional advancement at the individual, group, and population level.
- Graduates will demonstrate skills to communicate about the distinct value/role of occupational therapy across all practice areas.
- Graduates will advocate for occupational therapy with policy makers, third-party payers, regulatory boards, consumers, and colleagues.
- Graduates will be able to identify the effects of health disparities and occupational injustice in the health and occupational performance of their clients.

SCHOLARSHIP & ETHICS

- Graduates will be active consumers of knowledge becoming lifelong occupational therapy learners.
- Graduates will be able to critically appraise the ethical and practical aspects of client care, program development, and research.

Major Learning Outcomes

OTD OCCUPATIONAL THERAPY

PRACTICE OUTCOMES

- Graduates will be able to critically reflect on and evaluate the environment, opportunities, and barriers to innovate methods to address unmet occupational therapy needs in society.
- Graduates will model the value of occupational therapy's unique role in promoting health, wellness, and quality of life at the individual, community, and population level.
- Graduates will be able to develop client-centered, evidence-based assessment plans and perform evaluations that reflect the Occupational Therapy Process and Domain.
- Graduates will be able to develop and implement client-centered, evidence-based, theory-driven interventions and discharge plans that reflect the Occupational Therapy Process and Domain and evaluate their effectiveness.
- Graduates will be able to develop client-centered, evidence-based, theory-driven outcomes that reflect the Occupational Therapy Process and Domain.

LEADERSHIP & ADVOCACY

- Graduates will demonstrate effective leadership skills, which include effective communication, to advocate for the importance of occupational engagement.
- Graduates will demonstrate skills to communicate about the distinct value/role of occupational therapy across all practice areas.
- Graduates will advocate for occupational therapy with policy makers, third-party payers, regulatory boards, consumers, and colleagues.
- Graduates will be able to evaluate the effects of health disparities and develop and implement a plan to address these to support occupational justice.

SCHOLARSHIP & ETHICS

- Graduates will be active consumers and inventors of knowledge becoming lifelong occupational therapy learners.
- Graduates will be able to critically appraise the ethical and practical aspects of client care, program development, and research.

Pathologists' Assistant, M.H.S.

Degree Offered

- Master of Health Science

The Profession

A pathologists' assistant is a healthcare professional who is qualified through academic and practical training to provide services in anatomic pathology under the direction of a qualified pathologist. Pathologists' assistants serve as physician-extenders in the same manner as physicians' assistants. The addition of pathologists' assistants to the pathology team can reduce cost, increase revenue, and improve workflow in the anatomic pathology lab. In practice, pathologists' assistants (PAs) are responsible for the processing of the surgical pathology specimen from receipt to dissection and description to submission of tissue to histology. In autopsy practice, the PA is involved in reviewing the medical record of the decedent, evisceration, dissection, and selection of tissue for submission to histology as well as formulation of a preliminary anatomic diagnosis and autopsy report under the direction of a pathologist. Many PAs are involved in laboratory management, teaching at the university-level, training of residents and medical students, forensic investigation, or research.

Nature of Program

The graduate program for pathologists' assistants began in January 2008 and is administered by the School of Medicine. Students are admitted into the Master of Health Science program after earning a baccalaureate degree from a regionally accredited college or university. Students with a cumulative grade point average of 3.25 or higher in the B.S. degree program in Medical Laboratory Science at West Virginia University may be provisionally admitted directly into the pathologists' assistant program at the end of their junior year.

This program is a twenty-four month master's-level program that prepares graduates as allied health professionals for careers as pathologists' assistants. During the second year, the student receives both didactic instruction and practical experience. Students receive practical experience at several of the program's affiliated medical laboratories including the following:

- WVU Medicine Ruby Memorial Hospital, Morgantown, WV
- WVU Medicine Berkeley Medical Center, Martinsburg, WV
- UPMC Health System including Presbyterian, Shadyside, Magee Womens, and Children's Hospitals, Pittsburgh, PA
- Thomas Memorial Hospital, Charleston, WV

- St. Clair Hospital, Pittsburgh, PA
- Conemaugh Memorial Medical Center, Johnstown, PA
- Butler Health System, Butler, PA
- The Ohio State University Wexner Medical Center, Columbus, OH
- Charleston Area Medical Center, Charleston, WV
- Excella Health Westmoreland Hospital, Greensburg, PA
- Cuyahoga County Medical Examiner, Cleveland, OH
- East Tennessee State University Medical Examiner, Johnson City, TN

The WVU Pathologists' Assistant Program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 8410 W. Bryn Mawr Avenue, Suite 670, Chicago, IL 60631-3415, (773) 714-8880.

Graduates are eligible for certification by the Board of Certification of the American Society for Clinical Pathology (ASCP).

Pathologists' Assistant Program Essential Functions

In accordance with Section 304 of the 1973 Vocational Rehabilitation Act, the West Virginia University Pathologists' Assistant program has adopted minimum technical standards for assessment of all applicants.

Because the master's degree in health science/pathologists' assistant signifies that the holder has obtained minimum competencies in all areas of the anatomic pathology laboratories, it follows that graduates must have the knowledge and skills to function in a wide variety of laboratory situations and to perform a wide variety of procedures.

1. Candidates for the master's degree in health science/pathologists' assistant must have somatic sensation (sense of touch) and the functional use of the senses of vision and hearing.
2. Candidates' diagnostic skills will also be lessened without the functional use of the sense of equilibrium, smell, and taste.
3. Additionally, they must have sufficient motor function to permit them to carry out the activities described in the sections that follow.
4. They must be able to consistently, quickly, and accurately integrate all information received by whatever sense(s) employed, and they must have the intellectual ability to learn, integrate, analyze, and synthesize data.
5. A candidate for the master's degree in health science/pathologists' assistant must have abilities and skills which include observation, communication, motor, conceptual, integrative, quantitative, behavioral, and social. Technological compensation can be made for some disabilities in certain areas, but a candidate should be able to perform in a reasonably independent manner. The use of a trained intermediary means that a candidate's judgment must be mediated by someone else's power of selection and observation.
6. *Observation*: The candidate must be able to observe demonstrations, procedures, and instruments in the basic sciences and clinical courses. Observation necessitates the functional use of the sense of vision and somatic sensation. It is enhanced by the functional use of the sense of smell.
7. *Communication*: A candidate should be able to speak, hear, and observe people in order to elicit information and perceive nonverbal communications. A candidate must be able to communicate effectively and efficiently in oral and written form with members of the health care team.
8. *Motor*: Candidates should have sufficient motor function to perform laboratory procedures. This action requires the coordination of both gross and fine muscular movements, equilibrium, and functional use of the senses of touch and vision.
9. *Intellectual—conceptual, integrative, and quantitative abilities*: These abilities include measurement, calculation, reasoning, analysis, and synthesis. Problem-solving requires all of these intellectual abilities. In addition, the candidate should be able to comprehend three-dimensional relationships and to understand spatial relationships of structures.
10. *Behavioral and Social Attributes*: A candidate must possess the emotional health required for full utilization of his/her judgment, the prompt completion of all responsibilities, and the development of mature, sensitive relationships with patients and coworkers.

Candidates must be able to tolerate physically taxing workloads and to function effectively under stress. They must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, interpersonal skills, interest, and motivation are all personal qualities that should be assessed during admissions and education process. In its evaluation of applicants to the West Virginia University Pathologists' Assistant program, the Admissions Committee will approach each applicant with the following questions in mind.

When an applicant does not meet a non-academic standard as defined above, and when this would, in the professional judgment of the committee, not satisfy the pathologists' assistant objectives for the student in performing laboratory procedures, education, and research, such opinion will be documented by the Admissions Committee.

The questions are not designed to disqualify an applicant but rather to give the Admissions Committee more complete information about an applicant's ability to meet the following nonacademic standards:

1. Is the candidate able to observe demonstrations and perform procedures in the basic sciences and clinical courses?
2. Is the candidate able to analyze, synthesize, solve problems, and make judgments about results obtained on patient specimens?
3. Does the candidate have sufficient use of the senses of vision, hearing, and somatic sensation necessary to perform the indicated laboratory procedures?

4. Can the candidate reasonably be expected to communicate the results of laboratory tests to other members of the healthcare team with accuracy, clarity, and efficiency?

5. Can the candidate reasonably be expected to learn and perform laboratory tests and operate instruments?

6. Can the candidate reasonably be expected to display good judgment in the analysis of procedure results?

7. Can the candidate reasonably be expected to accept criticism and respond by appropriate modification of behavior?

8. Can the candidate reasonably be expected to possess the perseverance, diligence, and consistency to complete the pathologists' assistant program and to become a practicing pathologists' assistant?

FACULTY

PROGRAM DIRECTOR

- Michelle M. Costas - MHS, PA(ASCP)
  Assistant Professor

CLINICAL COORDINATOR

- Justin Falcon - MHS PA(ASCP)
  Assistant Professor

MEDICAL DIRECTOR

- David Howell - MD, PhD
  Assistant Professor

FACULTY

- Carie Boykin - MHS, PA(ASCP)
  Assistant Professor

- Trevor Wolfe - MHS, PA(ASCP)
  Instructor

- Joy Grise - MHS, PA(ASCP)
  Assistant Professor

Admissions

All students seeking admission to the Master of Health Science, Pathologists' Assistant program must meet the following admissions requirements:

- Hold an earned baccalaureate degree from a regionally accredited institution of higher education
- Successfully complete the specific prerequisite coursework in mathematics and sciences
- Have a cumulative GPA of 3.0 (on a 4.0 scale)
- Submit two letters of recommendation electronically, as part of the application
- Complete a shadowing experience with a certified PA in surgical pathology or have equivalent work experience
- Complete an interview with the admissions committee
- Submit an electronic admissions packet including the application form, personal statement, essential functions form, shadowing statement, and official transcripts from all colleges and universities attended

REQUIREMENT

Requirement	Description
College Prep	Baccalaureate Degree
Prerequisite Courses	8 hours of Biology with laboratory
Prerequisite Courses	8 hours of College Chemistry with lab
Prerequisite Courses	3-4 hours of Organic Chemistry (CHEM 231 at WVU) or 3-4 hours of Biochemistry
Prerequisite Courses	3-4 hours of Microbiology, Immunology, Parasitology, or Virology
Prerequisite Courses	3 hours of college Algebra or higher
Prerequisite Courses	3 hours of English Composition or higher
Grade Point Average required	3.0 cumulative
Grade Point Average preferred	3.0 in the prerequisite courses
Recommendations	Two letters of recommendation

Interview	A personal interview with the Pathologists' Assistant Program Admissions Committee

Shadowing or Work Experience

Applicants must complete a shadowing experience with a practicing pathologists' assistant in surgical pathology or have applicable work experience in surgical or autopsy pathology. A statement regarding this experience is required in the application packet. Please contact the program specialist for assistance if necessary.

Admissions Classifications

Students must have a baccalaureate degree prior to beginning the professional sequence. However, the program has established the following admissions classifications:

- Direct Admit: a limited number of students completing the bachelor of science program in Medical Laboratory Science with an emphasis in either Medical Laboratory Science or Histotechnology who have a cumulative GPA of 3.25 may apply to the Master of Health Science, Pathologists' Assistant Program at the end of their junior year. These students will be admitted into the program after completing the B.S. in Medical Laboratory Science at West Virginia University.
- Regular Decision: a student applies in the admission cycle during their senior year.

Typically, applications will be submitted in the application period which extends from January 1 to May 31 of the senior year. Admission is contingent upon satisfactory completion of the baccalaureate degree.

Performance Standards

Students are required to maintain a minimum GPA of 3.0 to progress in the first and second year of the professional program.

Application Procedure

Each year, the pathologists' assistant program selects a limited number of students from the applications received for admission. Applications for admission to the program are available between January 1 and May 31 for the class beginning the following January. The application fee is sixty dollars. A completed admissions packet contains the following: completed application form (electronic), personal and shadowing statements, official transcripts, two recommendation letters, and the signed essential functions form. Each applicant must arrange for transcripts to be sent directly from all institutions attended to the Office of Graduate Admissions. When the application is complete, the file is sent to the Pathologists' Assistant Admissions Committee. Recommendation letters can be from faculty in a pre-requisite course, a lab professional with whom the applicant has worked, current employer, or professional peer. Interviews are granted to qualified applicants after the committee has reviewed the completed admissions packet.

Degree Requirements

MICB 702	Microbiology	5
PALM 465	Medical Laboratory Management	2
PALM 603	Pathology and Anatomy	6
PALM 605	Advanced Microanatomy	2
PALM 610	Pathology Assistant Education Methods	1
PALM 620	Clinical Pathology Seminar	2
PALM 625	Anatomical Pathology Techniques	4
PALM 627	Pathology Assistant Practicum 1	9
PALM 628	Pathology Assistant Practicum 2	9
PALM 629	Pathologists' Assistant Practicum 3	7
PALM 630	Pathology Review 1	2
PALM 631	Pathology Review 2	2
PSIO 743	Fundamentals of Physiology	5
PALM 648	Surgical and Autopsy Pathology Procedures	3
PALM 750	Systemic Pathology for Pathologists' Assistant Students	8
PALM 650	Introduction to Disease Mechanisms	4
PALM 652	Histology for Pathologists' Assistants	3
Total Hours		74

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours	Summer	Hours
MICB 702		5 PALM 603		6 PALM 620	2
PSIO 743		5 PALM 625		4 PALM 750	8
PALM 465		2 PALM 610		1	
PALM 605		2 PALM 650		4	
PALM 648		3 PALM 652		3	
		17		18	10

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
PALM 629		7 PALM 627		9 PALM 628	9
PALM 631		2 PALM 630		2	
		9		11	9

Total credit hours: 74

GRADUATION REQUIREMENTS

Students are required to maintain an overall GPA of at least 3.0 as a graduate student while enrolled in the pathologists' assistant program. A minimum 3.0 GPA is required to graduate from the program.

Major Learning Outcomes

PATHOLOGISTS' ASSISTANT

The Pathologists' Assistant Program prepares students to be highly skilled allied health professionals providing services in both surgical and autopsy pathology. Individuals are prepared both academically and professionally to be contributing members of the healthcare team.

Graduates will:

- Demonstrate proficiency in surgical pathology
  - Distinguish between normal and abnormal tissue both grossly and microscopically
  - Choose the appropriate tissue to submit based on clinical history
  - Gross complex surgical cases using the most recent cancer staging protocols
  - Choose the appropriate stains - routine, special, or IHC, - to assist the pathologist in making a diagnosis
- Demonstrate proficiency in autopsy pathology
  - Perform an autopsy using different techniques
  - Gather pertinent clinical history and all necessary documentation for a case
  - Compose a gross description for the autopsy report
  - Select tissue for processing
- Demonstrate concepts in medical laboratory management
  - Apply management principles to regulation and professional oversight
  - Compare healthcare delivery systems
  - Discuss ethical principles and decision making
  - Identify basic management concepts, functions, and styles
- Determine a differential diagnosis for tumors based on gross appearance and clinical history
- Engage in activities and behavior that promote the profession and positively represent the program
- Instruct residents, medical students, and other health professionals in surgical and autopsy techniques

Physician Assistant, M.H.S.

Degrees Offered

- Master's in Health Sciences (MHS)

Nature of the Program

The PA curriculum is designed to provide a foundation in medical sciences, followed by an in-depth study of systems-based clinical medicine. The program consists of 4 months of didactic coursework followed by 12-months of clinical rotations. The clinical phase includes rotations in family medicine, pediatrics, internal medicine, general surgery, emergency medicine, women's health, behavioral medicine, and rural medicine. Consistent with our mission, the program has a focus on population health, health disparity, and rural and Appalachian health issues.

FACULTY

PROGRAM DIRECTOR

- Jennifer Momen - MD, MPH, FAAP (West Virginia University)
  Program Director, Assistant Professor

MEDICAL DIRECTOR

- Benjamin Silverberg - MD, MSc, FAAFP (University of Connecticut)
  Medical Director, Assistant Professor

ASSISTANT PROFESSORS

- Nicole Ludwig - MSPA, PA-C (Seton Hall University)
- Forrest Olgers - MPAS, MBA, PA-C (Alderson-Broaddus University)
- Gregory Selasky - MS, PA-C (Alderson Broaddus University)
  Director of Clinical Education, Assistant Professor

Admissions

In order to be eligible for admission, a bachelor's degree in any discipline from an accredited U.S. institution is required. In addition, students must fulfill the following:

- Submit GRE test scores (Institution Code 4275).
- Have a minimum cumulative undergraduate and prerequisite grade point average of 3.0.
- Complete all prerequisite courses with a grade of C or higher.
- Complete 80 hours of experience in a clinical setting (paid or unpaid). Health care experience obtained to meet requirements for any course or degree program may not be counted toward the 80 hours of experience in a clinical setting. Examples of qualifying health care experience include shadowing a physician or physician assistant and working as a patient care aid, medical assistant, respiratory/occupational/physical therapist, paramedic, emergency medical technician, or scribe. Applicants logging more than the minimum of 80 hours will not receive additional preference in the admission selection process. Please note that individuals with hands-on patient care experience and those with decision-making responsibility will receive additional preference (see *Selection Process* section for details). All healthcare experience must have been obtained no earlier than the freshman year of college.
- Three letters of recommendation (one from a college or university professor, one from a supervisor of the clinical experience including evidence of how the student contributed to the delivery of care, and a third from either of the two preceding categories

Prerequisite Courses

The following courses are required in order to be eligible for admission to the program:

- Biology with lab - 4 credits
- General Chemistry with lab - 8 credits
- Organic or Biochemistry with lab - 4 credits
- *Human Anatomy with lab - 4 credits
- *Human Physiology with lab - 4 credits
- Microbiology - 3 credits
- Psychology - 3 credits
- Statistics - 3 credits
- Medical Terminology - 1 credit

Total Credits: 34

Please note the following information about prerequisite courses:

- Prerequisite courses must be completed at a regionally accredited 2-or 4-year U.S. college or university within the 10 years prior to the date of matriculation
- A prerequisite course may be retaken, and if a higher grade is earned upon retaking a course, the second grade will be used to calculate the prerequisite GPA. However, both grades will be reflected in the cumulative GPA
- Credit hours represent semester hours
- Advanced placement (AP) courses will not be accepted for prerequisite requirements
- Online or virtual lecture and laboratory courses in the natural sciences will not be accepted to fulfill prerequisite requirements
- *Combined Anatomy and Physiology courses are accepted; however, an applicant must take two semesters of Anatomy and Physiology with labs to fulfill the Anatomy and Physiology requirements; mammalian anatomy lab will be acceptable, but human anatomy lab is preferred
- An applicant may have prerequisites in progress at the time of application, however all outstanding prerequisites must be successfully completed prior to matriculation. In order to fairly evaluate each candidate, **no more than two prerequisite courses may be outstanding at the time of the interview.**
- There will be no waivers or exceptions to the requirements

Important Dates

April 30, 2020	CASPA cycle opens
July 31, 2020	Deadline for application to be completed and verified
June- September 2020	On-campus interviews
October 1, 2020	Offers of acceptance mailed
January 7, 2021	Deadline to submit post-acceptance requirements
January 11, 2021	First day of spring semester classes

Selection Process

INTERVIEWS

Interviews will be conducted during the months of June-September. The interview session will include a tour of the Health Sciences Center and the opportunity to attend a group question and answer session and to interact with current students in the program.

FINAL SELECTION PROCESS

A total of 25 students will be admitted to each class.

Points will be awarded on the Admission Selection Rubric and candidates will be selected based upon the following criteria:

- Cumulative Undergraduate, Prerequisite, and Science GPA
- GRE scores (Verbal, Quantitative, and Analytical Writing)
- West Virginia residency status
- Interview score (average score of two interviewers)
- Strength of letters of recommendation (average score of three letters)
- Strength of CASPA statement and responses to two WVU-specific questions
- Quality and relevance of health care experience (see detail below)

Preference will be given to individuals based on previous health care experience as follows, and **in order of increasing preference**:

- No hands-on patient care (shadowing a physician or physician assistant)
- Involvement in patient care team as a scribe
- Hands-on patient care with limited need for professional judgment (patient care aid, medical assistant, physical therapy assistant)
- Patient care involving assessment and requiring some professional judgement (emergency medical technician (EMT), respiratory therapist, dietician)
- Patient care with independent decision-making and/or requiring significant professional judgement (paramedic, registered nurse)

In the event of a tie in the Admission Selection Rubric score, the following criteria will be applied in the order below until there is no longer a tie at the 25th position:

1. West Virginia residency status
2. Score on WVU mission question
3. Prerequisite GPA

Final decisions regarding admission will be made by the Admissions Committee.

Please note that applicants who are offered admission will often have academic records which exceed the published minimum standards. Data regarding the characteristics of successful applicants for the class entering in January 2020 will be provided when available.

Applicants accepted to the program will receive an offer of admission through their preferred email (as identified in CASPA) with a link to the online *Declaration of Acceptance* form. Those wishing to accept a seat in the class will have one week to complete the online *Declaration of Acceptance* form. Applicants accepting the offer of admission will be sent an invoice from the WVU Graduate Admissions Office for a non-refundable deposit of $1,000, which will be due within two weeks of receipt of the invoice. The deposit will be applied towards the first semester tuition. Failure to pay the deposit within the required time period will result in forfeiture of the seat.

An offer of admission may be revoked if an applicant's application materials are found to be falsified. An enrolled student may be dismissed from the program if the student's application materials are found to be falsified, consistent with applicable policies or procedures as contained in the WVU Graduate/Professional Catalog section on *Academic and Professional Standards*.

OFFERS OF ADMISSION

Applicants accepted to the program will receive an offer of admission through their preferred email (as identified in CASPA) with a link to the online *Declaration of Acceptance* form. Those wishing to accept a seat in the class will have one week to complete the online *Declaration of Acceptance* form. Applicants accepting the offer of admission will be sent an invoice from the WVU Graduate Admissions Office for a non-refundable deposit of $1,000, which will be due within two weeks of receipt of the invoice. The deposit will be applied towards the first semester tuition. Failure to pay the deposit within the required time period will result in forfeiture of the seat.

An offer of admission may be revoked if an applicant's application materials are found to be falsified. An enrolled student may be dismissed from the program if the student's application materials are found to be falsified, consistent with applicable policies or procedures as contained in the WVU Graduate/Professional Catalog section on *Academic and Professional Standards*.

POST-ACCEPTANCE REQUIREMENTS

The physician assistant studies program at West Virginia University begins in the spring term (January). Students accepting a seat in the program must submit proof of compliance with all post-acceptance requirements to the appropriate office (as instructed in the acceptance letter) by no later than the first day of orientation (January 7, 2021). Students failing to meet these requirements may not be permitted to matriculate into the program.

Students completing a Bachelor's degree or prerequisite course requirements in the fall semester preceding matriculation will be required to submit an unofficial transcript documenting degree conferral or prerequisite course completion by no later than the first day of orientation (January 7, 2021). The official transcript documenting degree and/or course completion is still required and must be received no later than the last day of class for the spring semester (April 30, 2021). Failure to complete this requirement will result in dismissal from the program.

In the event that a student is offered admission to the program after December 1st, the deadlines for submission of post-acceptance requirements will be stated in the acceptance letter and will supersede the deadlines provided above.

Post-acceptance requirements include:

- Official transcript verifying bachelor's degree from an accredited U.S. institution with cumulative undergraduate GPA of 3.0 or higher
- Official transcript verifying completion of all prerequisite courses within the 10 years prior to matriculation at a regionally accredited U.S. 2-or 4-year college or university with a grade of 'C' or higher and prerequisite GPA of 3.0 or higher
- Health screening form
- Proof of health insurance
- Proof of immunizations and titers
- Background check and drug screening
- Technical standards attestation

Health Sciences & Technology Academy (HSTA) Scholars
One HSTA tuition waiver will be offered by the physician assistant studies program if a HSTA scholar is selected for admission to the program through the published admission selection process. In the event that more than one HSTA scholar is accepted for admission, the applicant with the strongest academic credentials (average of cumulative undergraduate GPA and prerequisite GPA) will be awarded the tuition waiver.

Degree Requirements

A minimum grade of "C-" is required in EACH didactic course; however, an overall GPA of 3.0 will be required to progress in the program. There will be a Committee on Academic and Professional Standards that will assign remediation plans and penalties associated with failure to meet these standards.

A minimum cumulative GPA of 3.0 is required.

PA 507	Human Anatomy 1	3
PA 518	Health and Disease Across the Lifespan	3
PA 516	Pharmacology for PA	2
PA 515	Pathophysiology 1	2
PA 517	Genomic Medicine	2
PA 510	Physician Assistant Practice 1	2
PA 511	Evidence Based PA Practice 1	1
PA 512	Physical Diagnosis	3
PA 527	Human Anatomy 2	2
PA 522	Clinical Procedures 1	3
PA 524	Diagnostic Medicine 1	2
PA 523	Clinical Medicine & Pharmacotherapeutics 1	3
PA 528	Principles of Behavioral Health for PA	2
PSIO 743	Fundamentals of Physiology	5
PA 535	Pathophysiology 2	3
PA 533	Clinical Medicine & Pharmacotherapeutics 2	4
PA 534	Diagnostic Medicine 2	3
PA 530	Physician Assistant Practice 2	1
PA 531	Evidence Based PA Practice 2	2
PA 542	Clinical Procedures 2	2
PA 547	Neurobiology	4
PA 553	PA Practice in Pediatrics & Geriatrics	2
PA 549	Prevention and Community Health for PA	3
PA 541	Evidence Based PA Practice 3	1
PA 543	Clinical Medicine & Pharmacotherapeutics 3	4
PA 540	PA Practice in the US Health System	2
PA 610	Family Medicine PA Practice	6
PA 620	Internal Medicine PA Practice	8
PA 630	Pediatric PA Practice	6
PA 640	Women's Health PA Practice	5
PA 650	Surgery PA Practice	6
PA 660	Behavioral Medicine PA Practice	4
PA 670	Emergency Medicine PA Practice	4
PA 680	Elective PA Practice	4
PA 685	Rural PA Practice	4
PA 689	PA Summative Evaluation	1
Total Hours		114

Suggested Plan of Study

First Semester	Hours
PA 507	3
PA 518	3
PA 516	2
PA 515	2
PA 517	2
PA 510	2
PA 511	1

PA 512	3
	18

Second Semester	**Hours**
PA 527	2
PA 522	3
PA 524	2
PA 523	3
PA 528	2
	12

Third Semester	**Hours**
PSIO 743	5
PA 535	3
PA 533	4
PA 534	3
PA 530	1
PA 531	2
	18

Fourth Semester	**Hours**
PA 542	2
PA 547	4
PA 553	2
PA 549	3
PA 541	1
PA 543	4
PA 540	2
	18

Fifth Semester	**Hours**
PA 610	6
PA 620	8
	14

Sixth Semester	**Hours**
PA 630	6
PA 640	5
PA 650	6
	17

Seventh Semester	**Hours**
PA 660	4
PA 670	4
PA 680	4
PA 685	4
PA 689	1
	17

Total credit hours: 114

Major Learning Outcomes

PHYSICIAN ASSISTANT

Graduates of the physician assistant studies program will demonstrate competencies in each of six domains as noted below.

MEDICAL KNOWLEDGE

- Recognizes the underlying pathophysiologic processes of commonly encountered medical and surgical conditions

- Recognizes signs and symptoms of disease and abnormal findings on diagnostic studies

- Recognizes risk factors for acute and chronic medical conditions including mental health conditions

- Understands the effect of the patient's environment and stress on health outcomes and quality of life

- Understands the importance of using evidence-based interventions for disease prevention and health maintenance

INTERPERSONAL AND COMMUNICATION SKILLS

- Communicates with patients and other members of the healthcare team in a professional and respectful manner

- Recognizes the unique contributions of other health care providers to patient care

- Demonstrates rapport with patients while obtaining and providing information

- Partners with patients in formulating a treatment plan

- Collaborates effectively with all members of the health care team

- Identifies relevant information from the medical record and accurately documents patient encounters and procedures

CLINICAL AND TECHNICAL SKILLS

- Obtains a thorough and accurate medical history

- Performs a thorough and accurate physical examination for patients of all ages

- Performs commonly utilized medical and surgical procedures with proper technique and attention to patient safety

- Effectively counsels patients and provides education using a method tailored to the patient

PROFESSIONAL BEHAVIORS

- Understands the legal requirements for practice as a physician assistant

- Demonstrates respect, compassion, and sensitivity in patient interactions

- Applies ethical principles to the care of patients

- Maintains patient confidentiality in all venues

- Respects the doctrines of informed consent and shared decision-making

- Seeks opportunities for professional development and scholarship

- Demonstrates willingness to teach and learn from fellow health professionals

PRACTICE-BASED LEARNING AND IMPROVEMENT

- Identifies and uses evidence-based resources to answer clinical questions

- Recognizes and addresses personal deficits in knowledge and clinical skills

- Recognizes and addresses personal biases which may affect patient care

- Advocates effectively for patients as they navigate the health care system

- Recognizes and addresses the challenges facing patients in rural and/or underserved areas

- Takes into account costs to the patient and the health care system when ordering medication, diagnostic studies, or therapeutic interventions

CLINICAL REASONING AND PROBLEM SOLVING SKILLS

- Selects diagnostic studies most likely to be useful in evaluation of patients with acute and chronic disease

- Formulates a patient-specific differential diagnosis using patient data including history, physical examination, and diagnostic studies

- Suggests appropriate treatment modalities for emergent, acute and chronic medical and surgical conditions, including pharmacologic treatment and behavioral modifications

- Identifies the appropriate site of care based on clinical presentation and patient demographics

- Reflects on the possible causes of a patient's failure to respond to treatmen

Accreditation

The ARC-PA has granted Accreditation-Provisional status to the West Virginia University Physician Assistant Program sponsored by West Virginia University.

Accreditation-Provisional is an accreditation status granted when the plans and resource allocation, if fully implemented as planned, of a proposed program that has not yet enrolled students appear to demonstrate the program's ability to meet the ARC-PA Standards or when a program holding Accreditation-Provisional status appears to demonstrate continued progress in complying with the Standards as it prepares for the graduation of the first class (cohort) of students.

Accreditation-Provisional does not ensure any subsequent accreditation status. It is limited to no more than five years from matriculation of the first class.

Physical Therapy, D.P.T.

Degree Offered

- Doctor of Physical Therapy (D.P.T.)

Nature of the Program

The WVU Division of Physical Therapy was established in 1970 under the auspices of the School of Medicine to help meet the need for physical therapists in West Virginia. The program became an entry-level doctoral degree program in Fall 2005. The program is accredited by the Commission on Accreditation in Physical Therapy Education [CAPTE], a specialized body recognized by the Council on Postsecondary Accreditation. The most recent accreditation was awarded in November of 2011 for ten years. Forty full-time students are admitted in a typical annual admissions cycle. Preference is given to West Virginia residents and non-residents who have attended a West Virginia college or university or who have ties to West Virginia. All other non-residents who meet program requirements will also be considered for admission.

Students admitted into the program complete three years of combined classroom, laboratory, and clinical education, and part-time and full-time supervised clinical practice in various clinics in West Virginia and other states. A doctor of physical therapy (D.P.T.) degree is awarded upon completion of the program which entitles the graduate to apply for examination for state licensure. A license to practice physical therapy is required by all states.

The Profession of Physical Therapy

Physical therapy is a hands-on health care profession that defines and promotes the movement system as the foundation for optimizing movement to improve the health of society. The physical therapist is uniquely qualified to evaluate and manage an individual's movement system across the lifespan to promote optimal development; diagnose impairments, activity limitations, and participation restrictions; and provide interventions targeted at preventing or ameliorating activity limitations and participation restrictions. The movement system is the core of physical therapist practice, education and research.

Demand for physical therapy services is expected to continue over the next ten years. The Bureau of Labor Statistics projects growth of 22 percent from 2018 to 2028, which is much faster than average for all occupations. The demand for physical therapists in all practice settings is affected by such factors as an aging population and increased emphasis on a healthy, active lifestyle. The professional organization represents therapists on healthcare issues and is working hard to assure that physical therapy will continue to be a favorable career choice.

Physical therapists are respected members of the healthcare team. They work with other healthcare providers such as physicians, occupational therapists, music and arts therapists, rehabilitation nurses, psychologists, social workers, dentists, podiatrists, speech pathologists and audiologists. Physical therapists work in hospitals, private physical therapy offices, community health centers, corporate or industrial health centers, sports facilities, research institutions, rehabilitation centers, nursing homes, home health agencies, schools, pediatric centers, and colleges and universities.

Some physical therapists work as employees in these settings, while others are self-employed as owners or partners in private practices. Settings, employment arrangements, career responsibilities, and career opportunities depend on the interests and skills of each practitioner.

FACULTY

CHAIR

- MaryBeth Mandich - Ph.D. (West Virginia University)
  Neuroscience, Pediatric Physical Therapy

PROFESSORS

- Dina Jones - PT, PhD (University of Pittsburgh)
  arthritis, community based physical activity
- John J. Petronis - M.S. (West Virginia University)
  Orthopedic Physical Therapy [Emeritus Faculty]
- Bill Stauber - Ph.D. (Rutgers University)
  Electrotherapy, Muscle Physiology
- Corrie Mancinelli - PT, GCS, PhD (West Virginia University)
  orthopedics and geriatrics
- Anne Swisher - PT, CCS, Ph.D. (West Virginia University)
  Director of Faculty Development & Scholarship]
- Ralph Utzman - PT, MPH, PhD (Virginia Commonwealth University)
  Director of Clinical Education

ASSOCIATE PROFESSORS

- Valeriya Gritsenko - PhD (University of Alberta, Edmonton)
  Neuroscience, motor control
- Teresa Rice - PT, NCS, MPH,EdD
  Neurologic physical therapy

ASSISTANT PROFESSORS

- Muhammad Alrwaily - PT, COMT, PhD (University of Pittsburgh)
  Orthopedics, Research
- Megan Burkart - DPT (West Virginia University)
  oncology PT
- Yu-Jen Chang - PT, PhD (University of Southern California)
  musculoskeletal, research, prosthetics and orthotics
- Kimeran Evans - D.P.T. (Virginia Commonwealth University)
  Clinical Education, General Physical Therapy Practice
- Renee McGinnis - OCS, DPT (West Virginia University)
  Professional roles, orthopedics
- Kristin Phillips - DPT, WCS (University of Pittsburgh)
  women's health
- Carol Waggy - CHT, Ph.D. (West Virginia University)
  Anatomy and Hand Physical Therapy
- Michael Timko - MS
  Orthopedic and Manual Therapy

Admissions

For the most up-to-date information, please refer to our admissions website at:

https://medicine.hsc.wvu.edu/pt/admissions/

APPLICATION REQUIREMENTS

The following requirements must be met to apply to the WVU Physical Therapy Program:

1. Completion of a baccalaureate degree:

Applicants must complete a baccalaureate degree at an accredited US college or university prior to May of the year of matriculation. Students may apply with any degree background, as long as all prerequisite courses are completed.

2. Completion of prerequisite courses

Prerequisite courses (listed in the table below) must be completed at a regionally accredited 2- or 4-year US college or university. Applicants may be enrolled in prerequisite courses at the time of application. However, all prerequisite courses and the undergraduate major must be successfully completed by the end of the Spring semester (typically mid-May) of the year of entering the program.

The applicant must earn a minimum grade of C in each prerequisite course.

It is recommended that prerequisite courses in human anatomy and human physiology be completed within two years prior to admission.

Pre-requisite Courses	WVU Course Number
Biology with lab (8 hours)	(BIOL 101 and BIOL 103, BIOL 102 and BIOL 104) OR (BIOL 115 and BIOL 117)
Chemistry with lab (8 hours)	CHEM 115, CHEM 115L, CHEM 116, CHEM 116L
Physics with lab (8 hours)	PHYS 101, PHYS 102
General psychology (3 hours)	PSYC 101
Developmental psychology (3 hours)*, should include development across the human lifespan	PSYC 241
Introductory statistics (3 hours), must include descriptive and inferential statistics	STAT 211 or ECON 225
Human anatomy (3 hours)**	ATTR 219 or NBAN 205 or PALM 205 or EXPH 350 or EXPH 440
Human physiology (3 hours)***	PSIO 241 or PSIO 441 or BIOL 235

*   A course Developmental Psychology is strongly recommended, although other psychology courses (abnormal, social) are accepted. Students should seek Developmental Psychology courses that cover the entire human lifespan, from birth through older adulthood, when possible. Courses in Sports Psychology may not be used for this prerequisite.

**   The anatomy courses included in the DPT curriculum are extremely rigorous. Students should seek out the highest level anatomy course(s) available. The minimum prerequisite is a 3 credit hour course in Human Anatomy; ideally with a laboratory. We will accept a 2-semester, 8 credit sequence of combined Human Anatomy & Physiology. Courses in comparative, mammalian, or animal anatomy will not be accepted.

***   For the physiology prerequisite, we will accept a 2-semester, 8 credit sequence of combined Human Anatomy & PhysiologySeparate Human Physiology course with lab is preferred. Animal, Mammalian, or Comparative Physiology courses are not acceptable.

3. Overall Cumulative GPA:

An overall cumulative GPA of 3.0 is required.

4. Prerequisite GPA:

A GPA in the prerequisite courses of 3.0 is required.

5. Graduate Record Examination (GRE) scores:

Submit official GRE scores using institution code #7639 for the [West Virginia U Sch Med Phys Therapy].

6. Volunteer/Work experience in physical therapy:

A minimum of 60 hours of volunteer or work experience is required. This experience must be under the direction of licensed physical therapist, and experience from two different practice settings is recommended. Practice settings include acute care/hospital, outpatient, adult rehabilitation hospital/center, nursing home, school system/pediatrics, and home health. Though these hours may be obtained during high school and college, some volunteer hours obtained during the junior or senior college years is strongly recommended. Volunteer/work experience must be completed within the US.

Hours devoted to internships in undergraduate majors in other fields (such as exercise physiology or athletic training) may NOT be used as part of the 60 hours of volunteer experience.

7. Three Letters of recommendation

We require two references from US-licensed physical therapists with whom the student has worked in a clinical setting, either on a volunteer or work basis.

The third reference must be from a professor/instructor who taught the student in at least one course, or an academic advisor who is familiar with the applicant's academic background and performance.

We do NOT accept letters from physical therapist assistants or other healthcare providers.

We do NOT accept letters from relatives of the applicant, even if the relative is a physical therapist or professor.

APPLICATION PROCESS

Applications to the DPT program at West Virginia University are submitted through the Physical Therapy Centralized Application Service (PTCAS). The PTCAS application cycle will open July 15, 2020.

The application deadline is November 1. For an application to be considered, it must be marked as "Complete" by PTCAS and all supporting materials (GRE scores, letters of recommendation, etc.) must be received by PTCAS on or before the November 1 deadline.

INTERVIEWS

The admissions committee will offer personal interviews to well-qualified candidates. Interviews are conducted in late fall and early January at the WVU Health Sciences Center.

OFFERS OF ADMISSION

Applicants accepted to the program will receive an offer of admission through their preferred email (as identified in PTCAS) with a link to an online Declaration of Acceptance form. Those wishing to accept a seat in the class will complete an online Declaration of Acceptance form. Applicants accepting the offer of admission will be sent an invoice from the WVU Graduate Admissions Office for a non-refundable deposit ($400 for WV residents, $800 for non-residents), which will be due within two weeks of receipt of the invoice. The deposit will be applied towards the first semester tuition. Failure to pay the deposit within the required time period will result in forfeiture of the seat.

UPDATES AND ADDITIONAL INFORMATION

For updates, please periodically check the WVU Division of Physical Therapy website at https://medicine.hsc.wvu.edu/pt/admissions/.

Physical Therapy (PT)

Course information for the doctor of physical therapy degree can be found on the following website: http://medicine.hsc.wvu.edu/pt (http://medicine.hsc.wvu.edu/pt/).

PHYSICAL THERAPY CURRICULUM

Note: This is subject to change without notice.

PT 701	Professional Development 1	3
PT 706	Advanced Clinical Anatomy	5
PT 708	Movement Diagnosis 1	2
PT 713	Lifespan Functional Movement	2
PT 714	Foundational Science 1	4
PT 715	Evidence Based Physical Therapy 1	3
PT 716	Kinesiologic Foundations	4
PT 718	Movement Diagnosis 2	3
PT 720	Clinical Education 1	2
PT 723	Developmental Life Tasks	3
PT 724	Exercise Foundations	3
PT 725	Evidence-Based Physical Therapy 2	3
PT 727	Neurobiologic Foundations	4
PT 729	Physical Therapy Interventions 1	3
PT 731	Professional Development 2	1
PT 734	Cardiopulmonary Physical Therapy	3
PT 736	Orthopedic PT 1	4
PT 738	Movement Diagnosis 3	1
PT 739	PT Interventions 2	3
PT 740	Clinical Education 2	1
PT 741	Professional Development 3	3
PT 743	Geriatric Physical Therapy 1	2
PT 745	Evidence Based Physical Therapy 3	1
PT 746	Orthopedic Physical Therapy 2	4
PT 747	Neurorehabilitation 1	3
PT 754	Foundational Science 3	3
PT 749	Survey of PT Practice	1
PT 744	Foundational Science 2	2
PT 756	Orthopedic Physical Therapy 3	4
PT 757	Neurorehabilitation 2	3

PT 758	Movement Diagnosis 4	1
PT 759	Prosthetics and Orthotics	3
PT 760	Clinical Education 3	5
PT 761	Professional Development 4	2
PT 770	Clinical Education 4	5
PT 771	Professional Development 5	3
PT 773	Pediatric Physical Therapy	3
PT 775	Evidence-Based Practice 4	1
PT 780	Clinical Education 5	8
PT 781	Professional Development 6	1
PT 785	Advanced Clinical Decision Making	2
Independent Study (Optional)		
PT 795	Independent Study	
PT 797	Research	5
Total Hours		122

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours	Summer	Hours
PT 701 (Pre-fall)		3 PT 724		3 PT 734	3
PT 706 (Pre-Fall)[*]		5 PT 720		2 PT 731	1
PT 708		2 PT 723		3 PT 738	1
PT 713		2 PT 727		4 PT 736	4
PT 714		4 PT 729		3 PT 739	3
PT 715		3 PT 725		3	
PT 716		4			
PT 718		3			
		26		18	12

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
PT 740		1 PT 744		2 PT 760	5
PT 741		3 PT 754		3 PT 761	2
PT 743		2 PT 756		4 PT 797	1
PT 745		1 PT 757		3	
PT 746		4 PT 758		1	
PT 747		3 PT 759		3	
PT 749		1 PT 797		2	
PT 797		2 Independent Study (Optional) PT 795			
		17		18	8

Third Year

Fall	Hours	Spring	Hours		
PT 773		3 PT 780	8		
PT 775		1 PT 781	1		
PT 771		3 PT 785	2		
PT 770		5			
		12	11		

Total credit hours: 122

[*]   The professional curriculum begins in summer before first year. Students should plan for these courses to begin on or around June 1st.

Major Learning Outcomes

PHYSICAL THERAPY

This program is designed to prepare future physical therapy professionals for practice with special emphasis on meeting the needs of the citizens of West Virginia. This is done by the delivery of instruction focused on providing students with knowledge, skills, and behaviors consistent with professional excellence as described below:

Graduates will:

- Deliver high quality physical therapy services to individuals and communities across a continuum of care, including rural settings
- Demonstrate the ability to make sound clinical decisions characterized by critical thinking, information literacy, and based on scientific evidence
- Demonstrate the ability to collaborate as a unique member of inter-professional teams
- Provide care distinguished by inclusion, cultural sensitivity, advocacy, trust, respect and appreciation for both individual differences and population health disparities
- Demonstrate a commitment to the health of the community through participation in primary, secondary and tertiary prevention programs
- Demonstrate attributes of life-long learning through ongoing professional development, engagement in professional organizations and advocacy for the profession

Nursing

Degrees Offered

- Bachelor of Science in Nursing
- Master of Science in Nursing Advanced Practice
- Master of Science in Nursing Executive Focus/MBA
- Doctor of Nursing Practice
- Doctor of Nursing Practice in Nurse Anesthesia
- Doctor of Philosophy in Nursing

Introduction

The mission of the WVU School of Nursing is to lead in improving health in West Virginia and the broader society through excellence in student-centered educational programs, research and scholarship, the compassionate practice of nursing, and service to the public and the profession. This mission is responsive to changing healthcare needs and emerging national and state changes in technology and healthcare delivery and is enhanced by a supportive and open environment. The faculty's educational effort is directed at providing high quality, student-centered programs of instruction at all levels which prepare superb professional nurses to meet basic healthcare needs; advance practiced nurses to address complex health needs; and enable doctorally-educated nurses to advance nursing knowledge through research, to assist in the formulation of policies to improve health care, and to serve as faculty in higher degree programs. Unique characteristics of the state mandates that the healthcare needs of rural populations and vulnerable groups be a major focus of education, research, and service, including faculty practice.

The School of Nursing offers undergraduate and graduate degrees and post-graduate certificates of study. The baccalaureate program (BSN) is available for high school graduates who aspire to a career in nursing (basic or traditional BSN program) and to registered nurses (RNs) who are licensed graduates of associate degree or diploma nursing programs seeking to continue their career development (RN-BSN program). In addition, a BS/BA to BSN (fast track) program is available for the college graduate seeking a BSN.

The MSN programs at WVU offer baccalaureate-prepared nurses the opportunity to earn a master's degree and prepare graduates to sit for national advanced practice certification. Current specialty tracks (population emphases) are offered for aspiring pediatric nurse practitioners or family nurse practitioners. The SON also offers post-graduate certificate programs in these areas for nurses who already have a graduate degree.

The WVU School of Nursing and the John Chambers College of Business & Economics offer a dual master's degree program to provide the skills and knowledge necessary to serve as a nurse leader. This blended degree program (totaling 57 credit hours) is done predominately online, and includes four 3-4 day residencies. Students take courses from both the MSN and MBA program concurrently. Graduates of the MSN (Executive Focus) and MBA program can work in a variety of settings, including hospitals, private practice, nonprofit organizations, and public sectors.

The Doctor of Nursing Practice (DNP) program prepares nurses with graduate degrees to practice at the highest level of professional nursing. Graduates of the DNP program advance the application of nursing knowledge through the translation and implementation of evidence for practice to improve health outcomes for diverse populations. This expert-level practice builds on past advanced practice education, experience, and certification.

The DNP Nurse Anesthetist program prepares registered nurses to become Certified Registered Nurse Anesthetists (CRNAs) through a rigorous, challenging curriculum, heavily based in sciences, including anatomy, physiology, pathophysiology, chemistry, and physics.

The Doctor of Philosophy in Nursing (PhD) prepares nurse scholars/scientists for roles in research, teaching, and service. The program prepares graduates who will contribute to the body of nursing knowledge, educate the next generation, and lead, ultimately impacting health policy, improving health, and reducing disparity.

Accreditation

The baccalaureate degree program in nursing/master's degree program in nursing/Doctor of Nursing Practice program at West Virginia University is accredited by the Commission on Collegiate Nursing Education, 655 K Street, NW, Suite 750, Washington, DC 20001, 202-887-6791.

The WVU School of Nursing DNP Nurse Anesthetist Program is accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs (COA) until 2024. Contact the COA by phone at 847-655-1160, on the web at www.coacrna.org, or at 222 S. Prospect Ave., Suite 304, Park Ridge, IL 60068-4001.

Fees, Expenses, Housing, Transportation, and Immunization

Students enrolling at the Morgantown campus pay fees which are detailed at http://admissions.wvu.edu/pay (http://admissions.wvu.edu/pay/). Special fees and deposits are also required. Students enrolling at other sites pay the fees shown in the catalog for that site. Fees are subject to change without notice. Students' expenses vary according to the course of study and individual needs. Information concerning financial assistance, application forms, and the Free Application for Federal Student Aid (FAFSA) form may be obtained from the financial aid website at https://financialaid.wvu.edu/students/

professional-hsc (https://financialaid.wvu.edu/students/professional-hsc/) or by contacting the HSC Financial Aid Office, PO Box 9810, Morgantown, WV 26506-9810; telephone (304) 293-3706 (toll free) or 1-800-344-WVU1.

The University Housing and Residence Life Office, telephone (304) 293-4491, provides information concerning university-owned housing. The Student Life Office in E. Moore Hall, telephone (304) 293-5611, provides information concerning privately owned, off-campus housing.

Students are expected to provide their own transportation, equipment, and instruments for the clinical courses. Some clinical experiences require travel in a multi-county area.

Proof of specific immunizations is required for all health sciences students. Students in the BSN, BA/BS to BSN, RN-BSN, MSN Advanced Practice, DNP, and Post graduate certificate programs must undergo a criminal background check prior to clinical courses. Felony convictions, serious misdemeanors, illicit drug use, or positive drug screens may preclude participation in the clinical courses. This could, in turn, prevent the completion of course requirements and completion of the nursing program.

Scholarships

The School of Nursing offers several scholarships. These scholarships are administered by the Health Science Center Financial Aid Office and require completion of the Free Application for Federal Student Aid (FAFSA) form in order to be considered for financial aid. Most School of Nursing scholarships are available only to students already admitted to the School of Nursing and are awarded each April for the following academic year. However, there are a limited number of scholarships for which students may apply before admission. Further information is provided on the School of Nursing website: https://nursing.hsc.wvu.edu/students/current-students/.

Additional Information

Visit the School of Nursing website at https://nursing.hsc.wvu.edu/ (http://nursing.hsc.wvu.edu/). Call the WVU School of Nursing Office of Student and Alumni Services at 1-866-WVUNURS or (304) 293-1386. Write to WVU School of Nursing at PO Box 9600, Morgantown, WV 26506-9600

ADMINISTRATION

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  Professor and Vice President of Health Promotion and Wellness

ASSOCIATE DEAN OF ACADEMICS

- Tanya Rogers - EdD (West Virginia University)
  Clinical Education Professor

ASSOCIATE DEAN FOR RESEARCH

- Ubolrat Piamjariyakul - PhD (University of Kansas)
  Professor

ASSISTANT DEAN FOR STUDENT AND ALUMNI SERVICES

- Gregory T. Cave - BA (West Virginia University)

ASSISTANT DEAN FOR FACULTY PRACTICE AND COMMUNITY ENGAGEMENT

- Toni DiChiacchio - DNP (West Virginia University)
  Clinical Assistant Professor

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- Tanya Rogers

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  Teaching Assistant Professor

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CHAIR-WVU POTOMAC STATE (KEYSER CAMPUS)

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  Clinical Education Assistant Professor

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- Laurie Theeke - PhD (West Virginia University)

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- Jennifer Mallow - PhD (West Virginia University)
- Susan Newfield - PhD (Texas Tech University)
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- Suzy Walter - PhD (West Virginia University)

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- Elizabeth Minchau - MSN (University of Pittsburgh)
- Aaron Ostrowski - DNP (University of Pittsburgh)
- Susan Pinto - MSN (West Virginia University)
- Stephanie Young - MSN (West Virginia University)

CLINICAL INSTRUCTOR

- Kayla Watson - MSN (West Virginia University)
  PNP Track Coordinator

CLINICAL EDUCATION PROFESSOR

- Tanya Rogers - EdD (West Virginia University)

CLINICAL EDUCATION ASSOCIATE PROFESSOR

- P. Joy Maramba - DNP (West Virginia University)
- Stacy Huber - EdD (West Virginia University)

CLINICAL EDUCATION ASSISTANT PROFESSOR

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- Amanda Edwards - MSN (West Virginia University)
- Benjamin Klos - BSN (West Virginia University)
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- Christine Mott - DNP (West Virginia University)
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- Mindy Harris - MSN (Marshall University)
- James Messer - MSN (University of Phoenix)
- Hillary Parcell - MSN (Marshall University)
- Robin Spencer - MSN (Marshall University)

BECKLEY DIVISION - CLINICAL EDUCATION INSTRUCTOR

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- Dana Froble - MSN (Marshall University)
- Kelly Morton - MSN (Capella University)

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- Evelyn Martin - DNP (West Virginia University)
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- Tracie Bonner - MSN (West Virginia University)

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- Diana Niland - PhD (West Virginia University)
- Linda Shroyer - MSN (University of Maryland)

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ASSISTANT PROFESSOR EMERITUS

- Ann Cleveland - EdD (West Virginia University)
- Suzanne Gross - PhD (University of Texas)
- Dorothy Johnson - EdD (West Virginia Universtiy)

Degree Designation Learning Outcomes

MASTER OF SCIENCE IN NURSING EXECUTIVE FOCUS/MBA

Upon completion of the Master of Science in Nursing Executive Focus/MBA, the graduate will be prepared to:

- Synthesize theories, research findings, and broad-based perspectives for application in the advanced practice of nursing or nursing leadership:

  1. Integrate nursing and related sciences into the delivery of advanced nursing care to diverse populations.
  2. Synthesize evidence for practice to determine appropriate application of interventions across diverse populations.
  3. Utilize nursing and related science evidence to analyze, design, implement and evaluate nursing care delivery systems.

- Utilize systematic inquiry and refined analytical skills in the provision of health care services and leadership:

  1. Integrate organizational science and informatics to make changes in the care environment to improve health outcomes.
  2. Assume a leadership role in the management of human, fiscal, and physical healthcare resources.
  3. Critically appraise existing literature to identify best practices, apply knowledge to improve and facilitate systems of care in order to improve patient outcomes.
  4. Disseminate results through translational scholarship.

- Demonstrate safe, effective assessment, planning, implementation and evaluation skills in managing the care of individuals and groups while working in interprofessional collaborative relationships.

  1. Create a relationship with clients and healthcare organizations that builds and maintains a supportive and caring partnership.
  2. Analyze best practice evidence to implement effective quality improvement initiatives with measurable results.
  3. Advocates for patients, families, caregivers, communities and members of the healthcare team.

- Articulate viewpoints and positions in order to improve the quality of health care delivery and outcomes of successful care.

  1. Assume a leadership role in effectively implementing patient safety and quality improvement initiatives within the context of the interprofessional team using effective communication skills.
  2. Examine the effect of legal and regulatory processes on nursing practice, healthcare delivery, and outcomes.
  3. Use ethical decision making to promote the well-being of individuals, families, and health care professionals in local, national & international communities.

- Consults and collaborates in interdisciplinary and interagency endeavors to advance culturally sensitive health care to clients, families, groups, and communities:

  1. Synthesize broad ecological, global and social determinants of health; principles of genetics and genomics; and epidemiologic data to design and deliver evidence-based, culturally relevant clinical preventions interventions and strategies.

- Integrates prior and current learning as a basis for growth and accountability in enacting the role of advanced practice nurse or nurse leader:

  1. Advocate for patients, families, caregivers, communities, and members of the healthcare team.
  2. Use information and communication technologies to advance patient education, enhance accessibility of care, analyze practice patterns, and improve health care outcomes, including nurse sensitive outcomes.
  3. Value life-long learning and continued professional development.

- Assume a leadership role in advocacy, ethical issues, and health care policy development:

  1. Apply leadership skills and decision making in the provision of culturally responsive, high-quality nursing care, healthcare team coordination, and the oversight and
  accountability for care delivery and outcomes.
  2. Function as a leader and change agent in nursing and in health care delivery systems particularly to insure quality care for vulnerable and underserved populations.
  3. Demonstrates organizational and systems leadership that continually improves health outcomes and ensures patient safety.

- Integrates all the functional areas of business into management decisions in a global environment.

  1. Evaluate factors that influence the competitive behavior of the firm.
  2. Predict and anticipate company and market responses to external factors.
  3. Identify the risks and opportunities in global markets.

- Identify problems, collect appropriate data and analyze the data to make informed management decisions.

  1. Evaluate business reports to make meaningful decisions for the organization.
  2. Make data-driven, fact-based decisions using statistical techniques and principles.
  3. Take real world problems and express them in quantitative terms.

- Make management decisions in an ethically sensitive and socially responsible manner.

  1. Negotiate and control information ethically to meet organizational needs.
  2. Understand how to use and acquire information in an ethically sensitive manner.
  3. Synthesize various ethical theories and design a corporate code of ethics.

- Be effective team members in a virtual environment.

  1. Demonstrate the ability to work together in a supportive and effective manner.

- Be an effective leader who influences people towards the attainment of organizational goals.

  1. Recommend actions for leader effectiveness in a scenario case and apply a theory or framework to propose and defend their recommendations.
  2. Identify various leadership styles and their relative effectiveness, along with real-life examples.
  3. Evaluate, in a case setting, the processes through which goals are set and accomplished in organizations.

MASTER OF SCIENCE IN NURSING ADVANCED PRACTICE (MSN)

Upon completion of the Master of Science in Nursing Advanced Practice program, the graduate will be prepared to:

1. Use disciplined reasoning from sciences and the humanities to:
   - Integrate nursing and related sciences into the delivery of advanced nursing care to diverse populations.
   - Design nursing care for a clinical or community focused population based on biopsychosocial, public health, nursing and organizational sciences.
   - Apply ethical analysis and clinical reasoning to assess, intervene, and evaluate advanced nursing care delivery.
   - Analyze nursing history to expand thinking and provide a sense of professional heritage and identity.
2. Incorporate current and emerging genetic/genomic evidence in providing advanced nursing care to individuals, families, and communities while accounting for patient values and clinical judgment through:
   - Synthesizing broad ecological, global and social determinants of health; principles of genetics and genomics; and epidemiologic data to design and deliver evidence based, culturally relevant clinical prevention interventions and strategies.
   - Designing patient-centered and culturally responsive strategies in the delivery of clinical prevention and health promotion interventions and/or services to individuals, families, communities, and aggregates/clinical populations.
   - Integrating clinical prevention and population health concepts in the development of culturally relevant and linguistically appropriate health education, communication strategies, and interventions.
3. Support quality improvement and patient safety by:
   - Promoting a professional environment that includes accountability, peer review, advocacy for patients and families, reporting of errors, and professional writing.
   - Contributing to the integration of healthcare services to affect safety and quality of care to improve patient outcomes and reduce fragmentation of care.
   - Participating in, and leading when appropriate, in quality initiatives that integrate socio-cultural factors affecting the delivery of nursing and healthcare services.
4. Demonstrate organizational and systems leaderships that:
   - Emphasizes clinical practice.
   - Continually improves health outcomes.
   - Ensures patient safety.
5. Analyze and evaluate evidence to integrate scholarship into practice through:
   - Integrating theory, evidence, clinical judgment, and interprofessional perspectives to improve practice and health outcomes for patient aggregates.
   - Articulating to a variety of audiences the evidence base for practice decisions, including the credibility of sources of information and the relevance to the practice problem.
   - Applying practice guidelines to improve practice.
   - Participating, and leading when appropriate, in collaborative teams to improve care outcomes and support policy changes through knowledge generation, dissemination, and implementation.

6. Demonstrate proficiency in the analysis and use of information systems and technology to sustain improvements and promote transparency using high reliability and just culture principles through:
   - Analyzing current emerging technologies to support safe practice environments, and to optimize patient safety, cost-effectiveness, and health outcomes.
   - Using information and communication technologies, resources, and principles of learning to teach patients and others.
   - The use of current and emerging technologies in the care environment to support lifelong learning for self and others.

7. Assume an advocacy role in healthcare policy by:
   - The analysis of the influence of policy on the structure and financing of health care practice and health outcomes.
   - Participation in the development and implementation of institutional, local, state, and federal policy.
   - The examination of the effect of legal and regulatory processes on nursing practice, health care delivery, and outcomes.
   - Interpreting research and bringing the nursing perspective for policy makers and stakeholders.
   - Advocating for policies that improve the health of the public and the nursing profession.

8. Collaborate with other professions to improve patient and population health outcomes by:
   - Advocating for the value of the professional nurse as members, and leaders when indicated, of interprofessional healthcare teams.
   - Using collaboration in the design, coordination, and evaluation of patient-centered care.
   - Mentoring and coaching new and experienced nurses and other members of the healthcare team.
   - Understanding other health professions scopes of practice to maximize contributions within the healthcare team.

9. Plan, manage, and evaluate evidence-based clinical prevention and population care by:
   - Evaluating the effectiveness of clinical prevention interventions that affect individual and population-based health outcomes.
   - Delivering patient-centered and culturally responsive strategies in prevention and health promotion to individuals, families, communities, and aggregates/clinical populations.

10. Ensure accountability for advanced practice based on refined assessment skills; advanced communication skills; and biophysical, genetic, genomic, psychosocial, sociopolitical, economic, ethical, and cultural principles through:
    - Delivering safe, quality care to diverse populations in a variety of settings and roles.
    - Conducting a comprehensive and systematic assessment as a foundation for decision making.
    - Applying the best available evidence from nursing and other sciences as the foundation for practice.
    - Using knowledge of illness and disease management to provide evidence-based care to populations, perform risk assessments, and design plans or programs of care.
    - Incorporating core scientific and ethical principles in identifying potential and actual ethical issues arising from practice, in assisting patients and other healthcare providers to address such issues.

DOCTOR OF NURSING PRACTICE

Upon completion of the Doctor of Nursing Practice program, the graduate will be prepared to:

1. Use disciplined reasoning, science-based theories, and concepts from sciences and humanities to:
   - Determine the nature and significance of health and health care delivery phenomena.
   - Describe actions and advance strategies to improve healthcare delivery, to diverse populations.
   - Develop, deliver, and evaluate theory-based health care.
   - Analyze nursing history to expand thinking and provide a sense of professional heritage and identity.

2. Demonstrate organizational and systems leadership that:
   - Emphasizes clinical practice.
   - Continually improves health outcomes.
   - Ensures patient safety.

3. Use analytical methods, evidence, and nursing science to:
   - Critically appraise existing literature to identify and evaluate best practices and practice guidelines.
   - Facilitate the evaluation of systems of care in order to improve patient outcomes.
   - Serve as a practice specialist/consultant in collaborative knowledge generating research.
   - Disseminate results through translational scholarship.

4. Demonstrate proficiency and provide leadership for the integration of information systems/technology to:
   - Support, monitor, and improve patient care, healthcare systems, clinical decision- making, nurse-sensitive outcomes, and academic settings.
   - Support quality improvement and patient safety.

5. Assume a leadership role in advocacy and health care policy development.

6. Establish, participate, and lead interprofessional collaborations for improving patient, population, and systems outcomes.

7. Develop, implement, and evaluate practice and healthcare delivery models for the purpose of quality improvement and improved patient outcomes considering

- Safety and quality.
- Epidemiological, bio-statistical, environmental, and other appropriate scientific data.
- Culturally appropriate care.
- Values based professional practice and behaviors.
- Economies of care, business principles and health policy related to individual, aggregate, and population health.

8. Ensure accountability for advanced practice based on refined assessment skills, advanced communication skills, biophysical. genetic, genomic, psychosocial, sociopolitical, economic, ethical, and cultural principles.
9. Practice and provide services for populations with in the area of advanced nursing specialization.

DOCTOR OF NURSING PRACTICE NURSE ANESTHETIST

Upon completion of the nurse anesthetist program, the graduate will be prepared to:

1. Implement advanced knowledge in nurse anesthesia science, theory, and practice.
2. Evaluate, develop, implement, and lead organizational change to improve care delivery and quality.
3. Develop evidence-based interventions and implement solutions to address clinical problems.
4. Examine and evaluate technology and the utility of information systems and data to improve patient care.
5. Influence and participate in health policy development in the institution and region of practice.
6. Collaborate with the healthcare community, working with nursing, medical, surgical and anesthesia team members to promote patient advocacy and safety.
7. Demonstrate technical, professional, and cultural competence in nurse anesthesia practice by safely caring for patients across the lifespan and at all levels of acuity.
8. Formulate physiologically sound plans for anesthesia care.
9. Participate in the clinical, administrative, and educational advancement of fellow CRNAs and other advanced practice practitioners.

DOCTOR OF PHILOSOPHY (PHD)

Upon completion of the PhD program, the graduate will be prepared to:

1. Rigorously test, generate, and extend knowledge to inform nursing science, practice, and policy.
2. Contribute to the development of knowledge and interventions to address health disparity and promote or improve health.
3. Assume collaborative leadership roles in academia, health organizations, research teams, and scholarly networks.
4. Demonstrate expertise within an area of study that incorporates nursing and trans disciplinary perspectives.

School of Nursing Academic Progression Standards

MSN EXECUTIVE FOCUS/MBA

In order to progress in the Master of Science in Nursing Executive Focus/MBA curriculum, a student must meet the following performance standards:

1. Grade Point Average (GPA) requirements:
   - Graduate program students are required to maintain a 3.0 in all work attempted in the program. A student who falls below 3.0 after nine or more credit hours are completed in the program will be placed on academic probation and has only one semester to bring up the GPA to the 3.0 requirement. Failure to raise the cumulative GPA to 3.0 in one semester will result in dismissal from the program.
2. Earn a letter grade (A, B, C) on all required courses. A grade of F in any course results in dismissal from the program
3. Carry forward only one C grade in a nursing course. A second C in a nursing course will result in dismissal from the program.
4. Repeat only one nursing course and only one time.
5. If a student needs to withdraw from all courses in a semester, the student must meet with his or her advisor to request a Leave of Absence if he/she plans to return to course work.
6. Students at all times are expected to demonstrate professionalism, and respect for faculty, staff, preceptors, and student colleagues. If a student is dismissed from his or her practicum site for lack of professionalism or if the student's behavior compromises the school's relationship with the agency, the student is subject to failure in the course and subject to dismissal from the program.

MSN ADVANCED PRACTICE, POST-GRADUATE CERTIFICATE, AND DNP

In order to progress in the MSN Advanced Practice, Post-Graduate Certificate, or DNP curriculum, a student must meet the following performance standards:

1. Grade Point Average (GPA) requirements:
   - Graduate program students are required to maintain a 3.0 in all work attempted in the program. A student who falls below 3.0 after nine or more credit hours are completed in the program will be placed on academic probation and has only one semester to bring up the GPA to the 3.0 requirement. Failure to raise the cumulative GPA to 3.0 in one semester will result in dismissal from the program.
   - Post-Graduate Certificate students are required to take fewer credits than those in the degree programs. Therefore, a GPA lower than 3.0 will not be grounds for probation or dismissal. However, students earning two C grades or an F will be dismissed from the Post-Graduate Certificate Program.
2. Earn a letter grade (A, B, C) on all required courses. A grade of F in any course results in dismissal from the program.
3. Carry forward only one C grade in a nursing course. A second C in any nursing course will result in dismissal from the program.
4. Repeat only one nursing course and only one time.
5. If a student needs to withdraw from all courses in a semester, the student must meet with his or her advisor to request a Leave of Absence if he/she plans to return to course work.
6. Students at all times are expected to demonstrate professionalism, and respect for faculty, staff, preceptors, and student colleagues. If a student is dismissed from his or her clinical placement site for lack of professionalism or if the student's behavior compromises the school's relationship with the agency, the student is subject to failure in the course and subject to dismissal from the program.

DNP NURSE ANESTHETIST

To progress in the graduate curriculum, a nurse anesthetist program student must meet the following performance standards.

1. Grade Point Average (GPA) requirements:
   - Graduate program students are required to maintain a 3.0 in all work attempted in the program. A student who falls below 3.0 after nine or more credit hours are completed in the program will be placed on academic probation and has only one semester to bring up the GPA to the 3.0 requirement. Failure to raise the cumulative GPA to 3.0 in one semester will result in dismissal from the program.
2. Earn a letter grade (A, B, C, or Pass) on all required courses. A grade of F or Fail in any course results in dismissal from the program.
3. Carry forward only one C grade in a core nursing course. A second C in a core nursing course will result in dismissal from the program. A student earning below a B- grade in any anesthesia specialty course must repeat the course. This means the student will fall out of progression with the current cohort and must wait until the course is offered in the next academic year.
4. Repeat only one core nursing or anesthesia specialty course and only one time.
5. If a student needs to withdraw from all courses in a semester, the student must meet with his or her faculty and academic advisors to request a Leave of Absence if he/she plans to return to course work.
6. Students at all times are expected to demonstrate professionalism and respect for faculty, staff, preceptors, and student colleagues. If a student is dismissed from his or her clinical placement site for lack of professionalism, or if the student's behavior compromises the school's relationship with the agency, the student is subject to failure in the course and dismissal from the program.
7. Any student who has been dismissed from the West Virginia University School of Nursing will not be readmitted to the program.

PHD

To progress in the PhD curriclum, a student must meet the following performance standards:

1. Nursing course are taken in the sequence specified in the School of Nursing PhD Progression Plan. All prerequisites from preceding semesters must be completed prior to registration for new courses.
2. Students must maintain a 3.0 GPA to progress in the program and must achieve an overall academic GPA of 3.0 in all coursework applied to the PhD degree.
3. Students may carry forward one C grade in any course to be applied to the PhD degree. A second C will result in dismissal from the program.
4. Students with a grade of F in any course will be dismissed from the program.

The grading scale for WVU graduate programs is:

A = 93 – 100

B = 85 – 92

C = 77 – 84

F = 0-76

Certificate Programs

POST GRADUATE CERTIFICATE PROGRAM

The program prepares master's prepared nurses to sit for a national certification examination in the selected area of focus. To be considered for admission, the applicant must have a Master of Science in nursing degree from an accredited (ACEN, CNEA, or CCNE) program, a minimum cumulative GPA of 3.0 or better, and an active, unrestricted RN license in at least one state.

Requirements for certification include evidence of completion of courses in advanced pathophysiology, advanced pharmacotherapeutics, and advanced assessment. Each student's program of study will be individualized based on educational and experiential background.

Note: Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-date criteria at https://nursing.hsc.wvu.edu (https://nursing.hsc.wvu.edu/).

- Post-MSN Certificate AGAC (p. 61)
- Post-MSN Certificate FNP (p. 62)
- Post-MSN Certificate PNP (p. 62)

Accreditation

The School of Nursing has specialized accreditation through the Commission on Collegiate Nursing Education.

The baccalaureate degree program in nursing, the master's degree program in nursing, and the Doctor of Nursing Practice program at West Virginia University is accredited by the Commission on Collegiate Nursing Education, 655 K Street, NW, Suite 750, Washington, DC 20001, 202-887-6791.

The WVU School of Nursing DNP Nurse Anesthetist Program is accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs (COA) until 2024. Contact the COA by phone at 847-655-1160, on the web at www.coacrna.org, or at 222 S. Prospect Ave., Suite 304, Park Ridge, IL 60068-4001.

Master of Science in Nursing Advanced Practice Online Program, M.S.N.

Degree Offered

- Master of Science in Nursing

Nature of the Program

DESCRIPTION

The West Virginia University School of Nursing offers a Master of Science in Nursing (MSN) degree that provides the skills necessary to sit for advanced practice certification. The major areas of study are Family Nurse Practitioner (FNP) and Pediatric Nurse Practitioner (PNP). Throughout the curriculum, students are guided in the process of self-development aimed at pursuing excellence in scholarly and professional endeavors. Courses are offered via web-based modalities using synchronous and asynchronous meeting patterns. The MSN program offers a curriculum that allows students to enroll on a part-time or full-time basis. The 46-credit program can be completed in five semesters (including a summer session) of full-time study (average of nine to twelve credit hours per semester)*. Flexibility within the basic curricular structure is achieved through the individualization of learning experiences and students may complete the program over a longer duration. The pattern and duration of the student's plan of study is determined in consultation with a faculty advisor and is based upon the student's background and goals.

Graduates meet all requirements to sit for the national certification examination in his or her major area of study, family nurse practitioner or pediatric nurse practitioner. They are prepared to offer care at the advanced practice level to select populations and are able to perform all activities encompassed in the traditional scope of practice.

*It is a strong recommendation by the University and the School of Nursing that graduate students limit their credit load if they are also involved in full-time work. Full-time work and studies may negatively affect the student's ability to succeed academically.

Admissions

MSN CRITERIA

1. Satisfy WVU requirements (https://graduateadmissions.wvu.edu/how-to-apply/apply-for-2020-2021/first-time-graduate-applicant/#anchor-gpa) for admission to graduate study.
2. Hold a Bachelor of Science in nursing degree from a nationally accredited program.
3. Meet the following minimum qualifications: must have a minimum WVU institutional GPA of a 3.0, a minimum cumulative GPA of a 3.0 from all college work ever attempted, and a minimum nursing GPA of a 3.0.

4. Completion of 3 credits of undergraduate statistics equivalent to WVU's STAT 211 and 3 credits of health assessment with a grade of C or better.

5. Have an active, unrestricted RN license in at least one state at the time of application.

6. Submit a professional goals statement following the guidelines (https://nursing.hsc.wvu.edu/media/74629/msn-personal-statement-guidelines-for-applicants.pdf) posted on our website.

Note: Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-date criteria at https://nursing.hsc.wvu.edu (https://nursing.hsc.wvu.edu/).

POST-MSN CRITERIA

1. Satisfy WVU requirements (https://graduateadmissions.wvu.edu/how-to-apply/apply-for-2020-2021/first-time-graduate-applicant/#anchor-gpa) for admission to graduate study.

2. Hold a Master of Science in nursing degree from a nationally accredited program.

3. Meet the following minimum qualifications: must have a minimum WVU institutional GPA of a 3.0, a minimum cumulative GPA of a 3.0 from all college work ever attempted, and a minimum nursing GPA of a 3.0.

4. Have a current, unrestricted RN license in at least one state at the time of application.

5. Submit a professional goals statement following the guidelines (https://nursing.hsc.wvu.edu/media/74629/msn-personal-statement-guidelines-for-applicants.pdf) posted on our website.

6. Prerequisites to registration for the primary care and practicum courses in the Post-MSN program are evidence of completion of graduate level courses in advanced pathophysiology, advanced pharmacotherapeutics, and advanced assessment. These courses will be added to the progression plan, if not taken prior to admission.

Note: Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-date criteria at https://nursing.hsc.wvu.edu (https://nursing.hsc.wvu.edu/).

APPLICATION PROCESS

Applicants may apply between October 1st and January 1st for fall admission by going to the West Virginia University Graduate Admissions website and completing the main graduate student application. Applicants should select the fall term, desired campus, "Masters" as the admission type, "Nursing MSN" as the intended program, and FNP or PNP track. Applicants will then be asked to select a full-time or part-time progression plan. Please note that full-time and part-time placements are based on space availability for both the Morgantown and Charleston division. The most qualified applicants will receive priority for full-time placements. Class size and progression plans may be limited based on available faculty resources and space. Applicants to the MSN program need to complete the following steps in order to be considered for admission:

1. Application for Admission to Graduate Studies (available at: https://westvirginia.force.com/wvugrad/TX_SiteLogin?startURL=%2Fwvugrad%2FTargetX_Portal__PB (https://westvirginia.force.com/wvugrad/TX_SiteLogin/?startURL=%2Fwvugrad%2FTargetX_Portal__PB))

2. Request an official transcript of records from each college or university attended.
   a. Transcripts should be sent directly to WVU Graduate Admissions, P.O. Box 6510, Morgantown, WV 26506-6510.
   b. Applicants who completed prior education outside of the U.S. must have their transcripts evaluated by World Education Services (WES) (https://www.wes.org/evaluations-and-fees/education/graduate-admissions/). Please request a "course-by-course" International Credential Advantage Package (ICAP).

3. Submit a current curriculum vitae.

4. Submit a professional writing sample using the guidelines (https://nursing.hsc.wvu.edu/media/74629/msn-personal-statement-guidelines-for-applicants.pdf) provided on our website.

For more information, visit the website at https://nursing.hsc.wvu.edu (https://nursing.hsc.wvu.edu/), write to West Virginia University School of Nursing, P.O. Box 9600, Morgantown, WV 26506-9600; or call (304) 293-1386.

Note: Any student who has been dismissed from the West Virginia University School of Nursing will not be readmitted to the program.

ADMISSION PROCESS FOR THE MSN PROGRAM (FNP AND PNP TRACKS)

The Graduate Admissions Committee will meet in early March to review all qualified applicants. Decisions will be emailed to students by the first week of April. Students will be evaluated based on the following:

- Nursing GPA
- Work Experience
- Professional Writing Statement Score
- Overall GPA

Master's of Science in Nursing Requirements

A minimum cumulative GPA of 3.0 is required

A minimum grade of C- is required in all courses

Core Courses		
NSG 626	Lifespan and Health Promotion	3
NSG 622	Theory and Disciplined Reasoning	3
NSG 628	Leadership/Policy/Ethics	3
NSG 706	Advanced Pathophysiology	3
NSG 627	Evidence Based Practice	3
NSG 623	Advanced Practice Role/Interprofessional Collaboration	3
NSG 709	Health Care Informatics	3
NSG 625	Statistics	3
Required Area of Emphasis		22
Total Hours		46

Suggested Plan of Study for Family Nurse Practitioner Area of Emphasis

First Year

Fall	Hours	Spring	Hours	Summer	Hours
NSG 706		3 NSG 701		3 NSG 626	3
NSG 623		3 NSG 705		3 NSG 712	3
NSG 622		3 NSG 627		3	
		NSG 625		3	
		9		12	6

Second Year

Fall	Hours	Spring	Hours
NSG 714		3 NSG 628	3
NSG 720		5 NSG 721	5
NSG 709		3	
		11	8

Total credit hours: 46

A minimum of 10 credits of Family Practicum (including Practicum 1 and 2) is required for graduation. This equates to a total of 600 hours of supervised clinical experience.

Suggested Plan of Study for Pediatric Nurse Practitioner

First Year

Fall	Hours	Spring	Hours	Summer	Hours
NSG 706		3 NSG 770		3 NSG 626	3
NSG 623		3 NSG 767		3 NSG 700	3
NSG 622		3 NSG 627		3	
		NSG 625		3	
		9		12	6

Second Year

Fall	Hours	Spring	Hours
NSG 771		3 NSG 628	3
NSG 772		5 NSG 773	5
NSG 709		3	
		11	8

Total credit hours: 46

A minimum of 10 credits of Pediatric Practicum (including Practicum 1 and 2) is required for graduation. This equates to a total of 600 hours of supervised clinical experience.

Progression Standards

To progress in the MSN curriculum, a student must meet the following performance standards. Failure to meet the criteria below will result in dismissal from the program.

1. Grade Point Average (GPA) requirements:

   a. Graduate program students are required to maintain a 3.0 in all work attempted in the program. A student who falls below 3.0 after nine or more credit hours are completed in the program will be placed on academic probation and has only one semester to bring up the GPA to the 3.0 requirement. Failure to raise the cumulative GPA to 3.0 in one semester will result in dismissal from the program.

   b. Post-Graduate Certificate students are required to take fewer credits than those in the degree programs. Therefore, a GPA lower than 3.0 will not be grounds for probation or dismissal. However, students earning two C grades or one F will be dismissed from the Post-Graduate Certificate Program.

2. Earn a letter grade (A, B, C) on all required courses. A grade of F in any course results in dismissal from the program.

3. Carry forward only one C grade in a nursing course. A second C in any nursing course will result in dismissal from the program.

4. Repeat only one nursing course and only one time.

5. If a student needs to withdraw from all courses in a semester, the student must meet with his or her advisor to request a Leave of Absence if he/she plans to return to course work.

6. Students at all times are expected to demonstrate professionalism, and respect for faculty, staff, preceptors, and student colleagues. If a student is dismissed from his or her clinical placement site for lack of professionalism or if the student's behavior compromises the school's relationship with the agency, the student is subject to failure in the course and subject to dismissal from the program.

   The grading scale for nursing as posted in each course syllabus is:

   A = 93 – 100

   B = 85 – 92

   C = 77 – 84

   F = 0-76

Major Learning Outcomes

MASTER OF SCIENCE IN NURSING

At the completion of the program, the graduate will be able to:

1. Use disciplined reasoning from sciences and the humanities to:

   a. Integrate nursing and related sciences into the delivery of advanced nursing care to diverse populations.

   b. Design nursing care for a clinical or community focused population based on biopsychosocial, public health, nursing, and organizational sciences.

   c. Apply ethical analysis and clinical reasoning to assess, intervene, and evaluate advanced nursing care delivery.

   d. Analyze nursing history to expand thinking and provide a sense of professional heritage and identity.

2. Incorporate current and emerging genetic/genomic evidence in providing advanced nursing care to individuals, families, and communities while accounting for patient values and clinical judgment through:

   a. Synthesizing broad ecological, global and social determinants of health; principles of genetics and genomics; and epidemiologic data to design and deliver evidence based, culturally relevant clinical prevention interventions and strategies.

   b. Designing patient-centered and culturally responsive strategies in the delivery of clinical prevention and health promotion interventions and/or services to individuals, families, communities, and aggregates/clinical populations.

   c. Integrating clinical prevention and population health concepts in the development of culturally relevant and linguistically appropriate health education, communication strategies, and interventions.

3.   Support quality improvement and patient safety by:

a. Promoting a professional environment that includes accountability, peer review, advocacy for patients and families, reporting of errors, and professional writing.

b. Contributing to the integration of healthcare services to affect safety and quality of care to improve patient outcomes and reduce fragmentation of care.

c. Participating in, and leading when appropriate, in quality initiatives that integrate socio-cultural factors affecting the delivery of nursing and healthcare services.

4.   Demonstrate organizational and systems leadership that:

a. Emphasizes clinical practice.

b. Continually improves health outcomes.

c. Ensures patient safety.

5.   Analyze and evaluate evidence to integrate scholarship into practice through:

a. Integrating theory, evidence, clinical judgment, and interprofessional perspectives to improve practice and health outcomes for patient aggregates.

        b. Articulating to a variety of audiences the evidence base for practice decisions, including the credibility of sources of information and the relevance to the practice problem.

c. Applying practice guidelines to improve practice.

d. Participating, and leading when appropriate, in collaborative teams to improve care outcomes and support policy changes through knowledge generation, dissemination, and implementation.

6.   Demonstrate proficiency in the analysis and use of information systems and technology to sustain improvements and promote transparency using high reliability and just culture principles through:

a. Analyzing current emerging technologies to support safe practice environments, and to optimize patient safety, cost-effectiveness, and health outcomes.

b. Using information and communication technologies, resources, and principles of learning to teach patients and others.

c. The use of current and emerging technologies in the care environment to support lifelong learning for self and others.

7.   Assume an advocacy role in healthcare policy by:

a. The analysis of the influence of policy on the structure and financing of health care practice and health outcomes.

b. Participation in the development and implementation of institutional, local, state, and federal policy.

c. The examination of the effect of legal and regulatory processes on nursing practice, health care delivery, and outcomes.

d. Interpreting research and bringing the nursing perspective for policy makers and stakeholders.

e. Advocating for policies that improve the health of the public and the nursing profession.

8.   Collaborate with other professions to improve patient and population health outcomes by:

a. Advocating for the value of the professional nurse as members, and leaders when indicated, of interprofessional healthcare teams.

b. Using collaboration in the design, coordination, and evaluation of patient- centered care.

c. Mentoring and coaching new and experienced nurses and other members of the healthcare team.

d. Understanding other health professions scopes of practice to maximize contributions within the healthcare team.

9.   Plan, manage, and evaluate evidence-based clinical prevention and population care by:

a. Evaluating the effectiveness of clinical prevention interventions that affect individual and population-based health outcomes.

b. Delivering patient-centered and culturally responsive strategies in prevention and health promotion to individuals, families, communities, and aggregates/clinical populations.

10.   Ensure accountability for advanced practice based on refined assessment skills; advanced communication skills; and biophysical, genetic, genomic, psychosocial, sociopolitical, economic, ethical, and cultural principles through:

a. Delivering safe, quality care to diverse populations in a variety of settings and roles.

b. Conducting a comprehensive and systematic assessment as a foundation for decision making.

c. Applying the best available evidence from nursing and other sciences as the foundation for practice.

d. Using knowledge of illness and disease management to provide evidence- based care to populations, perform risk assessments, and design plans or programs of care.

e. Incorporating core scientific and ethical principles in identifying potential and actual ethical issues arising from practice, in assisting patients and other healthcare providers to address such issues.

Doctor of Nursing Practice Nurse Anesthetist, D.N.P.

Degree Offered

- Doctor of Nursing Practice

Nature of the Program

DESCRIPTION

The DNP Nurse Anesthetist Program prepares registered nurses to become Certified Registered Nurse Anesthetists (CRNAs) through a rigorous, challenging curriculum based on the Standards of Accreditation from the Council on Accreditation of Nurse Anesthesia Educational Programs (COA) and the DNP Essentials of the American Association of Colleges of Nursing (AACN). Only offered as a full-time program, students are required to take 88 credits over 3 years or 9 continuous semesters. The program received an initial five-year accreditation from the COA effective October 9, 2019.

Nurse anesthesia practice covers the continuum of care from pre-operative assessment to discharge from the recovery unit. Nurse anesthetists interview and assess each patient to best formulate and implement an individualized plan of care while collaborating with members of a multi-disciplinary health care team. The DNP Nurse Anesthetist Program prepares students through course work that develops knowledge and skill in anesthesia practice, translation and implementation of evidence to practice, improvement in health outcomes for diverse populations, and organizational leadership.

Courses are divided into four categories, including core DNP, anesthesia specialty, clinical practicum, and DNP project offerings. Core DNP courses are offered online and address foundations of nursing theory, assessment, pharmacology, statistics, evidence-based practice methods, health promotion, informatics, leadership, ethics, and health policy. Anesthesia specialty courses are face-to-face classes with online capabilities. They are heavily based in sciences including chemistry, physics, advanced anatomy, physiology, pathophysiology, pharmacology, and basic and advanced principles of anesthesia. Additional specialty courses present physical assessment and principles of business, management, and finance pertinent to anesthesia practice. Clinical practicum begins in the third semester and provides the student the opportunity to integrate didactic content with application of state-of-the-art techniques in the provision of anesthesia care to patients in all risk categories and age ranges in a variety of health care settings. Students are required to administer a minimum of 600 anesthetics and complete over 2000 clinical hours; however, graduating WVU DNP nurse anesthetists will likely exceed that minimum. DNP project courses are incorporated early in the curriculum to give the student and faculty time to develop a project question, perform a literature search, refine and implement an initiative, collect and analyze data, and write a manuscript. The DNP Project manuscript and a portfolio of course work will demonstrate a synthesis of the student's efforts in the program and will lay the foundation for future clinical scholarly initiatives directed at improving health and organizational outcomes in nurse anesthesia practice.

The graduate will earn a DNP degree and be eligible to sit for the National Certification Exam (NCE). This is a board exam administered by the National Board of Certification and Recertification of Nurse Anesthetists (NBCRNA). Graduates who pass the Certification Exam become *Certified* Registered Nurse Anesthetists. Certified graduates have the opportunity to practice in traditional hospital operating suites; ambulatory surgical centers; offices of dentists, podiatrists and pain management specialists; or in a wide variety of settings including the U.S. military and Public Health Services. The Bureau of Labor Statistics projects that employment for Nurse Anesthetists will grow 31% by 2024. According to the most current American Association of Nurse Anesthetists (AANA) statistics, the mean total compensation for full time CRNAs is greater than $170,000.

ACCREDITATION INFORMATION

The WVU Nurse Anesthetist Program is accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs (COA) through October, 2024. The COA may be contacted by mail at 222 South Prospect Ave., Park Ridge, IL 60068-4001; by phone at 847-655-1160; or on the web at

The WVU School of Nursing DNP program is accredited by the Commission on Collegiate Nursing Education (CCNE). A 10-year renewed accreditation was confirmed in June, 2019 and is effective through June, 2029.

Admissions

DNP NURSE ANESTHETIST ADMISSION CRITERIA

- Degree of Bachelor of Science in Nursing from a nationally accredited nursing program.
- Minimum nursing GPA of at least a 3.0 on a 4.0 scale.
- Cumulative GPA of a 3.0 on a 4.0 scale on all college work attempted.
- Completion of 3 credits of undergraduate statistics equivalent to WVU's STAT 211 and 3 credits of health assessment with a grade of C or better.
- GRE scores within the past 5 years.
- Minimum of 1-year post-orientation, and preferably 2-3 years of current, full-time critical care experience.
  - Employment in telemetry, cardiac catheterization lab, operating room, post-anesthesia care unit, interventional radiology, or emergency department is not considered critical care experience.
- Certification in basic, advanced cardiac, and pediatric advanced life support.
- Current, unrestricted RN license. (Licensure in West Virginia will be required during the program and possibly one or more of the following states: Maryland, Ohio, and/or Pennsylvania.)

Applicants must submit official transcripts from all degree programs of attendance, a curriculum vita/resume, 3 letters of recommendation (Professor/Faculty Member, Supervisor/Employer responsible for your annual performance review, and a professional colleague, physician or CRNA), and an application fee by the specified deadline. It is also strongly recommended that students shadow a CRNA prior to applying to the program.

Competitive applicants will be invited for an on-campus interview. Applicants will not be admitted without an interview. Admission into any graduate program is granted on a competitive basis, and students meeting minimum requirements may be denied admission based on such factors as program capacity or academic discretion.

Note: Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-date criteria at https://nursing.hsc.wvu.edu (https://nursing.hsc.wvu.edu/).

APPLICATION PROCESS

Complete two application forms as indicated below and return to the appropriate offices by the deadline.

1. Application for Admission to Graduate Studies (available at: https://westvirginia.force.com/wvugrad/TX_SiteLogin?startURL=%2Fwvugrad%2FTargetX_Portal__PB (https://westvirginia.force.com/wvugrad/TX_SiteLogin/?startURL=%2Fwvugrad%2FTargetX_Portal__PB))
   - On the Supplemental Materials screen, you will upload the following:
     - Current curriculum vita or resume
     - Professional goals statement. View the guidelines on writing the essay on the School of Nursing website.
   - Applicants must also provide three letters of recommendation (Professor/Faculty Member, Supervisor/Employer responsible for your annual performance review, and a professional colleague, physician or CRNA). You will list your references, with their email addresses, on the Recommendations screen. Your references will receive an email from the application vendor with an electronic form. They will also need to upload a letter of recommendation.
2. Supplemental Application for the DNP Nurse Anesthetist Program (available at: https://nursing.hsc.wvu.edu/students/graduate-programs/dnp-nurse-anesthetist/) (https://nursing.hsc.wvu.edu/students/graduate-programs/dnp-nurse-anesthesia-major/)
3. Request an official transcript of records from each college or university attended. Transcripts should be sent directly to: WVU Office of Admissions, PO Box 6009, Morgantown, WV 26506-6009.
4. GRE scores within the past 5 years. WVU ETS Institution Code: 5904

Note: Any student who has been dismissed from the West Virginia University School of Nursing will not be readmitted to the program.

For more information, visit the website at https://nursing.hsc.wvu.edu (http://nursing.hsc.wvu.edu/), write to West Virginia University School of Nursing, P.O. Box 9600, Morgantown, WV 26506-9600; or call (304) 293-1386.

Degree Requirements

A minimum cumulative GPA of 3.0 is required for the degree.

NSG 701	Advanced Pharmacotherapeutics	3
NSG 702	Population Health Promotion	3
NSG 704	Health Care Leadership	3
NSG 705	Advanced Lifespan Assessment: FNP Focus	3

NSG 706	Advanced Pathophysiology	3
NSG 707	Evidence Based Practice Methods	3
NSG 710	Health Care Issues, Policy, and Ethics	3
NSG 724	Health Research Statistics 1	3
NSG 739	Scientific Underpinnings of the DNP Role	3
NSG 740A	Standards of Practice, Professionalism, and Overview of the Nurse Anesthesia Role	2
NSG 740B	Professional Issues in Nurse Anesthesia	2
NSG 741	Genetics, Chemistry, and Physics of Anesthesia	3
NSG 742A	Foundations of Anesthesia 1: Basic Principles of Safe Anesthesia Care	3
NSG 742B	Foundations of Anesthesia 2: Regional Anesthesia and Considerations for Common Procedures	2
NSG 743	Foundations of Anesthesia Lab	1
NSG 744A	Advanced Anatomy, Physiology, and Pathophysiology 1: Cardiac, Pulmonary, and CNS	3
NSG 744B	Advanced Anatomy, Physiology, and Pathophysiology 2: Hepatic, Renal, and Related Systems	2
NSG 746	Advanced Pharmacology for Nurse Anesthetists	3
NSG 747	Perioperative Assessment and Care	1
NSG 748A	Advanced Principles of Anesthesia 1: Cardiothoracic, Vascular, and Neuroanesthesia	3
NSG 748B	Advanced Principles of Anesthesia 2: Management Across the Lifespan	3
NSG 748C	Advanced Principles of Anesthesia 3: Management of Special Populations	2
NSG 749	Business, Management, and Finance in Nurse Anesthesia Practice	3
NSG 751	Evidence-Based Anesthesia Review	3
NSG 752A	Foundations Clinical Practicum 1	1
NSG 752B	Foundations Clinical Practicum 2	2
NSG 753A	Advanced Clinical Practicum 1	2
NSG 753B	Advanced Clinical Practicum 2	2
NSG 753C	Advanced Clinical Practicum 3	2
NSG 754	Transforming Health Care Through Information Technology	3
NSG 810	Nurse Anesthesia Clinical Immersion 1	3
NSG 812	Nurse Anesthesia Clinical Immersion 2	3
NSG 830	Doctor of Nursing Practice Project Development	2
Project Implementation		3
NSG 831	Doctor of Nursing Practice Project Implementation	
NSG 832	Doctor of Nursing Practice Project Presentation	2
Total Hours		88

Suggested Plan of Study

First Semester	Hours
NSG 706	3
NSG 724	3
NSG 739	3
NSG 740A	2
	11
Second Semester	**Hours**
NSG 701	3
NSG 705	3
NSG 707	3
NSG 741	3
	12
Third Semester	**Hours**
NSG 702	3
NSG 742A	3
NSG 743	1
NSG 752A	1

NSG 830	2
	10

Fourth Semester	**Hours**
NSG 742B	2
NSG 744A	3
NSG 746	3
NSG 752B	2
NSG 831	1
	11

Fifth Semester	**Hours**
NSG 744B	2
NSG 747	1
NSG 748A	3
NSG 753A	2
NSG 754	3
NSG 831	1
	12

Sixth Semester	**Hours**
NSG 748B	3
NSG 753B	2
NSG 831	1
	6

Seventh Semester	**Hours**
NSG 704	3
NSG 740B	2
NSG 748C	2
NSG 753C	2
	9

Eighth Semester	**Hours**
NSG 710	3
NSG 749	3
NSG 810	3
	9

Ninth Semester	**Hours**
NSG 751	3
NSG 812	3
NSG 832	2
	8

Total credit hours: 88

Progression and Performance Standards

To progress in the graduate curriculum, a Nurse Anesthetist Program student must meet the following performance standards. Failure to meet the criteria below will result in dismissal from the program.

1. Maintain an overall academic Grade Point Average of at least 3.0 in all work attempted in the DNP Nurse Anesthetist Program. A student who falls below 3.0 after nine or more credit hours are completed in the program will be placed on academic probation and has only one semester to bring up the GPA to the 3.0 requirement. Failure to raise the cumulative GPA to 3.0 in one semester will result in dismissal from the program.
2. Earn a grade of A, B, C, or Pass on all required courses. A grade of F or Fail in any course results in dismissal from the program.
3. Carry forward only one C grade in a core nursing course. A second C in a core nursing course will result in dismissal from the program. A student earning below a B- grade in any anesthesia specialty course or clinical practicum must repeat the course. This means the student will fall out of progression with the current cohort and must wait until the course is offered in the next academic year.
4. Repeat only one nursing course and only one time.

5. If a student needs to withdraw from all courses in a semester, the student must meet with his or her faculty and academic advisors to request a Leave of Absence if he/she plans to return to course work.

6. Students at all times are expected to demonstrate professionalism and respect for faculty, staff, preceptors, and student colleagues. If a student is dismissed from his or her clinical placement site for lack of professionalism, or if the student's behavior compromises the school's relationship with the agency, the student is subject to failure in the course and subject to dismissal from the program.

7. Any student who has been dismissed from the West Virginia University School of Nursing will not be readmitted to the program.

Doctor of Nursing Practice in Nurse Anesthesia Learning Outcomes

Upon completion of the Nurse Anesthetist Program, the graduate will be prepared to:

1. Implement advanced knowledge in nurse anesthesia science, theory, and practice.

2. Evaluate, develop, implement, and lead organizational change to improve care delivery and quality.

3. Develop evidence-based interventions and implement solutions to address clinical problems.

4. Examine and evaluate technology and the utility of information systems and data to improve patient care.

5. Influence and participate in health policy development in the institution and region of practice.

6. Collaborate with the healthcare community, working with nursing, medical, surgical and anesthesia team members to promote patient advocacy and safety.

7. Demonstrate technical, professional, and cultural competence in nurse anesthesia practice by safely caring for patients across the lifespan and at all levels of acuity.

8. Formulate physiologically sound plans for anesthesia care.

9. Participate in the clinical, administrative, and educational advancement of fellow CRNAs and other advanced practice practitioners.

Doctor of Nursing Practice Online Program, D.N.P.

Degree Offered

- Doctor of Nursing Practice

Nature of the Program

DESCRIPTION

The West Virginia University School of Nursing offers a post-master's program of study leading to the Doctor of Nursing Practice (DNP) degree. Graduates of the DNP program advance the application of nursing knowledge through the translation and implementation of evidence for practice to improve health outcomes for diverse populations. This expert level practice builds on the past advanced practice education, experience, and certification.

The DNP-prepared nurse is prepared to participate in healthcare in numerous roles including:

- clinical nurse specialist
- nurse practitioner
- nurse entrepreneur
- nurse administrator
- health care advocate

This post-graduate DNP program can be completed in as few as 32 credit hours. The plan of study for the DNP degree requires 1,000 post-baccalaureate hours of clinical immersion and completion of a DNP project. Students must complete a minimum of 5 credits of clinical immersion and 6 credits in DNP project courses (additional clinical immersion and DNP project credits may be required to meet program outcomes).

The clinical immersion experience is intended to broaden clinical experience through the assessment of system level changes and the evaluation of such changes. Approved precepted Master's level clinical hours may be counted toward the 1,000 hours, but a minimum of 300 clinical immersion hours must be earned at the DNP level.

The DNP Project is used to demonstrate mastery of the DNP curriculum content. According to the American Association of Colleges of Nursing (AACN), doctoral education is distinguished by the completion of a specific project that demonstrates synthesis of the student's work and lays the groundwork for future clinical scholarly work directed at improving health or organizational outcomes in the area of focus. The curriculum primarily involves mastery of an advanced specialty within nursing practice and methods of practice improvement and change. Guided by faculty, and with assistance of an expert in the area of interest, the DNP project demonstrates the student's ability to identify a practice or system related problem through clinical immersion, to synthesize and critically appraise the evidence related to addressing that practice problem, to negotiate within the system to implement evidence based change within an organization, implement that change, and systematically measure the results of the practice or system related change initiative. The

DNP Project documents outcomes of the student's educational experiences and summarizes the student's growth in knowledge and expertise. The DNP Project experience serves as a foundation for leadership in future scholarly practice with the clinical setting.

The programs are offered by faculty on the Morgantown and Charleston campuses. Courses are offered via web-based modalities, with both synchronous and asynchronous meeting schedules. Enrollment in nursing courses is based upon readiness, availability of space, and an adequate cohort of students. The DNP project proposal and final presentation take place on either campus depending on the preference of the committee chair.

It is a strong recommendation by the University and the School of Nursing that graduate students limit their credit load if they are also involved in full-time work. Full-time work and studies may negatively affect the student's ability to succeed academically.

Admissions

CRITERIA

1. Satisfy WVU requirements (https://graduateadmissions.wvu.edu/how-to-apply/apply-for-2020-2021/first-time-graduate-applicant/#anchor-gpa) for admission to graduate study.
2. Have a Master of Science in Nursing degree from a nationally accredited college or university.
3. Students must meet the following minimum qualifications for admission consideration: must have a minimum WVU institutional GPA of a 3.0, a minimum cumulative GPA of a 3.0 from all college work ever attempted, and a minimum nursing GPA of a 3.0.
4. Have an active, unrestricted RN license in at least one state at the time of application (and licensure in the state in which he or she plans to complete clinical immersion).
5. Have advanced practice certification (NP, CNS, CNM, CRNA) from a national certifying body (new MSN graduates may be provisionally admitted with the requirement to obtain national certification before the end of the first semester of the program).
6. Requirements also include:

    a. Completion of a nationally accredited Master of Science in Nursing Program. Graduate transcripts will be evaluated to ensure students have met the AACN 2011 Master's Essentials which require:

      * Advanced Pathophysiology

      * Advanced Pharmacotherapeutics

      * Advanced Health Assessment

    b. Transcripts will be evaluated via a gap analysis related to the Essentials to ensure completion of content in these areas:

      * Research Process/statistics

      * Quality & Safety

      * Informatics

      * Nursing Theory

Note: Any student who has been dismissed from the West Virginia University School of Nursing will not be readmitted to the program.

Application Process

The application process should be completed by January 1. The beginning sequence of courses in the DNP program starts in the fall semester only. Applicants to the DNP program need to complete the following steps in order to be considered for admission:

Complete one application form as indicated below and return to the appropriate offices by the deadline.

1. Application for Admission to Graduate Studies (available at: https://westvirginia.force.com/wvugrad/TX_SiteLogin?startURL=%2Fwvugrad%2FTargetX_Portal__PB (https://westvirginia.force.com/wvugrad/TX_SiteLogin/?startURL=%2Fwvugrad%2FTargetX_Portal__PB))
2. Request an official transcript of records from each college or university attended.
    a. Transcripts should be sent directly to WVU Graduate Admissions, P.O. Box 6510, Morgantown, WV 26506-6510.
    b. Applicants who completed prior education outside of the U.S. must have their transcripts evaluated by World Education Services (WES) (https://www.wes.org/evaluations-and-fees/education/graduate-admissions/). Please request a "course-by-course" International Credential Advantage Package (ICAP).
3. Provide a list of three professional references and their email addresses. The references should be familiar with the applicant's expertise in the advanced practice of nursing and likelihood for success in doctoral work.
4. Submit a current curriculum vitae.

5. Submit a professional writing sample using the guidelines (https://nursing.hsc.wvu.edu/media/74626/wvu-dnp-personal-statement-guidelines-for-application.pdf) provided on our website.

For more information, visit the website at https://nursing.hsc.wvu.edu, write to West Virginia University School of Nursing, P.O. Box 9600, Morgantown, WV 26506-9600; or call (304) 293-1386.

Note: Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-date criteria at https://nursing.hsc.wvu.edu (https://nursing.hsc.wvu.edu/).

ADMISSION PROCESS FOR THE DNP PROGRAM

The Graduate Admissions Committee will meet in early March to review all qualified applicants. Decisions will be emailed to students by the first week of April. Acceptance is dependent upon space available in the program, and the most qualified applicants are accepted.

Students will be evaluated based on the following:

- Nursing GPA
- Work Experience
- Professional Writing Statement Score
- Overall GPA
- Professional recommendations

Doctor of Nursing Practice Requirements

NSG 702	Population Health Promotion	3
NSG 704	Health Care Leadership	3
NSG 707	Evidence Based Practice Methods	3
NSG 710	Health Care Issues, Policy, and Ethics	3
NSG 724	Health Research Statistics 1	3
NSG 739	Scientific Underpinnings for the DNP Role	3
NSG 745	Clinical Immersion [*]	5
NSG 754	Transforming Healthcare Through Information Technology	3
DNP Project [**]		
NSG 830	Doctor of Nursing Practice Project Development	2
NSG 831	Doctor of Nursing Practice Project Implementation	2
NSG 832	Doctor of Nursing Practice Project Presentation	2
Total Hours		32

[*]   A minimum of 5 credits of Clinical Immersion is required prior to graduation. A total of 1000 hours post baccalaureate supervised clinical practice is required prior to graduation and therefore students may be required to take additional credits to meet this total. Spread over multiple semesters.

[**]   Total DNP Project hours - at least 6 credits. Spread over multiple semesters.

[***]   Individual progression plans to be developed based on previous course work. Total credit hours will vary according to previous course work provided credit for, including number of post-baccalaureate clinical experience hours gained prior to admission to the program.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours	Summer	Hours
NSG 724		3 NSG 707		3 NSG 702	3
NSG 739		3 NSG 754		3 NSG 830	2
		6		6	5

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
NSG 704		3 NSG 710		3 NSG 745	1
NSG 831		2 NSG 745		1	
		NSG 832		2	
		5		6	1

Third Year

Fall	Hours
NSG 745	3
	3

Total credit hours: 32

PROGRESSION AND PERFORMANCE STANDARDS

To progress in the graduate curriculum, a student must meet the following performance standards. Failure to meet the criteria below and to progress will result in dismissal from the program.

1. Grade Point Average (GPA) requirements:
   a. Graduate program students are required to maintain a 3.0 in all work attempted in the program. A student who falls below 3.0 after nine or more credit hours are completed in the program will be placed on academic probation and has only one semester to bring up the GPA to the 3.0 requirement. Failure to raise the cumulative GPA to 3.0 in one semester will result in dismissal from the program.
2. Earn a letter grade (A, B, C) on all required courses. A grade of F in any course results in dismissal from the program.
3. Carry forward only one C grade in a nursing course. A second C in any nursing course will result in dismissal from the program.
4. Repeat only one nursing course and only one time.
5. If a student needs to withdraw from all courses in a semester, the student must meet with his or her advisor to request a Leave of Absence if he/she plans to return to course work.
6. Students at all times are expected to demonstrate professionalism, and respect for faculty, staff, preceptors, and student colleagues. If a student is dismissed from his or her clinical immersion site for lack of professionalism or if the student's behavior compromises the school's relationship with the agency, the student is subject to failure in the course and subject to dismissal from the program.

The grading scale for nursing as posted in each course syllabus is:

A = 93 – 100

B = 85 – 92

C = 77 – 84

F = 0-76

Major Learning Outcomes

POST-MASTER'S DNP PROGRAM GOALS

Upon completion of the program, the graduate will be able to:

1. Use disciplined reasoning, science-based theories, and concepts from sciences and humanities to:

   a)   Determine the nature and significance of health and health care delivery phenomena.

   b)   Describe actions and advanced strategies to improve health care delivery, to diverse populations.

   c)   Develop, deliver and evaluate theory based health care.

   d)   Analyze nursing history to expand thinking and provide a sense of professional heritage and identity

2. Demonstrate organizational and systems leadership that:

   a)   Emphasizes clinical practice.

   b)   Continually improves health outcomes.

   c)   Ensures patient safety.

3. Use analytic methods, evidence, and nursing science to:

   a)   Critically appraise existing literature to identify and evaluate best practices and practice guidelines.

   b)   Facilitate the evaluation of systems of care in order to improve patient outcomes.

   c)   Serve as a practice specialist/consultant in collaborative knowledge generating research.

    d)   Disseminate results through translational scholarship.

4. Demonstrate proficiency and provide leadership for the integration of information systems/technology to:

a)   Support, monitor, and improve patient care, healthcare systems, clinical decision-making, nurse-sensitive outcomes, and academic settings.

    b)   Support quality improvement and patient safety.

5. Assume a leadership role in advocacy and health care policy development.

6. Establish, participate in, and lead interprofessional collaborations for improving patient, population, and systems outcomes.

7. Develop, implement, and evaluate practice and healthcare delivery models for the purpose of quality improvement and improved patient outcomes considering:

    a)   Safety and quality.

    b)   Epidemiological, bio-statistical, environmental, and other appropriate scientific data.

    c)   Culturally appropriate care.

    d)   Values based professional practice and behaviors.

    e)   Economies of care, business principles and health policy related to individual, aggregate, and population health.

8. Ensure accountability for advanced practice based on refined assessment skills, advanced communication skills, biophysical, genetic, genomic, psychosocial, sociopolitical, economic, ethical, and cultural principles.

9. Practice and provide services for populations within the area of advanced nursing specialization.

Doctor of Philosophy, Ph.D.

Degree Offered

- Doctor of Philosophy

Nature of the Program

The purpose of the Ph.D. program is to prepare nurse scholars/scientists for roles in research, teaching, and service. The program prepares graduates who will contribute to the body of nursing knowledge, educate the next generation, and assume collaborative leadership roles in shaping health policy, improving health, and reducing disparity.

The goals of the program are to prepare graduates who will:

1. Rigorously test, generate, and extend knowledge to inform nursing science, practice, and policy.
2. Contribute to the development of knowledge and interventions to address health disparity and promote or improve health.
3. Assume collaborative leadership roles in academia, health organizations, research teams, and scholarly networks.
4. Demonstrate expertise within an area of study that incorporates nursing and trans disciplinary perspectives.

Visit the School of Nursing website at https://nursing.hsc.wvu.edu/. Call the WVU school of Nursing Office of Student Services at 1-866-WVUNURS or (304) 293-1386. Write to WVU School of Nursing at PO Box 9600, Morgantown, WV 26506-9600

Admissions

CRITERIA

1. Transcript of a nursing degree at the baccalaureate level or higher from a nationally accredited nursing program or equivalent.
2. Evidence of current license to practice nursing.
3. A Master's degree in nursing from an accredited college or university. A Master's degree in a health-related discipline will be considered.
4. A grade of B or higher in graduate-level statistics and research courses.
5. Students must meet the following minimum qualifications for admission consideration: must have a minimum WVU institutional GPA of a 3.0, a minimum cumulative GPA of a 3.0 from all college work ever attempted, and a minimum GPA of 3.25 in master's degree work.

Note: *Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-date criteria at* https://nursing.hsc.wvu.edu/.

APPLICATION PROCESS

The application process is on a rolling basis. The beginning sequence of courses in the PhD in nursing program starts in the Fall semester only. Class size and progression plans may be limited based on available faculty resources and space. Applicants to the PhD in nursing program need to complete the following steps in order to be considered for admission:

1. Complete two application forms as indicated below and return to the appropriate offices by the deadline
   - Application for Admission to Graduate Studies (available at: https://westvirginia.force.com/wvugrad/TX_SiteLogin?startURL=%2Fwvugrad%2FTargetX_Portal__PB (https://westvirginia.force.com/wvugrad/TX_SiteLogin/?startURL=%2Fwvugrad%2FTargetX_Portal__PB))
   - Supplemental Application of Admission to PhD in the School of Nursing and PhD application checklist (available at https://nursing.hsc.wvu.edu/students/graduate-programs/). Students should be certain that all materials are sent to the following:

     WVU School of Nursing, Student Services Office
     P.O. Box 9600
     Morgantown, WV 26506-9600

2. Request an official transcript of records from each college or university attended.
   a. Transcripts should be sent directly to WVU Graduate Admissions, P.O. Box 6510, Morgantown, WV 26506-6510.
   b. Applicants who completed prior education outside of the U.S. must have their transcripts evaluated by World Education Services (WES) (https://www.wes.org/evaluations-and-fees/education/graduate-admissions/). Please request a "course-by-course" International Credential Advantage Package (ICAP).

3. Submit a current curriculum vitae or resume.

4. Provide an example of graduate work (if available).

5. Essay: Read about the research (https://nursing.hsc.wvu.edu/research/) focus of our faculty. Select one or two faculty with whom you are interested in working based on their research focus and explain how your interest aligns with the faculty members' area of research, referring to their relevant publications. Essay should be submitted in APA format and cover the following areas: preparation for doctoral work (background), why do you want a PhD (how does a PhD fit in your career plan), personal/academic strengths and weaknesses, research area of interest, and current/long term goals.

6. Interview to determine congruence between the applicant's career goals and program objectives and between the applicants research interests and those of the faculty.

7. Applicants must also provide three letters of reference addressing the applicant's likelihood for success in graduate work.

Note: *Any student who has been dismissed from the West Virginia University School of Nursing will not be readmitted to the program.*

Degree Requirements

Core Requirements

NSG 704	Health Care Leadership	3
NSG 727	Contemporary Nursing Science	3
NSG 728	Nursing Science Theory/Philosophy	4
NSG 732	Seminar in Nursing Scholarship	2
NSG 735	Principles: Nursing Education	3
NSG 736	Advanced Health Policy and Ethics	3
Cognate/Electives		**6**
Select two 3 credit courses. One course must be an advanced methodology course and at least one of the two courses must be taken outside the School of Nursing		
Research		
NSG 724	Health Research Statistics 1	3
NSG 725	Health Research Statistics 2	3
NSG 731	Qualitative Research Methods	3
NSG 729	Quantitative Methods	3
NSG 781	Research Mentorship	3
NSG 733	Research Grant Development	2
NSG 734	Use of Data	3
NSG 795	Independent Study	1
NSG 783	Dissertation Seminar	1
NSG 797	Research	9
Qualifying Examination [1]		

Scholarly Events [2]	
Total Hours	55

[1]   Successfully complete the qualifying examination prior to beginning the dissertation.

[2]   Meet the residency requirement of the university prior to taking the qualifying examination.

Suggested Plan of Study

Students are required to be on campus for the six-week Summer sessions, once in the Fall for two days, and once in the Spring for two days. During residency, students are provided with an opportunity to participate with nurse researchers and peers in the ongoing development of a scholarly community.

First Semester	Hours
NSG 724	3
NSG 735	3
	6
Second Semester	**Hours**
NSG 725	3
NSG 732	2
	5
Third Semester	**Hours**
NSG 728	4
NSG 729	3
	7
Fourth Semester	**Hours**
NSG 727	3
NSG 731	3
	6
Fifth Semester	**Hours**
NSG 704	3
NSG 734	3
NSG 781	1
	7
Sixth Semester	**Hours**
NSG 781	2
NSG 733	2
NSG 736	3
	7
Seventh Semester	**Hours**
Cognate	3
NSG 795 (Qualifying Exam)	1
	4
Eighth Semester	**Hours**
NSG 783	1
NSG 797	1
Cognate	3
	5
Ninth Semester	**Hours**
NSG 797 (Variable credits over multiple semesters)	8
	8

Total credit hours: 55

Major Learning Outcomes

DOCTOR OF PHILOSOPHY

The PhD in Nursing at WVU is a blended program composed of on-campus classroom and distance learning components. For part-time students it will require three years of coursework, delivered online during fall and spring semesters with both synchronous and asynchronous components. Students are not required to come to campus for fall and spring semesters for regular nursing course work. Summer courses for the first two summers will include limited time on campus. Once a student successfully passes the written and oral components of the qualifying examination, they must complete the research and dissertation phase, culminating in a written and oral dissertation defense. The purpose of the PhD program is to educate nurse scholar-scientists for roles in research, teaching, and service. The program prepares graduates who will contribute to the body of nursing knowledge; educate the next generation; and assume collaborative leadership roles in shaping health policy, improving health, and reducing disparity. The goals of the program are to:

- Rigorously test, generate, and extend knowledge to inform nursing science, practice, and policy.
- Contribute to the development of knowledge and interventions to address health disparity and promote or improve health.
- Assume collaborative leadership roles in academia, healthcare organizations, research teams, and scholarly networks.
- Demonstrate expertise within an area of study that incorporates nursing and trans-disciplinary perspectives.

Academic Progression Standards

To progress in the PhD program, a student must:

1. Take nursing courses in the sequence stated in the WVU School of Nursing PhD Progression Plan (Appendix B). All prerequisites from preceding semesters must be completed prior to registration for new courses. Courses are only applicable for graduation credit if they have been taken within the last eight years.

2. Achieve an overall academic GPA of 3.0 in all course work. The following guidelines apply to grades in the PhD program:

    - Students may carry forward one C grade in any course. However, a second C will result in dismissal from the program.
    - Students with a grade of F in any course will be dismissed from the program.
    - The grade of I (incomplete) is given only when a student situation meets the WVU policy for grades of Incomplete (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/advising_and_evaluation/#Incompletes). Resolution of the grade of I MUST occur in the semester following its issuance and before any graduate degree can be awarded. If the I grade is not removed within the following semester, the grade of I will automatically be converted to an IF which is an incomplete with failure. A grade of IF will result in dismissal from the program. When the "I" grade is replaced, the grade point average is recalculated on the basis of the new grade.
    - Students can only have one "W" (class withdraw) while in the PhD program.
    - If students earn an unsatisfactory or "U" in NSG 797 Research, the chair and student must devise a plan to rectify deficiencies in the next semester. If the student receives another "U", they will be dismissed from the program.

3. Successfully complete the QE prior to beginning the dissertation. The QE may be repeated once as outlined in the QE section, pages 10-11. If the student passes the 5 year limit and has not successfully completed the QE, they will be removed from the PhD program and their status changed to non-degree at the university level.

4. Within the first semester, complete an individualized plan to meet the university residency requirements for doctoral education. Doctoral education involves many learning experiences that take place outside the formal classroom setting. These involve observing and participating in activities conducted by the graduate faculty, using departmental and University libraries, attending lectures presented by visiting scholars, informally debating other students, and similar activities. To ensure that graduate students experience this kind of informal learning, doctoral programs at WVU generally require at least two semesters in residence on campus. However, an individual student or graduate committee may propose an alternative plan by which the student can gain equivalent educational experience. This plan must be submitted in writing, approved by the college or school dean or designee, and placed in the student's program file.http://catalog.wvu.edu/graduate/advisingcoursesdegrees/degree_regulations/#requirementstext

5. Meet with his or her advisor at least once a year to review and submit documentation of progression. Following spring advisement, student will complete an online mentor evaluation survey. Complete and submit an individualized development plan for program success to the advisor within one year of entering the program.

6. Generate a syllabus each time they are enrolled in research mentorship (NSG 781), independent study course (NSG 795), and/or a research course (NSG 797) is taken. Working with the chair or instructor, the student will identify course learning outcomes. Before the course is released for enrollment, the syllabus must be signed by both the student and chair and a copy provided to the PhD Program Director.

Master of Science in Nursing Executive Focus/MBA

Nature of the Program

MSN EXECUTIVE FOCUS/MBA DUAL DEGREE

The School of Nursing, together with the John Chambers College of Business & Economics, offers a program of study leading to the dual degree of Master of Science in nursing (MSN) (Executive Focus), and Master of Business Administration (MBA). This program is offered predominantly online, in both synchronous and asynchronous formats. Students take courses from both the MSN and MBA program concurrently, allowing assimilation of advanced business management concepts into the nursing administration role.

The MSN Executive Focus major is offered only to students enrolled in the dual MSN/MBA degree. It is not offered as a "stand-alone" major. The combined MSN/MBA curriculum meets the Essentials of Master's Education in Nursing, the American Organization of Nurse Executive Competencies, and the expectations of the Association to Advance Collegiate Schools of Business. Throughout the curriculum, students are guided in the process of self-development aimed at pursuing excellence in scholarly and professional endeavors.

The 57-credit-hour program can be completed in eight semesters of full-time study, including summer sessions. Graduates of the program will be eligible to sit for Nurse Executive board certification (ANCC) or the Certification in Executive Nursing Practice (AONL) exams after having held a nursing administration position for at least 2 years.

Admissions

APPLICATION PROCESS FOR MSN EXECUTIVE FOCUS/MBA DUAL DEGREE PROGRAM

This program is designed for nurses who already have a bachelor's degree in nursing, two or more years professional, full-time work experience, and have an interest in leadership. Students must apply to both the MSN Executive Focus nursing program and the online hybrid MBA program simultaneously. The application process should be completed by July 1 for the August start date or by December 1 for the January start date. Students must be admitted to both programs concurrently in order to complete the MSN/MBA dual degree program. To be considered for admission, please complete the following steps:

MBA Application

1. Online Application- Be sure to indicate Business Administration (Online MBA) when responding to "Intended Major". Please select "Off Campus" as the primary delivery method. The application along with the $60 application fee should be submitted prior to the application deadline. All material should be sent to: Office of Graduate Admissions, P.O. Box 6510, Morgantown, WV 26506-6510 or submitted electronically with your application.

2. Official transcripts from all prior academic work must be forwarded by your previous institution to West Virginia University, Office of Graduate Admissions, P.O. Box 6510, Morgantown, WV 26506-6510. Contact prior institutions as early as possible. If undergraduate work was completed at WVU, admissions will pull transcripts automatically.

   a. Applicants who completed prior education outside of the U.S. must have their transcripts evaluated by World Education Services (WES) (https://www.wes.org/evaluations-and-fees/education/graduate-admissions/). Please request a "course-by-course" International Credential Advantage Package (ICAP).

3. Your current resume should include enough information for the admissions committee to trace your entire professional work history and should indicate any relevant affiliations.

4. Your statement of purpose should be a short essay in which you reflect on the contribution of the Online MBA degree to your future and the special characteristics that you would bring to the Online MBA program. We are interested in value-added experiences, both from the program to you and from you to the program.

5. We recommend that your one letter of reference provide some information that is not found in the other materials being submitted. Topics with regards to your ability to work with others, your discipline and ambition, leadership potential, etc. should be addressed. If applicable, an Employers Commitment letter would also be beneficial. In particular, we'd like to know that your manager is aware of the program residency requirements and is in support of your efforts to complete your degree.

6. GMAT/GRE score (or waiver): You should have test scores submitted from the Graduate Management Admissions Test® (GMAT) (WVU GMAT code: C2S-6D-13) or from the Graduate Record Examination (GRE) (WVU GRE code:5904.). Early test taking is encouraged. If you have 5+ years of continuous full-time professional work experience or a terminal degree, you may request a GMAT waiver. To do so, the completed GMAT waiver request form must be uploaded as "Supplemental Information" on your online application. Once all application materials are received, you will be contacted for a phone interview regarding the GMAT waiver request.

MSN Application

1. Completed online WVU application (https://westvirginia.force.com/wvugrad/TX_SiteLogin/?startURL=%2Fwvugrad%2FTargetX_Portal__PB) to the MSN program.

For more information, visit the website at https://nursing.hsc.wvu.edu.

CRITERIA

1. Satisfy WVU requirements (https://graduateadmissions.wvu.edu/how-to-apply/apply-for-2020-2021/first-time-graduate-applicant/#anchor-gpa) for admission to graduate study.
2. Students must meet the following minimum qualifications for admission consideration: must have a minimum WVU institutional GPA of a 3.0, a minimum cumulative GPA of a 3.0 from all college work ever attempted, and a minimum nursing GPA of a 3.0.
3. Have completed 3 credits of undergraduate statistics equivalent to WVU's STAT 211 with a "C" or better.
4. Hold a Bachelor of Science in nursing degree from a nationally accredited program.
5. Have an active, unrestricted RN license in at least one state.
6. Have completed two or more years of professional, full-time work experience.
7. There are no pre-requisite courses for the MBA; however, online not-for-credit classes in Financial Accounting, Economics, and Statistical Concepts through Ivy Software are recommended for those without a strong background in these disciplines.

Note: Admission criteria and applications are subject to change. Please see the School of Nursing website for the most up-to-date criteria at https://nursing.hsc.wvu.edu.

Note: Any student who has been dismissed from the West Virginia University School of Nursing will not be readmitted to the program.

Curriculum Requirements for MSN Executive Focus

NURSING REQUIREMENTS

NSG 611	System Based Decision Making	2
NSG 616	Role Seminar for Leadership MSN	2
NSG 617	Leadership Practicum 1	3
NSG 618	Leadership Practicum 2	3
NSG 622	Theory and Disciplined Reasoning	3
NSG 625	Statistics	3
NSG 626	Lifespan Health Promotion	3
NSG 627	Evidence Based Practice	3
NSG 628	Leadership/Policy/Ethics	3
NSG 709	Health Care Informatics	3
Total Hours		28

BUSINESS REQUIREMENTS

Managerial and Team Skills		2
BADM 612	Managerial and Team Skills	
BADM 641	Decision Analysis for Executives	3
BADM 618	Macroeconomics and Managerial Economics	4
Marketing Strategy		2
BADM 652	Marketing Strategy	
BADM 622	Financial Statements Analysis	3
BADM 623	Strategy	3
BADM 632	Corporate Finance	3
BADM 644	Legal Environment and Ethics	3
BADM 653	Integrated Global Business	3
BADM Elective		3
Total Hours		29

First Year

Fall	Hours	Spring	Hours	Summer	Hours
NSG 622	3	NSG 625	3	NSG 626	3
Mangerial and Team Skills BADM 612	2	NSG 627	3	BADM 618	4
NSG 616	2	BADM 641	3		
	7		9		7

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
Marketing Strategy BADM 652	2	NSG 628	3	BADM Elective	3
BADM 622	3	BADM 632	3	BADM 644	3
BADM 623	3	NSG 611	2		
	8		8		6

Third Year

Fall	Hours	Spring	Hours		
NSG 617	3	BADM 653	3		
NSG 709	3	NSG 618	3		
	6		6		

Total credit hours: 57

Progression Standards

To progress in the MSN curriculum, a student must meet the following performance standards. Failure to meet the criteria below will result in dismissal from the program.

1. Graduate program students are required to maintain a 3.0 in all work attempted in the program. A student who falls below 3.0 after nine or more credit hours are completed in the program will be placed on academic probation and has only one semester to bring up the GPA to the 3.0 requirement. Failure to raise the cumulative GPA to 3.0 in one semester will result in dismissal from the program.

2. Earn a letter grade (A, B, C) on all required courses. A grade of F in any course results in dismissal from the program.

3. Carry forward only one C grade in a nursing course. A second C in any nursing course will result in dismissal from the program.

4. Repeat only one nursing course and only one time.

5. If a student needs to withdraw from all courses in a semester, the student must meet with his or her advisor to request a Leave of Absence if he/she plans to return to course work.

6. Students at all times are expected to demonstrate professionalism, and respect for faculty, staff, preceptors, and student colleagues. If a student is dismissed from his or her practicum site for lack of professionalism or if the student's behavior compromises the school's relationship with the agency, the student is subject to failure in the course and subject to dismissal from the program.

The grading scale for nursing as posted in each course syllabus is:

A = 93 – 100

B = 85 – 92

C = 77 – 84

F = 0-76

Major Learning Outcomes

MASTER OF SCIENCE IN NURSING EXECUTIVE FOCUS/MBA ONLINE PROGRAM

Upon successful completion of the program, the graduate will:

- Synthesize theories, research findings, and broad-based perspectives for application in the advanced practice of nursing or nursing leadership:
- Integrate nursing and related sciences into the delivery of advanced nursing care to diverse populations.
- Synthesize evidence for practice to determine appropriate application of interventions across diverse populations.
- Utilize nursing and related science evidence to analyze, design, implement and evaluate nursing care delivery systems.
- Utilize systematic inquiry and refined analytical skills in the provision of health care services and leadership:
- Integrate organizational science and informatics to make changes in the care environment to improve health outcomes.
- Assume a leadership role in the management of human, fiscal, and physical healthcare resources.
- Critically appraise existing literature to identify best practices, apply knowledge to improve and facilitate systems of care in order to improve patient outcomes.
- Disseminate results through translational scholarship.
- Demonstrate safe, effective assessment, planning, implementation and evaluation skills in managing the care of individuals and groups while working in interprofessional collaborative relationships:
- Create a relationship with clients and healthcare organizations that builds and maintains a supportive and caring partnership.
- Analyze best practice evidence to implement effective quality improvement initiatives with measurable results.
- Advocates for patients, families, caregivers, communities and members of the healthcare team.
- Articulate viewpoints and positions in order to improve the quality of health care delivery and outcomes of successful care:
- Assume a leadership role in effectively implementing patient safety and quality improvement initiatives within the context of the interprofessional team using effective communication skills.
- Examine the effect of legal and regulatory processes on nursing practice, healthcare delivery, and outcomes.
- Use ethical decision making to promote the well-being of individuals, families, and health care professionals in local, national & international communities.
- Consults and collaborates in interdisciplinary and interagency endeavors to advance culturally sensitive health care to clients, families, groups, and communities:
- Synthesize broad ecological, global and social determinants of health; principles of genetics and genomics; and epidemiologic data to design and deliver evidence-based, culturally relevant clinical preventions interventions and strategies.
- Integrates prior and current learning as a basis for growth and accountability in enacting the role of advanced practice nurse or nurse leader:
- Advocate for patients, families, caregivers, communities, and members of the healthcare team.
- Use information and communication technologies to advance patient education, enhance accessibility of care, analyze practice patterns, and improve health care outcomes, including nurse sensitive outcomes.
- Value life-long learning and continued professional development.
- Assume a leadership role in advocacy, ethical issues, and health care policy development:
- Apply leadership skills and decision making in the provision of culturally responsive, high-quality nursing care, healthcare team coordination, and the oversight and
accountability for care delivery and outcomes.
- Function as a leader and change agent in nursing and in health care delivery systems particularly to insure quality care for vulnerable and underserved populations.
- Demonstrates organizational and systems leadership that continually improves health outcomes and ensures patient safety.
- Integrates all the functional areas of business into management decisions in a global environment:
- Evaluate factors that influence the competitive behavior of the firm.
- Predict and anticipate company and market responses to external factors.
- Identify the risks and opportunities in global markets.
- Identify problems, collect appropriate data and analyze the data to make informed management decisions:
- Evaluate business reports to make meaningful decisions for the organization.
- Make data-driven, fact-based decisions using statistical techniques and principles.
- Take real world problems and express them in quantitative terms.
- Make management decisions in an ethically sensitive and socially responsible manner:
- Negotiate and control information ethically to meet organizational needs.
- Understand how to use and acquire information in an ethically sensitive manner.
- Synthesize various ethical theories and design a corporate code of ethics.
- Be effective team members in a virtual environment:
- Demonstrate the ability to work together in a supportive and effective manner.
- Be an effective leader who influences people towards the attainment of organizational goals:
- Recommend actions for leader effectiveness in a scenario case and apply a theory or framework to propose and defend their recommendations.
- Identify various leadership styles and their relative effectiveness, along with real-life examples.

- Evaluate, in a case setting, the processes through which goals are set and accomplished in organizations.

Pharmacy

Degrees Offered

- Doctor of Pharmacy (Pharm.D.)
- Doctor of Philosophy (Ph.D.)

Introduction

The mission of the West Virginia University (WVU) School of Pharmacy is to improve the health of West Virginians and our global community by developing exemplary pharmacists and scientists; conducting meaningful research; and advancing pharmacy practice.

Pharmacy was first offered at West Virginia University as a department in the School of Medicine in 1914. The College of Pharmacy emerged as a separate entity in 1936 and became the School of Pharmacy in 1958. In 1960, the School of Pharmacy changed from a four-year to a five-year program and in 1998 to a six-year program. The doctor of pharmacy (Pharm.D.) program comprises four years of professional study preceded by a minimum of two years of pre-pharmacy study in an accredited U.S. or Canadian college of arts and sciences.

Many pharmacy graduates enter practice in community or institutional pharmacies; postgraduate pharmacy residency programs offer the opportunity for additional training and experience in general pharmacy practice and in several areas of specialty practice. Positions are also available in various government agencies, the pharmaceutical industry, long-term care, nuclear pharmacy, home health-care organizations and many other areas. Pharmacists are eligible for commissions in the armed forces and the U.S. Public Health Service. Pharmacists also may prepare for careers in teaching and research.

The WVU School of Pharmacy also offers Ph.D. programs in health services and outcomes research and the pharmaceutical and pharmacological sciences.

Accreditation

The School of Pharmacy is fully accredited by the Accreditation Council for Pharmacy Education, the national agency for the accreditation of professional degree programs in pharmacy. The Council is composed of members from the American Pharmacists Association, the National Association of Boards of Pharmacy, the American Association of Colleges of Pharmacy, and the American Council on Education.

The School of Pharmacy holds membership in the American Association of Colleges of Pharmacy, whose mission is to lead and partner with member institutions in advancing pharmacy education, research, scholarship, practice, and service to improve societal health.

ADMINISTRATION

DEAN

- William P. Petros - Pharm.D. (Philadelphia College of Pharmacy and Science)

SENIOR ASSOCIATE DEAN FOR ACADEMIC AFFAIRS AND EDUCATIONAL INNOVATION

- Mary K. Stamatakis - Pharm.D. (The Ohio State University)

SENIOR ASSOCIATE DEAN FOR RESEARCH AND STRATEGIC INITIATIVES

- Paul R. Lockman - Ph.D. (Texas Tech University Health Sciences Center)

ASSOCIATE DEAN FOR ADMISSIONS AND STUDENT AFFAIRS

- Mary L. Euler - Pharm.D. (University of Missouri-Kansas City School of Pharmacy)

FACULTY

PROFESSORS

- Marie A. Abate - Pharm.D. (University of Michigan)
  Director, West Virginia Center for Drug and Health Information, Director of Assessment, Department of Clinical Pharmacy
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  Director, Introductory Pharmacy Practice Experiences, Department of Clinical Pharmacy
- Patrick S. Callery - Ph.D. (University of California)
  Department of Pharmaceutical Sciences
- David P. Elliott - Pharm.D. (University of Texas)

Associate Chair for the Charleston Division, Department of Clinical Pharmacy

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Department of Pharmaceutical Sciences
- Gerald M. Higa - Pharm.D. (University of the Pacific)
Department of Clinical Pharmacy and Hematology/Oncology
- Jason D. Huber - Ph.D. (Florida A&M)
Department of Pharmaceutical Sciences
- Paul R. Lockman - Ph.D. (Texas Tech University)
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Department of Pharmaceutical Sciences
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Department of Pharmaceutical Sciences
- Charles D. Ponte - Pharm.D. (University of Utah)
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Department of Pharmaceutical Sciences
- Usha Sambamoorthi - Ph.D. (University of Madras)
Interim Chair, Department of Pharmaceutical Systems and Policy
- Elizabeth J. Scharman - Pharm.D. (Virginia Commonwealth University/Medical College of Virginia)
Director, West Virginia Poison Center, Department of Clinical Pharmacy, Charleston Division
- Ginger Scott - Ph.D. (University of Minnesota)
Department of Pharmaceutical Systems and Policy
- Douglas Slain - Pharm.D. (Duquesne University)
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  Department of Clinical Pharmacy
- Traci J. LeMasters - Ph.D. (West Virginia University)
  Department of Pharmaceutical Systems and Policy
- Cassandra Simpkins - Pharm.D. (University of Charleston)
  Department of Clinical Pharmacy

Degree Designation Learning Outcomes

DOCTOR OF PHARMACY (PHARM.D.)

Upon successful completion of the West Virginia University Doctor of Pharmacy degree program, the graduate will be able to accomplish the following educational outcomes (EOs):

EO 1   Foundational Knowledge and Skills (Learner) - Develop, integrate, and apply foundational knowledge (e.g., concepts, facts, principles) from biological, pharmaceutical, social, behavioral, administrative, and clinical sciences to evaluate the scientific literature, explain drug actions, solve therapeutic problems, and advance individual and population health.

- Acquire and demonstrate depth and breadth of knowledge of foundational scientific, clinical, socioeconomic, and humanistic concepts and skills.
- Explain how knowledge in the foundational sciences is integral to pharmacy practice.
- Integrate knowledge from foundational sciences to explain how specific drugs or drug classes work and evaluate their potential value in individuals and populations.
- Apply foundational concepts and skills to practice.
- Use scientific reasoning and critical thinking skills in practice to address problems, issues, or concerns.
- Develop and apply creative and innovative approaches to effectively resolve problems and improve patient outcomes.
- Apply an evidence-based approach to practice by identifying appropriate questions to address, using databases and other resources to retrieve information, critically analyzing and interpreting relevant scientific information and other evidence, formulating sound conclusions, and integrating the best published evidence with expertise and individual patient values/needs.
- Analyze and use epidemiologic, pharmacoeconomic, medication utilization, and quality improvement data when developing evidence-based programs and protocols.
- Apply knowledge of research methodology to design or conduct basic research, practice-based studies, or clinical trials.
- Use information technology where appropriate to enhance individual knowledge and skills.

EO 2   Communication Skills (Communicator, Educator) – Effectively communicate verbally and nonverbally when interacting with an individual, group, or organization.

- Use appropriate verbal and nonverbal communication skills with individuals or groups, including patients, health professionals and others.
- Use effective written communication skills with patients, health professionals, and others, including the development of documents pertinent to professional or organizational needs (e.g., monographs, reports).
- Educate target audiences by using the most effective method to deliver information, in coordination with other health care professionals as appropriate.
- Use technology to facilitate or enhance professional communications and presentations.

EO 3   Professionalism, Advocacy, and Leadership (Professional, Leader, Advocate) - Exhibit behaviors and values consistent with the professional trust given by patients, healthcare providers, and society; assure that patients' best interests are represented; and demonstrate responsibility for achieving shared goals regardless of position.

- Conduct pharmacy practice duties and patient care responsibilities in accordance with applicable federal, state, and local laws, statutes, and regulations, as well as professional guidelines and standards.
- Serve as an advocate, leader, and change agent for pharmacy and pharmacists' professional roles and responsibilities by implementing or participating in new, evidence-based models for cost-effective pharmacist-delivered patient care.
- Serve as an advocate for community and patient health and medication therapy needs, including disadvantaged or underserved patients and those from diverse cultural and socioeconomic backgrounds, while honoring their autonomy and dignity.
- Serve as a positive role model in actions/communications for peers and other health care providers by maintaining a high standard for personal and professional demeanor and ethical conduct.
- Respect all points of view in professional interactions while placing patients' needs and desires at the forefront.
- Demonstrate compassion, empathy, honesty, integrity, ethical behavior and altruism in all actions and communications with patients, families, and care providers.
- Develop professional competence through ongoing, active and self-directed pursuit of new knowledge and skills.
- Identify and analyze emerging health care and pharmacy issues and incorporate new roles, products and services into practice that can improve patient outcomes.
- Accept accountability and responsibility for one's words and actions.

EO 4   Self-Awareness (Insightful) – Examine and assess personal knowledge, skills, abilities, attitudes, beliefs, motivation, and emotions and strive for continual improvement.

- Conduct self-assessments on a regular basis and create, implement, evaluate, and modify as needed plans for personal improvement and continuing professional development.
- Recognize personal strengths and limitations and seek assistance when needed.
- Approach tasks and situations with flexibility and a desire to learn.
- Accept constructive criticism and display a willingness to correct and learn from errors.

EO 5   Interprofessional Collaboration (Collaborator) – Actively participate as a healthcare team member by demonstrating mutual respect, understanding, and values to meet patient care needs.

- Collaborate with health care professionals, patients, and/or caregivers to ensure that desired patient-specific or population-based health outcomes are achieved.
- Facilitate team building among health care professionals by developing and maintaining an atmosphere of mutual respect and shared values that place the patient at the forefront.
- Effectively utilize the knowledge, expertise, and unique roles of health care team providers and refer patients to others when indicated.
- Serve as the medication expert on a collaborative care team by managing the pharmacotherapy for patients' medical conditions and by proactively providing drug product and other medication related information to team members.
- Accept responsibility for medication-related outcomes on the care team.

EO 6   Patient Care (Provider) – Provide patient-centered care as the medication expert.

- Accurately interpret, prepare and/or compound, handle and dispense prescriptions for patients.
- Obtain necessary patient-specific data (e.g., consulting patient records, taking medication histories, performing basic physical assessments, ordering/interpreting lab tests), and evaluate and use these data when performing patient care related responsibilities.
- Evaluate pharmaceutical products, including information about the drug, dosage form, delivery system and cost/benefit, when conducting a medication review or preparing a care plan.
- Conduct comprehensive medication reviews and prepare individualized care plans to optimize patient outcomes, with emphasis on commonly encountered chronic or high risk conditions amenable to pharmacotherapy and patients at greater risk for adverse events.

- Work with patients, caregivers, and health care professionals to implement specific therapy plans.
- Educate and empower patients to take an active role in their health and incorporate recommendations for healthy living and self-care into care plans.
- Monitor and evaluate patients during therapy for drug product or pharmacotherapy problems, patient concerns, or adherence issues and recommend or implement solutions.
- Work with patients and other health care providers to ensure the continued success of individual care plans.
- Document patient-care services in charts/medical records and on forms needed for reimbursement.
- Counsel patients and/or caregivers about the following to help ensure a care plan's success: i) medications, non-drug therapy, dietary supplements and natural products; ii) insurance and other options for obtaining necessary medications; iii) proper use of testing devices and medical goods and equipment; and iv) healthy lifestyle changes.

EO 7   Population-Based Care (Promoter, Provider) – Design and implement prevention, intervention, and educational strategies for communities to manage chronic disease and improve health and wellness.

- Develop, recommend, and provide preventive health services, such as administration of vaccines and screening tests.
- Develop and implement disease management programs based upon identified needs and priorities (e.g., cost, access, and patient satisfaction considerations; commonly encountered, chronic conditions managed by pharmacotherapy).
- Evaluate and adjust interventions as needed to maximize population health.
- Promote public awareness of health promotion and disease prevention strategies.
- Design, develop, and disseminate public health related educational materials or services in a culturally competent manner.
- Work with health care professionals and other personnel to identify and help resolve key public health issues and problems, and participate in policies or strategies to address them.

EO 8   Pharmacy and Medication Use Systems (Manager) – Manage patient healthcare needs using human, financial, technological, and physical resources to optimize the safety and efficacy of medication use systems.

- Demonstrate knowledge of pharmacy management including operations, human and fiscal resources, marketing, and leadership principles.
- Design, use, and manage systems to prepare, dispense, distribute and administer medications to optimally serve patient's drug-related needs.
- Use knowledge of the organization and financing of the U.S. healthcare system to provide and effectively manage progressive pharmacy services.
- Develop a business plan for integrating clinical and distributive services that includes methods for supporting and obtaining reimbursement for clinical services provided to patients.
- Demonstrate and apply knowledge of national standards, guidelines, best practices, and established principles and processes for safe medication use to protect patient safety.
- Participate in quality improvement programs and employ performance indicators to enhance the quality of care and cost effectiveness of services provided and to optimize safe, appropriate medication use.
- Participate in developing and performing medication use evaluations to identify and resolve drug therapy problems or concerns.
- Reconcile a patient's medications when transitioning from one care setting to another by communicating effectively with all involved health care professionals.
- Use current and emerging information and system technologies to enhance safe and effective medication use.
- Provide recommendations for developing and managing a formulary that incorporate pharmacoeconomic principles.
- Actively participate in, and contribute to the development of, strategies to minimize drug misuse/abuse.

DOCTOR OF PHILOSOPHY (PH.D.)

The overall goals of the Ph.D. program in Health Services and Outcomes Research are:

- To educate and train highly qualified individuals to pursue independent research in health services and outcomes research (HSOR) within interdisciplinary teams, and to function and contribute as a member of a research team.
- To prepare competent scientists able to contribute to health-related research, industrial research and development, pharmaceutical education, and scholarship.
- To advance research in pharmaceutical and healthcare delivery.
- To provide leadership for the pharmacy profession in research, graduate education, and health policy making.

The program is designed to prepare students to become independent researchers. Students will develop competencies in the scientific research process through didactic studies and conceptualizing, designing, conducting, and reporting original research.

Didactic Studies

- To learn basic principles and apply these principles to specific disciplines and related fields to cultivate a broad background of knowledge.
- To develop research skills, including scientific communication and critical thinking/problem solving abilities by participating in seminars and designated research skill courses.

Research Training

- To acquire practical experience in conducting original research, including acquisition of background information (e.g. literature research), problem development, experimental design and experimentation, collecting primary data and using secondary data, and data analyses.
- To foster research communication skills by writing abstracts for research presentations, manuscripts for publication, research grant proposals, and a thesis or dissertation.
- To gain additional insight into research and scholarship by participating in scholarly exchanges with faculty and students in the WVU School of Pharmacy, the Health Sciences Center (HSC), as well as the national and international healthcare community.

DOCTOR OF PHILOSOPHY (PH.D.)

Student Learning Outcomes of the Pharmaceutical & Pharmacological Sciences graduate education program are focused on preparing students to become independent researchers. To be successful in our program pathways, students will need to develop competencies in the scientific research process through didactic studies in an area of emphasis and then conceptualizing, designing, conducting, and reporting original research.

Student Learning Outcomes

- Demonstrate competency in the 5 content areas of pharmaceutical and pharmacological sciences:
  - Drug Chemistry
  - Pharmacokinetics
  - Principles of Drug Action
  - Approaches to Drug Discovery
  - Biopharmaceutics
- Independently design experimental protocols that include the principles of rigor and reproducibility, conduct the experiments, analyze the results, and defend the experimental approach to other scientists.
- Develop and plan the test of hypotheses regarding significant problems in the student's chosen area of specialization
- Demonstrate critical thinking/problem solving ability by effectively criticizing the neuroscience literature and by asking relevant questions in seminars.
- Ability to effectively reference the relevant literature in support of the student's research project. Ability to identify significant gaps in knowledge on this scientific topic.
- Effectively communicate scientific information in written abstracts for research presentations, manuscripts for publication, research grant proposals, and the dissertation.
- Effectively communicate scientific information in both formal and informal oral presentations.

Accreditation

The Pharm.D. program within the School of Pharmacy has specialized accreditation through the Accreditation Council for Pharmacy Education.

Health Services and Outcomes Research, Ph.D.

Degree Offered

- Doctor of Philosophy

Nature of the Program

WHAT IS HEALTH SERVICES AND OUTCOMES RESEARCH?

The Health Services and Outcomes Research program emphasizes population-based, health services delivery and outcomes, and policy research.

Health services research examines how people get access to health care, how much care costs, and what happens to patients as a result of this care. The main goals of health services research are to identify the most effective ways to organize, manage, finance, and deliver high quality care; reduce medical errors; and improve patient safety. (AHRQ, 2002)

Outcomes research refers to the scientific design, data collection, and analysis of the end results of medical care. It focuses on quality, cost-effectiveness and the effect of treatment on quality of life in patients. Outcomes research evaluates the effectiveness of health interventions through changes in outcomes such as improvements in patient functional status, satisfaction with care, and mortality. Apart from traditional experimental and quasi-experimental designs, outcomes research methodology embraces epidemiological research designs (such as retrospective or prospective,

longitudinal or cross-sectional, case-control or cohort study designs), or econometric modeling (such as decision-tree analysis, cost-benefit analysis, cost-effectiveness analysis), and survey research methods (such as quality of life measurements, satisfaction with care).

WHY STUDY HEALTH SERVICES AND OUTCOMES RESEARCH?

With health care costs increasing five folds in the last two decades, there has been increasingly greater accountability demanded of health care systems and providers. There has been growing recognition that resources are limited, and health care interventions have to be cost-effective, and not just efficacious in clinical trials. Three particular factors have contributed to growing interest in determining effectiveness of health care interventions: (1) unexplained differences in quality of care or effectiveness by region, population, and type of systems; (2) the desire to control rising health care costs and spread the availability of services to those who do not currently have access; and (3) concern that cost-containment strategies and improving quality of health care are two competing goals.

These factors also led to the passage of the Patient Protection and Affordable Care Act in March 2010. The Affordable Care Act's main focus is on providing more Americans with access to affordable health insurance, improving the quality of health care and health insurance, regulating the health insurance industry, and reducing health care spending in the US. The shift from fee-for-service to fee-for-value necessitates that healthcare providers and institutions optimize their operations and align costs with clinical outcomes.

HOW IS OUTCOMES RESEARCH USED?

Data collected from outcomes research provide patients, physicians, and providers information about what does and does not work in real life settings. It provides other measures of effectiveness such as what treatment provides the best return on investment, and from a patient perspective, what is the most preferred or satisfying treatment option. Overall, outcomes research will lead to better use of limited resources, informed decision-making by patients, providers, and payers, development of guidelines for better disease management - especially for chronic diseases, and better health policy decisions.

WHAT ARE THE GOALS OF THE GRADUATE PROGRAM IN HEALTH SERVICES AND OUTCOMES RESEARCH?

The focus of Health Services and Outcomes Research is to prepare highly qualified graduate students for careers in academia, industry, government, and institutional settings through training in health outcomes and policy research. Areas of specialization include: pharmacoeconomics, health services research, pharmacoepidemiology, health behavior and risk.

WHAT ARE THE JOB OPPORTUNITIES FOR GRADUATES OF THE PROGRAM?

Job opportunities for those with PhD's in this field are excellent and will continue to be so in the near future. Our students are trained to take jobs in Universities, the pharmaceutical industry, government agencies, clinical research organizations, and the managed care industry. Please visit our Alumni – Where are They Now? (http://pharmacy.hsc.wvu.edu/pharmaceutical-systems-and-policy/phd-program-in-health-services-and-outcomes-research/information-for-new-applicants/alumni-where-are-they-now/) page to see where recent graduates of our program are employed.

Frequently Asked Questions

Does this program offer a Master's degree?
This program does not at this time have a terminal Master's degree. Students are only admitted into the PhD Program. Students with a Bachelor or Doctor of Pharmacy degree who are admitted to the program are required to complete a MS on the way to a PhD. Students with a non-thesis Master's degree (e.g. M.P.H.) are required to complete a research project and publish a manuscript by the end of the first year of their PhD studies. Students who already have a research (with thesis) Master's degree are admitted with no such stipulations. All students have to complete the PhD graduation requirements (http://pharmacy.hsc.wvu.edu/pharmaceutical-systems-and-policy/phd-program-in-health-services-and-outcomes-research/information-for-new-applicants/phd-graduation-requirements/) to be awarded a PhD.

How long does it take to finish a PhD degree in this field?
Typically, a student starting without a research Master's degree could take anywhere from 4 to 5 years to complete all of the degree requirements. Students who already have a research Master's degree take less time, about 3 to 4 years.

Is financial assistance available?
A limited number of teaching and research assistantships (with a stipend of $25,000 a year) and fellowships are available within the department. These include an annual stipend and full tuition waiver with the student required to perform 20 hours/week of assistantship duties. Students with assistantships have to pay approximately $625/semester towards the use of the recreation center, the public rapid transport system (PRT), and other such conveniences. The assistantships are available to students throughout the duration of their studies (typically 3 or 4 years) as long as they are performing well in their duties, and making satisfactory progress toward their degree objective. The stipends are sufficient for graduate students to live comfortably and devote sufficient time to their educational program and research training. These assistantships are awarded on a competitive basis each year with the highest ranked applicants given the first offer of available assistantships. Some qualified students may be also offered admission without an assistantship. These students are provided guidance to seeking other campus employment opportunities subject to Immigration and Naturalization Services' regulations in case of foreign students.

Is BS in Pharmacy or Pharm.D. degree (or a pharmacy background) required for admission?

No. Generally, a professional degree in pharmacy, medicine, or a health-related discipline is preferred. Students with Masters Degrees in related fields such as epidemiology, economics, and public health are also encouraged to apply. Students with Master's degree in marketing management, psychology, or sociology with a demonstrated interest or experience in health care may also apply.

What is the entry date into the program?
Because of the sequence of core courses, students are admitted only in the Fall semester only, which typically begins in the middle or last week of August every year. In very rare instances, a student may be admitted in the Spring semester if they already have a research Master's degree, and if the PSP faculty agree that the circumstances of his/her admission warrant special consideration.

How do I apply to the program and what is the application deadline?
All application materials, transcripts, test scores, three letters of recommendation, curriculum vitae of educational qualifications and training and job experiences, and statement of purpose must be submitted to WVU Graduate Admissions (https://app.applyyourself.com/AYApplicantLogin/fl_ApplicantConnectLogin.asp?id=wvugrad) by **February 1st** of the year for consideration of admission in the Fall semester of that year. It is best to start the admission process by September of the year before the Fall semester that you want to be considered to give yourself sufficient time to complete the process and not be affected by unexpected delays. Reviews are completed by the middle or end of March, and applicants are notified of acceptance or rejection with a signed acceptance from those offered an admission required no later than April 15.

How many applications do you receive each year?
The number of applications we receive vary from year to year but has shown a dramatic increase in the last few years. In recent years the numbers have ranged from 25 to 40.

How many students are accepted each year?
The number of students accepted each year vary depending on the number of students who have graduated in the preceding year. Typically, 3-4 students have been admitted per year in the recent past. A total number of 13-16 students are maintained in the program to enable close mentoring and training relationships with faculty advisors.

How is an application to the graduate program evaluated?
An application to the graduate program along with all supporting materials is reviewed by all members of the department graduate faculty. Each application is holistically reviewed first in terms of meeting the minimum academic (a 'B' average or a 3.0 GPA on 4.0 scale) and TOEFL (550 on the paper-based exam and 213 on the computer-based exam) criteria. Applications not meeting these criteria are immediately rejected. The subsequent reviews take place in a committee meeting in which all applications are discussed and ranked through a consensus process. While individual faculty may weigh each criteria slightly different, sustained academic excellence, good to outstanding GRE scores, past work or research experience in areas of interest, well written statement of purpose, leadership and extracurricular activities are all considered important and considered in a holistic way. Telephone or personal interview are typically required by the graduate faculty. Students ranked according to merit are offered admission with an assistantship in the order of listing until no more assistantships are available. A few additional students may be offered admission without an assistantship. A verbal offer by telephone is made to students who are offered admission with assistantships, and upon verbal acceptance of the offer, are sent formal letters of acceptance.

How are grades, GRE/GMAT scores considered in the overall admissions evaluation?
While sustained academic excellence is considered to be among the best predictors of academic performance, GRE scores are also important to compare students from different domestic and international education systems. For students from English speaking parts of the world, quantitative and analytical scores are given more weight than the verbal scores. Faculty participating in application reviews typically look for overall educational achievements, competitive GRE scores, extracurricular and leadership activities, and demonstrated interest in research in the chosen area of study.

What role does TOEFL play in the admission process?
Since all of the education process and research training is in English, students from non-English speaking parts of the world are required to provide TOEFL scores by the University with a score of 500 on the paper-based exam, 173 on the computer-based exam, 61 for TOEFL internet-based, and 60 for IELTS considered to be minimum University requirement. Once admitted, and if awarded a Teaching Assistantship, students are also required to pass a test of spoken English before they are allowed to teach in classes or labs.

Can TOEFL be waived?
Students who have received a high school, bachelor's or Master's degree in the United States *need not* submit TOEFL scores. Please contact the Office of International Students and Scholars (http://oiss.wvu.edu/students) (http://oiss.wvu.edu/students/) to request a waiver.

What are acceptable GRE (or GMAT) scores?
Scores on the GRE (or GMAT) are reported in terms of percentiles. So, for example, if a student scores at the 65th percentile, this means that he or she scored at or better than 65 percent of the students who took that test. We obviously want the best students who apply.

If my GRE (or GMAT) or TOEFL scores are not good, should I retake these exams?
These tests are standardized tests, and typically, student scores do not change much on retaking of these exams. Make sure that you are familiar with the format of these tests and the time constraints for their completion. Practice books are available to familiarize yourself with the exam. If you take these exams and are not satisfied with your scores, you should retake them only if you feel certain that retaking them will help you improve your test scores. If you do retake them, Educational Testing Service will report the results of all attempts within the previous three years.

Are applicants interviewed?

All applicants are interviewed either by video-chats (Skype, or Go-to Meeting) or in person in Morgantown. International students are interviewed by video-chats.

Can I transfer graduate coursework from my current institution if I have not completed a Masters degree?
Yes, on admission to the graduate program and upon forming a PhD committee with an advisor, the committee will take into consideration whatever recent graduate coursework you have completed that can contribute to your plan of study given your educational goals and program needs. WVU allows up to 18 credit hours of coursework to be transferred that are not part of a degree program. See **Application for Transfer of Graduate Credit to WVU**

Are there examples of Master's thesis and PhD dissertations completed by recent graduates to get a flavor of the type of research projects that graduate students do at WVU?
Yes, please visit Recent MS thesis and PhD dissertations (https://pharmacy.hsc.wvu.edu/pharmaceutical-systems-and-policy/phd-program-in-health-services-and-outcomes-research/information-for-new-applicants/phd-dissertations/) for titles completed by recent graduates.

What is it like to study at West Virginia University (WVU) and live in Morgantown?
West Virginia University, founded in 1867, is located in Morgantown, West Virginia, is one of only 46 public universities that serve their state as research and land-grant institutions. Through 15 colleges and schools, WVU offers 193 bachelors, master's, doctoral and professional degree programs.

WVU is a Doctoral/ Research University - Extensive as classified by the Carnegie Classification of Institutions of Higher Education -- based on the complexity and breadth of the institution's mission. As West Virginia's major research and development center and only comprehensive doctoral-granting institution, WVU faculty conducts over $150 million in sponsored contracts and grants per year.

The WVU System spans the state, including 518 buildings on 15,880 acres (main campus 430 buildings/1,456 acres). Eleven main campus buildings are on the National Register of Historic Places, and WVU operates eight experimental farms and four forests throughout the state. The University's total operating budget is approximately $900 million. WVU's student body is comprised of over 31,524 students with 28,776 on the Morgantown campus. These students hail from all West Virginia counties, nearly all 50 states, and close to 100 foreign nations. Chartered in 1873, the WVU Alumni Association is made up of more than 190,000 graduates worldwide in some 135 nations. For more information about West Virginia University and a virtual tour of the campus, visit: http://www.wvu.edu/.

Morgantown, W.Va., population 31,073 (US Census Bureau, 2014), was rated "No. 1 Small City in America" by *BizJournals.com. Business Insider* named Morgantown the ninth best college town in America. Within easy traveling distance of Washington, D.C., to the east, Pittsburgh, Pa., to the north, and Cleveland and Columbus, Ohio, to the northwest. Other recent rankings: Kiplinger.com included Morgantown in their 10 great places to live list; one of "Best Sports Cities" by *Sporting News*; 5th "Best Small Metro" by *Forbes*; 12th overall "Hottest Small City" by *Inc.*; one of "50 Smartest Places to Live" by *Kiplinger's*; and the second-ranking "Best College Town for Jobs" by *Forbes*. WVU has divisional campuses in Charleston, Keyser, Martinsburg and Montgomery.

Monongalia County in which Morgantown is located is a community of about 80,000 people in the Appalachian Mountains on West Virginia's northern border. While the state is rural and the community quiet, Morgantown is within easy traveling distance from Pittsburgh, which is 75 miles (115 kilometers) north, and Baltimore and Washington, both of which are 200 miles (325 kilometers) east. Two major four-lane highways, Interstate 79 and Interstate 68, pass through Morgantown. U.S. 19 and U.S. 119 also pass through Morgantown.

For information about the Morgantown area, students can visit the Greater Morgantown Convention and Visitors Bureau homepage at www.tourmorgantown.com/ (http://tourmorgantown.com/) or the City of Morgantown homepage at www.morgantownwv.gov (http://www.morgantownwv.gov/). (http://morgantown.com/)

What if I have more questions or concerns?
If your question is not addressed anywhere in the list of frequently asked questions…

- For questions about other programs, life at WVU, and other information for prospective students please visit Graduate Education at http://graduate.wvu.edu/.
- For questions about University policies on graduate programs at West Virginia University, please visit: Undergraduate, Graduate, and Health Sciences Center Catalogs (http://catalog.wvu.edu/).

For application related inquiries, status of application file, confirmation of materials, scores, received, admission status, etc., please contact:

Kimberly M. Kelly, Ph.D.
Associate Professor
HSOR Admissions Coordinator
Pharmaceutical Systems & Policy
Telephone: 304-293-1453
E-mail: kmkelly@hsc.wvu.edu

For specific Health Services and Outcomes Research graduate program related inquiries, please contact:

Usha Sambamoorthi, Ph.D.
Professor

HSOR Graduate Program Director
Pharmaceutical Systems & Policy
Telephone: 304-293-1451
Email: usambamoorthi@hsc.wvu.edu

For more details about the PhD program in HSOR go to: http://pharmacy.hsc.wvu.edu/department-of-pharmaceutical-systems-and-policy/phd-program-in-health-services-and-outcomes-research/

Admissions

Applicants considered for admission to the doctoral program must meet the following minimum requirements.

- A professional degree in Pharmacy (Pharm.D.), Medicine (M.D.), or a Master's degree in pharmacy administration. Students with a Master's degree in related fields such as epidemiology, public health, health care administration, are also encouraged to apply. Students with a Master's degree in related fields such as marketing, management, economics, psychology, or sociology with a demonstrated interest or experience in health care may also apply.
- Outstanding students with a B.S. in pharmacy or pharmaceutical sciences may be considered for direct admission into the Doctoral program
- College transcript with a minimum of a B average (3.0 on a 4.0 scale)
- GRE or GMAT scores (International applicants must also take the TOEFL examination and score at least 550 on the paper exam, 213 on the computer-based exam, or 79-80 on the internet exam) evaluating potential for graduate studies
- Supportive letters of recommendation (at least three)
- Satisfactory personal or telephone interview (whenever possible)
- Statement (one page) of personal goals describing background, academic/ research interests and career objectives
- A resume or curriculum vitae listing educational and employment history
- Application deadline is February 1st of each year

INTERNATIONAL APPLICANTS

International students should also be aware of the following:

- International applicants must present the Test of English as a Foreign Language or TOEFL (minimum of 550 on the paper-based exam, 79-80 on the internet exam, or 213 on the computer-based exam) if they are from a non-English speaking country or the official language of the country is not English. Applicants are urged to arrange for one of these tests well in advance of the desired enrollment period.
- International students who have completed a M.S. degree or any degree in the U.S. may request a waiver for submitting TOEFL results. They should contact the Office of International Students and Scholars (https://oiss.wvu.edu/) for approval.
- International students should not plan to leave their country without a formal notification of admission from the Office of Admissions at WVU. International students admitted without an assistantship must submit a statement of financial status in order to be registered at WVU.
- International students admitted to the program must report to the Office of International Students and Scholars upon arrival at WVU. Students are responsible for making sure that they are in compliance with immigration requirements.

APPLICATION PROCESS (MAJOR CODE 8980)

DEADLINE: FEBRUARY 1

Application to the Health Services and Outcomes Research PhD program is completed electronically at https://app.applyyourself.com/AYApplicantLogin/fl_ApplicantConnectLogin.asp?id=wvugrad

Please choose Major Code: **8980.**

West Virginia University requires the following information for application through the WVU online application portal. Please note that all materials are submitted through the portal. Do not send materials to the School of Pharmacy unless instructed to do so by the Office of Student Services.

1. One copy of official transcripts (original or certified; minimum of a B average or a 3.0 GPA on a 4.0 scale) in a sealed envelope from each college you have attended.
2. Original or certified copies of all degrees/diplomas/certificates received in the original language.
3. Translation of an applicant's foreign transcripts and diplomas/certificates may be sent directly to a foreign transcript service for evaluation. If using a foreign transcript service, please have the evaluated documents submitted the WVU Office of Graduate Admissions.
4. Official GRE Scores and TOEFL or IELTS scores.
5. Statement of personal goals describing your background, academic interests, and career objectives.
6. A resume or curriculum vitae listing educational and employment history.
7. Three letters of recommendation from persons who are in a position to evaluate your potential for graduate school. At least one recommendation must be from a person at the last school you attended for full-time study, unless you have been out of school for five years or longer.

Direct admission related inquiries to:
Kimberly M. Kelly, Ph.D.
Associate Professor
HSOR Admissions Coordinator
Pharmaceutical Systems & Policy
Telephone: 304-293-1453
E-mail: kmkelly@hsc.wvu.edu

Direct program related inquiries to:

Usha Sambamoorthi, Ph.D.
Professor
HSOR Graduate Program Director
Pharmaceutical Systems & Policy
Telephone: 304-293-1451
Email: usambamoorthi@hsc.wvu.edu

Students considered for admission will participate in an interview and will be notified of their candidacy in the spring prior to admission.

- See more at: http://pharmacy.hsc.wvu.edu/department-of-pharmaceutical-systems-and-policy/phd-program-in-health-services-and-outcomes-research/

Curriculum Requirements

PUBA 670	Health Systems	3
PHAR 769	Advanced Health Service Research Methods	3
PHAR 757	Patient Reported Outcomes	3
BIOS 601	Applied Biostatistics 1	4
BIOS 603	Applied Biostatistics 2	3
PHAR 755	Pharmacoeconomics	3
PHAR 753	Social and Behavioral Theory and Health Outcomes Research	3
PHAR 756	Health Survey Research Methods	3
PHAR 785	Pharmacoepidemiology	3
PHAR 786	Health Services Research and Secondary Database	3
PHAR 777	Health Outcomes Research Designs	2
PHAR 754	Decision Analysis in Healthcare	3
PHAR 767	Scientific Writing: Health Services and Outcomes Research	3
PHAR 758	Ethical and Regulatory Aspects of Clinical Research	2
Research		6
PHAR 797	Research	
Seminar		6
PHAR 788	Graduate Seminar in Health Outcomes Research	
Electives (from Suggested Electives or any 600 or 700 level courses)		**12**
Total Hours		65

Suggested Electives

Quantitative Emphasis

BIOS 610	Biostatistical Theory and Methods 1	4
BIOS 611	Data Management and Reporting	3
BIOS 612	Biostatistical Theory and Methods 2	3
BIOS 620	Applied Linear Models HS	3
BIOS 621	Categorical Data Analysis HS	3
PSYC 711	Seminar in Methodology	3
PHAR 768	HEOR/HSOR Internship	1 to 6
Behavioral Emphasis		
PHAR 759	Clinical and Population Practicum	1
SBHS 613	Public Health Program Evaluation	3

SBHS 615	Intervention Design	3
SBHS 701	Public Health Grant Writing	3
SBHS 761	Qualitative Research Methods	3
Health Policy Emphasis		
HPML 601	Foundations of Health Policy	3
HPML 622	Analytic Methods for Health Policy, Management, and Leadership	3
HPML 624	Advanced Issue Analysis for Health Policy	3
HPML 670	Policy Analysis for Population Health 1	3
HPML 671	Population Health Policy Analysis Informatics 1	3
Epidemiology Emphasis		
EPID 611	Concepts and Methods of Epidemiology	3
EPID 712	Quantitative Methods in Epidemiology	3
Health Care Administration		
PUBA 671	Healthcare Organization and Operation	3
PUBA 672	Healthcare Finance	3
PUBA 673	Alternative Healthcare Delivery Systems	1
PUBA 674	Rural Healthcare	1
PUBA 675	Organization Performance Improvement	1
PUBA 774	Healthcare Law and Ethics	1
PUBA 770	Managed Care	1
PUBA 775	Healthcare Policy	1
PUBA 776	Healthcare Planning/Marketing	1

Major Learning Outcomes

The overall goals of the PhD program in Health Services and Outcomes Research are:

1. To educate and train highly qualified individuals to pursue independent research in health services and outcomes research (HSOR) within interdisciplinary teams, and to function and contribute as a member of a research team.
2. To prepare competent scientists able to contribute to health-related research, industrial research and development, pharmaceutical education, and scholarship.
3. To advance research in pharmaceutical and healthcare delivery.
4. To provide leadership for the pharmacy profession in research, graduate education, and health policy making.

The program is designed to prepare students to become independent researchers. Students will develop competencies in the scientific research process through didactic studies and conceptualizing, designing, conducting, and reporting original research.

Didactic Studies

1. To learn basic principles and apply these principles to specific disciplines and related fields to cultivate a broad background of knowledge.
2. To develop research skills, including scientific communication and critical thinking/problem solving abilities by participating in seminars and designated research skill courses.

Research Training

1. To acquire practical experience in conducting original research, including acquisition of background information (e.g. literature research), problem development, experimental design and experimentation, collecting primary data and using secondary data, and data analyses.
2. To foster research communication skills by writing abstracts for research presentations, manuscripts for publication, research grant proposals, and a thesis or dissertation.
3. To gain additional insight into research and scholarship by participating in scholarly exchanges with faculty and students in the WVU School of Pharmacy, the Health Sciences Center (HSC), as well as the national and international healthcare community.

Pharmaceutical and Pharmacological Sciences, Ph.D.

Degree Offered

- Doctor of Philosophy

The Pharmaceutical and Pharmacological Sciences Graduate Program is housed in the School of Pharmacy and associated with the Department of Pharmaceutical Sciences. The program is one of the Ph.D. degree-granting programs in Biomedical Sciences at the WVU Health Sciences Center (HSC).

The Pharmaceutical and Pharmacological Sciences Graduate Program at West Virginia University is an interdisciplinary program that prepares students for a future in a variety of employment settings, ranging from academic research and industry to federal positions. Our students have a unique and rich training environment, which gives them a basis in such pharmaceutical sciences disciplines as drug development and discovery, pharmaceutics, pharmacology, toxicology, therapeutic development and regulatory affairs. Students can take additional graduate courses in drug delivery systems, drug metabolism, molecular modeling, bench to bedside and biotechnology.

The core areas of Ph.D. training in Pharmaceutical and Pharmacological Sciences are:

1. pharmacology and therapeutic development,
2. drug delivery, and,
3. drug discovery and biotechnology.

The students are mentored by experts with an international reputation and publish in prestigious journals. They also have opportunities to present their research at national and international scientific meetings and to enroll in internships with pharmaceutical or biotech companies.

Upon completion of the second year of study, students must submit a formal plan of study and a research plan that is approved by their Ph.D. committee. Progress is expected to continue with guidance from the student's research committee. Final admission to candidacy requires satisfactory performance on written and oral qualifying examinations, including a dissertation proposal defense. Subsequent to admission to candidacy, a substantial part of the program is devoted to an original research project which culminates in a first-authored publication and dissertation. To be recommended for a Ph.D., the dissertation must be satisfactorily completed and defended at an oral examination. Typically, four to five years are needed to graduate.

Academic Standards

No credits are acceptable toward a graduate degree with a grade lower than a C. A graduate student is expected to have a cumulative grade point average of at least 3.0 in all graduate courses to continue in the program and to qualify for a Ph.D. degree.

Introduction

The WVU School of Pharmacy offers graduate programs in the pharmaceutical and pharmacological sciences for the Ph.D. degree. The school is advantageously located in the Health Sciences Center complex which also houses all departments of the Schools of Medicine, Nursing, and Dentistry, as well as a comprehensive medical library, audio-visual and computer-based learning center, research core facilities, and laboratory animal quarters. State-of-the-art research laboratories are located throughout the Health Sciences Center complex to facilitate interactions with the Mary Babb Randolph Cancer Center, Center for Neuroscience, and Center for Cardiovascular and Respiratory Sciences. In addition, the Health Sciences Center has easy access to the Evansdale and Downtown campuses of WVU through a personal rapid transit (PRT) system. The scientific community, which is especially well-developed, draws on area scientists throughout WVU, the Centers of Disease Control/National Institute on Occupational Safety and Health (CDC/NIOSH), Federal Bureau of Investigation (FBI), and a variety of research centers supported by the National Institutes of Health (NIH), National Science Foundation (NSF), and the Department of Energy (DOE). A CDC/NIOSH research facility is two blocks away, and Mylan Pharmaceuticals, a leading generic drug producer in the world, is located across the street from the Health Sciences Center. In addition, the school has long-standing collaborations with several state agencies and multinational pharmaceutical companies.

Admissions

Applicants for admission into the graduate program must satisfy the WVU and Health Sciences Center general requirements for admission as a graduate student. Applicants interested in this program must apply through a common admissions portal. Choice of this graduate program occurs during the first year of graduate study after selection of an advisor for your dissertation research. Applications include a personal statement, transcripts from all Colleges or Universities attended, and 2 letters of recommendation. Applicants must arrange to have official copies of transcripts sent directly to the WVU Office of Graduate Admissions and Recruitment. Competitive applicants have a STEM GPA of 3.5 or higher and possess a baccalaureate degree that provides sufficient scientific background the basic sciences. Note that the graduate record exam (GRE) is not required and will not be considered in evaluating applications.   TOEFL scores are required of international students from countries where English is not the primary language.

To review the application process, please visit:

https://www.hsc.wvu.edu/resoff/graduate-education/phd-programs/biomedical-sciences/prospective-students/

To obtain specific information related to the school's graduate programs, graduate faculty research interests, and availability of graduate assistantships or fellowships, applicants may contact program directors.

Graduate Director:
Werner J. Geldenhuys, B.Pharm., Ph.D.
Phone: 304-581-1683

Email: werner.geldenhuys@hsc.wvu.edu

Co-Director:
Grazyna D. Szklarz, Ph.D.
Phone: 304-293-1473
Email: gszklarz@hsc.wvu.edu

Doctor of Philosophy

The School of Pharmacy offers a doctor of philosophy (Ph.D.) degree in pharmaceutical and pharmacological sciences aimed at training competent researchers and educators.

MAJOR REQUIREMENTS

BMS 700	Scientific Integrity	1
BMS 701	Scientific Rigor and Ethics	1
BMS 702	Biomedical Lab Experience	2
BMS 706	Biomedical Research Methods	1
BMS 707	Experiential Learning for Biomedical Trainees	2
BMS 720	Scientific Writing	2
BMS 747	Foundations for Contemporary Biomedical Research I	4
BMS 777	Foundations for Contemporary Biomedical Research II	4
PHAR 779	Drug Discovery	3
PHAR 706	Biopharmaceutics	2
PHAR 805	Drug Chemistry	2
PHAR 809	Principles of Drug Action	2
PHAR 816	Pharmacokinetics	2
Graduate Seminar		7
PHAR 796	Graduate Seminar	
Research		42-44
PHAR 797	Research	
Journal Clubs (Select from the following)		7
PHAR 782	Tumors of the Central Nervous System Journal Club	
PHAR 783	Pharmacy Cell Biology Seminar	
PHAR 784	Pharmacology Journal Club	
PHAR 787	Drug Discovery and Development	
Advanced Courses/Electives*		4-8
PHAR 780	Introduction to Molecular Modeling	
PHAR 781	Drug Metabolism	
PHAR 803	Physical Pharmacy	
PHAR 804	Drug Delivery Systems	
PHAR 806	Pharmaceutical Biotechnology	
PHAR 808	Pharmacogenomics	
Qualifying Exams		
Dissertation Proposal Defense		
Dissertation Defense		
*Note: Other graduate courses at WVU may be taken as an elective with the permission of the student's advisory committee.		
Total Hours		90-92

PHARMACEUTICAL AND PHARMACOLOGICAL SCIENCES PATHWAY SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours	Summer	Hours
BMS 700	1	BMS 701	1	PHAR 797	3
BMS 706	1	PHAR 797	1		
BMS 702	2	PHAR 796	1		
BMS 747	4	Journal Club (select from the following)	1		
BMS 777	4	PHAR 782			
		PHAR 783			
		PHAR 784			
		PHAR 787			
		PHAR 706	2		
		PHAR 805	2		
		PHAR 809	2		
		PHAR 816	2		
	12		**12**		**3**

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
PHAR 779	3	Advanced Courses/ Elective Modules (select from list)	2-3	PHAR 797	1
Advanced Courses/ Elective Modules (Select from the list)	2-5	PHAR 796	1	BMS 720	2
PHAR 796	1	Journal Club (Select from the following)	1		
Journal Club (Select from the following)	1	PHAR 782			
PHAR 782		PHAR 783			
PHAR 783		PHAR 784			
PHAR 784		PHAR 787			
PHAR 787		PHAR 797	4-5		
PHAR 797	1-2	Take Qualifying Exams			
* Students must sign up for a minimum of 9 credit hours.		* Students must sign up for a minimum of 9 credit hours.			
	9-11		**9**		**3**

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
PHAR 796	1	PHAR 796	1	PHAR 797	1
Journal Club (Select from the following)	1	Journal Club (Select from the following)	1	BMS 707	2
PHAR 782		PHAR 782			
PHAR 783		PHAR 783			
PHAR 784		PHAR 784			
PHAR 787		PHAR 787			
PHAR 797	7	PHAR 797	7		
Proposal Defense		*Students must sign up for a minimum of 9 hours			

Fall	Hours	Spring	Hours	Summer	Hours
*Students must sign up for a minimum of 9 hours					
	9		9		3

Fourth Year

Fall	Hours	Spring	Hours	Summer	Hours
PHAR 797	7	PHAR 797	7	PHAR 797	3
PHAR 796	1	PHAR 796	1		
Journal Club (Select from the following)	1	Journal Club (Select from the following)	1		
PHAR 782		PHAR 782			
PHAR 783		PHAR 783			
PHAR 784		PHAR 784			
PHAR 787		PHAR 787			
*Students must sign up for a minimum of 9 hours.		*Students must sign up for a minimum of 9 hours			
	9		9		3

Total credit hours: 90-92

Major Learning Outcomes

DOCTOR OF PHILOSOPHY (PHD)

Student Learning Outcomes of the Pharmaceutical & Pharmacological Sciences graduate education program are focused on preparing students to become independent researchers. To be successful in our program pathways, students will need to develop competencies in the scientific research process through didactic studies in an area of emphasis and then conceptualizing, designing, conducting, and reporting original research.

Student Learning Outcomes

1. Demonstrate competency in the 5 content areas of pharmaceutical and pharmacological sciences:
    a. Drug Chemistry
    b. Pharmacokinetics
    c. Principles of Drug Action
    d. Approaches to Drug Discovery
    e. Biopharmaceutics
2. Independently design experimental protocols that include the principles of rigor and reproducibility, conduct the experiments, analyze the results, and defend the experimental approach to other scientists.
3. Develop and plan the test of hypotheses regarding significant problems in the student's chosen area of specialization
4. Demonstrate critical thinking/problem solving ability by effectively criticizing the relevant literature and by asking relevant questions in seminars.
5. Ability to effectively reference the relevant literature in support of the student's research project. Ability to identify significant gaps in knowledge on this scientific topic.
6. Effectively communicate scientific information in written abstracts for research presentations, manuscripts for publication, research grant proposals, and the dissertation.
7. Effectively communicate scientific information in both formal and informal oral presentations.

Doctor of Pharmacy (Pharm. D.)

Degree Offered

- Doctor of Pharmacy (Pharm.D.)

Nature of the Program

INTERPROFESSIONAL EDUCATION OPPORTUNITIES

A wide array of health care learners at West Virginia University enables pharmacy students to learn with, from and about other health care professionals and students to prepare them to improve patient outcomes through interprofessional collaboration. Along with students from medicine, dentistry, public health, nursing, physical/occupational therapy, and others, students work collaboratively in interprofessional learning experiences. At WVU,

interprofessional education is a longitudinal thread that is progressive and reinforced throughout all four years. These experiences are supplemented by co-curricular activities such as community service projects outside of the classroom and other extracurricular activities. Experiences include:

- First Year Experience: First year longitudinal experience with students from a variety of health professions discussing and working through hands-on activities related to professional roles, teamwork, communication, and quality and safety.
- Second Year Service Projects: Advancing the objectives of the US Department of Health and Human Services' Healthy People 2020 through service initiatives. Students work collaboratively with students from other health professions to develop and implement health fairs across the state and to provide education to middle and high school students on the neurosciences behind drugs of abuse.
- Third Year Acute Care Pharmacy Practice Experience: Third year students work with nursing and medical students for a simulated patient care rounds experience in the West Virginia Simulation Training and Education for Patient Safety (WV STEPS) Center.
- Fourth Year Advanced Pharmacy Practice Experiences: Students work with a variety of students from other health professions providing direct patient care during five-week rotations in a variety of health care settings.

PROGRAM INFORMATION

AREA OF EMPHASIS IN ADVANCED CLINICAL PRACTICE

The Advanced Clinical Practice Area of Emphasis (AoE) is designed to enhance the preparation and competitiveness of Doctor of Pharmacy students applying for a PGY-1 residency. The AoE focuses on providing didactic and experiential education, as well as one-on-one mentorship, to allow students to understand and appreciate the nuances of clinical pharmacy practice. This track will offer a road map for students to be successful in critical areas including scholarship experience, organizational involvement, experiential education, and additional basic tools for navigating the application and interview process. The experiences provided in the AoE will provide students with a strong core foundation upon which further training in a residency program can expand upon. More information can be found on the School's web page (https://pharmacy.hsc.wvu.edu/student-services/pharmd-program/areas-of-emphasis-program/).

AREA OF EMPHASIS IN COLLEGE TEACHING IN PHARMACY

This area of emphasis program helps to prepare student pharmacists for teaching at the college level. The program combines courses and expertise at the university level with those at the School of Pharmacy to provide a broad range of knowledge and experience in pedagogy training, diversity issues in higher education, current issues in academic pharmacy education, and mentored teaching experience. Together, the program components will develop students' ability to design and teach their own courses while implementing effective classroom techniques and assessment. By completing the area of emphasis, students will be more competitive for residency and fellowship programs with an emphasis in teaching and will also be prepared to participate in college teaching as an adjunct pharmacy instructor or preceptor. More information can be found on the School's web page (https://pharmacy.hsc.wvu.edu/student-services/pharmd-program/areas-of-emphasis-program/).

AREA OF EMPHASIS IN GERIATRIC PHARMACY

This area of emphasis program offers students pursuing the Doctor of Pharmacy degree the opportunity to explore the basic biological, psychological, sociological and medical processes of aging, the needs and experiences of older people, and the impact of social policies related to human aging. An understanding of the unique experiences and needs of older adults in Appalachia and other rural areas is emphasized. More information can be found on the School's web page (https://pharmacy.hsc.wvu.edu/student-services/pharmd-program/areas-of-emphasis-program/).

AREA OF EMPHASIS IN GLOBAL HEALTH (FOR PHARMACY)

The area of emphasis program in global health trains students to be able to provide patient-centered care at home and abroad. Its focus is on providing both didactic and experiential education that will allow students to have an understanding and an appreciation for the global nature of healthcare and how pharmacy practice can impact individuals worldwide. More information can be found on the School's web page (https://pharmacy.hsc.wvu.edu/student-services/pharmd-program/areas-of-emphasis-program/).

AREA OF EMPHASIS IN TRANSLATIONAL PHARMACY RESEARCH

The Area of Emphasis (AoE) in Translational Pharmacy Research will allow students to understand and recognize the importance of and participate in translational research (e.g., how basic sciences contributions are applied in improving the quality of patients' health, how observations in the clinic direct new scientific hypotheses, and how health services and outcomes research impacts access, cost, quality and outcomes of health care). Participants conduct original research under the mentorship of a faculty member. More information can be found on the School's web page (https://pharmacy.hsc.wvu.edu/student-services/pharmd-program/areas-of-emphasis-program/).

DUAL PHARM.D./ONLINE HYBRID MASTER OF BUSINESS ADMINISTRATION (OHMBA)

The dual Pharm.D./Online Hybrid Master of Business Administration (OHMBA) program provides outstanding career opportunities for graduates by building expertise in business administration principles and managerial practices coupled with therapeutic knowledge and expertise in medication management. The goal of the dual degree program is to prepare the next generation of leaders, managers, and administrators for rewarding careers in health care or pharmaceutical organizations. Opportunities for the dual degree graduates include leadership positions in hospitals and health systems, pharmacy benefit management companies, government organizations, the pharmaceutical industry, chain pharmacy corporations, and owning, franchising, or operating an independent pharmacy. Through a well-coordinated plan of study in both degree programs, the dual Pharm.D./OHMBA degree students will be able to obtain two nationally-accredited graduate degrees - OHMBA and Pharm.D. degrees - during the course of the 4-year

Pharm.D. program. Additional information, including the plan of study, can be found at the School's web page (http://pharmacy.hsc.wvu.edu/student-services/pharmd-program/pharmdmba-program/).

Academic and Technical Standards

In accordance with section 504 of the Rehabilitative Act of 1973 (PL 93-112), and incorporating the guidelines of the Americans with Disabilities Act (ADA PL 101-336) enacted by Congress in 1990, the West Virginia University School of Pharmacy has adopted minimal technical standards for the assessment of admission, scholastic advancement, and graduation for its professional degree (Doctor of Pharmacy) program.

Because the Doctor of Pharmacy (Pharm.D.) degree signifies that the holder is a pharmacist prepared for entry into the practice of pharmacy, it follows that graduates must have the knowledge, skills, and demeanor to function in a broad variety of clinical situations and to conduct a wide spectrum of pharmaceutical care activities.

Candidates for admission into, progression through, and graduation from the Pharm.D. program must have the functional use of the senses of vision and hearing. Candidates' pharmaceutical skills will also be lessened without the functional use of the senses of equilibrium, smell, and taste. Additionally, they must have sufficient motor function to permit them to carry out the activities described in the sections that follow. They must be able to consistently, quickly, and accurately integrate all information received by whatever sense(s) employed, and they must have the intellectual ability to learn, integrate, analyze, and synthesize data.

A candidate for the Pharm.D. degree must have abilities and skills of five varieties including:

- Observation
- Communication
- Motor
- Conceptual, integrative, and quantitative
- Behavioral and social

Technological compensation can be made for some handicaps in certain of these areas, but a candidate should be able to perform in a reasonably independent manner. The use of a trained intermediary means that a candidate's judgment must be mediated by someone else's power of selection and observation. For details, see the Technical Standards document published online (http://pharmacy.hsc.wvu.edu/media/1960/technical-standards-revised-november-17-2015.pdf).

Student Course Load

Students in the Doctor of Pharmacy program are expected to register for all required classes in a semester unless directed not to do so by the Committee on Academic and Professional Standards or the Office of Admissions and Student Affairs. Full-time students in the School of Pharmacy may not register for less than nine credit hours during any semester without written approval of the Committee on Academic and Professional Standards. For an exception, a letter of petition must be submitted to the Committee on Academic and Professional Standards through the School of Pharmacy's Office of Admissions and Student Affairs.

Promotion and Graduation Requirements

EVALUATION OF STUDENT PROGRESS

Promotion of a student in the Doctor of Pharmacy program is evaluated in two major areas: successful completion of all curricular and co-curricular requirements, and appropriate adherence to the professional standards of the School of Pharmacy.

The following information is only a brief outline of the School of Pharmacy policies and procedures. Detailed requirements and policies for evaluation of student progress and graduation can be found in the *Policy on Academic and Professional Standards Governing the Doctor of Pharmacy Degree Program at West Virginia University School of Pharmacy* and may be viewed on the School of Pharmacy website. Copies are available at the Office of Admissions and Student Affairs. The Committee on Academic and Professional Standards administers all promotion and academic penalty rules.

ACADEMIC COURSEWORK REVIEW

The Committee on Academic and Professional Standards of the School of Pharmacy reviews the performance of each student in every course at the end of each academic period.

If a student has been found to have unsatisfactory performance in any course as indicated by a grade less than a C or a semester GPA less than 2.5, a student will be placed on probation. Students on probation are not eligible to hold office in student organizations or receive School of Pharmacy scholarships. Students on probation are expected to be present for all of their classes and laboratories. Students failing to complete any required remedial actions or meet the specified performance requirements during the probationary period may be subject to academic suspension or dismissal.

After academic dismissal, a student may apply for readmission to the School of Pharmacy. Readmission of a student is the decision of the Admissions Committee following a recommendation by the Committee on Academic and Professional Standards.

GRADING POLICY

Courses in the Doctor of Pharmacy degree program are graded either as A (excellent), B (good), C (fair), F (failing), I (incomplete), or on a (P) pass/(F) fail basis. Grades may be accompanied by a narrative report on the student's progress, noting any factors requiring remedial work or counseling. It is customary that all experiential courses are accompanied by a narrative evaluation.

The grade of incomplete (I) is given when the instructor believes that the work is unavoidably incomplete. If the grade of I is not removed by the satisfactory completion of the work before the end of the next semester in which the student is in residence, it becomes a failure (F) unless special permission to postpone the work is obtained from the course coordinator of record. It is the responsibility of the student to consult the instructor about the means and schedule for completing incomplete courses. A contract specifying what work must be completed and when should be drawn up by the instructor and signed by the instructor and student.

PROFESSIONAL STANDARDS REVIEW

In view of public and professional responsibilities, the faculty of each of the professional schools of WVU has the authority to recommend the removal of any student from its program whenever, by formal decision reduced to writing, the faculty finds that the student is unfit to meet the qualifications and responsibilities of the profession. Further information is provided in The Policy on Academic and Professional Standards Governing the Doctor of Pharmacy Degree at West Virginia University School of Pharmacy, which is available at the School of Pharmacy Office of Admissions and Student Affairs.

Special Requirements

The Board of Pharmacy requires 1,500 clock hours of internship experience for licensure in West Virginia. Students are required to obtain an Intern Certificate from the West Virginia Board of Pharmacy in order to accrue intern hours. Any hours worked before becoming a registered intern will not apply toward meeting the WV board requirements. Students must have a valid Intern Certificate throughout their entire experiential years of the Pharm.D. program. The Board of Pharmacy holds final authority over internship rules and regulations. All 1,500 hours required by the WV Board of Pharmacy may be obtained via the WVU School of Pharmacy experiential program.

Students in the Pharm.D. program will perform one four-week experiential rotation in a community pharmacy setting at the conclusion of the first year and a two-week experiential rotation in an institutional pharmacy setting at the conclusion of the second year of the professional curriculum. Students complete eight, five-week advanced pharmacy practice experiences (APPE) during the final year of the program. One to two rotations are performed in rural/geographically diverse locations throughout West Virginia. Site placement and sequencing will occur in the semesters prior to the experiential activities. Students may incur additional housing and/or travel costs when taking part in the experiential rotations. Opportunity will be provided for students to prioritize their site selection; however, ultimate authority for site selection will be maintained by the School of Pharmacy. All didactic coursework (required and elective) must be successfully completed prior to beginning the fourth-year APPE experiential rotations.

Legal Requirements

To qualify for examination for licensure by the West Virginia Board of Pharmacy, information can be found at the West Virginia Board of Pharmacy website (https://www.wvbop.com/).

Interns must be registered with the West Virginia Board of Pharmacy and must be enrolled in or a graduate of an accredited school of pharmacy to gain experience acceptable for the internship requirement. Details may be obtained from the Office of Admissions and Student Affairs.

Course Exemptions

A student who seeks exemption from one or more professional courses based upon previous academic experience must submit a written petition to the Committee on Academic and Professional Standards. Only courses taken through an accredited school of pharmacy or medicine will be considered for possible substitution.

Pharm.D. Admissions

Admissions are competitive. Criteria used to evaluate candidates include academic performance, as measured by the grade point averages (GPA) for all the above-noted prerequisite courses and the cumulative GPA achieved in all prior college-level coursework, Pharmacy College Admissions Test (PCAT) scores (including a written essay), a personal interview, and letters of recommendation. Prerequisite courses may be taken at an accredited U.S. or foreign institution of higher education and completed with a grade of C or better. Careful consideration is given to those personal qualifications which bear upon the fitness of applicants for the study and practice of the profession of pharmacy.

All applicants must first file an initial electronic application with the Pharmacy College Application Service (PharmCAS). Instructions for completing the application are found on the PharmCAS website: http://www.pharmcas.org/. Application deadlines are subject to change; check PharmCAS, the School of Pharmacy website at http://pharmacy.hsc.wvu.edu or contact the School to verify current deadlines.

Each applicant recommended for acceptance is required to pay a deposit of $100 before his or her name is added to the official list of those accepted by the School of Pharmacy. If the applicant enrolls, this sum is applied to the first-semester tuition. If the applicant fails to enroll, this deposit is forfeited.

With enrollment in the School of Pharmacy, all students must comply with the immunization and diagnostic procedures required by the WVU Board of Governors, WVU, the WVU Health Sciences Center, and the School of Pharmacy.

Complete information may be obtained from:

School of Pharmacy Office of Admissions and Student Affairs
WVU Health Sciences Center
P.O. Box 9500
Morgantown, WV 26506-9500

Pharmacy College Admission Test

Completion of the Pharmacy College Admission Test is a requirement for admission to the School. It is recommended that the student take this test in the summer or fall before making application for admission. Information concerning time and place of the test can be obtained from NCS Pearson, Inc.

PCAT Customer Relations
19500 Bulverde Road
San Antonio, TX 78259
1-800-622-3231 or (210) 339-8710
Fax 1-800-727-0811 or 1-800-999-5941
or http://www.PCATweb.info

Personal Interview

The Admissions Committee requires a personal interview with selected candidates. Interviews are held during the fall and spring semesters at the WVU Health Sciences Center in Morgantown.

Letters of Recommendation

A total of three recommendations are required. Two academic recommendations are required and must be provided by course instructors in any two of the pre-pharmacy course requirements. The third recommendation may be provided by a variety of individuals. Please refer to the PharmCAS website for more detailed information.

Early Decision

The Early Decision program is a binding option for applicants who decide West Virginia University is the degree program of their first choice and that they will enroll if accepted. As an Early Decision applicant, you may apply to only one pharmacy degree program.

The Early Decision application deadline is typically September 1. In addition to completing the PharmCAS application, you must arrange for PharmCAS to receive all of your official transcripts and fee by the September deadline. If your application, transcripts, or fee arrives after the deadline, PharmCAS will automatically change your file from early decision status to regular status.

You may be offered early admission, denied admission, or deferred to regular applicant status. **If you are offered admission as an Early Decision applicant, you are obligated to accept the offer and you will not be permitted to apply to other PharmCAS institutions.** If, however, you are denied admission as an Early Decision applicant, you may apply to other PharmCAS institutions for an additional fee. Refer to the PharmCAS application fee schedule to determine the cost to apply to each additional program. PharmCAS institutions will make admission decisions on early decision applicants by mid-October.

Admission to Advanced Standing for Transfer Students

If space is available, students from other accredited schools of pharmacy may be admitted provided they meet the prerequisite course requirements of the WVU School of Pharmacy, have at least a 2.5 professional grade point average, are in good academic and professional standing at the school of origin, and are eligible for continuation toward a degree in pharmacy at the school initially attended. Grades of D in professional courses cannot be transferred.

Provisional Admission

An applicant accepted into the first year or an advanced standing transfer student is expected to have met all entrance requirements and satisfactorily completed all pre-pharmacy coursework in progress prior to matriculation. A satisfactory performance in the completion of such coursework is defined as one that is consistent with the student's previous academic record and must include no grades of D or lower in prerequisite courses. While it is preferred that all prerequisite coursework be completed by the end of the spring term prior to matriculation, it is possible to complete up to two non-sequential prerequisite courses before the start of pharmacy student orientation in the fall semester of matriculation. Failure to do so will result in revocation of the acceptance by the Admissions Committee.

Admitted students must remain free of any violations of local, state, or federal law that would prohibit their ability to obtain an intern license from the West Virginia Board of Pharmacy.

Furnishing or causing to furnish false or incorrect information for the purpose of gaining admission to the School of Pharmacy constitutes grounds for disciplinary action including, but not limited to, expulsion or revocation of acceptance.

Students in the School of Pharmacy agree to abide by the provisions of the Student Code of Academic and Professional Integrity. Upon admission, each student is required to return a signed statement to the Office of Admissions and Student Affairs indicating the student has read and understands the Policy on Academic and Professional Standards and the Student Code of Academic and Professional Integrity of the West Virginia University School of Pharmacy. The code and copies of the statement are available in the Office of Admissions and Student Affairs in the School of Pharmacy and on the School of Pharmacy website.

Academic and Technical Standards and Policies

http://pharmacy.hsc.wvu.edu/student-services/pharmd-program/

General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

General Education Foundations		
F1 - Composition & Rhetoric		3-6
ENGL 101	Introduction to Composition and Rhetoric	
& ENGL 102	and Composition, Rhetoric, and Research	
or ENGL 103	Accelerated Academic Writing	
F2A/F2B - Science & Technology		4-6
F3 - Math & Quantitative Reasoning		3-4
F4 - Society & Connections		3
F5 - Human Inquiry & the Past		3
F6 - The Arts & Creativity		3
F7 - Global Studies & Diversity		3
F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree)		9
Total Hours		31-37

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

Degree Requirements

The awarding of a doctor of pharmacy degree to a student is approved by the dean of the School of Pharmacy after receipt of recommendations from the Academic and Professional Standards Committee. Candidates must meet the following criteria:

1. Meet the academic and professional standards, criteria, and requirements outlined in The Policy on Academic and Professional Standards Governing the Doctor of Pharmacy Degree at West Virginia University School of Pharmacy, which is available at the School of Pharmacy Office of Student Services and on the school's website.
2. Satisfactorily complete all of the required coursework in a timely fashion, which may not exceed five years from the date of initial enrollment into the professional program.
3. Pay all fees.
4. Complete coursework as a cohort; students cannot progress to the next year's coursework without satisfactorily completing all previous year's academic requirements.
5. Satisfactorily complete the required number of experiential rotations and demonstrate the attainment of minimum competencies.
6. Complete 100 hours of volunteer community service.

Curriculum Requirements

Biochemistry Requirement

Select one of the following:		3
AGBI 410	Introductory Biochemistry	

BIOC 339	Introduction to Biochemistry	
Biology Requirement		
Select one of the following BIOL 115 preferred - (May fulfill GEF 2): [*]		4
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	
BIOL 101 & BIOL 102 & BIOL 103 & BIOL 104	General Biology and General Biology and General Biology Laboratory and General Biology Laboratory	
BIOL 117 & BIOL 118	Introductory Physiology and Introductory Physiology Laboratory (May fulfill GEF 8)	4
Chemistry Requirement		
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (May fulfill GEF 8)	4
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory (May fulfill GEF 8)	4
CHEM 233 & CHEM 235	Organic Chemistry and Organic Chemistry Laboratory	4
CHEM 234 & CHEM 236	Organic Chemistry and Organic Chemistry Laboratory	4
Economics Requirement		
ECON 201	Principles of Microeconomics (May fulfill GEF 4)	3
English Requirement		
ENGL 101	Introduction to Composition and Rhetoric (May fulfill GEF 1)	3
ENGL 102	Composition, Rhetoric, and Research (May fulfill GEF 1)	3
Math Requirement		
Select one of the following (May fulfill GEF 3):		3
MATH 150	Applied Calculus	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 155	Calculus 1	
Microbiology Requirement		
Select one of the following:		3
AEM 341	General Microbiology	
AEM 401	Environmental Microbiology	
MICB 200	Medical Microbiology	
Physiology Requirement		
PSIO 241	Elementary Physiology	4
or BIOL 235	Human Physiology	
Public Speaking Requirement		
Statistics Requirement		
STAT 211	Elementary Statistical Inference	3
or ECON 225	Elementary Business and Economics Statistics	
General University Orientation Requirement		
PHAR 191	First-Year Seminar	1
General Education Foundations		
GEF Requirements 5, 6, 7		9
Total Hours		59

[*]   BIOL 101, 102, 103, and 104 are equivalent to BIOL 115.

PHARMACY REQUIREMENTS

PALM 301	Principles of Human Anatomy	3
PSIO 593	Special Topics	4

PHAR 793	Special Topics (Introduction to Pharmacy)	4
PHAR 801	Drug Delivery	5
PHAR 802	Preparation of Pharmaceutical Products	1
PHAR 807	Pharmacy Calculations	1
PHAR 703	Pharmacy Practice Experience 1	1
PHAR 811	Foundational Pharmacy Skills	1
PHAR 812	Drug Chemistry and Biotechnology	3
PHAR 813	Biopharmaceutics and Pharmacogenomics	4
PHAR 814	Biochemical Pharmacology	4
PHAR 815	Self-Care	3
PHAR 810	Community Pharmacy Practice	2
PHAR 793	Special Topics (Principles of Immunology and Microbiology)	2
PHAR 710	Pharmacy Practice Experience 2	1
Community Rotation Requirement		4
PHAR 818	Intro Community Rotation	
PHAR 820	Population Health and Policy	3
PHAR 793	Special Topics (Pain)	1
PHAR 823	Pulmonology	3
PHAR 824	Cardiology	5
PHAR 826	Evidence-Based Practice	3
PHAR 830	Intro to Health Systems Pharmacy	2
PHAR 825	Nephrology	2
PHAR 833	Endocrinology	3
PHAR 835	Rheumatology and Pain	2
PHAR 837	Quality and Outcomes in Pharmacy Practice	2
PHAR 836	Research in the Pharmaceutical Sciences	3
Intro to Institutional Rotation (repeated for a total of 2 credit hours)		2
PHAR 838	Intro Institutional Rotation	
PHAR 840	Pharmacy Practice Management	3
PHAR 843	Gastroenterology and Nutrition	3
PHAR 844	Infectious Diseases	3
PHAR 845	Neurology and Psychiatry	4
PHAR 848	Acute Care Practice Experience	2
PHAR 849	Ambulatory Care Practice Experience	2
Hematology/Oncology Requirement		3
PHAR 853	Hematology/Oncology	
PHAR 854	Special Populations	3
PHAR 858	Comprehensive Assessment of Practice	3
PHAR 859	Pharmacy Law and Ethics	3
PHAR 760	Acute Care Rotation 1	5
PHAR 762	Ambulatory Care Rotation 1	5
Acute/Ambulatory Care Requirement		5
PHAR 761	Acute Care Rotation 2	
PHAR 763	Ambulatory Care Rotation 2	
PHAR 764	Elective Rotation 1	5
PHAR 765	Elective Rotation 2	5
PHAR 766	Selective Rotations	5
PHAR 770	Community Rotation	5
PHAR 772	Institutional Rotation	5
Current Topics Requirement		2
PHAR 860: Current Topics in Pharmacy		
Electives (only approved professionally related courses)		8

Selected from the following (BIOL, BUSA, CHEM, CSAD, COMM, CHPR, DISB, ENGL, ENTR, EPID, FIN, GEN, GERO, HPML, HN&F, LDR, NSG, OEHS, PHAR, PHIL, POLS, PUBA, PUBH, SHED, SOCA, STAT)

Total Hours		153

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours	Summer	Hours
PALM 301	3	Community Pharmacy Practice	2	PHAR 818	1
PSIO 593 (Body Function)	4	PHAR 810			
PHAR 801	5	PHAR 811	1		
PHAR 802	1	PHAR 812	3		
PHAR 807	1	PHAR 813	4		
PHAR 793 (Intro to Pharmacy)	4	PHAR 814	4		
PHAR 703	1	PHAR 815	3		
		PHAR 793 (Principles of Immunology and Microbiology)	2		
		PHAR 818	3		
		PHAR 710	1		
	19		23		1

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
PHAR 820	3	PHAR 825	2	PHAR 838	1
PHAR 823	3	PHAR 833	3		
PHAR 824	5	Health Systems Pharmacy Practice	2		
PHAR 826	3	PHAR 830			
PHAR 793 (Pain)	1	PHAR 835	2		
Elective	2	PHAR 836	3		
		PHAR 838	1		
		PHAR 837	2		
		Elective	2		
	17		17		1

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
PHAR 840	3	PHAR 859	3	Complete 2 rotations from the following:	10
PHAR 843	3	Hematology/Oncology	3	PHAR 760	
PHAR 844	3	PHAR 854	3	PHAR 761	
PHAR 845	4	PHAR 858	3	PHAR 762	
Select 1 of the following:	2	Select course not yet completed:	2	PHAR 763	
PHAR 848		PHAR 848		PHAR 764	
PHAR 849		PHAR 849		PHAR 765	
Elective	2	Elective	2	PHAR 766	
				PHAR 770	
				PHAR 772	
	17		16		10

Fourth Year

Fall	Hours	Spring	Hours
PHAR 860	1	PHAR 860	1
Complete 3 rotations from the following of those not yet completed:*	15	Complete 3 rotations from the following of those not yet completed:	15
PHAR 760		PHAR 760	
PHAR 761		PHAR 761	
PHAR 762		PHAR 762	
PHAR 763		PHAR 763	
PHAR 764		PHAR 764	
PHAR 765		PHAR 765	
PHAR 766		PHAR 766	
PHAR 770		PHAR 770	
PHAR 772		PHAR 772	
	16		16

Total credit hours: 153

*   Prior to beginning the experiential rotations, each student enrolled in the School of Pharmacy professional program must complete a minimum of eight credit hours of school of pharmacy elective courses or courses from a list of approved professionally-related electives as part of the pharmacy curriculum. Electives must be completed during the first three years of the four-year professional program. No course taken prior to admission into the School of Pharmacy may be used nor repeated to meet the elective requirements of the professional curriculum, and no reduction in elective requirements will be allowed for courses completed or degrees earned prior to enrollment in the program.

Areas of Emphasis Offered:

- Advanced Clinical Practice (p. 804)
- College Teaching in Pharmacy (p. 805)
- Geriatric Pharmacy (p. 806)
- Global Health (for Pharmacy) (p. 806)
- Translational Pharmacy Research (p. 807)

Advanced Clinical Practice Area of Emphasis Requirements

Required Course:

PHAR 776	Preparing Residency Applicants	2
Select 6 credit hours from the following:*		6
PHAR 721	Advocacy and Leadership	
PHAR 743	Teach to Learn: Learn to Teach	
PHAR 749	Pharmaceutical Investigation	
PHAR 718	Pediatric Pharmacotherapy	
PHAR 745	Critical Care Pharmacotherapy	
PHAR 748	Acute Care Case Studies	
PHAR 751	Geriatrics	
PHAR 778	Travel Medicine and Global Pharmacy Practice	
PHAR 707	Drug-Induced Diseases	
PHAR 713	Oncology Pharmacotherapy	
*Other courses may be added to the list as approved by the Curriculum Committee		
Total Hours		8

ADDITIONAL REQUIREMENTS

Mentorship Program:

- Each student will be assigned or will identify a faculty mentor to meet with regularly to discuss career goals, progression through the program, curriculum vitae development, and other issues that arise.

- In addition, the AoE coordinator(s) will meet with the students as a group at least twice a semester to discuss global issues and professional development topics.

Research Project:

- Each student must complete some type of scholarly project that is presented for dissemination in some venue. This can be a research project presented as a poster at a national meeting, a review article published in a peer-reviewed journal, a patient case series presented at the local WVU HSC research day, or any number of other options. The mentors assigned to students as part of this AoE are not necessarily scholarship mentors. Students may ask their mentors if they are able to work with them on a scholarly project; however, the onus is on the student to find an appropriate mentor and project. Students are encouraged to talk to the AoE coordinator(s) if they need assistance with completing this requirement of the AoE.

Advanced Pharmacy Practice Experiences (APPE) Rotations:

- As part of the advanced pharmacy practice experiences (APPEs), students will be required to complete an approved plan of study, which will include at least four acute or ambulatory care rotations.
- All student APPE schedules must comply with Accreditation Council for Pharmacy Education (ACPE) Standards.

College Teaching in Pharmacy Area of Emphasis

The area of emphasis has four major requirements: a pharmacy-specific pedagogy course; a pharmacy specific journal club; elective course options from across the university; and a pharmacy teaching experience.

Eligibility and Deadlines:

Students must be currently enrolled in the Doctor of Pharmacy program and in good academic standing. Up to five students will be enrolled per year. Students will complete an application for admission to the area of emphasis program, including the following elements:

1) a cover letter or email with intent to enroll

2) an essay describing the applicant's future career goals and what he or she expects to gain through completion of the Area of Emphasis

3) a current curriculum vitae

4) an unofficial transcript will be accessed through the School of Pharmacy, Office of Admissions and Student Affairs

Required Courses

PHAR 743	Teach to Learn: Learn to Teach	2
PHAR 744	Education Journal Club	1
Required Teaching Experience - Select one of the following:		**1-5**
PHAR 764	Elective Rotation 1	
PHAR 765	Elective Rotation 2	
PHAR 790	Teaching Practicum	
Elective Course Options [*]		**6**
GRAD 710	Scholarly Teaching	
C&I 789	Teaching in Higher Education	
C&I 689	Cultural Diversity in the Classroom	
GRAD 680	Classroom Assessment Techniques	
HIED 750	Diversity Issues in Higher Education	
HIED 651	College Student Development	
WGST 593	Special Topics (Gender and Sexuality Theory)	
HIED 763	International Higher Education	
HIED 693	Special Topics (Women & Gender Issues in Higher Education)	
GRAD 793	Scholarship of Teaching and Learning	
GRAD 710	Scholarly Teaching	
GRAD 593	Special Topics (Accessible Teaching)	
GRAD 593	Special Topics (Readability in the Online Course)	
GRAD 593	Special Topics (Designing Scenarios to Engage Students)	
GRAD 693	Special Topics (Teaching Different Cultures)	
C&I 687	Advanced Teaching Strategies	
EDP 640	Instructional Design	

EDP 600	Educational Psychology	
EDP 700	Psychological Foundations of Learning	
C&I 643	Brain-Based Teaching and Learning	
HIED 760	Curriculum Development and Reform in Higher Education	
IDT 693	Special Topics (Online Teaching and Learning)	
IDT 655	Technology for Teachers	
Other courses may be added to the list as they become available.		
Total Hours		10

Geriatric Pharmacy Area of Emphasis

Eligibility and Deadlines:

Students must be currently enrolled in the Doctor of Pharmacy program and in good academic standing. Students will complete an application for admission to the area of emphasis program, including the following elements:

1) a cover letter

2) an essay describing the applicant's future career goals and what he or she expects to gain through completion of the Area of Emphasis

3) a current Curriculum Vitae

4) an unofficial transcript will be accessed through the Office of Student Services.

PHAR 751	Geriatrics	2
GERO 645	Fundamentals of Gerontology	3
GERO 681	Rural Gerontology	3
Students must choose one additional course from the approved electives listed below.		**2**
PHAR 764	Elective Rotation 1 (Geriatrics or Long-Term Care)	
GERO 512	Public Policy of Aging	
GERO 628	Aging Women & Cultural Issues	
PHAR 749	Pharmaceutical Investigation	
SOWK 653	End of Life Care	
SOWK 572	Contemporary Issues in Aging	
COMM 693	Special Topics (Communication in Later Life)	
Total Hours		10

Global Health (for Pharmacy) Area of Emphasis Requirements

The area of emphasis program in global health trains students to be able to provide patient-centered care at home and abroad. Its focus is on providing both didactic and experiential education that will allow students to have an understanding and an appreciation for the global nature of healthcare and how pharmacy practice can impact individuals worldwide. More information can be found on the School's webpage at http://pharmacy.hsc.wvu.edu (https://pharmacy.hsc.wvu.edu/).

PHAR 778	Travel Medicine and Global Pharmacy Practice	2
Select one course from the following:		5
PHAR 764	Elective Rotation 1	
PHAR 765	Elective Rotation 2	
PHAR 766	Selective Rotations	
Select one additional course*:		3-4
POLS 250	Introduction to Comparative Politics	
COMM 309	Health Communication	
COMM 316	Intercultural Communication	
ASP 220	Introduction to Africana Studies	
WGST 345	Women in International Development	
EPID 601	Public Health Epidemiology	
OEHS 742	Outbreak Assessment	
POLS 260	Introduction to International Relations	

PUBH 605	Introduction to Global Public Health	
POLS 363	International Law	
SOCA 350	Latin American Culture	
SOCA 417	Sociology of Globalization	
SOCA 499	Global Service Learning	
RELG 231	Religions of China and Japan	
* or course not on the list with pre-approval by the Global Health for Pharmacy advisors		
Total Hours		10-11

ADDITIONAL REQUIREMENTS

1) Students will have to complete either: a) an advanced pharmacy practice experience (APPE) that takes place in an underserved community, such as a rotation in Anchorage or Nome, Alaska, one with the Indian Health Service, or one at a Federally Qualified Health Center (e.g., Cabin Creek, Camden-on-Gauley), or b) an approved summer internship or medical mission that contains a global health emphasis.   The summer internship or medical mission must be focused on global health and be of a minimum duration of 2 weeks. The school will maintain a list of approved internships when possible. However the student may inquire about the acceptability of other programs which are not listed.

2) All students will serve as Global Health Ambassadors for international students visiting the West Virginia University School of Pharmacy when they are in Morgantown. The Ambassador's role will require students to: a) organize and host social events outside of the School of Pharmacy attempting to incorporate the visiting students' wishes into the planned activities, and b) organizing and participating as School of Pharmacy representatives during the HSC's Global Health Week.

All students must remain in good academic standing in the Doctor of Pharmacy program to remain in the area of emphasis program. Students on probation in the Doctor of Pharmacy program will be evaluated by the Academic Standards committee and may be removed from the area of emphasis program.

Translational Pharmacy Research Area of Emphasis

Research is an integral component of the education and practice of pharmacy, enabling development of new information, technologies, and processes which are essential for improving patient care, therapeutics outcomes and growth of the profession. The importance of research in the profession of pharmacy is well established. The Area of Emphasis (AoE) in Translational Pharmacy Research will allow students to understand and recognize the importance of translational research (e.g., how basic sciences contributions are applied in improving the quality of patients' health, how observations in the clinic direct new scientific hypotheses, and how health services and outcomes research impacts access, cost, quality and outcomes of health care).

COURSE REQUIREMENTS

Required research course:

PHAR 749	Pharmaceutical Investigation *	1
Electives **		**8**
PHAR 764	Elective Rotation 1 (must be a research elective)	
or PHAR 765	Elective Rotation 2	
PHAR 758	Ethical and Regulatory Aspects of Clinical Research	
PHAR 779	Drug Discovery	
PHAR 752	History of Drug Discovery	
PHAR 788	Graduate Seminar in Health Outcomes Research	
or PHAR 796	Graduate Seminar	
PHAR 789	Seminar in Nanoscience	
PHAR 784	Pharmacology Journal Club	
CCB 705	Journal Club	
PHAR 744	Education Journal Club	
PHAR 755	Pharmacoeconomics	
PHAR 753	Social and Behavioral Theory and Health Outcomes Research	
PHAR 756	Health Survey Research Methods	
PHAR 758	Ethical and Regulatory Aspects of Clinical Research	
PHAR 793	Special Topics (Health Outcomes Research Designs)	
Written Thesis		

Oral Presentation and Defense	
Total Hours	9

*   Students may complete 1-3 hours of research credit. Each credit hour equals 3 hours of laboratory or clinic based research per week.

**   Students complete 8-9 hours from the list of electives

ADDITIONAL REQUIREMENTS

- Students involved in clinical research must take the CITI training for Human Research offered through WVU and which must be kept current.
- Present his/her project as a poster or oral presentation at the Annual HSC Research Day.
- Offer an oral presentation of the work (which is open to the public). Students that are enrolled in the AoE must attend.
- Write a summary of his/her research and findings. This project will be distributed to the certification committee members at least three weeks prior to the oral presentation. The certification committee will be comprised of the research mentor, two additional faculty members selected by the research mentor, and the AoE program director. One committee member can be from outside of the School of Pharmacy with prior approval by the Associate Dean for Research and Graduate Programs.
- All Pharm.D. students in good academic standing are eligible for participation. Acceptance and continuation in the program is contingent on each student identifying a research mentor and committee members, who will guide the research progress and completion.

Major Learning Outcomes

DOCTOR OF PHARMACY (PHARM. D.)

Educational Outcomes

Upon successful completion of the West Virginia University Doctor of Pharmacy degree program, the graduate will be able to accomplish the following educational outcomes (EOs):

EO 1   Foundational Knowledge and Skills (Learner) - Develop, integrate, and apply foundational knowledge (e.g., concepts, facts, principles) from biological, pharmaceutical, social, behavioral, administrative, and clinical sciences to evaluate the scientific literature, explain drug actions, solve therapeutic problems, and advance individual and population health.

- Acquire and demonstrate depth and breadth of knowledge of foundational scientific, clinical, socioeconomic, and humanistic concepts and skills.
- Explain how knowledge in the foundational sciences is integral to pharmacy practice.
- Integrate knowledge from foundational sciences to explain how specific drugs or drug classes work and evaluate their potential value in individuals and populations.
- Apply foundational concepts and skills to practice.
- Use scientific reasoning and critical thinking skills in practice to address problems, issues, or concerns.
- Develop and apply creative and innovative approaches to effectively resolve problems and improve patient outcomes.
- Apply an evidence-based approach to practice by identifying appropriate questions to address, using databases and other resources to retrieve information, critically analyzing and interpreting relevant scientific information and other evidence, formulating sound conclusions, and integrating the best published evidence with expertise and individual patient values/needs.
- Analyze and use epidemiologic, pharmacoeconomic, medication utilization, and quality improvement data when developing evidence-based programs and protocols.
- Apply knowledge of research methodology to design or conduct basic research, practice-based studies, or clinical trials.
- Use information technology where appropriate to enhance individual knowledge and skills.

EO 2   Communication Skills (Communicator, Educator) – Effectively communicate verbally and nonverbally when interacting with an individual, group, or organization.

- Use appropriate verbal and nonverbal communication skills with individuals or groups, including patients, health professionals and others.
- Use effective written communication skills with patients, health professionals, and others, including the development of documents pertinent to professional or organizational needs (e.g., monographs, reports).
- Educate target audiences by using the most effective method to deliver information, in coordination with other health care professionals as appropriate.
- Use technology to facilitate or enhance professional communications and presentations.

EO 3   Professionalism, Advocacy, and Leadership (Professional, Leader, Advocate) - Exhibit behaviors and values consistent with the professional trust given by patients, healthcare providers, and society; assure that patients' best interests are represented; and demonstrate responsibility for achieving shared goals regardless of position.

- Conduct pharmacy practice duties and patient care responsibilities in accordance with applicable federal, state, and local laws, statutes, and regulations, as well as professional guidelines and standards.
- Serve as an advocate, leader, and change agent for pharmacy and pharmacists' professional roles and responsibilities by implementing or participating in new, evidence-based models for cost-effective pharmacist-delivered patient care.
- Serve as an advocate for community and patient health and medication therapy needs, including disadvantaged or underserved patients and those from diverse cultural and socioeconomic backgrounds, while honoring their autonomy and dignity.
- Serve as a positive role model in actions/communications for peers and other health care providers by maintaining a high standard for personal and professional demeanor and ethical conduct.
- Respect all points of view in professional interactions while placing patients' needs and desires at the forefront.
- Demonstrate compassion, empathy, honesty, integrity, ethical behavior and altruism in all actions and communications with patients, families, and care providers.
- Develop professional competence through ongoing, active and self-directed pursuit of new knowledge and skills.
- Identify and analyze emerging health care and pharmacy issues and incorporate new roles, products and services into practice that can improve patient outcomes.
- Accept accountability and responsibility for one's words and actions.

EO 4   Self-Awareness (Insightful) – Examine and assess personal knowledge, skills, abilities, attitudes, beliefs, motivation, and emotions and strive for continual improvement.

- Conduct self-assessments on a regular basis and create, implement, evaluate, and modify as needed plans for personal improvement and continuing professional development.
- Recognize personal strengths and limitations and seek assistance when needed.
- Approach tasks and situations with flexibility and a desire to learn.
- Accept constructive criticism and display a willingness to correct and learn from errors.

EO 5   Interprofessional Collaboration (Collaborator) – Actively participate as a healthcare team member by demonstrating mutual respect, understanding, and values to meet patient care needs.

- Collaborate with health care professionals, patients, and/or caregivers to ensure that desired patient-specific or population-based health outcomes are achieved.
- Facilitate team building among health care professionals by developing and maintaining an atmosphere of mutual respect and shared values that place the patient at the forefront.
- Effectively utilize the knowledge, expertise, and unique roles of health care team providers and refer patients to others when indicated.
- Serve as the medication expert on a collaborative care team by managing the pharmacotherapy for patients' medical conditions and by proactively providing drug product and other medication related information to team members.
- Accept responsibility for medication-related outcomes on the care team.

EO 6   Patient Care (Provider) – Provide patient-centered care as the medication expert.

- Accurately interpret, prepare and/or compound, handle and dispense prescriptions for patients.
- Obtain necessary patient-specific data (e.g., consulting patient records, taking medication histories, performing basic physical assessments, ordering/interpreting lab tests), and evaluate and use these data when performing patient care related responsibilities.
- Evaluate pharmaceutical products, including information about the drug, dosage form, delivery system and cost/benefit, when conducting a medication review or preparing a care plan.
- Conduct comprehensive medication reviews and prepare individualized care plans to optimize patient outcomes, with emphasis on commonly encountered chronic or high risk conditions amenable to pharmacotherapy and patients at greater risk for adverse events.
- Work with patients, caregivers, and health care professionals to implement specific therapy plans.
- Educate and empower patients to take an active role in their health and incorporate recommendations for healthy living and self-care into care plans.
- Monitor and evaluate patients during therapy for drug product or pharmacotherapy problems, patient concerns, or adherence issues and recommend or implement solutions.
- Work with patients and other health care providers to ensure the continued success of individual care plans.
- Document patient-care services in charts/medical records and on forms needed for reimbursement.
- Counsel patients and/or caregivers about the following to help ensure a care plan's success: i) medications, non-drug therapy, dietary supplements and natural products; ii) insurance and other options for obtaining necessary medications; iii) proper use of testing devices and medical goods and equipment; and iv) healthy lifestyle changes.

EO 7   Population-Based Care (Promoter, Provider) – Design and implement prevention, intervention, and educational strategies for communities to manage chronic disease and improve health and wellness.

- Develop, recommend, and provide preventive health services, such as administration of vaccines and screening tests.
- Develop and implement disease management programs based upon identified needs and priorities (e.g., cost, access, and patient satisfaction considerations; commonly encountered, chronic conditions managed by pharmacotherapy).
- Evaluate and adjust interventions as needed to maximize population health.
- Promote public awareness of health promotion and disease prevention strategies.
- Design, develop, and disseminate public health related educational materials or services in a culturally competent manner.
- Work with health care professionals and other personnel to identify and help resolve key public health issues and problems, and participate in policies or strategies to address them.

EO 8   Pharmacy and Medication Use Systems (Manager) – Manage patient healthcare needs using human, financial, technological, and physical resources to optimize the safety and efficacy of medication use systems.

- Demonstrate knowledge of pharmacy management including operations, human and fiscal resources, marketing, and leadership principles.
- Design, use, and manage systems to prepare, dispense, distribute and administer medications to optimally serve patient's drug-related needs.
- Use knowledge of the organization and financing of the U.S. healthcare system to provide and effectively manage progressive pharmacy services.
- Develop a business plan for integrating clinical and distributive services that includes methods for supporting and obtaining reimbursement for clinical services provided to patients.
- Demonstrate and apply knowledge of national standards, guidelines, best practices, and established principles and processes for safe medication use to protect patient safety.
- Participate in quality improvement programs and employ performance indicators to enhance the quality of care and cost effectiveness of services provided and to optimize safe, appropriate medication use.
- Participate in developing and performing medication use evaluations to identify and resolve drug therapy problems or concerns.
- Reconcile a patient's medications when transitioning from one care setting to another by communicating effectively with all involved health care professionals.
- Use current and emerging information and system technologies to enhance safe and effective medication use.
- Provide recommendations for developing and managing a formulary that incorporate pharmacoeconomic principles.
- Actively participate in, and contribute to the development of, strategies to minimize drug misuse/abuse.

Physical Activity and Sport Sciences

Degrees Offered

- Master of Science
- Doctor of Education
- Doctor of Philosophy

The College of Physical Activity and Sport Sciences (CPASS) offers master's degree programs in coaching and sport education (on-campus), sport education (online), physical education teacher education (online), sport management (oncampus and online). The online masters degree in sport management offers two areas of emphasis: Comprehensive Sport Industry Management and Interscholastic Athletic Administration. Students can start the distance education master's degree programs at the start of any semester (i.e., Fall, Spring, and Summer). The Ph.D. program in kinesiology, administered through the College of Physical Activity and Sport Sciences, has two major areas: sport, exercise and performance psychology and coaching and teaching studies (designed for students interested in athletic coaching education or physical education teacher education).

The College of Physical Activity and Sport Sciences is housed on the Evansdale Campus in the Health and Education Building. This building has 8 technology based classrooms, three large seminar/conference rooms, active learning center, research space, a teacher behavior laboratory, sport psychology consulting laboratory, fitness room, multipurpose room, Office of Student Success and faculty offices. Courses are also taught at the indoor track and sports area in the Shell Building and WVU Recreation Center; outdoor areas including tennis courts, grass and turf fields, and the outdoor track. .

For additional information, contact the Graduate Coordinator, College of Physical Activity and Sport Sciences, 375 Birch St., P.O. Box 6116, West Virginia University, Morgantown, WV 26506-6116.

ADMINISTRATION

DEANS OFFICE

- Jack Watson - Ph.D. (Florida State University)
  Interim Dean

ASSOCIATE DEANS

- Sean Bulger - Ed.D. West Virginia University
- Valeria K. Wayda - Ed.D. West Virginia University

PROFESSORS EMERITI

- William Alsop
- Dallas Branch
- Dana Brooks
- Linda Carson
- J. William Douglas
- Edward Etzel
- Andrew Hawkins
- Lynn Housner
- Andrew Ostrow
- Robert Wiegand
- Bruch Wilmoth
- Daniel Ziatz

FACULTY

ASSOCIATE DEAN

- Valeria Wayda - Ed.D. West Virginia University
- Sean Bulger - Ed.D. West Virginia University

Degree Designation Learning Outcomes

MASTER OF SCIENCE (MS)

A mission of the College of Physical Activity and Sport Sciences is to prepare students to become effective practitioners and leaders in their respective fields and to enhance the quality of life of the citizens of West Virginia and beyond. The college offers traditional on-campus program emphasis areas in Coaching and Sport Education, and Sport Management. In addition, the college offers online degree emphasis areas in Physical Education Teacher Education, Sport Coaching, and Sport Management. These programs are characterized by curricular experiences which are designed to broaden perspectives, enrich awareness, deepen understanding, establish disciplined habits of thought, prepare for meaningful careers, and thus help individuals become informed, responsive and productive citizens.

Students in Masters of Science degree programs in CPASS

- Demonstrate skill to utilize various forms of assessment to inform professional practice
- Critically evaluate research to understand best practices in one's chosen field of study
- Develop an understanding of current issues effecting professional practice
- Engage in professional development to improve practice in field

DOCTOR OF EDUCATION (EDD)

A mission of the College of Physical Activity and Sport Sciences is to prepare students to become effective practitioners and leaders in their respective fields and to enhance the quality of life of the citizens of West Virginia and beyond. The college offers a Doctorate of Education in Physical Education Teacher Education. These programs are characterized by curricular experiences which are designed to broaden perspectives, enrich awareness, deepen understanding, establish disciplined habits of thought, prepare for meaningful careers, and thus help individuals become informed, responsive and productive citizens.

Students in the Doctor of Education program in CPASS

- Develop leadership and advocacy skills for professional practice
- Demonstrate teaching skills within one's area of professional practice
- Interpret and applying knowledge to enhance professional practice
- Demonstrate interdisciplinary knowledge in kinesiology

DOCTOR OF PHILOSOPHY (PHD)

A mission of the College of Physical Activity and Sport Sciences is to prepare students to become effective practitioners and leaders in their respective fields and to enhance the quality of life of the citizens of West Virginia and beyond. The college offers a Doctorate of Kinesiology with an emphasis in Coaching and Teaching Studies or Sport, Exercise and Performance Psychology. These programs are characterized by curricular experiences which are designed to broaden perspectives, enrich awareness, deepen understanding, establish disciplined habits of thought, prepare for meaningful careers, and thus help individuals become informed, responsive and productive citizens.

Students in Doctor of Philosophy program in CPASS

- Generate new knowledge based upon theoretical underpinnings
- Synthesize information in an area of study and effectively communicate in oral and written form
- Demonstrate ability to prepare future practitioners through teaching, scholarly and professional development activities
- Evaluate literature and engage in research appropriate to chosen area of emphasis

Coaching and Sport Education, M.S.

Degree Offered

- Master of Science

Nature of the Program

The **Coaching and Sport Education** master's degree is designed to provide students with critical thinking and decision making skills. The curriculum focuses on the sport science, interpersonal and intrapersonal knowledge necessary to excel in high performance sports. Students will experience hands on training through applied science, sport movement analysis software, strength and conditioning coursework, internship experiences and more. The program utilizes the International Council for Sport Coaching Excellence's International Sport Coaching Framework and professional development guidelines from coaching education and coach development industry leaders.

Students complete 36 credit hours over five semesters (fall, spring, summer, fall, and spring) with 27 credit hours of core classes and 9 credit hours of coursework in one of three areas of emphasis.

FACULTY

ASSOCIATE PROFESSORS

- Kristen Dieffenbach - Ph.D. (University of North Carolina, Greensboro)
- Valerie Wayda - Ed.D. (West Virginia University)

ASSISTANT PROFESSOR

- William (Guy) Hornsby III - Ph.D. (East Tennessee State University)

TEACHING ASSISTANT PROFESSOR

- Michael Ryan - Ph.D. (West Virgnia University)
- Jeremy Yeats - Ph.D. (University of Northern Colorado)

ASSOCIATE PROFESSOR EMERITUS

- Daniel Ziatz

Admissions

CRITERIA

The following supplemental materials will be used to evaluate applications for admission to the Coaching and Sport Education master's program:

- Undergraduate degree grade point average (2.75 minimum for regular status) from an approved institution
- Minimum of two references (three references preferred)
- Resume emphasizing coaching/sport experiences
- Professional goal statement (one to two pages on professional background, goals, and reasons for pursuing the master's degree)
- TOFEL score (for international students only)

Note: Students who do not meet the 2.75 grade point average requirement may be admitted as a provisional graduate student only if their GPA is between 2.50 and 2.75. If a student is admitted as a provisional student they are required to attain a 3.0 GPA in their first 9 hours of adviser approved course work in order to remain in the program and to be reclassified as a regular graduate student.

Priority Deadline is December 15th.

Student will submit their application and application fee through the WVU Office of Admissions GEMS web site at: https://graduate.wvu.edu/. Official transcript(s) must be submtted to the WVU Office of Admissions, PO Box 6009, Morgantown, WV 26506-6009 in order to be processed. Please do not submit any hard copies of transcript(s) or letters of recommendation to the CPASS office. Your application must be processed by the WVU Office of Admission by the priority admission deadline, December 15th. Any applications submitted after the December 15th deadline will be considered if space is still available in the program.

Student is required to upload their resume and goal statement to the GEMS web site. Student will list names and email addresses for letters of recommendation to the GEMS web site and the system will generate an email to each recommender to complete the required form and attach a letter of recommendation if they desire. It may take several weeks to process your application. We recommend students submit their online application at least three (3) weeks (international students, three months) before December 15th deadline to allow allow your application to be processed before the priority deadline. Apply online at the WVU Admissions website (https://app.applyyourself.com/AYApplicantLogin/ApplicantConnectLogin.asp?id=wvugrad). Please note that it is the applicant's responsibility to make sure all supplemental materials (including letters of recommendation) are submitted online to the WVU Office of Admissions GEMS web site to be processed. Any incomplete applications (those without all required supplemental materials) or applications received after December 15th will be considered ONLY if space still exists in the program. The program will continue to accept applications until all seats are filled.

No more than twelve graduate hours may be taken toward the master's degree as a non-degree seeking graduate student.

Degree Requirements

Students must have a cumulative GPA of 3.0 or higher to graduate.

ACE 508	Coaching Techniques	3
ACE 510	Training Theories for Coaches	3
ACE 518	Psychology of Coaching	3
or SEP 640	Sport and Performance Psychology	
ACE 522	Motor Behavior for Sport Coaches	3
ACE 530	Coaching Education Administration	3

ACE 539	Create Healthy Competitive Environments	3
ACE 568	Sport Movement Analysis	3
ACE 569	Strength and Conditioning Methods for Coaches	3
ACE 585	Coaching Internship	3
Area of Emphasis		**9**
Sport Science and Technology		
Sport Management		
Leadership		
Total Hours		36

Leadership Area of Emphasis Requirements

LDR 501	Advanced Leadership Theory and Practice	3
LDR 551	Advanced Problems in Leadership	3
LDR 601	Applied Leadership in the Workplace	3
Total Hours		9

Sport Management Area of Emphasis Requirements

Select three of the following:		**9**
SM 516	Sport Marketing Research Methods	
SM 527	Legal Issues in Sport Administration	
SM 535	Sport Management Processes	
SM 546	Sport Marketing	
SM 570	Sport Finance	
SM 575	Fund-Raising and Development	
SM 621	Sport Publicity/Public Relations	
SM 660	NCAA Compliance and Current Issues	
Total Hours		9

Sport Science and Technology Area of Emphasis Requirements

Select three of the following:		**9**
ACE 573	Advanced Strength and Conditioning Coaching Techniques	
ACE 587	Strength and Conditioning Program Design Coach	
ACE 557	Intro to Sport Technology and Sport Science	
ACE 558	Internship Practicum and Data Collection	
ACE 559	Internship Practicum and Data Analysis	
Total Hours		9

Major Learning Outcomes

COACHING AND SPORT EDUCATION

The goal of the program is for students to graduate with the essential skills and knowledge to work with athletes in a variety of contexts across their lifetime.

- **Content Knowledge** – Students will demonstrate knowledge and disciplinary concepts related to the pedagogy of sport coaching.
- **Reflection and Critical Thinking** – Students will demonstrate reflection and critical thinking in order to refine professional practice **and promote lifelong athlete development.**.
- **Professionalism and Ethics** – Students will demonstrate professional behaviors, including commitment to excellence, valuing diversity and collaboration, service to others, and techniques for lifelong learning.
- **Technology** – Students will be able to demonstrate the use of different forms of technology to assess skills and provide meaningful feedback.

Coaching and Teaching Studies, Ph.D., Ed.D.

Degree Offered

- Doctor of Philosophy
- Doctor of Education

Nature of the Program

WVU is the only institution in the state of West Virginia to offer a Doctorate degree (Ph.D. and an Ed.D.) majoring in Coaching and Teaching Studies.

The mission of our doctoral programs is to guide future professionals in becoming knowledgeable and skillful leaders, educators and researchers who will be prepared to assume roles within the fields of physical education teacher education, physical activity, and coaching in universities or associated organizations/agencies in related settings. Our programs provide a high-quality and meaningful educational experience that will allow each student to succeed in their chosen educational goals and will further promote their ability in becoming analytical thinkers who are confident in the application of the scientific method and who can excel professionally as educators and researchers.

The Doctoral degree in Coaching and Teaching Studies is designed to prepare researchers, teachers and professional leaders to address critical issues in physical education teacher education and sport pedagogy by developing research skills, engaging in reflective teaching and expanding knowledge. Doctoral programs at West Virginia University include a Doctorate of Philosophy (Ph.D.) and a Doctorate of Education (Ed.D.), both in Coaching and Teaching Studies.

The Ph.D. program of study focuses on developing future professionals who will address critical issues in physical education, physical activity, and coaching, and develop focused lines of research. Students will work collaboratively with faculty mentors to enhance their critical thinking, knowledge and skills to succeed as productive researchers within university settings, national sports organizations and other settings.

The Ed.D. program of study prepares future professionals for a productive career as educators in the field of physical education teacher education or sport education (Ed.D.), teaching and research positions in universities, as well as leadership positions in professional associations/agencies. The Ed.D. students are encouraged to select an applied research specialization designed to enhance success as an academic and professional leader.

FACULTY

PROFESSOR

- Sean Bulger - Ed.D. (West Virginia University)
  Associate Dean, Graduate Education

CLINICAL PROFESSOR

- Eloise Elliott - Ph.D. (Virginia Polytechnic Institute and State University)
  Ware Distinguished Professor

ASSOCIATE PROFESSORS

- Kristen Dieffenbach - Ph.D. (University of North Carolina at Greensboro)
- Andrea Taliaferro - Ph.D. (University of Virginia)
- Valerie Wayda - Ed.D. (West Virginia University)

ASSISTANT PROFESSORS

- William (Guy) Hornsby III - Ph.D. (East Tennessee State University)
- Samantha Ross - Ph.D. (Oregon State University)
- Emi Tsuda - Ph.D. (The Ohio State University)
- James Wyant - Ph.D. (West Virginia University)

TEACHING ASSISTANT PROFESSOR

- Jeremy Yeats - Ph.D. (University of Northern Colorado)

Admissions

Students can be admitted to the Ed.D. or Ph.D. program with either a bachelor's or master's degree. Those admitted with a bachelor's degree will obtain either a Coaching and Sport Education or a Physical Education Teacher Education masters degree at WVU as part of their doctoral program of studies.

Applicants must submit their application and application fee through the WVU Office of Admissions GEMS web site at: https://graduate.wvu.edu/. An official copy of transcript(s) and test scores should be sent to the WVU Office of Admissions at: West Virginia University, Office of Admissions, PO Box

6009, Morgantown, WV 26506-6009. Please do not send hard copies of transcripts or letters of recommendation to CPASS, everything is submitted online to the GEMS web site. The additional screening materials necessary to complete your doctoral application (should be uploaded as part of your GEMS admission application) are:

1. Resume/CV
2. Statement of Professional Goals and Research Interests *
3. Letters of Recommendations: 3 required**
4. Test Requirements: GRE (taken within 5 years of application). Preferred scores of 151 Verbal; 153 Quantitative Reasoning; 3.5 Analytical Writing or higher. Provisional admission decisions can be made based upon faculty discretion.
5. International applicants TOEFL: 550 paper, 79 internet based

*   The Statement of Professional Goals and Research Interests should be 2-3 pages in length, double-spaced. Describe your academic and professional background, professional goals, possible areas of research, any completed research projects and how and why you are a good fit for the program. It should be tailored to WVU and your specific program of interests.

**   A minimum of two letters of recommendation should speak directly to the candidate's academic skills and professional potential and abilities. Student will list the names and email addresses of their recommenders in the GEMS application site and the system will automatically generate an email to complete the necessary recommendation form, and upload an attached letter if they so desire.

NOTE: Provisional admission decisions can be made based upon faculty discretion.

Applicants are strongly encouraged to contact WVU faculty members, schedule an on-campus visit, or conference call prior to submitting application to get a feel for faculty, staff, students, and the WVU experience.

First round submission date (and to be considered for scholarships) is **December 15th**. Applications will be accepted on a rolling basis after December 15th pending available space in the program. International applicants are strongly encouraged to submit their admission application and supplemental materials by October 1st to allow extra time for processing.

Doctor of Education

Degree Requirements

All students must complete the written and oral qualifying exam within the first two semesters of the program. All students must also pass a comprehensive exam as designated by the candidate's doctoral committee, pass the dissertation prospectus, and successfully defend the dissertation.

CURRICULUM REQUIREMENTS

Minimum grade of C required unless otherwise noted.

Minimum GPA of 3.0 required.

Core Clases		**12**
PET 735	Reading Research 1	
PET 741	Research in Kinesiology	
PET 745	Physical Education/Teaching Curriculum Development and Evaluation	
SEP 765	Dissertation and Thesis Seminar	
Statistics and Research Methods		**15**
Minimum grade of B required in all courses.		
EDP 612	Introduction to Research	
EDP 613	Statistical Methods 1	
EDP 614	Statistical Methods 2	
SCFD 615	Qualitative Research Methods	
Elective - Advanced Statistics/Research Methods		
Elective - Advanced Statistics/Research Methods		
Cognate Specialization		**12**
Minimum grade of B required in all courses.		
Electives		**12**
Dissertation Research		**12**
PET 797	Research	
Benchmarks		
Qualifying Exam		
Comprehensive Exam		

Dissertaion Proposal Defense	
Dissertation Defense	

Total Hours	**63**

PERFORMANCE STANDARDS

Credit for courses in which a grade of lower than C is obtained will not count toward satisfying program requirements for both the Ed.D. or Ph.D. Students who fail to maintain a 3.0 GPA will be placed on probation and must bring their GPA up to 3.0 during the following semester. If a student fails to bring his or her GPA up to 3.0, they will be dismissed from the program. Student research will be graded by the PETE faculty each semester. Research and grades will be satisfactory or unsatisfactory (S/U).

Doctor of Philosophy

Degree Requirements

For the Ph.D. program, the candidate must complete a series of research benchmarks beyond the required coursework. All students must complete the written and oral qualifying exam within the first two semesters of the program. All students must also pass a comprehensive exam as designated by the candidate's doctoral committee, pass the dissertation prospectus, and successfully defend the dissertation. In addition, Ph.D. candidates must submit three publishable articles. The acceptability (publishable) of the articles will be determined by the candidate's doctoral committee.

CURRICULUM REQUIREMENTS

Minimum grade of C required unless otherwise noted.

Minimum GPA of 3.0 required.		
Core Clases		**12**
PET 735	Reading Research 1	
PET 741	Research in Kinesiology	
PET 745	Physical Education/Teaching Curriculum Development and Evaluation	
SEP 765	Dissertation and Thesis Seminar	
Statistics and Research Methods		**18**
Minimum grade of B required in all courses.		
EDP 612	Introduction to Research	
EDP 613	Statistical Methods 1	
EDP 614	Statistical Methods 2	
SCFD 615	Qualitative Research Methods	
Elective - Advanced Statistics/Research Methods		
Elective - Advanced Statistics/Research Methods		
Cognate Specialization		**12**
Minimum grade of B required in all courses.		
Dissertation Research		**18**
PET 797	Research	
Benchmarks		
Qualifying Exam		
Comprehensive Exams		
Dissertation Proposal Defense		
1st Research Paper Submitted		
2nd Research Paper Submitted		
Dissertation Defense & 3rd Research Paper Submitted (based on dissertation findings)		

Total Hours	**60**

PERFORMANCE STANDARDS

Credit for courses in which a grade of lower than C is obtained will not count toward satisfying program requirements for both the Ed.D. or Ph.D. Students who fail to maintain a 3.0 GPA will be placed on probation and must bring their GPA up to 3.0 during the following semester. If a student fails to bring his or her GPA up to 3.0, they will be dismissed from the program. Student research will be graded by the PETE faculty each semester. Research and grades will be satisfactory or unsatisfactory (S/U).

Major Learning Outcomes

COACHING AND TEACHING STUDIES

Upon completion of the Ph.D., each graduate should:

1. Demonstrate a high level of competence in critically understanding the discipline of Coaching and Teaching Studies.
2. Establish a specific line of scholarship related to Coaching & Teaching Studies.
3. Demonstrate the capacity to conduct research in Coaching & Teaching Studies through the development, implementation and reporting of an extended piece of research work.
4. Demonstrate the capacity to write grant proposals, and to develop curriculum related to Coaching and Teaching Studies.
5. Apply and integrate academic frameworks, theories and understandings to develop and teach within programs in higher education and/or organizations related to coaching and teaching studies.

Upon completion of the Ed.D, each graduate should:

1. To develop an in-depth knowledge of the contemporary theoretical concepts within coaching and teaching studies.
2. Develop a critical understanding of the knowledge, research and analytical skills required to be an effective and reflective pedagogue in coaching and teaching studies.
3. Be able to apply, justify, and promote evidence-based practices in varied environments within coaching and teaching studies.
4. Be able to identify, critically analyze and reflect on practice-based problems in teacher and coach preparation to generate and implement informed solutions and directions in professional practice.
5. Critically engage in reflective practice through the development, implementation and reporting of an extended piece of research work.

Physical Education Teacher Education, M.S.

Degree Offered

- Master of Science

Nature of the Program

The fully online Physical Education Teacher Education (PETE) Master of Science program is designed for physical education professionals who already possess initial teaching certification in physical education (or related field). This format is ideal for teachers and coaches with demanding schedules who need to balance work, family, and continue their education. The full online format allows students to complete online courses year round (Fall, Spring, Summer). Practical applications of research-based and developmentally appropriate teaching practices are embedded within courses.

Students enrolled in the WVU PETE Master's program evaluate their teaching effectiveness using research informed methods, examine standards-based curriculum and assessment strategies, explore the possibilities of technology in PE, engage with learners with diverse physical, mental, and emotional needs, and extend their understanding of fitness education for K-adult learners.

The program has been approved as a part of Southern Regional Electronic College and therefore will be offered at **IN-STATE TUITION**. This program is **NOT** a teaching licensure program.

FACULTY

PROFESSOR

- Sean Bulger - Ed.D. (West Virginia University)
  Associate Dean, Graduate Education

CLINICAL PROFESSOR

- Eloise Elliott - Ph.D. (Virginia Polytechnic Institute and State University)
  Ware Distinguished Professor

ASSOCIATE PROFESSOR

- Andrea Taliaferro - Ph.D. (University of Virginia)

ASSISTANT PROFESSORS

- Samantha Ross - Ph.D. (Oregon State University)
- Emi Tsuda - Ph.D. (The Ohio State University)
- James Wyant - Ph.D. (West Virginia University)

TEACHING ASSISTANT PROFESSOR

- Jeremy Yeats - Ph.D. (University of Northern Colorado)

ADJUNCT INSTRUCTOR

- Jack Sager - Ed.D. (West Virginia University)

PROFESSOR EMERITUS

- Linda Carson
  Ware Distinguished Professor
- Lynn Housner
- Andrew Hawkins
- Robert Wiegand

ASSOCIATE PROFESSOR EMERITUS

- Bruce Wilmoth

Admissions

M.S. PHYSICAL EDUCATION TEACHER EDUCATION

Required criteria for PETE program admission include the following:

1. Baccalaureate degree with cumulative GPA of at least 2.75 on a 4.0 scale
2. Submission of unofficial transcripts at point of application (admission contingent upon receipt of official transcripts sent to the WVU Office of Admissions).
3. All admitted students must have access to youth (children and adolescents) in school-based physical education or community physical activity/sport settings throughout the duration of the program for course assignments and follow-up application tasks.

Note: Students who do not meet the 2.75 grade point average requirement may be admitted as a provisional graduate student only if their GPA is between 2.50 and 2.75. Provisional graduate students are required to attain a 3.0 GPA in their first 9 hours of adviser approved course work in order to remain in the program and to be reclassified as a regular graduate student.

No more than twelve graduate hours may be taken toward the master's degree as a non-degree seeking graduate student.

ACCELERATED B.S./M.S. PHYSICAL EDUCATION TEACHER EDUCATION

Students must complete an internal application for admission to the accelerated B.S./M.S. (ABM) program. Students may apply for regular admission to the ABM in PETE in the fall semester following the completion of 60 credits. Only enrolled WVU PEK majors may be considered for regular admission to the program. Transfer students must complete at least 24 credit hours as degree-seeking students at WVU before applying. The minimum GPA requirement for regular admission is a GPA of 3.0, with no provisional admissions allowed. Additional criteria include acceptable performance on the Praxis Core Exam and the program's Professionalism Assessment used to monitor undergraduate student dispositions each semester in the major by a designated faculty member. Regular admission will not be offered to students with less than 2 semesters to complete the bachelor's degree. The ABM in PETE is not available to students seeking a second (or subsequent) bachelor's degree. The internal application is due by October 1 with program admissions decisions communicated by December 15. Applications will be reviewed by a three member work group and presented to the program faculty for a final admissions decision.

Master of Science

Degree Requirements

PET 515	Research Methodology in Physical Education	3
PET 545	Standards-Based Assessment in Physical Education	3
PET 565	Curriculum in Physical Education	3
PET 573	Instructional Technology in Sport and Physical Education	2
PET 574	Curriculum in Physical Education - Advanced Laboratory	2
PET 575	Effective Teaching in Physical Education - Advanced Laboratory	2

PET 576	Motor Development for Special Populations - Advanced Laboratory	2
PET 577	School Physical Activity and Technology - Advanced Laboratory	2
PET 580	School Physical Activity	3
PET 581	Motor Development in Special Populations	3
PET 583	Principles of Effective Teaching	3
PET 585	Physical Education Supervision and Advocacy	2
Total Hours		30

SUGGESTED PLAN OF STUDY

First Semester	Hours	
PET 565	3	
PET 574	2	
	5	
Second Semester	**Hours**	
PET 515	3	
PET 585	2	
	5	
Third Semester	**Hours**	
PET 580	3	
PET 577	2	
	5	
Fourth Semester	**Hours**	
PET 581	3	
PET 576	2	
	5	
Fifth Semester	**Hours**	
PET 545	3	
PET 573	2	
	5	
Sixth Semester	**Hours**	
PET 583	3	
PET 575	2	
	5	

Total credit hours: 30

Accelerated Program

Degree Requirements

Minimum cumulative GPA of 3.0 is required.

Professional Knowledge		
PET 515	Research Methodology in Physical Education	3
PET 545	Standards-Based Assessment in Physical Education	3
PET 565	Curriculum in Physical Education	3
PET 573	Instructional Technology in Sport and Physical Education	2
PET 581	Motor Development in Special Populations	3
PET 583	Principles of Effective Teaching	3
Professional Practice		
PET 578	Teaching Physical Activities 1	1
PET 579	Teaching Physical Activities 2	1
Professional Leadership		
PET 580	School Physical Activity	3

PET 585	Physical Education Supervision and Advocacy	2
Total Hours		24

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
PET 124	2	PET 125	2
PET 167	3	PET 175	2
ENGL 101 (GEF 1)	3	ENGL 102 (GEF 1)	3
PASS 191	1	HN&F 171 (GEF 8)	3
GEF 5	3	GEF 3	3
GEF 6	3	GEF 8	3
	15		16

Second Year

Fall	Hours	Spring	Hours
PET 244	2	PET 228	3
PET 276	2	PET 233	4
SPED 304	3	PET 349	3
GEF 2	4	EXPH 365	3
GEF 7	3	SHED 403	3
GEF 8	3		
	17		16

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
SHED 401	4	SHED 402	4	PET 565	3
PET 350	2	PET 346	3	PET 583	3
PET 369	3	PET 347	3	PET 578	1
PET 379	3	PET 441	3		
RDNG 422	3	PET 515	3		
	15		16		7

Fourth Year

Fall	Hours	Spring	Hours	Summer	Hours
PET 447	3	C&I 491A	4	PET 573	2
PET 449	3	PET 487	3	PET 579	1
PET 477	3	PET 488	3	PET 581	3
PET 545	3	PET 489	2		
PET 580	3	PET 585	2		
	15		14		6

Total credit hours: 137

NOTE: See Undergraduate Catalog for Bachelor's degree requirements (B.S. in Physical Education Teacher Education, Accelerated Program).

Major Learning Outcomes

PHYSICAL EDUCATION TEACHER EDUCATION

The goal of the program is to develop educational professionals who focus their teaching on learner needs, enhance their integrated knowledge base, conduct inquiry-based practice and engage as school-community leaders.

- **Professional Knowledge** - Students understand, refine, and analyze disciplinary content knowledge, the application of that knowledge to the pedagogy of teaching, and modes of inquiry that form the basis for physical education programs and instruction.
- **Professional Practice** - Students apply content knowledge and pedagogical content knowledge to design, deliver, and reflect upon appropriate learning experiences that facilitate and enhance the growth of learners.
- **Professional Leadership and Advocacy** - Students become continuous, collaborative learners who further their professional development and use their abilities to contribute to the profession.

- **Professional Ethics** - Students demonstrate professional behaviors, including a commitment to excellence and lifelong learning, diversity and collaboration, and service to others.

Sport, Exercise and Performance Psychology, M.S., Ph.D.

Degree Offered

- Master of Science
- Doctor of Philosophy

Nature of the Program

Graduate studies within the College of Physical Activity and Sport Sciences can lead to a Ph.D. in Sport, Exercise and Performance Psychology (SEP). Students admitted into the SEP doctoral program may also complete a master's degree in clinical mental health counseling.

The sport, exercise and performance psychology program has procedures and requirements which are specific to the program. In general, they include the following:

- Selection of an advisor (The program faculty, in consultation with the student, assigns an advisor to assist in planning the student's program.)
- Selection of a plan of studies committee (The student, in consultation with the advisor, selects a plan of studies committee. This committee assists the students in developing a plan of studies which will include relevant coursework, evaluation of competencies, and an estimated time frame for its completion.)
- Plan of studies approval (The plan of studies committee will meet with the student by March 1st of the first year in the program to ratify the plan. The approved plan of studies functions as the document against which completion of program requirements is assessed.)
- Completion of required coursework (The student completes the coursework required by the plan of studies. The number of credit hours required and the time required to complete the coursework varies, but a minimum of three years [six semesters] of coursework is normally required for students entering with a master's degree.)
- Research benchmarks (students must complete all research benchmarks within the time frame identified by their plan of studies committee. These include the submission of a data-based article for publication to a peer-reviewed journal; submission of a second article for publication to a peer-reviewed journal or present a data-based study at a national conference)
- Qualifying Project (A qualifying research project, approved by the advisor, that informs the dissertation will be completed and submitted for publication. This project will be presented to a majority of the faculty within the program and approved to count for the comprehensive exam requirements).
- Prospectus defense (Following the successful completion of the qualifying project, the student will write and defend a prospectus for the dissertation. The prospectus will be evaluated by the student's dissertation committee. The dissertation committee is often identical to the student's plan of studies committee, though additions or changes may be made to the plan of studies committee in order to constitute the dissertation committee.)
- Admission to candidacy (Once the qualifying project and prospectus defense are successfully completed, the student is admitted to candidacy. Admission to candidacy is permission to proceed with dissertation research as described in the prospectus.)
- Defense of the dissertation (The student will write and orally defend an original research project as described in the prospectus. Successful defense will be determined by the quality of the written document as well as by the quality of the oral defense in a forum open to the academic community. All members of the student's dissertation committee must be present for the dissertation defense. Successful defense of the dissertation with submission to a professional journal results in the awarding of the degree. The dissertation must be successfully defended within five years of admission to candidacy.)
- During the Ph.D. program, students are required to submit multiple works to peer-reviewed journals and national conferences.

FACULTY

PROFESSORS

- Jack Watson - Ph.D. (Florida State University)
  Interim Dean
- Samuel Zizzi - Ed.D. (West Virginia University)
  Associate Dean, Research

ASSOCIATE PROFESSOR

- Peter Giacobbi - Ph.D. (University of Tennessee)
- Damien Clement - Ph.D. (West Virginia University)

ASSISTANT PROFESSORS

- Johannes Raabe - Ph.D. (University of Tennessee)
- Dana Voelker - Ph.D. (Michigan State University)

PROFESSORS EMERITI

- Dana D. Brooks
- Edward Etzel, Jr.
- Andrew Ostrow

TEACHING ASSISTANT PROFESSOR

- Scott Barnicle - Ph.D. (University of Idaho)
  Program Coordinator

Admissions

APPLICATION DEADLINE

Application procedures for the Ph.D. in Sport Exercise and Performance Psychology must submit their online admission application to the Office of Admissions website to be processed by the December 1 deadline for fall admission.

Students must also submit an official undergraduate transcript(s) and application fee (online). Supplemental required materials (GRE scores, resume, goal statement, and three letters of recommendation) must also be uploaded and submitted online. Once all the materials have been received, the admission application will be ready for the screening committee to review after the deadline date. Incomplete applications will not be reviewed. Prospective students should **not** apply to the Master's Program in Clinical Mental Health Counseling at this time. They should wait to apply once they are accepted into the PhD program. International applicants are strongly encouraged to submit their admission application and supplemental materials one month in advance of all deadlines to allow extra time for processing.

CRITERIA

The following preferred criteria are used to evaluate applicants for interview and admission to the doctoral program:

- Grade point average of 3.5 for Bachelor's degree and a 3.5 for Master's degree
- Graduate Record Examination score - Verbal, Quantitative, and Writing percentiles above fifty percent. (Student files will be reviewed with scores lower than fifty percent.)
- Three letters of recommendation (submitted online - NO HARD COPIES), to be submitted electronically through the application process
- Official transcripts should be submitted to the Office of Admissions as instructed in the online application
- Professional goal statement (one-two page paper on professional backgrounds, goals, and reasons for pursuing doctoral degree at WVU) to be submitted electronically through the application process
- Curriculum vitae to be submitted electronically through the application process
- Personal interview, if invited

Master of Science

Degree Requirements

Students who are accepted into the Ph.D program in Sport and Exercise Psychology will receive the M.S. degree upon completing the requirements described below.

A minimum GPA of 3.0 is required for graduation.

SEP 765	Dissertation and Thesis Seminar	3
SEP 640	Sport and Performance Psychology	3
SEP 615	Research Methodology in Physical Education	3
SEP 726	Advanced Measurement and Research in Physical Education	3
SEP 697	Research	6
COUN 501	Counseling Theory and Techniques 1	3
COUN 606	Counseling Theory and Techniques 2	3
Advisor Approved Electives		12
Total Hours		36

Additional course requirements needed to meet 36 minimum total credits will be determined in consultation with the student's advisor. Refer to the Sport and Exercise Psychology Ph.D. Suggested Plan of Study.

Doctor of Philosophy

Degree Requirements

Students will form a Plan of Study committee and have their Plan of Study approved by March 1 of their first year in the program. This Plan of Study will outline all of the courses needed to complete the requirements for the M.S. in Sport and Exercise Psychology (if necessary) and the M.A. in Counseling as well as the Ph.D in Sport and Exercise Psychology as both Masters degrees are required to earn the Ph.D.

CURRICULUM REQUIREMENTS

A minimum GPA of 3.0 is required for graduation.

Disciplinary Core		
SEP 719	Social and Psychological Foundations of Performance [*]	3
SEP 720	Psychological Sport Performance Enhancement [*]	3
SEP 721	Counseling College Student-Athletes [*]	3
SEP 722	Exercise and Health Psychology [*]	3
EPID 766	Physical Activity Epidemiology	3
SEP 723	Psychological Aspects of Sport Injury	3
SEP 727	Ethical/Legal Issues in sport Psychology	3
Professional Practice Core		
Teaching Practicum		6
SEP 690	Teaching Practicum (Repeated)	
SEP 686	Internship in Sport and Exercise Psychology	6
SEP 647	Supervision Sport Psychology	3
Statistics/Research Design Disciplinary Core		
EDP 614	Statistical Methods 2	3
Advisor Approved Introductory Graduate-level course in Research Methods		3
EDP 711	Multivariate Methods 1	3
Research Practice Core		
SEP 697	Research	9
or SEP 797	Research	
Master of Science in Sport and Exercise Psychology		36
Master of Arts in Counseling or related field (credits determined by MA program)		
Research Publication Requirement		
Submit 2 data-based articles for publication in peer-reviewed journal		
Submit an additional article (literature review or data-based) for publication in a peer-reviewed journal or present a data-based study at a national conference (published abstract)		
Oral Defense		
Prospectus Defense		
Qualifying Project		
Dissertaion Defense		
Total Hours		90

Major Learning Outcomes

SPORT AND EXERCISE PSYCHOLOGY

The goal of the program is for students to graduate with the essential skills and knowledge necessary to prepare them to immediately begin a career in the field of sport and exercise psychology.

- **Content Knowledge** - Students will demonstrate knowledge and disciplinary concepts related to sport and exercise psychology.
- **Reflection and Critical Thinking** - Students will demonstrate reflection and critical thinking in order to refine professional knowledge and practice.
- **Programming and Assessment** - Students will demonstrate evidence-based knowledge and skills (and best practices) for assessing needs and for designing, implementing and evaluating performance enhancement skills across domains.

- **Professionalism and Ethics** - Students will demonstrate professional behaviors, including commitment to excellence, valuing diversity and collaboration, service to others, and techniques for lifelong learning.
- **Technology** - Students will be able to demonstrate the use of different forms of technology to assess skills and provide meaningful feedback.

Sport Coaching, M.S.

Degree Offered

- Master of Science

Nature of the Program

As sport evolves, coaches need to evolve. The **Sport Coaching** master's degree trains students to be lifelong learners who can adapt to modern demands on the coaching profession. This degree is designed for teachers and full time professionals who coach at the scholastic, community and club levels. WVU professors in Coaching Education have designed a curriculum that focuses on the knowledge and skills necessary to be an effective coach. Additional focus is placed on holistic athlete development, including sport skills, life skills, long-term development and periodized training.

The fully online format allows working professionals to complete courses during fall, spring and summer, without having to be on-campus. The course load is two courses a semester (one course every 8 weeks) to allow students to balance the master's program with family, work and coaching responsibilities. Courses promote online interaction and peer support within and between cohorts.

The **Sport Coaching** master's program can be completed in five semesters. The program utilizes the International Council for Sport Coaching Excellence's International Sport Coaching Framework and professional development guidelines from coaching education and coach development industry leaders.

FACULTY

ASSOCIATE PROFESSORS

- Kristen Dieffenbach - Ph.D. (University of North Carolina at Greensboro)
- Valerie Wayda - Ed.D. (West Virginia University)

ASSISTANT PROFESSOR

- William (Guy) Hornsby III - Ph.D. (East Tennessee State University)

TEACHING ASSISTANT PROFESSOR

- Jeremy Yeats - Ph.D. (University of Northern Colorado)

ADJUNCT FACULTY

- Lynda Bowers - M.S.
- Anthony Moreno - Ph.D. (Michigan State University)

ASSOCIATE PROFESSOR EMERITUS

- Daniel Ziatz

Admissions

CRITERIA

The following supplemental materials will be used to evaluate applications for admission to the master's program:

- Undergraduate degree grade point average (2.75 minimum for regular status) from an approved institution
- Minimum of two references (three references preferred)
- Resume emphasizing your coaching/sport experiences
- Professional goal statement (one to two pages on professional background, goals, and reasons for pursuing the master's degree

Note: Students who do not meet the 2.75 grade point average requirement may be admitted as a provisional graduate student only if their GPA is between 2.50 and 2.75. Provisionally admitted students are required to attain a 3.0 GPA in their first 9 hours of adviser approved course work in order to remain in the program and to be reclassified as a regular graduate student.

No more than twelve graduate hours may be taken toward the master's degree as a non-degree seeking graduate student.

Degree Requirements

Student must complete a total of 30 credits across the three areas in the ICCE Framework.

Minimum GPA of 3.0 required.

Intrapersonal Knowledge		
ACE 508	Coaching Techniques (New Title: The Sport Coaching Profession)	3
Interpersonal Knowledge		
ACE 585	Coaching Internship (New Title: Applied Professional Development)	3
Professional Knowledge		
Pedagogy and Context		6
ACE 518	Psychology of Coaching	
ACE 522	Motor Behavior for Sport Coaches	
ACE 539	Create Healthy Competitive Environments	
ACE 541	Positive Youth Development in Sport	
Applied Sport Science		6
ACE 510	Training Theories for Coaches	
ACE 568	Sport Movement Analysis	
ACE 569	Strength and Conditioning Methods for Coaches	
Leadership Development		6
ACE 530	Coaching Education Administration	
SM 535	Sport Management Processes	
SM 571	Interscholastic Sport Organization and Administration	
SM 578	Leadership in Interscholastic Athletic Administration	
Additional Coursework [*]		**6**
ACE 518	Psychology of Coaching	
ACE 522	Motor Behavior for Sport Coaches	
ACE 539	Create Healthy Competitive Environments	
ACE 541	Positive Youth Development in Sport	
ACE 510	Training Theories for Coaches	
ACE 568	Sport Movement Analysis	
ACE 569	Strength and Conditioning Methods for Coaches	
ACE 530	Coaching Education Administration	
SM 535	Sport Management Processes	
SM 571	Interscholastic Sport Organization and Administration	
SM 578	Leadership in Interscholastic Athletic Administration	
Total Hours		30

[*]   Additional coursework cannot be fulfilled by courses already completed in Pedagogy and Context, Applied Sport Science, or Leadership Development content areas.

SUGGESTED PLAN OF STUDY

First Semester	Hours
ACE 508	3
ACE 541	3
	6

Second Semester	Hours
ACE 568	3
ACE 510	3
	6

Third Semester	Hours
SM 535	3

	Hours
ACE 522	3
	6
Fourth Semester	**Hours**
SM 571	3
SM 578	3
	6
Fifth Semester	**Hours**
ACE 518	3
ACE 585	3
	6

Total credit hours: 30

Major Learning Outcomes

SPORT COACHING

The goal of the program is for students to graduate with the essential skills and knowledge to work with athletes in a variety of contexts across their lifetime.

1.**Content Knowledge** – Students will demonstrate an understanding of and the ability to synthesize and apply Professional Knowledge, Interpersonal Knowledge, and Intrapersonal Knowledge through the use of best practices related to athlete development and sport coaching.

2.**Reflection and Critical Thinking** – Students will develop and utilize critical thinking skills as they refine their professional practice and promote lifelong athlete development.

3.**Professionalism and Ethics** – Students will model leadership competencies including ethical practices representative of professional conduct.

Sport Management, M.S.

Degree Offered

- Master of Science

Nature of the Program

Students have two options for completing a master's degree in sport management: 1) On-Campus and 2) Distance-Learning with Areas of Emphasis in either Comprehensive Sport Industry Management or Interscholastic Athletic Administration.

On-Campus

The graduate on-campus sport management program requires thirty-six credit hours including a six-hour internship or a thesis track option for students. This program can be completed in one or two years. This broad-based program prepares students to enter any segment of the sport management industry, and boasts alumni who have been successful in all areas of the industry. The unique curriculum provides students with assignments that mirror "real-world" issues impacting professionals in the domain. The thesis track option is available for students who are considering doctoral level work in the future.

Dual Degree

A dual degree track option also exists between the on-campus sport management master's degree program and the M.B.A. program in the College of Business and Economics. This dual degree program requires two years to complete, as credits are used from each program to support the other. Students interested in the dual degree program must complete the online applications for admission to both the Sport Management Program (fall admission only) and the M.B.A. program (summer admission) and be admitted separately to both programs. For more information, go to http://business.wvu.edu/graduate-degrees/mba (http://business.wvu.edu/graduate-degrees/mba/). Students complete the MBA coursework during the first year, and complete the sport management coursework in the second year.

Distance-Learning Program

This degree program offers flexibility to complete course competences at times which are convenient for students. The 30 credit hour distance education master's degree is expected to be completed in five semesters (including summers). Students entering this distance-education program can choose from one of two specific areas of emphasis to direct their studies.

The fully on-line Area of Emphasis in **Comprehensive Sport Industry Management** has been in existence for almost two decades with many successful alumni currently working in all segments of the sport industry. This program is designed for students who are interested in focusing on

the general sport management industry. Students in this Area of Emphasis complete all of their courses online. Students in this track complete their coursework over 5 semesters, including a capstone project designed to give the student a hands-on experience researching a project in the field that will help them develop skills necessary for career advancement in a focus area of their choice.

The fully on-line Area of Emphasis in **Interscholastic Athletic Administration** is designed for students who are interested in working as interscholastic (middle school and high school) athletic directors. All courses in this program are designed to be completed on-line and at a distance, with no residency required on campus. Completion of this program will allow students to meet the requirements necessary to obtain the National Interscholastic Athletic Administrators Association (NIAAA) Registered Athletic Administrator (RAA) certification as well as the educational requirements necessary for the NIAAA Certified Athletic Administrator (CAA) certification. As part of this program, students will complete NIAAA leadership coursework in two of the classes (SM 571 and SM 578). Students will be required to purchase course materials for these five educational components, each costing $70 (Total $350), and purchased directly from the NIAAA.

FACULTY

ASSOCIATE PROFESSORS

- Gonzalo Bravo - Ph.D. (Ohio State University)
- Dennis Floyd Jones - Ph.D. (University of Pittsburgh)
- Cindy Lee - Ph.D. (Ohio State University)

TEACHING ASSOCIATE PROFESSORS

- Gary Lhotsky - Ed.D. (Florida State University)
  Program Coordinator

TEACHING ASSISTANT PROFESSOR

- Justin Wartella - Ph.D. (Univ. of Nevada-Las Vegas)

ADJUNCT INSTRUCTORS

- William Alsop - Ed.D. (West Virginia University)
- Andro Barnett - Ph.D. (Temple University)
- Jordan Blizzard - M.S., J.D. (West Virginia University)
- Phil Caskey - M.A. (West Virginia University)
- Charles Fisher - M.S. (West Virginia University)
- Todd Knisley - M.S. (West Virginia University)
- Christopher Miller - J.D. - (West Virginia University)

Admissions

ON-CAMPUS PROGRAM

- Undergraduate degree grade point average (2.75 minimum for regular status) from an approved institution
- Two letters of recommendation submitted to the WVU Office of Admissions (https://graduateadmissions.wvu.edu/) website
- Official transcript (submitted directly to the WVU Office of Admissions)
- Resume submitted to the WVU Office of Admissions website
- Two-page career (goal) statement submitted to the WVU Office of Admissions website

Submit your online admission application thru the WVU Office of Admissions website (https://graduateadmissions.wvu.edu/) along with your application fee. Official transcripts should be sent directly to the WVU Office of Admissions. Your goal statement and resume are submitted online through the WVU Office of Admissions web site. The WVU Office of Admissions website will also need two recommendation names and email addresses for reference letters. The system will send an email to your recommenders to complete a letter to be uploaded to the WVU Office of Admissions web site. Please DO NOT submit any paper copies of the screening materials above directly to faculty or CPASS, everything must be submitted online through the WVU Office of Admissions web site. The deadline to have a completed file eligible for review for the on-campus program is January 15.

DISTANCE LEARNING

Admissions criteria and processes are identical for both the Areas of Emphasis in Comprehensive Sport Industry Management and Interscholastic Athletic Administration. These criteria include:

- Undergraduate degree grade point average (2.75 minimum for regular status) from an approved institution
- Transcript (submitted directly to the WVU Office of Admissions (https://graduateadmissions.wvu.edu/)). (Note: Unofficial transcripts will be accepted for review of file, however, official transcripts will be required prior to admission)

- Resume submitted to the WVU Office of Admissions website
- Two-page career (goal) statement submitted to the WVU Office of Admissions website (Identify which Area of Emphasis you are interested in).

Please DO NOT submit paper copies of these screening materials to our office, they are to uploaded to the WVU Office of Admissions website along with your admission application.

Students applying to either Area of Emphasis can start their program any semester (i.e., Fall, Spring, or Summer). The application deadlines are: May 1 (for summer start, middle of May), August 1 (for Fall Star, middle of August), and December 1 (Spring Start, early to mid January)

ACCELERATED B.S./M.S. SPORT MANAGEMENT

Students must complete an internal application for admission to the accelerated B.S./M.S. (ABM) program. Students may apply for regular admission to the ABM in SM program in the fall semester following the completion of 60 credits, but not later than the semester after which they have completed 95 credits. Only enrolled WVU SM majors may be considered for regular admission to the program. Transfer students must complete at least 24 credit hours as degree seeking students at WVU before applying. The minimum GPA requirement for regular admission into the ABM program is a GPA of 3.25 with no provisional admissions allowed. Regular admission will not be offered to students with less than two semesters to complete the bachelor's degree. The ABM in SM program is not available to students seeking a second (or subsequent) bachelor's degree. Internal application is due by October 1 with program admissions decisions communicated by December 15. Applications will be reviewed by a faculty work group and presented to the program faculty for a final admissions decision.

Degree Requirements: Campus Program

Minimum overall GPA of 3.0 or higher required.

A grade of C or higher must be earned in all major courses		
Core Coursework		
SM 527	Legal Issues in Sport Administration	3
SM 575	Fund-Raising and Development	3
SM 535	Sport Management Processes	3
SM 546	Sport Marketing	3
SM 570	Sport Finance	3
SM 580	Sociocultural and Ethical Dimensions of Sport	3
SM 621	Sport Publicity/Public Relations	3
SM 630	Sport Sponsorship and Sales Management	3
SM 660	NCAA Compliance and Current Issues	3
Select one of the following tracks:		**9**
Traditional Track		
SM 516	Sport Marketing Research Methods	
SM 685	Internship in Sport Management	
Thesis Track [*]		
SEP 615	Research Methodology in Physical Education	
or SEP 726	Advanced Measurement and Research in Physical Education	
or EDP 613	Statistical Methods 1	
or SCFD 615	Qualitative Research Methods	
SM 697	Research	
Total Hours		36

[*] Students will substitute SM 516 (Research Methods in Sport Marketing) for SEP 615.

Students will also substitute any of the three-credit hour SM courses for one three-credit statistics (SEP 726 or EDP 613) or qualitative methods course (SCFD 615).

Students will substitute six credit hours of SM 686 of the internship for six credit hours of SM 698 Research (Master thesis).

SUGGESTED PLAN OF STUDY: TRADITIONAL TRACK

First Year

Fall	Hours	Spring	Hours	Summer	Hours
SM 621		3 SM 630		3 SM 685	6
SM 580		3 SM 660		3	
SM 527		3 SM 516		3	

SM 546	3 SM 535	3
SM 575	3 SM 570	3
	15	15	6

Total credit hours: 36

SUGGESTED PLAN OF STUDY: THESIS TRACK

First Year

Fall	Hours	Spring	Hours
SM 580		3 SM 630	3
SM 546		3 SM 660	3
SEP 615		3 SEP 726, EDP 613, or SCFD 615	3
		9	9

Second Year

Fall	Hours	Spring	Hours
SM 527		3 SM 535	3
SM 575		3 SM 570	3
SM 697		3 SM 697	3
		9	9

Total credit hours: 36

Degree Requirements: Distance Education Program

Minimum overall GPA of 3.0 required.

SM 527	Legal Issues in Sport Administration (Online)	3
SM 535	Sport Management Processes	3
SM 540	International Sport Governance (Online)	3
SM 546	Sport Marketing	3
SM 570	Sport Finance	3
SM 575	Fund-Raising and Development (Online)	3
SM 580	Sociocultural and Ethical Dimensions of Sport (Online)	3
SM 586	Facility Planning and Management	3
Area of Emphasis		**6**
Comprehensive Sport Industry Management		
Interscholastic Athletic Administrator		
Total Hours		30

Comprehensive Sport Management Area of Emphasis

Students will be required to maintain a minimum GPA of 3.0.

All courses will need to be completed with a grade of C- or better.

SM 516	Sport Marketing Research Methods	3
SM 590	Teaching Practicum	3
Total Hours		6

*   This program can be started in any semester, but the starting point will impact the order in which classes are taken.

Interscholastic Athletic Administrator Area of Emphasis

Students will be required to maintain a minimum GPA of 3.0.

All courses will need to be completed with a grade of C- or better.

SM 571	Interscholastic Sport Organization and Administration	3
SM 578	Leadership in Interscholastic Athletic Administration	3
Total Hours		6

*   This program can be started in any semester, but the starting point will impact the order in which classes are taken.

Accelerated B.S./M.S. Degree Requirements

BACHELOR OF SCIENCE DEGREE REQUIREMENTS

Minimum cumulative GPA of 3.0 is required.

PASS 191	First-Year Seminar	1
GEF 1, 2, 5 & 6 (may vary depending on overlap)		12
ENGL 101	Introduction to Composition and Rhetoric (GEF 1)	3
Select one of the following:		3
COMM 100 & COMM 102	Principles of Human Communication and Fundamentals of Interpersonal Communication (GEF 8)	
COMM 104	Public Communication	
Select one of the following (GEF 3):		3
MATH 121	Intro Concepts Of Mathematics	
MATH 124	Algebra with Applications	
ACCT 200	Survey of Accounting	3
ECON 200	Survey of Economics	3
or ECON 201	Principles of Microeconomics	
MDIA 101	Media and Society	3
SM 167	Introduction to Sport Management	3
SEP 271	Sport in American Society	3
SEP 272	Psychological Perspectives of Sport (GEF 8)	3
SM 340	Sport Governance	3
SM 345	Technology in Sport Management	2
SM 350	Leadership in Sport Management	2
SM 355	Orientation in Sport Management	1
SM 375	Sport in the Global Market (GEF 7)	3
SM 387	Issues in Sport Studies	3
SM 425	Sport Facility and Event Management	3
SM 486	Sport Marketing & Sales	3
SM 491	Professional Field Experience	3
BCOR 350	Principles of Marketing	3
BCOR 370	Managing Individuals and Teams	3
CS 101	Intro to Computer Applications	4
COMM 306	Organizational Communication	3
PR 215	Introduction to Public Relations	3
Industry Approved Electives		6
Minor Courses or Free Electives		23
Total Hours		108

MASTER OF SCIENCE DEGREE REQUIREMENTS

Minimum overall GPA of 3.0 or higher required.

SM 516	Sport Marketing Research Methods	3
SM 527	Legal Issues in Sport Administration	3
SM 535	Sport Management Processes	3
SM 540	International Sport Governance	3
SM 546	Sport Marketing	3
SM 570	Sport Finance	3
SM 575	Fund-Raising and Development	3
SM 580	Sociocultural and Ethical Dimensions of Sport	3
SM 586	Facility Planning and Management	3

SM 590	Teaching Practicum	3
Total Hours		30

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)	3	CS 101 (GEF 2)	4
Select one of the following:	3	ACCT 200	3
COMM 100 & COMM 102 (GEF 8)		PR 215	3
COMM 104		SEP 271	3
MDIA 101	3	GEF 5	3
SM 167	3		
PASS 191	1		
GEF 6	3		
	16		16

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)	3	BCOR 350 or 370	3
Select one of the following (GEF 3):	3	ECON 200 or 201	3
MATH 121		SM 350	2
MATH 124		SM 355	1
COMM 306	3	Industry Approved Elective	3
SEP 272 (GEF 8)	3	Elective or Minor Course	3
GEF 2	3		
	15		15

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
BCOR 370 or 350	3	SM 375 (GEF 7)	3	SM 516	3
SM 340	3	SM 486	3	SM 586	3
SM 345	2	Industry Approved Elective	3	SM 590	1
SM 425	3	Elective or Minor Course	6	Elective or Minor Course	3
Elective or Minor Course	3				
	14		15		10

Fourth Year

Fall	Hours	Spring	Hours	Summer	Hours
SM 387	3	SM 527	3	SM 535	3
SM 491	3	SM 540	3	SM 570	3
SM 546	3	SM 590	1	SM 580	3
SM 575	3	Elective or Minor Courses	8		
SM 590	1				
	13		15		9

Total credit hours: 138

Major Learning Outcomes
SPORT MANAGEMENT

The goal of the program is for students to graduate with the essential skills and knowledge necessary to prepare them for immediately entry into a career in the field of sport management.

- **Content Knowledge** - Students will demonstrate knowledge and disciplinary concepts related to the field of sport management.
- **Reflection and Critical Thinking** - Students will demonstrate reflection and critical thinking in order to refine professional knowledge and practice.
- **Programming and Assessment** - Students will demonstrate evidence-based knowledge and skills (and best practices) for assessing needs and for designing, implementing and evaluating sport related settings/organizations.
- **Professionalism and Ethics** - Students will demonstrate professional behaviors, including commitment to excellence, valuing diversity and collaboration, service to others, techniques for lifelong learning.
- **Technology** - Students will be able to demonstrate the use of different forms of technology to allow them to function effectively within a sport management setting.

Public Health

Degrees Offered

MASTER

- Master of Health Administration (MHA)
- Master of Public Health (MPH):
    - Biostatistics
    - Epidemiology
    - Health Policy
    - Occupational and Environmental Health Sciences
    - Social and Behavioral Sciences
- Master of Science (MS):
    - MS in Biostatistics

DOCTORAL

- Doctor of Philosophy (Ph.D.) in Public Health Sciences
    - Epidemiology
    - Occupational and Environmental Health Sciences
    - Social and Behavioral Sciences

General Information

West Virginia University's School of Public Health has well-established faculty and successful programs that focus on education, research, and service.

West Virginia University and its academic programs are accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools. The School of Public Health is further accredited by the Council on Education in Public Health (CEPH). MPH Students from throughout the world who choose West Virginia University begin making a difference even before graduation. We truly believe in learning by doing. Students remain engaged in community health throughout their training and complete practicum/internship experiences in diverse settings. Our MHA students will work closely with WVU Medicine and WVU Health Systems as they gain essential knowledge required for managerial, planning and implementation work in the health services and systems sectors. We are currently seeking Commission of Accreditation of Healthcare Management Education (CAHME). The Doctor of Philosophy in Public Health Sciences prepares graduates for future careers in academia and research in a variety of settings. School of Public Health faculty and staff involve students in their active research programs. Research efforts at the School often focus on the health of rural communities, consistent with our West Virginia roots. Students publish in leading peer-reviewed journals and present at national scientific conferences with their faculty mentors.

The *mission* of the West Virginia University School of Public Health is to improve the quality of life for West Virginians and all who call Appalachia home.

The *vision* of the School of Public Health is to attain healthy people in thriving communities.

The School of Public Health is guided by the following *values*:

- *Community Engagement:* we are proud of the communities we serve and recognize the importance of bidirectional participatory activities.
- *Collaboration*: we collaborate with partners who join us in improving the public's health.
- *Equity*: we promote equity and social justice in defining health and eliminating health disparities.
- *Integrity*: we adhere to the highest ethical standards of honesty and fairness and we recognize that integrity and ethical behavior are essential elements of our professions.
- *Respect*: we respect diverse points of view and the cultural heritage and traditions of all people.
- *Accountability*: we hold ourselves accountable to one another and to the many stakeholders who support the School of Public Health.

ADMINISTRATION

DEAN

- Jeffrey Coben - MD (University of Pittsburgh)
  Professor, Department of Health Policy, Management and Leadership

SENIOR ASSOCIATE DEAN FOR ACADEMIC, STUDENT, AND FACULTY AFFAIRS

- Linda Alexander - EdD (University of Virginia)
  Professor, Department of Social and Behavioral Sciences

SENIOR ASSOCIATE DEAN FOR ADMINISTRATION

- Sarah Woodrum - DrPH (University of Illinois, Chicago)
  Assistant Professor, Department of Health Policy, Management, and Leadership

ASSOCIATE DEAN FOR PROFESSIONAL PROGRAMS

- Erik Carlton - DrPH (University of Kentucky)
  Associate Professor, Department of Health Policy, Management and Leadership

DIRECTOR OF DOCTORIAL PROGRAMS

- Alfgeir Kristjansson - PhD (Karolinska Institute, Stockholm, Sweeden)
  Associate Professor, Department of Social and Behavioral Sciences

DIRECTOR OF MPH AND MHA

- Erik Carlton - DrPH (University of Kentucky)
  Associate Professor, Health Policy, Management and Leadership

DIRECTOR OF PUBLIC HEALTH PRACTICE AND SERVICE LEARNING

- Audra Hamrick - MA (West Virginia University)
  Assistant Professor, Department of Social and Behavioral Sciences

DIRECTOR OF UNDERGRADUATE STUDIES

- Audra Hamrick - MA (West Virginia University)
  Assistant Professor, Social and Behavioral Sciences

CHAIRS

- Nicholas Castle - PhD (Pennsylvania State University)
  Professor, Department of Health Policy, Management and Leadership
- Weimin Gao - PhD (University of Pittsburgh)
  Professor, Department of Occupational and Environmental Health Sciences and Interim Chair for Biostatistics
- Thomas Hulsey - ScD (Johns Hopkins University)
  Professor, Department of Epidemiology
- Keith Zullig - PhD (University of South Carolina)
  Professor, Department of Social and Behavioral Sciences

Accreditation

The WVU School of Public Health is fully accredited (http://publichealth.wvu.edu/about/accreditation/) by the Council on Education for Public Health (https://ceph.org/). The only accredited public health program in the state, the School is home to undergraduate and graduate programs in various public health disciplines at the BS, MPH, MS and PhD levels.

Degree Designation Learning Outcomes

MASTER OF HEALTH ADMINISTRATION (MHA)

MHA Competencies

- Interpersonal Communication: Students will build collaborative and productive relationships.
- Relationship Management: Students will demonstrate negotiation and conflict resolution skills.
- Writing Skills: Students will prepare effective business communications.
- Presentation Skills: Students will demonstrate professional oral communication and presentation skills.
- Leading & Managing Others: Students will hold self and others accountable for team and/or organizational goal attainment.
- Change Management: Students will show the ability to promote and manage change.
- Honest Self-Assessment: Students will exhibit self-awareness through active reflection and self-assessment.
- Systems Thinking: Students can assess the potential impacts and consequences of decisions in a broad variety of situations.
- Problem-Solving & Decision-Making: Students are able to apply evidence-based techniques to health services decisions.

- Personal & Professional Ethics: Students will exhibit honesty, integrity, and ethical behavior.
- Personal Responsibility: Students will fulfill their commitments and demonstrate accountability.
- Professional & Community Contribution: Students demonstrate a commitment to community engagement and service.
- Working in Teams: Students will demonstrate the capacity to work in and lead teams.
- Health Services Issues & Trends: Students can examine important issues in health services, including circumstances causing major changes and reform in U.S. health systems and services
- Health Services Legal Principles: Students are able to discuss and analyze health-related legal principles, including compliance standards, regulations, and risk management
- Health Policy: Students are able to articulate the impact of health policies on the delivery of health services.
- Public & Population Health: Students understand and explain the major factors in population health status.
- Financial Management: Students are able to compile, analyze, and interpret financial information for health services decision making.
- Human Resources: Students will apply methods and techniques related to the management of health services organizations, employees and professional staff.
- Organizational Dynamics & Governance: Students can articulate the roles, responsibilities, structures, and influence of governing bodies in health services organizations.
- Strategic Planning: Based on environmental analysis, development of strategic alternatives, and discernment of a competitive strategy, students will formulate an evidence-based business strategy appropriate for health services and systems.
- Marketing: Students will analyze and assess markets, market segmentation, strategy, change, and innovation related to health systems and services.
- Information Management: Students will demonstrate proficient technology skills and understanding of information technology in health services environments.
- Quality/Performance Improvement: Students will discern relevant problems and apply principles and concepts of quality/performance improvement of health services and systems.
- Data Analytics: Students can analyze and interpret quantitative information.
- Planning and Managing Projects: Students will design, plan, implement and assess health services projects, including developing appropriate timelines related to performance, structure and outcomes.
- Health Economic Analysis and Application: Students will analyze and apply health economics theories and concepts to decision making.

MASTER OF PUBLIC HEALTH (MPH)

MPH Foundational Competencies

- Apply epidemiological methods to the breadth of settings and situations in public health practice.
- Select quantitative and qualitative data collection methods appropriate for a given public health context.
- Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate.
- Interpret results of data analysis for public health research, policy or practice.
- Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings.
- Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels.
- Assess population needs, assets and capacities that affect communities' health.
- Apply awareness of cultural values and practices to the design or implementation of public health policies or programs.
- Design a population-based policy, program, project or intervention.
- Explain basic principles and tools of budget and resource management.
- Select methods to evaluate public health programs.
- Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence.
- Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes.
- Advocate for political, social or economic policies and programs that will improve health in diverse populations.
- Evaluate policies for their impact on public health and health equity.
- Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making.
- Apply negotiation and mediation skills to address organizational or community challenges.
- Select communication strategies for different audiences and sectors.
- Communicate audience-appropriate public health content, both in writing and through oral presentation.
- Describe the importance of cultural competence in communicating public health content.

- Perform effectively on interprofessional teams.
- Apply systems thinking tools to a public health issue.

MASTER OF SCIENCE (MS)

MS Biostatistics Program Competencies

- Assess foundational concepts of probability and statistical inference.
- Analyze clinical and public health data using descriptive biostatistical methods.
- Distinguish appropriate basic inferential statistical analyses and summarize their results.
- Manage standard statistical software to efficiently manage data structures.
- Summarize the central concepts of statistical theory and inference.
- Develop appropriate plans to analyze standard continuous data in order to make valid inferences.
- Develop appropriate plans to analyze standard categorical data in order to make valid inferences.
- Communicate effectively, in writing and verbally, with substantive investigators and members of the community when assisting in the design of research studies as well as the results of statistical analyses.
- Weigh a public health problem in terms of magnitude, person, time, and place.
- Explain each of the five core disciplines in public health and illustrate the ways each of the core disciplines have contributed to the historical evolution of public health.

DOCTOR OF PHILOSOPHY (PH.D.)

Program Competencies

- Develop effective strategies for teaching in higher education
- Review and synthesize pertinent literature and formulate focused research questions that address identified knowledge gaps
- Design and conduct original research that uniquely contributes to the public health scientific knowledge
- Disseminate research findings through appropriate peer-reviewed publications and presentations, and to other public health community audiences

Major-specific competencies can be found under each major's Learning Goals tab.

In this section:

Master of Public Health (MPH)

Welcome to the West Virginia University School of Public Health. Our mission is to improve the health of West Virginians through innovation and leadership in education, research, and service. Each day, the affiliates and centers within the School of Public Health conduct research on today's pressing public health issues. Diabetes, obesity, substance abuse, and tobacco use top the list of health disparities faced by West Virginians. Public health strategies are typically focused on broad, societal, and population levels; for example, environmental regulations, water quality control, immunization programs, and health education initiatives.

The Master of Public Health program seeks students with a strong, genuine commitment to a career in public health, This degree is appropriate for health professionals, as well as individuals with bachelors' degrees from a wide range of disciplines, who have a strong interest in community/population health and preventive medicine. Our faculty and staff look forward to your decision to become a public health practitioner, researcher, and educator by enrolling in one of our master degree programs. Each department and major can be explored by visiting our website http://publichealth.hsc.wvu.edu.

Program Description

Public Health is shaped by our nation's public health agencies via health assessment, policy development, and public health services. The WVU School of Public Health addresses the core functions of public health by offering the MPH in the discipline-specific majors of:

- Biostatistics
- Epidemiology
- Health Policy
- Occupational and Environmental Health Sciences
- Social and Behavioral Science

All MPH programs are accredited by the National Council for Education for Public Health (CEPH). For more information about the MPH program, please contact:

Office of Student Services
West Virginia University
School of Public Health
P.O. Box 9190
64 Medical Center Drive
Morgantown, WV 26505-9190
Phone (304) 293-2502

Master of Health Administration (MHA)

A Master of Health Administration (MHA) is a professional degree focused on the organization, delivery and management of healthcare and public health systems and services. It is the premier professional program for those seeking to lead the healthcare organizations and health systems of the future.

The WVU MHA program prepares students for promising careers leading innovative, population health-oriented organizations and health systems. Graduates leave our program with the skills necessary to work in a variety of healthcare and public health settings such as hospitals, medical group practices, long-term and rehabilitation care, behavioral health systems, healthcare consulting firms, and health departments. Students will also be excellently prepared for post-graduate administrative fellowships.

The MHA program at WVU focuses on providing students with both a breadth and depth of knowledge in areas critical to success as an administrative leader in the health sector, including:

- • Health Services & Operations Management

- • Leadership & Organizational Behavior

- • Health Finance & Economics

- • Health Policy, Law & Ethics

- • Strategic Planning & Managerial Decision Making

- • Project Management

- • Healthcare Quality & Outcomes Management

The program requires courses across these disciplines. Additionally, elective courses allow students to specialize in a variety of areas. Importantly, a robust practice-based internship requirement assures students experiential application of the competencies and skills learned in the classroom.

Master of Science (MS) Biostatistics

The Master of Science (MS) Program in Biostatistics is meant for college graduates with interest and background in mathematics and statistics who wish to learn both the methodology and the application of biostatistics in the health sciences. The goals of this program are similar to the current MPH in Biostatistics Program in learning objectives; however, MS students will receive a more extensive methodological foundation as well as be expected to take additional statistical courses instead of the "core" public health courses required for any MPH.

A typical student who graduates with an MS in Biostatistics from WVU would be qualified to work as a biostatistician or research coordinator in research organizations such as a pharmaceutical company, contract research organization (CRO), a university, or a health department. MS graduates also will be prepared to pursue doctoral education in biostatistics or similar disciplines.

Doctor of Philosophy (Ph.D.) in Public Health Sciences

The mission of the **Ph.D. program in Public Health Sciences** is to provide high-quality doctoral education to motivated students who desire to positively impact the public's health. We aim to train these students in a research-intensive curriculum that is guided by a distinguished faculty at the leading edge of effective public health science. The degree emphasizes both evidence-based primary prevention of disease and injury, and health promotion research and practice.

The Ph.D. program in Public Health Sciences is a degree for scientist-practitioners focused on prevention of premature mortality, morbidity, and disability from disease and injury. The Ph.D. program offers three discipline-specific majors of:

- Epidemiology
- Occupational and Environmental Health Sciences
- Social and Behavioral Sciences

Goals of the Ph.D. Program

- Educate and train the next generation of public health leaders who will help shape public health education, practice, and policy.
- Identify and address public health disparities.
- Improve the health of West Virginians and improve their access to quality health care.
- Provide trans-disciplinary teaching and research experience that prepares graduates for jobs in academia, research, and high-level practice settings.

Program Description

The early years of the program emphasize research and statistical methods complemented by theoretical and process-oriented coursework relevant to the student's selected area of specialty. During the later years of the program, students are engaged in their dissertation research while given the freedom to further diversify their training by choosing electives.

Qualifying Examination

Once students complete the majority of their coursework, they are required to pass a comprehensive qualifying examination. This comprehensive exam is based on core public health and discipline-specific material and administered within the student's home department.

Doctoral Dissertation

Upon passing the Qualifying Exam, the student begins the dissertation work, which includes:

- a written research proposal
- a defense of the research proposal
- original dissertation research
- a defense of the dissertation research

Dissertation Proposal

The dissertation proposal should include the following sections:

- **Specific Aims.** In this section, you will lay out the goals of your research.
- **Significance**. In this section, you will locate your research aims within the relevant literature to demonstrate the need for your proposed study.
- **Approach.** In this section, you will lay out your proposed research design and methods used to achieve your specific aims.
- **Literature Cited**. Here you will include a bibliography of the works cited in the proposal.
- **Human Subjects**. If the proposal involves human subjects you must include this section. Here you will summarize the measures you propose to protect the human subjects involved in your research project.

The proposal must be defended by the student in a forum that includes the student's *complete* Dissertation Committee.

Dissertation Research

The program will culminate in a research dissertation on a public health topic of interest to the student. The dissertation format can be either a traditional book format or the Journal Article Format (JAF) which consists of a series of three publishable papers on the students' dissertation research.

The Ph.D. program emphasizes peer-reviewed research publications as the dissertation product because of its positive impact on the student's skills and their post-graduation success.

Dissertation Defense

The dissertation will be defended in a forum that includes all Dissertation Committee members**,** who must sign the dissertation approval form in order for the dissertation to be complete.

The defense must be announced to the entire School of Public Health and the University, and students are required to post fliers that announce the details of the defense.

The written dissertation must be submitted in accordance with the WVU policy regulating the electronic submission of theses and dissertations. https://etd.lib.wvu.edu/

Program Delivery

Most courses in the program will be taught using the face-to-face, on-campus, small, or large group format. A small number of core courses and some electives may be delivered by web-based technology.

For more information contact:

Office of Student Services
West Virginia University

School of Public Health
P.O. Box 9190
64 Medical Center Drive
Morgantown, WV 26505-9190
Phone (304) 293-2502

Certificate Programs

Biostatistics, M.P.H., M.S.

Degrees Offered

- Master of Public Health (MPH)
- Master of Science (MS)

Certificate Offered

- Applied Biostatistics

Nature of the Program

Biostatistics is the science of applying statistical theory and principles to research in public health, medicine, biology, pharmaceuticals, environmental science, and other related fields.

MPH IN BIOSTATISTICS

The MPH degree with a major in Biostatistics is meant for individuals with a general interest in public health, who lack formal training in biostatistics and would like to gain skills needed to understand and apply standard statistical techniques. The purpose of the degree program is to:

- Introduce key principles of probability and statistical inference,
- Teach standard techniques of database management and analysis, and
- Provide guidance regarding critical appraisal of research from a statistical perspective

The program builds on the existing Applied Biostatistics Certificate, allowing for added coursework for those individuals interested in obtaining a more intensive examination of common biostatistical techniques as well as a comprehensive training in the core disciplines of public health.

MS IN BIOSTATISTICS

The Master of Science (MS) Program in Biostatistics is meant for college graduates with interest and background in mathematics and statistics who wish to learn both the methodology and the application of biostatistics in the health sciences. The goals of this program are similar to the current MPH in Biostatistics Program in learning objectives; however, MS students will receive a more extensive methodological foundation as well as be expected to take additional statistical courses instead of the "core" public health courses required for any MPH.

A typical student who graduates with an MS in Biostatistics from WVU would be qualified to work as a biostatistician or research coordinator in research organizations such as a pharmaceutical company, contract research organization (CRO), a university, or a health department. MS graduates also will be prepared to pursue doctoral education in biostatistics or similar disciplines.

BIOSTATISTICS CERTIFICATE

The Applied Biostatistics Certificate is designed for those individuals who lack formal training in biostatistics and would like to gain skills needed to understand and apply standard statistical techniques. It is an **online program** that is available to practitioners and/or students at WVU and elsewhere.

The primary objectives of the program are thus to:

- Describe basic concepts of probability and statistical inference
- Demonstrate standard techniques of database management and analysis
- Compare and contrast study designs common to health research
- Recognize the primary sources of bias observed in health research
- Interpret appropriate inferences from data based on strengths and limitations of major epidemiologic study designs as well as the results of descriptive and inferential statistical analyses

Individuals who would be interested in such a Certificate include clinical and translational researchers at varying levels of their career (faculty, fellows, residents, basic scientists) as well as public health practitioners, in the state of West Virginia or beyond. Interested individuals in the program should have a desire to be more self-sufficient with their research, specifically being able to know basic study design principles, analyze their data, and interpret their results.

The entire curriculum will be available both **online and in-person (live)**, thus being accessible to individuals from a variety of backgrounds, locations, and experiences. The program will take advantage of existing course technology where courses are taught in a synchronous fashion in which the instructor lectures in-class, and the lecture (along with associated PowerPoint slides or other files, such as SAS programs) is broadcast online. While the lecture is available live during the lecture itself, the video or audio of the lecture is archived and available on the course for access at any time. All course notes, homeworks, programs, etc. are available online, and the instructor is available in a number of formats (online chat, email, phone) to accommodate distance-learning students.

Applied Biostatistics Certificate Program students will typically take one class per semester. Completion of the program will typically take two years. Certificate Program students will pay tuition at the standard School of Public Health per-credit rate. Please visit the School of Public Health financial information link (http://publichealth.hsc.wvu.edu) for more information on current rates.

FACULTY
INTERIM CHAIR

- Weimin Gao - PhD (University of Pittsburgh)
  Professor, Occupational and Environmental Health Sciences

PROFESSOR

- George A. Kelley - DA (Middle Tennessee State University)

ASSOCIATE PROFESSOR

- Christa L. Lilly - Ph.D. (Vanderbilt University)
- Sijin Wen - Ph.D. (The University of Texas Health Sciences Center at Houston)

ASSISTANT PROFESSOR

- Caroline P Groth - PhD (University of Minnesota)

RESEARCH INSTRUCTOR

- Kristi Kelley - M.Ed. (University of North Carolina at Charlotte)

Admissions

If you are ready to apply to West Virginia University School of Public Health, the admissions team is here to assist you.

Master of Public Health (MPH) in Biostatistics
ADMISSIONS GUIDELINES

- A baccalaureate degree from an accredited college or university with a preferred overall GPA of 3.0.
- Basic competencies in mathematics.
- GRE scores of 150 (verbal), 150 (quantitative), 3.5 (analytical writing), or a terminal degree.
- TOEFL scores (minimum 550 paper-based) (minimum 213 computer-based); IELTS (minimum 6.5), or PTE score of 53-55. *International students only*

APPLICATION PROCESS

Our CEPH accredited Master of Public Health program participates in the Schools of Public Health Application Service (SOPHAS), http://www.sophas.org/. **The MPH Admissions process has two steps**. (1) All **MPH applications** must be submitted through the national SOPHAS service and (2) applicants must also submit a WVU Graduate application, https://graduateadmissions.wvu.edu/.

In addition to the application, applicants must submit to SOPHAS a statement of purpose and objectives, official GRE test scores, three letters of reference, a current resume/curriculum vitae, and all university transcripts. SOPHAS requires **original transcripts** from **ALL** U.S. and International institutions attended (even Study Abroad).

There is a SOPHAS application fee. Applicants must indicate their first choice of MPH major and may also indicate a second choice. A maximum of two choices is allowed.

- E-submit your application as soon as the applicant entered information is complete. Do NOT wait for SOPHAS to receive transcripts, recommendations or test scores.

- Plan Ahead! Allow up to 4 weeks for SOPHAS to verify grades, process, and mail your application to your designated institutions after your documents have been received.

- SOPHAS grants fee waivers based upon financial need for Peace Corps Volunteers, McNair Scholars, Gates Millennium Scholars Program, AmeriCorps, U.S., and International applicants.

Once the department has reviewed the SOPHAS application, students will receive a communication from the WVU School of Public Health regarding their recommendation for acceptance and instructions to complete the WVU graduate application and pay the application fee.

Important: When sending GRE scores for consideration for admission to WVU, please use the WVU School of Public Health College GRE **code: 0157**. *This code MUST be used, otherwise, your GRE score will not be reported to SOPHAS and your application will be incomplete. Incomplete applications cannot be reviewed for an admissions decision. [Each program at West Virginia University has a specific code*.

All other degrees and certificate programs will use the WVU application system **(**https://app.applyyourself.com/AYApplicantLogin/fl_ApplicantConnectLogin.asp?id=wvugrad**).**

Master (MS) in Biostatistics
ADMISSIONS GUIDELINES

- Baccalaureate degree from an accredited college or university (preferred GPA: 3.0 overall; 3.4 for quantitative courses)
- Course experience including:
    - Multivariable calculus (equivalent to WVU MATH 251)
    - Matrix or elementary linear algebra (equivalent to WVU MATH 343)
    - Knowledge of a programming language
- GRE scores: 155 quantitative, 150 verbal, and 3.5 for analytical writing
- A completed MS application, including a Statement of Purpose
- Three letters of recommendation

APPLICATION PROCESS

Complete the WVU graduate application and submit with the processing fee: http://graduateadmissions.wvu.edu/. (http://graduateadmissions.wvu.edu/)

Applicants must submit a statement of purpose, official GRE test scores, three letters of reference, a current resume/curriculum vitae, and all university transcripts. The deadline for applications to be considered for the fall (no spring/summer admissions are permitted) is July 1 (priority deadline: April 1).

Applications that are complete will be sent to the department for review. Students will receive an e-mail through from the WVU School of Public Health regarding their recommendation for acceptance.

Applied Biostatistics Certificate
ADMISSIONS GUIDELINES

- Baccalaureate degree from an accredited college or university with a preferred overall GPA of 3.0 (official transcripts required)
- GRE scores or a terminal degree (MD, Ph.D., etc.)
- Essay describing previous education and experience and career objectives
- Resume or curriculum vitae
- At least two letters of recommendation
- Computer skills are a program requirement. It is the responsibility of the **students to become skilled in computer applications** and to participate in the Health Sciences Center Mandatory Laptop Program.
- The admissions process will include a 15-20 minute phone interview between the Biostatistics Certificate Admissions Committee and the applicant.

Students currently enrolled at WVU should fill out the admissions form for current students to apply for the Applied Biostatistics Certificate. Please contact Dr. Christa Lilly **(**cice@hsc.wvu.edu**) with questions or the completed form.**

STUDENTS INTERESTED IN APPLYING FOR THE APPLIED BIOSTATISTICS CERTIFICATE MUST:

- Complete the WVU graduate application and indicate Applied Biostatistics Certificate and submit with the processing fee.
- https://app.applyyourself.com/AYApplicantLogin/ApplicantConnectLogin.asp?id=wvugrad
- Submit official school transcripts and official GRE scores to:

WVU HSC Admissions
64 Medical Center Drive
1170 HSC North
Morgantown, WV 26506

- International students must submit to:

Office of Graduate Admissions and Recruitment
PO Box 6510
Morgantown, WV 26506-6510

Master of Public Health

MPH Major in Biostatistics Description

The MPH degree with a major in Biostatistics is meant for individuals with a general interest in public health, who lack formal training in biostatistics and would like to gain skills needed to understand and apply standard statistical techniques. The purpose of the degree program is to:

- Introduce key principles of probability and statistical inference,
- Teach standard techniques of database management and analysis, and
- Provide guidance regarding critical appraisal of research from a statistical perspective

The program builds on the existing Applied Biostatistics Certificate, allowing for added coursework for those individuals interested in obtaining a more intensive examination of common biostatistical techniques as well as a comprehensive training in the core disciplines of public health.

Biostatistics Major Competencies

In addition to the standard MPH Foundational Competencies required of all MPH students, our major in Biostatistics also prepares students to meet six competencies specific to the major. These include:

1. Manage data structures efficiently using standard statistical software.
2. Evaluate basic multivariable statistical techniques commonly used in clinical and public health settings.
3. Explain the motivations, underlying theory, and assumptions of advanced methodological tools for biostatisticians.
4. Conduct and evaluate systematic reviews with meta-analysis.
5. Develop written presentations based on statistical analyses for both substantive investigators and members of the community.
6. Develop oral presentations based on statistical analyses for both substantive investigators and members of the community.

MAJOR REQUIREMENTS

A final GPA of 3.0 or higher is required for the successful completion of the program.

Students must earn a minimum grade of "C-" in all PUBH and BIOS coursework.		
MPH Foundational Courses		
PUBH 610	Contemporary Foundations of Public Health Practice	2
PUBH 611	Epidemiology for Public Health Practice	2
PUBH 612	Research Translation and Evaluation in Public Health Practice	4
PUBH 620	Building and Sustaining Public Health Capacity	2
PUBH 621	Public Health Prevention and Intervention	3
PUBH 630	MPH Field Practicum	3
PUBH 640	Leadership and Collaboration in Public Health	3
PUBH 641	Systems Thinking in Public Health Practice	2
PUBH 696	Graduate Seminar	1
Biostatistics Major Courses		
BIOS 603	Applied Biostatistics 2	3
BIOS 604	Applied Biostatistics 3	3
BIOS 611	Data Management and Reporting	3
BIOS 623	Biostatistics Careers and Skills	2
BIOS 629	Application of Biostatistics to Public Health Data	2
BIOS 663	Introduction to Meta-Analysis	3
Electives		**6**

As Approved by MPH Program Advisor

Total Hours	44

*   1. All students in the WVU SPH MPH program are required to maintain a portfolio that demonstrates their ability to meet the competencies associated with the MPH Foundational Courses, the Department Major Courses, and to apply a selection of those competencies in an approved practice-based setting(s). This portfolio must be submitted for review at the end of each academic year, as well as reviewed and approved prior to the successful completion of the program.

          2. The MPH degree will be awarded based on successful completion of all academic requirements and demonstrated achievement of competencies via the student portfolio system and class-based evaluations of competency attainment.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours	Summer	Hours	
PUBH 610		2 PUBH 620		2 PUBH 630		3
PUBH 611		2 PUBH 621		3		
PUBH 612		4 BIOS 603		3		
BIOS 611		3 Elective		3		
		11		11		3

Second Year

Fall	Hours	Spring	Hours		
PUBH 640		3 PUBH 696		1	
PUBH 641		2 BIOS 629		2	
BIOS 604		3 BIOS 663		3	
BIOS 623		2 Elective		3	
		10		9	

Total credit hours: 44

Note: With approval from the MPH Program Advisor and the Director of Practice-Based Learning, PUBH 630: MPH Field Practicum can be taken anytime during Year 2.

Master of Science in Biostatistics

MS-Biostatistics students will gain the following general competencies that will be assessed continuously through the assessment processes already in place in the School of Public Health (SPH):

1. Assess foundational concepts of probability and statistical inference.
2. Analyze clinical and public health data using descriptive biostatistical methods.
3. Distinguish appropriate basic inferential statistical analyses and summarize their results.
4. Manage standard statistical software to efficiently manage data structures.
5. Summarize central concepts of statistical theory and inference.
6. Develop appropriate plans to analyze standard continuous data in order to make valid inferences.
7. Develop appropriate plans to analyze standard categorical data in order to make valid inferences.
8. Communicate effectively, in writing and verbally, with substantive investigators and members of the community when assisting in the design of research studies as well as the results of statistical analyses.

MAJOR REQUIREMENTS

MS Required Courses

BIOS 610	Biostatistical Theory and Methods 1	4
BIOS 611	Data Management and Reporting	3
BIOS 612	Biostatistical Theory and Methods 2	3
BIOS 620	Applied Linear Models HS	3
BIOS 621	Categorical Data Analysis HS	3
BIOS 623	Biostatistics Careers and Skills	2
PUBH 610	Contemporary Foundations of Public Health Practice	2
Electives		**9**
BIOS 622	Analysis of Time-to-Event Data	

BIOS 662	Statistics in Clinical Trials	
BIOS 663	Introduction to Meta-Analysis	
STAT 513	Design of Experiments	
EPID 601	Public Health Epidemiology	
EPID 611	Concepts and Methods of Epidemiology	
EPID 612	Applied Epidemiology for Public Health	
STAT 521	Statistical Analysis System Programming	
STAT 522	Advanced Statistical Analysis System Programming	
STAT 523	Statistical Computing	
STAT 531	Sampling Theory and Methods	
STAT 541	Applied Multivariate Analysis	
STAT 543	Bioinformatics Data Analysis	
STAT 551	Nonparametric Statistics	
Or other approved courses		
Choice of Thesis or Non-Thesis Option		**6**
Thesis Option		
BIOS 628	Biostatistics Practicum	
BIOS 697	Research	
Non-Thesis Option		
BIOS 628	Biostatistics Practicum	
Elective		
Total Hours		35

SUGGESTED PLAN OF STUDY(THESIS OPTION)

First Year

Fall	Hours	Spring	Hours
BIOS 610	4	BIOS 620	3
BIOS 611	3	BIOS 621	3
BIOS 623	2	BIOS 612	3
	9		9

Second Year

Fall	Hours	Spring	Hours
BIOS 628	3	BIOS 697	3
PUBH 610	2	Elective	3
Elective	3	Elective	3
	8		9

Total credit hours: 35

SUGGESTED PLAN OF STUDY(NON-THESIS OPTION)

First Year

Fall	Hours	Spring	Hours
BIOS 610	4	BIOS 612	3
BIOS 611	3	BIOS 620	3
BIOS 623	2	BIOS 621	3
	9		9

Second Year

Fall	Hours	Spring	Hours
BIOS 628	3	Elective	3
PUBH 610	2	Elective	3

Elective	3 Elective	3
	8	9

Total credit hours: 35

The MS degree will be awarded based on successful completion of all academic requirements.

Doctor of Philosophy

Biostatistics Major Competencies

- Assimilate the foundations of public health, including the physical, biological, and social behavioral/factors which affect the health of the community.
- Synthesize and illustrate principles of study design, estimation, statistical inference, and standard data analysis methods to students and researchers across various health disciplines
- Integrate the foundations of statistical theory and inference for estimation and testing of hypotheses in public health
- Discern gaps in current statistical methods that limit further public health research and propose solutions based on rigorous theoretical justification
- Synthesize new developments in the biostatistical literature to address relevant and challenging public health questions
- Evaluate research reports and proposals for research funding on the basis of their scientific integrity, validity, and the strength of the quantitative analysis
- Prepare reports of quantitative analyses for journal publication, presentations at scientific meetings, and grant application.

MAJOR REQUIREMENTS

Common Core Courses for the SPH Doctoral Program

EPID 711	Methodological Issues in Design & Analysis of Cohort Studies	3
PUBH course	Foundations of Public Health	3
Research		**60**
BIOS 797	Research	
C&I 789	Teaching in Higher Education	3
PUBH 790	Teaching Practicum	3
BMS 700	Scientific Integrity	1
BMS 720	Scientific Writing	2
BIOS Required Courses		
BIOS 623	Biostatistics Careers and Skills [*]	1
BIOS 700	Foundations of Modern Statistical Inference	3
BIOS 701	Modern Statistical Inference	3
Select one of the following:		4
BIOS 720	Theory and Application of Linear Models	
STAT 645 & BIOS 745	Linear Models and Advanced Application of Linear Models	
BIOS 721	Advanced Categorical Data Analysis for Health Sciences	4
BIOS 740	Advanced Longitudinal Data Analysis	3
BIOS 788	Biostatistical Grant Writing	2
BIOS 796	Graduate Seminar	1
BIOS 796	Graduate Seminar	1
Electives Courses		**15**
BIOS 622	Analysis of Time-to-Event Data	
BIOS 764	Bayesian Biostatistics	
BIOS 765	Advanced Structural Equation Models	
STAT 547	Survival Analysis	
STAT 745	Data Mining	
STAT 761	Theoretical Statistics 1 [**]	
STAT 762	Theoretical Statistics 2 [**]	
STAT 763	Stochastic Processes	
Total Hours		**112**

*   Students with MS in Statistics or Biostatistics may be exempt from these courses

**   Strongly recommended for students interested in an academic career.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours	Summer	Hours
BIOS 700	3	BIOS 701	3	C&I 789	3
EPID 710		BIOS 721	4	BMS 720	2
STAT 645	3	BIOS 623	2	BIOS 797	1
BIOS 745	1	BIOS 788	2		
BMS 700	1				
	8		**11**		**6**

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
STAT 765		BIOS 624		BIOS 797	6
STAT 761	3	EPID 711	3		
BIOS 740	3	PUBH course - Foundations of Public Health	3		
BIOS 765	3	BIOS 797	1		
BIOS 797	1	PUBH 790	3		
	10		**10**		**6**

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
BIOS 797	10	BIOS 662	3	BIOS 797	6
BIOS 796	1	BIOS 796	1		
STAT 547	3	BIOS 797	10		
	14		**14**		**6**

Fourth Year

Fall	Hours	Spring	Hours	Summer	Hours
BIOS 797	9	BIOS 797	10	BIOS 797	6
	9		**10**		**6**

Total credit hours: 110

Major Learning Outcomes

BIOSTATISTICS

MPH BIOSTATISTICS MAJOR COMPETENCIES:

- Manage data structures efficiently using standard statistical software.
- Evaluate basic multivariable statistical techniques commonly used in clinical and public health settings.
- Explain the motivations, underlying theory, and assumptions of advanced methodological tools for biostatisticians.
- Conduct and evaluate systematic reviews with meta-analysis.
- Develop written presentations based on statistical analyses for both substantive investigators and members of the community.
- Develop oral presentations based on statistical analyses for both substantive investigators and members of the community.

MS IN BIOSTATISTICS MAJOR COMPETENCIES:

- Assess foundational concepts of probability and statistical inference.
- Analyze clinical and public health data using descriptive biostatistical methods.
- Distinguish appropriate basic inferential statistical analyses and summarize their results.
- Manage standard statistical software to efficiently manage data structures.
- Summarize central concepts of statistical theory and inference.
- Develop appropriate plans to analyze standard continuous data in order to make valid inferences.
- Develop appropriate plans to analyze standard categorical data in order to make valid inferences.

- Communicate effectively, in writing and verbally, with substantive investigators and members of the community when assisting in the design of research studies as well as the results of statistical analyses.
- Weigh a public health problem in terms of magnitude, person, time, and place.
- Explain each of the five core disciplines in public health and illustrate the ways each of the core disciplines have contributed to the historical evolution of public health

Epidemiology, M.P.H., Ph.D.

Degrees Offered

- Master of Public Health
- Doctor of Philosophy

Nature of the Program

MPH IN EPIDEMIOLOGY

The MPH degree with a major in Epidemiology is designed for those who wish to acquire knowledge and skills necessary for epidemiologic practice and research. This degree will be appropriate for persons interested in a career studying the relationship of risk factors to a variety of disease, injury, and other health-related states.

WVU MPH graduates with major in Epidemiology are qualified to work and provide leadership in state, federal, and global health agencies (e.g. Centers for Disease Control and Prevention [CDC], The National Institute for Occupational Safety and Health [NIOSH]); hospitals; infection control departments in multiple industries; academic health centers and other healthcare organizations; research institutions, foundations; insurance and managed care organizations; and pharmaceutical and biotechnology companies.

PH.D. IN EPIDEMIOLOGY

The Doctor of Philosophy (Ph.D.) in Public Health Sciences, Epidemiology Major, prepares students for careers in research, teaching, and consulting. Students develop research and teaching skills in epidemiology through coursework and practice opportunities. The curriculum provides rigorous and comprehensive training in epidemiologic methods for clinical and population-based research including study design, statistical analysis and interpretation of results, as well as research areas of focus for epidemiologic research including chronic diseases, infectious diseases, injury, and gene by environment interactions. The program's etiologic orientation is based on the premise that knowledge of genetic, physiologic, behavioral, and environmental factors contribute to understanding the underlying causes of complex human diseases needed to develop and evaluate effective preventive and treatment measures. The first years of the program emphasize research and statistical methods complemented by theoretical and process-oriented coursework relevant to epidemiology. The latter years will largely be dedicated to dissertation research.

Ph.D. graduates in the Epidemiology Major work as faculty members in academic institutions; scientists in research centers, e.g., the National Institutes of Health (NIH), Centers for Disease Control and Prevention (CDC) or the pharmaceutical industry; or may assume leadership positions in state or federal health agencies (such as CDC, Food and Drug Administration [FDA], and the Environmental Protection Agency [EPA]).

FACULTY

CHAIR

- Thomas C. Hulsey, Professor - MSPH, Sc.D.
  (The Johns Hopkins University)

PROFESSORS

- Gregory A. Hand - Ph.D. (University of Texas Southwestern Medical Center at Dallas)
- Kimberly Innes - Ph.D. (Cornell University)
- Sarah Knox - Ph.D. (University of Stockholm)
- Gordon Smith - MB, ChB (MD equivalent), MPH (University of Otago Medical School, Harvard School of Public Health)

ASSOCIATE PROFESSOR

- Diane Gross - DVM, Ph. D. (Ohio State University)

ASSISTANT PROFESSORS

- Ruchi Bhandari - Ph. D. (West Virginia University)
- Brian Hendricks - Ph.D. (West Virginia University)
- Toni Rudisill - Ph. D. (West Virginia University)

ADJUNCT ASSOCIATE PROFESSORS

- Robert Bossarte - Ph.D. (University of Notre Dame)
- Robin Pollini - Ph.D. (Johns Hopkins University)

ADJUNCT ASSISTANT PROFESSOR

- Miguella Mark-Cares - Ph.D. (Cornell University)
  Office of Epidemiology and Prevention Services, WV DHHS

EMERITUS

- Ian R. H. Rockett - Ph.D. (Brown University)

Admissions

If you are ready to apply to West Virginia University School of Public Health, the admissions team is here to assist you.

MASTER OF PUBLIC HEALTH (MPH) IN EPIDEMIOLOGY

ADMISSION GUIDELINES

- A baccalaureate degree from an accredited college or university (required)
- Preferred minimum GPA of 3.0
- Preferred minimum GRE scores of 150 (verbal), 155 (quantitative), and 4.0 (analytical writing)
- Personal Statement
- Three academic letters of recommendation
- TOEFL scores (minimum 550 paper-based, 213 computer-based, 80 internet-based), IELTS (minimum 6.5), or PTE score of 53-55. *International students only*

APPLICATION PROCESS

Our CEPH accredited Master of Public Health program participates in the Schools of Public Health Application Service (SOPHAS), http://www.sophas.org/. **The MPH Admissions process has two steps**. (1) All **MPH applications** must be submitted through the national SOPHAS service and (2) applicants must also submit a WVU Graduate application, https://graduateadmissions.wvu.edu/.

In addition to the application, applicants must submit to SOPHAS a statement of purpose and objectives, official GRE test scores, three letters of reference, a current resume/curriculum vitae, and all university transcripts. SOPHAS requires **original transcripts** from **ALL** U.S. and International institutions attended (even Study Abroad).

There is a SOPHAS application fee. Applicants must indicate their first choice of MPH major and may also indicate a second choice. A maximum of two choices is allowed.

- E-submit your application as soon as the applicant entered information is complete. Do NOT wait for SOPHAS to receive transcripts, recommendations or test scores.

- Plan Ahead! Allow up to 4 weeks for SOPHAS to verify grades, process, and mail your application to your designated institutions after your documents have been received.

- SOPHAS grants fee waivers based upon financial need for Peace Corps Volunteers, McNair Scholars, Gates Millennium Scholars Program, AmeriCorps, U.S., and International applicants.

Once the department has reviewed the SOPHAS application, students will receive a communication from the WVU School of Public Health regarding their recommendation for acceptance and instructions to complete the WVU graduate application and pay the application fee.

*Important: When sending GRE scores for consideration for admission to WVU, please use the WVU School of Public Health College GRE **code: 0157**. This code MUST be used, otherwise, your GRE score will not be reported to SOPHAS and your application will be incomplete. Incomplete applications cannot be reviewed for an admissions decision. [Each program at West Virginia University has a specific code**.**]*

DOCTOR OF PHILOSOPHY (PH.D.) IN PUBLIC HEALTH SCIENCES (EPIDEMIOLOGY MAJOR)

ADMISSION GUIDELINES

- A Master's degree in Public Health or a closely related field is strongly preferred. Exceptional applicants with a Bachelor's degree in a relevant field may also be considered.
- A minimum GPA of 3.0 is required, 3.5 is preferred.

- Preferred GRE scores of 150 Verbal; 155 Quantitative; and 3.5 Writing.
- WVU requires international students to submit TOEFL scores. Preferred scores are as follows: 550 on the paper-based test; 213 on the computer-based test; and 80 on the internet-based test. The IELTS (minimum score 6.5) or PTE (score of 53-55) can be used in lieu of TOEFL.

APPLICATION PROCESS

Applying to the Ph.D. program is a two-step process in which prospective students first submit an application through the national SOPHAS service, http://www.sophas.org/. If you are accepted into the Ph.D. program by the School, the next step is for you to complete a WVU Graduate Application, https://graduateadmissions.wvu.edu/.

The SOPHAS application requires:

- Official test scores
- Official transcripts from all US institutions attended
- A Personal Statement
- 3 Letters of Recommendation
- Current CV/Resume

Applicants must indicate their first choice of Major and may indicate a second choice (you are allowed a maximum of two choices).

There is a SOPHAS application fee. However, SOPHAS grants fee waivers based upon financial need for McNair Scholars, Gates Millennium Scholars, as well as for AmeriCorps and Peace Corps Volunteers.

TIPS for completing the SOPHAS application:

- APPLY EARLY! Allow up to 4 weeks for SOPHAS to verify your transcripts and test scores and send them to the Universities to which you have applied. *Your application may not be reviewed if it does not contain verified transcripts and test scores.*
- *When submitting your GRE scores,* **be sure to use the college code 0157 for the WVU School of Public Health.** *This code MUST be used so that verified scores are sent by SOPHAS to the WVU School of Public Health for review.*
- Submit your application once you have provided the required information. DO NOT wait for SOPHAS to receive transcripts, recommendations or test scores prior to submitting your application.

Personal Statement

The Personal Statement is a critical piece of the application. The content of the Statement and the applicant's writing skills will be evaluated in the admissions decision. The Statement should address the following in no more than 1000 words:

- What is it about Public Health that interests you?
- What is it about your selected major, specifically, that interests you?
- What are your career goals?
- What topics or areas of research do you wish to pursue and why? If you have identified a potential dissertation topic, briefly describe that as well.
- Which faculty members in the SPH do you see as being potential mentors to help you succeed in your area of interest?

Applicants should also include any additional information about their interests, background, prior experience, or special circumstances that may be helpful to the School of Public Health Admissions Committee.

Letters of Recommendation

Three letters of recommendation are required. At least two of these should be from people who can attest to your academic abilities.

Deadlines

Please refer to SOPHAS for the current deadline. Applications received after this deadline will not be considered. All admissions are for the Fall semester. We do not admit students into the Ph.D. program in the Spring or Summer semesters.

Review process

All completed and verified SOPHAS applications are first reviewed by the Admissions Committees of the major to which an applicant has applied (EPID, OEHS, or SBHS). Candidates that are recommended for admission at this level, are put forth to the School of Public Health Doctoral Admissions Committee, which makes the final decisions on admissions and funding.

Advanced Standing for Applicants with a Master's Degree

Students who enter the Ph.D. program with an MPH or approved Master's degree are eligible for *Advanced Standing.* This allows students to complete an abbreviated course of study that takes between 2 and 3 years to complete, depending on the student's past course work and current interests.

Master of Public Health

MPH MAJOR IN EPIDEMIOLOGY PROGRAM DESCRIPTION

The MPH degree with a major in Epidemiology is designed for those who wish to acquire knowledge and skills necessary for epidemiologic practice and research. This degree will be appropriate for persons interested in a career studying the relationship of risk factors to a variety of disease, injury, and other health-related states.

WVU MPH graduates with a major in Epidemiology are qualified to work and provide leadership in state, federal, and global health agencies (e.g. Centers for Disease Control and Prevention [CDC], The National Institute for Occupational Safety and Health [NIOSH]); hospitals; infection control departments in multiple industries; academic health centers and other healthcare organizations; research institutions, foundations; insurance and managed care organizations; and pharmaceutical and biotechnology companies.

EPIDEMIOLOGY MAJOR COMPETENCIES

In addition to the standard MPH Foundational Competencies required of all MPH students, our major in Epidemiology also prepares students to meet five competencies specific to the major. These include:

1. Derive and assess basic epidemiologic frequencies and association.
2. Compare and contrast epidemiologic designs.
3. Weigh public health problems in terms of magnitude, person, time, and place.
4. Measure occurrences of incidence, morbidity, and mortality.
5. Derive appropriate inferences from epidemiologic data.

MAJOR REQUIREMENTS

A final GPA of 3.0 or higher is required for the successful completion of the program.

Students must earn a minimum grade of "C-" in all PUBH and EPID coursework.

MPH Foundational Courses:

PUBH 610	Contemporary Foundations of Public Health Practice	2
PUBH 611	Epidemiology for Public Health Practice	2
PUBH 612	Research Translation and Evaluation in Public Health Practice	4
PUBH 620	Building and Sustaining Public Health Capacity	2
PUBH 621	Public Health Prevention and Intervention	3
PUBH 630	MPH Field Practicum	3
PUBH 640	Leadership and Collaboration in Public Health	3
PUBH 641	Systems Thinking in Public Health Practice	2
Seminar		2
PUBH 696	Graduate Seminar	
Epidemiology Major Courses:		
BIOS 611	Data Management and Reporting	3
EPID 611	Concepts and Methods of Epidemiology	3
EPID 612	Applied Epidemiology for Public Health	3
Capstone		2
EPID 629	Epidemiology Capstone	
Seminar		2
EPID 696	Graduate Seminar	
Electives: As Approved by the MPH Program Advisor		**9**
Total Hours		45

*   1. All students in the WVU SPH MPH program are required to maintain a portfolio that demonstrates their ability to meet the competencies associated with the MPH Foundational Courses, the Department Major Courses, and to apply a selection of those competencies in an approved practice-based setting(s). This portfolio must be submitted for review at the end of each academic year, as well as reviewed and approved prior to the successful completion of the program.
2. The MPH degree will be awarded based on successful completion of all academic requirements and demonstrated achievement of competencies via the student portfolio system and class-based evaluations of competency attainment.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours	Summer	Hours
PUBH 610	2	PUBH 620	2	PUBH 630	3
PUBH 611	2	PUBH 621	3		
PUBH 612	4	EPID 611	3		
BIOS 611	3	Elective	3		
			11	11	3

Second Year

Fall	Hours	Spring	Hours
PUBH 640	3	Seminar	2
PUBH 641	2	PUBH 696	
EPID 612	3	EPID 629	2
Elective	3	EPID 696	2
		Elective	3
	11		9

Total credit hours: 45

Note: With approval from the MPH Program Advisor and the Director of Practice-Based Learning, PUBH 630: MPH Field Practicum can be taken anytime during Year 2.

Doctor of Philosophy

MAJOR REQUIREMENTS

A minimum GPA of 3.0 is required.

BIOS 603	Applied Biostatistics 2	3
BMS 700	Scientific Integrity (and Ethics)	1
EPID 675	GIS Applications in Public Health	3
EPID 711	Methodological Issues in Design & Analysis of Cohort Studies	3
EPID 712	Quantitative Methods in Epidemiology	3
Graduate Seminar		3
EPID 796	Graduate Seminar (Taken 3 times for 1 credit)	
BIOS 611	Data Management and Reporting	3
PUBH 610	Contemporary Foundations of Public Health Practice	2
PUBH 611	Epidemiology for Public Health Practice	2
PUBH 612	Research Translation and Evaluation in Public Health Practice	4
PUBH 796	Graduate Seminar (Taken 2 times for 1 credit)	2
PUBH 797	Research (Two 1-hour research rotations)	2
PUBH 790	Teaching Practicum (Two 1-hour experiences)	2
SBHS 701	Public Health Grant Writing	3
Electives		12
Qualifying Examination - written and oral components		
Dissertation Proposal		
Dissertation Research (mininum credit number shown)		27
PUBH 797	Research	
Dissertation Defense		
Total Hours		75

PROGRAM REQUIREMENTS FOR STUDENTS ENTERING WITH ADVANCED STANDING

Students entering the EPID PhD program that are admitted with advanced standing (that already hold strongly relevant Master's degrees) will work with the departmental PhD advisor for a recommended course of study. This includes initiating a selection of course credits that can be transferred (600 level and above, graded B or above, passed in the last 5 years) and/or waived that ultimately will be reviewed and approved by the PhD Program Director in

consultation with the PhD Advisory Committee. Under typical circumstances a student with a recent MPH degree or similar, can expect to transfer and/or waive up to 20 credits or roughly one year of course work.

ELECTIVES

Courses may be selected from among the Department, School, or University's many course offerings. This will allow students to develop an area of focus. These courses will be discussed and approved with the faculty advisor.

TEACHING PRACTICUMS

Students will complete two (1 credit) teaching practicums (PUBH 790) during which they will spend time in a mentored relationship with a faculty member, assisting with the administration and teaching of a course. These may be graduate or undergraduate level courses. Students who have a strong interest in teaching should also consider taking C&I 789 Teaching in Higher Education (3 credits). This is a general methods course involving instructional concepts and strategies for present/prospective faculty in higher education.

Full-time HSC-funded stipend students are expected to participate in the SPH teaching mission to a greater degree.

QUALIFYING EXAM

The qualifying examination is the capstone experience for the EPID PhD program. Successful completion of the examination signifies competence in the field of epidemiology and indicates readiness to engage in independent research. Following completion of the majority of the PhD coursework, students are then eligible to take the qualifying examination, which consists of two components, a written exam and an oral defense as follows:

Written exam: The written exam will consist of questions related to epidemiology generally as well as those pertinent to the student's research focus.

Oral defense: The oral component consists of a defense of student's answers to the written exam and includes additional questions that further test the student's understanding of key concepts in epidemiology and knowledge specific to the student's research focus. The oral defense of the written exam must be attempted within two academic weeks of completing the written exam. *Note: Students are not eligible to begin their dissertation, or sign up for dissertation credits, until they have successfully completed both components of the qualifying examination.*

RESEARCH

The research component of the EPID PhD program consists of both a dissertation (27 credits, minimum) and completion of two research rotations (2 credits).

Research Rotations: Students will participate in two research rotations during their first year, meeting and working with research faculty with similar interests in order to develop mentorships for dissertation research.

Dissertation**:** Students will complete a dissertation in which they design and conduct an original work of research. First, students will develop a proposal for an original research project. This proposal will be presented and defended orally before the student's dissertation committee. Upon successful completion of the proposal defense, students are admitted to PhD candidacy and may then complete their dissertation research. There are two options for the dissertation format, a traditional book format or a three Journal Article Format (JAF). The decision of which format to use is something that students should discuss with their committee chairperson. Regardless of the format selected, students must have a minimum of one first-authored publication based on their dissertation topic area, at least under review in a peer-reviewed journal before they can defend their dissertation. While the required publication may come from one of the student's three dissertation articles if using the JAF, this is not mandatory. Upon completion of the written dissertation, the student will present and defend their work before the dissertation committee. *Note: The dissertation defense is open to all members of the WVU community and the public.*

University Doctoral Degree Requirements: For further details on WVU's requirements for Doctoral programs please visit the following website: http://catalog.wvu.edu/graduate/advisingcoursesdegrees/degree_regulations/.

PLAN OF STUDY

Upon matriculating into the PhD program, students should contact the EPID PhD Program Coordinator, or their advisor if already identified, to discuss the course requirements and to develop a plan of study (POS) to meet their individual needs. Below is a suggested POS with the minimum requirements for students entering the program with a BA/BS. *Note: Research credits show below reflect the minimum requirements. Students may enroll in additional research credits as necessary to achieve the degree competencies.*

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
PUBH 610	2	SBHS 701	3
PUBH 611	2	BIOS 603	3
PUBH 612	4	PUBH 797	1
BMS 700	1	EPID 675	3
PUBH 796	1	Elective	3
	10		13

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
PUBH 790	1	EPID 712	3	Qualifying Exam	
PUBH 796	1	EPID 796	1		
EPID 711	3	Elective	3		
EPID 796	1	Elective	3		
BIOS 611	3	PUBH 790	1		
PUBH 797	1				
	10		11		0

Third Year

Fall	Hours	Spring	Hours
EPID 796	1	PUBH 797	10
Elective	3		
PUBH 797	7		
Dissertation Proposal			
	11		10

Fourth Year

Fall	Hours
PUBH 797	10
Dissertation Defense	
	10

Total credit hours: 75

Major Learning Outcomes

EPIDEMIOLOGY

MPH Major Competencies

- Derive and assess basic epidemiologic frequencies and association.
- Compare and contrast epidemiologic designs.
- Weigh public health problems in terms of magnitude, person, time, and place.
- Measure occurrences of incidence, morbidity, and mortality.
- Derive appropriate inferences from epidemiologic data.

DOCTOR OF PHILOSOPHY

Program Competencies

- Develop effective strategies for teaching in higher education
- Review and synthesize pertinent literature and formulate focused research questions that address identified knowledge gaps
- Design and conduct original research that uniquely contributes to the public health scientific knowledge
- Disseminate research findings through appropriate peer-reviewed publications and presentations, and to other public health community audiences

Major Competencies

- Design investigations of acute and chronic conditions, as well as other adverse health outcomes in targeted populations.
- Analyze and evaluate data from epidemiologic investigations, and disease and injury surveillance systems.
- Evaluate health behaviors and outcomes in populations by such variables as age, sex, race/ethnicity, socioeconomic status, and disability.

- Critically evaluate results of epidemiologic studies, including study design, analysis results, and conclusions.
- Prepare written and oral reports and presentations to effectively communicate to professional audiences, policymakers, and the general public.
- Prepare research proposals for extramural peer-reviewed funding.
- Promote and model ethical conduct in epidemiologic practice.
- Bring epidemiologic perspectives to the development and analysis of public health policies.

Health Administration, M.H.A.

Degrees Offered

- Master of Healthcare Administration

Nature of the Program

A Master of Health Administration (MHA) is a professional degree focused on the organization, delivery and management of healthcare and public health systems and services. It is the premier professional program for those seeking to lead the healthcare organizations and health systems of the future.

The WVU MHA program prepares students for promising careers leading innovative, population health-oriented organizations and health systems. Graduates leave our program with the skills necessary to work in a variety of healthcare and public health settings such as hospitals, medical group practices, long-term and rehabilitation care, behavioral health systems, healthcare consulting firms, and health departments. Students will also be excellently prepared for post-graduate administrative fellowships.

The MHA program at WVU focuses on providing students with both a breadth and depth of knowledge in areas critical to success as an administrative leader in the health sector, including:

- Health Services & Operations Management
- Leadership & Organizational Behavior
- Health Finance & Economics
- Health Policy, Law & Ethics
- Strategic Planning & Managerial Decision Making
- Project Management
- Healthcare Quality & Outcomes Management

The program requires courses across these disciplines. Additionally, elective courses allow students to specialize in a variety of areas. Importantly, a robust practice-based internship requirement assures students experiential application of the competencies and skills learned in the classroom.

FACULTY
PROFESSORS

- Nicholas Castle - PhD (Pennsylvania State University)
- Jeffrey Coben - MD (University of Pittsburgh)
- Garrett Moran - PhD (American University)

ASSOCIATE PROFESSORS

- Thomas Bias - PhD (West Virginia University)
- Erik Carlton - DrPH (University of Kentucky)
- Stephen Davis - PhD (West Virginia University)
- Robert Duval - PhD (Florida State University)

ASSISTANT PROFESSORS

- Lindsay Allen - PhD (Emory University)
- Lauri Andress - PhD/JD (University of Texas/South Texas College of Law)
- Sarah Woodrum - DrPH (University of Illinois - Chicago)

Admissions

If you are ready to apply to West Virginia University School of Public Health, the admissions team is here to assist you.

MASTER OF HEALTH ADMINISTRATION (MHA)

ADMISSION GUIDELINES

- Baccalaureate degree from an accredited college or university with a preferred overall GPA of 3.5, minimum 3.0
- GRE exam, with preference given to those in the 25th percentiles or above for quantitative, verbal, and analytic writing
  - GRE waived with previous terminal degree (MD, JD, etc.) or 5+ years of directly-related (healthcare or public health administration) work experience. Waiver request submitted to the program director.
  - GMAT may be substituted for the GRE
- TOEFL scores (minimum 550 paper-based) (minimum 213 computer-based) (minimum of 80 internet-based), IELTS (minimum 6.5), or PTE score of 53-55.
- Other requirements:
  - Resume
  - Letter(s) of recommendation (2-3)
  - Personal statement

APPLICATION PROCESS

Our Master of Health Administration program participates in the Schools of Public Health Application Service (SOPHAS), http://www.sophas.org/. **The MHA Admissions process has two steps**.   (1) All **MHA applications** must be submitted through the national SOPHAS service and (2) applicants must also submit a WVU Graduate application, https://graduateadmissions.wvu.edu/.

In addition to the application, applicants must submit to SOPHAS a personal statement , official GRE test scores, two or three letters of reference, a current resume/curriculum vitae, and all university transcripts. SOPHAS requires **original transcripts** from **ALL** U.S. and International institutions attended (even Study Abroad).

There is a SOPHAS application fee.

- E-submit your application as soon as the applicant entered information is complete. Do NOT wait for SOPHAS to receive transcripts, recommendations or test scores.
- Plan Ahead! Allow up to 4 weeks for SOPHAS to verify grades, process, and mail your application to your designated institutions after your documents have been received.
- SOPHAS grants fee waivers based upon financial need for Peace Corps Volunteers, McNair Scholars, Gates Millennium Scholars Program, AmeriCorps, U.S., and International applicants.

Once the department has reviewed the SOPHAS application, students will receive a communication from the WVU School of Public Health regarding their recommendation for acceptance and instructions to complete the WVU graduate application and pay the application fee.

Please Note: There are both SOPHAS and WVU application fees.

Important: When sending GRE scores for consideration for admission to WVU, please use the WVU School of Public Health College GRE **code: 0157**. *This code MUST be used, otherwise, your GRE score will not be reported to SOPHAS and your application will be incomplete. Incomplete applications cannot be reviewed for an admissions decision. [Each program at West Virginia University has a specific code.]*

Master of Health Administration

Minimum GPA of 3.0 is required.

PUBH 640	Leadership and Collaboration in Public Health	3
PUBH 659	Public Health Foundations	3
HPML 610	Health Economics for Population Health	3
HPML 620	Managing Robust Public Health Organizations	3
HPML 622	Analytic Methods for Health Policy, Management, and Leadership	3
HPML 623	Healthcare Finance	3
HPML 626	Internship	3
HPML 650	Prof. Issues in Health Administration: Health Policy	1
HPML 652	Prof. Issues in Health Administration: Law & Ethics	1
HPML 653	Prof. Issues in Health Administration: Human Resources Mgmt.	1
HPML 654	Prof. Issues in Health Admin.: Health Info. & Mgmt. Systems	1
HPML 655	Health Services Project Management	3
HPML 656	Managerial Epidemiology/Decision-Making	3
HPML 659	Integrative Capstone in Health Administration	3

HPML 682	Managing Quality Improvement in Healthcare	3
Seminar		4
HPML 696	Graduate Seminar	
Electives		4-6
Total Hours		45-47

Major Learning Outcomes

HEALTH ADMINISTRATION

COMMUNICATION AND RELATIONSHIP MANAGEMENT

1. Interpersonal Communication: Students will build collaborative and productive relationships.
2. Relationship Management: Students will demonstrate negotiation and conflict resolution skills.
3. Writing Skills: Students will prepare effective business communications.
4. Presentation Skills: Students will demonstrate professional oral communication and presentation skills.

LEADERSHIP SKILLS

1. Leading & Managing Others: Students will hold self and others accountable for team and/or organizational goal attainment.
2. Change Management: Students will show the ability to promote and manage change.
3. Honest Self-Assessment: Students will exhibit self-awareness through active reflection and self-assessment.
4. Systems Thinking: Students can assess the potential impacts and consequences of decisions in a broad variety of situations.
5. Problem-Solving & Decision-Making: Students are able to apply evidence-based techniques to health services decisions.

PROFESSIONALISM

1. Personal & Professional Ethics: Students will exhibit honesty, integrity, and ethical behavior.
2. Personal Responsibility: Students will fulfill their commitments and demonstrate accountability.
3. Professional & Community Contribution: Students demonstrate a commitment to community engagement and service.
4. Working in Teams: Students will demonstrate the capacity to work in and lead teams.

KNOWLEDGE OF THE HEALTHCARE ENVIRONMENT

1. Health Services Issues & Trends: Students can examine important issues in health services, including circumstances causing major changes and reform in U.S. health systems and services
2. Health Services Legal Principles: Students are able to discuss and analyze health-related legal principles, including compliance standards, regulations, and risk management
3. Health Policy: Students are able to articulate the impact of health policies on the delivery of health services.
4. Public & Population Health: Students understand and explain the major factors in population health status.

BUSINESS AND ANALYTICAL SKILLS

1. Financial Management: Students are able to compile, analyze, and interpret financial information for health services decision making.
2. Human Resources: Students will apply methods and techniques related to the management of health services organizations, employees and professional staff.
3. Organizational Dynamics & Governance: Students can articulate the roles, responsibilities, structures, and influence of governing bodies in health services organizations.
4. Strategic Planning: Based on environmental analysis, development of strategic alternatives, and discernment of a competitive strategy, students will formulate an evidence-based business strategy appropriate for health services and systems.
5. Marketing: Students will analyze and assess markets, market segmentation, strategy, change, and innovation related to health systems and services.
6. Information Management: Students will demonstrate proficient technology skills and understanding of information technology in health services environments.
7. Quality/Performance Improvement: Students will discern relevant problems and apply principles and concepts of quality/performance improvement of health services and systems.
8. Data Analytics: Students can analyze and interpret quantitative information.
9. Planning and Managing Projects: Students will design, plan, implement and assess health services projects, including developing appropriate timelines related to performance, structure and outcomes.
10. Health Economic Analysis and Application: Students will analyze and apply health economics theories and concepts to decision making.

Health Policy Management and Leadership, M.P.H.

Degrees Offered

- Master of Public Health
- Dual Degree MPH/MBA

Nature of the Program

MASTER OF PUBLIC HEALTH

The MPH degree with a major in Health Policy Management and Leadership (HPML) is focused on examining social and political systems that influence the health status of populations and then learning how to influence and/or design, implement, and manage broad, system-level instruments to improve population health outcomes. These instruments might include programs in public health agencies, not-for-profit organizations, or healthcare provider settings, or policies at the local, state, national, or international governmental levels.

The MPH major in HPML has a dual emphasis on acquiring both theoretical knowledge and practical skills. Thus, this degree is ideal for recent graduates or early- and mid-career public health professionals seeking to develop or advance their careers in a variety of health care settings. Additionally, the professional practice component of the program has been designed to place students in public health settings and apply their newly acquired knowledge and skills to address real-world problems.

Upon completion of the MPH degree with a major in HPML, students will be prepared to continue developing their careers as leaders, managers, public health professionals, policy analysts, program evaluators, advocates, or health program managers in a variety of public health, government, health care, or other professional settings. In addition, our students will be prepared to continue their graduate education at the doctoral level.

DUAL DEGREE MPH/MBA

The Department of Health Policy, Management, and Leadership has an approved Dual Degree Program with the MBA program in the College of Business and Economics. Program details are available from either program upon request.

FACULTY

CHAIR

- Nicholas Castle - PhD (Pennsylvania State University)

PROFESSORS

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- Jeffrey Coben - MD (University of Pittsburgh)
- Garrett Moran - PhD (American University)

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- Lauri Andress - PhD/JD (University of Texas/South Texas College of Law)
- Sarah Woodrum - DrPH (University of Illinois - Chicago)

ADJUNCT FACULTY

- Ann Chester - PhD
  Assistant Vice President for Education Partnerships
- Rahul Gupta - MD/MPH (University of Delhi; University of Alabama-Birmingham)
  State Health Officer and Commissioner, West Virginia Bureau of Public Health
- Chris Haddox - PhD/MBA (West Virginia University)
  Assistant Professor, Interior Design & Design Studies
- Patricia Moss - MSW (West Virginia University)
- Lee Smith - MD, JD (Marshall University/West Virginia University)

Executive Director, Monongalia County Health Department
- Richard Wittberg - PhD
  Independent Researcher

Admissions

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MASTER OF PUBLIC HEALTH (MPH) IN HEALTH POLICY MANAGEMENT AND LEADERSHIP

ADMISSION GUIDELINES

- Baccalaureate degree from an accredited college or university with a preferred overall GPA of 3.0
- GRE scores of 150 (verbal), 144 (quantitative), 4.0 (analytical writing)
- TOEFL scores (minimum 550 paper-based) (minimum 213 computer-based) (minimum of 80 internet-based), IELTS (minimum 6.5), or PTE score of 53-55.

APPLICATION PROCESS

Our CEPH accredited Master of Public Health program participates in the Schools of Public Health Application Service (SOPHAS), http://www.sophas.org/. **The MPH Admissions process has two steps**.   (1) All **MPH applications** must be submitted through the national SOPHAS service and (2) applicants must also submit a WVU Graduate application, https://graduateadmissions.wvu.edu/.

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Master of Public Health

MPH MAJOR IN HEALTH POLICY, MANAGEMENT, AND LEADERSHIP DESCRIPTION

The MPH degree with a major in Health Policy, Management, and Leadership (HPML) is focused on examining social and political systems that influence the health status of populations and then learning how to influence and/or design, implement, and manage broad, system-level instruments to improve population health outcomes. These instruments might include programs in public health agencies, not-for-profit organizations, or healthcare provider settings, or policies at the local, state, national, or international governmental levels.

The MPH major in HPML has a dual emphasis on acquiring both theoretical knowledge and practical skills. Thus, this degree is ideal for recent graduates or early- and mid-career public health professionals seeking to develop or advance their careers in a variety of health care settings. Additionally, the professional practice component of the program has been designed to place students in public health settings and apply their newly acquired knowledge and skills to address real-world problems.

Upon completion of the MPH degree with a major in HMPL, students will be prepared to continue developing their careers as leaders, managers, public health professionals, policy analysts, program evaluators, advocates, or health program managers in a variety of public health, government, health care, or other professional settings. In addition, our students will be prepared to continue their graduate education at the doctoral level.

Health Policy, Management and Leadership Major Competencies

In addition to the standard MPH Foundational Competencies required of all MPH students, our major in Health Policy, Management and Leadership also prepares students to meet 5 competencies specific to the major. These include:

1. Develop a fundamental understanding of the process of the production and delivery of health policy and its outputs.
2. Acquire the skills to effectively work within the healthcare/health policy system to assist in the formulation and articulation of health care management structures and processes, and work for its efficient and equitable delivery.
3. Develop an understanding of the processes and applications of influence whereby an individual empowers a group to achieve common goals.
4. Learn a broad set of analytic, statistical, economic, presentation, and interpersonal skills and tools to facilitate the communication of health policy and its understanding.
5. Clarify the conditions of participation within the health sector and achieving results that exemplify what we believe to be good citizenship.

MAJOR REQUIREMENTS

A final GPA of 3.0 or higher is required for the successful completion of the program.

Students must earn a minimum grade of "C-" in all PUBH and HPML coursework.

MPH Foundational Courses:

PUBH 610	Contemporary Foundations of Public Health Practice	2
PUBH 611	Epidemiology for Public Health Practice	2
PUBH 612	Research Translation and Evaluation in Public Health Practice	4
PUBH 620	Building and Sustaining Public Health Capacity	2
PUBH 621	Public Health Prevention and Intervention	3
PUBH 630	MPH Field Practicum	3
PUBH 640	Leadership and Collaboration in Public Health	3
PUBH 641	Systems Thinking in Public Health Practice	2
PUBH 696	Graduate Seminar	1
HPML Major Courses:		
HPML 601	Foundations of Health Policy	3
HPML 610	Health Economics for Population Health	3
HPML 620	Managing Robust Public Health Organizations	3
HPML 622	Analytic Methods for Health Policy, Management, and Leadership	3
HPML 623	Healthcare Finance	3
HPML 624	Advanced Issue Analysis for Health Policy	3
HPML 629	Tools for Health Policy and Management Communication	2
Electives:		**2**
Approved Elective Courses		
Total Hours		44

1. All students in the WVU SPH MPH program are required to maintain a portfolio that demonstrates their ability to meet the competencies associated with the MPH Foundational Courses, the Department Major Courses, and to apply a selection of those competencies in an approved practice-based setting(s). This portfolio must be submitted for review at the end of each academic year, as well as reviewed and approved prior to the successful completion of the program.
2. The MPH degree will be awarded based on successful completion of all academic requirements and demonstrated achievement of competencies via the student portfolio system and class-based evaluations of competency attainment.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours	Summer	Hours
PUBH 610		2 PUBH 620		2 PUBH 630	3
PUBH 611		2 PUBH 621		3	
PUBH 612		4 HPML 610		3	
HPML 601		3 HPML 620		3	
		11		11	3

Second Year

Fall	Hours	Spring	Hours
PUBH 640		3 PUBH 696	1

PUBH 641	2	HPML 624	3
HPML 622	3	HPML 629	2
HPML 623	3	Elective	1
Elective	1		
	12		7

Total credit hours: 44

*Note: With approval from the MPH Program Advisor and the Director of Practice-Based Learning, PUBH 630: MPH MPH Field Practicum can be taken anytime during Year 2.*Students must select at least nine credit hours for electives.

Major Learning Outcomes

HEALTH POLICY

1. Develop skills to influence the effective production and implementation of health policy (POLICY).
2. Assess structures and processes for effective health services management (MANAGEMENT).
3. Employ processes and applications that positively effect both individuals and group goals (LEADERSHIP).
4. Develop analytic, statistical, and economic skills for application to health service issues (SKILLS).
5. Appraise theory and skills in policy, management, and leadership to examine and influence real world health issues (APPLICATION).

Occupational and Environmental Health Sciences, M.P.H., Ph.D.

Degrees Offered

- Master of Public Health
- Doctor of Philosophy

Nature of the Program

MPH IN OCCUPATIONAL AND ENVIRONMENTAL HEALTH SCIENCES

The MPH degree with a major in Occupational and Environmental Health Sciences provides students with the practical skills needed to solve occupational and environmental health problems. Students will focus on understanding occupational and environmental processes and their effects on humankind, as well as developing the skills needed to assess and address their health consequences.

Upon completion of the MPH degree with a major in Occupational and Environmental Health Sciences, students will be prepared to either continue their graduate education at the doctoral level or begin a career as consultants, managers, and leaders in public health practice, research settings, government, or industry, addressing such issues as environmental pollution related to air, water, and waste, occupational health hazards, and work-related injury. The degree and major are ideal for recent college graduates or early to mid-career public health professionals seeking to develop or advance their current careers.

PH.D. IN PUBLIC HEALTH SCIENCES (OCCUPATIONAL AND ENVIRONMENTAL HEALTH SCIENCES MAJOR)

The Ph.D. in Public Health Sciences, Occupational and Environmental Health Major, is a degree for scientist-practitioners in the area of prevention of premature mortality, morbidity and disability resulting from occupational and environmental exposures, communicable and chronic disease, and injury. This degree emphasizes both evidence-based primary prevention of disease and injury, as well as health promotion research and practice. Students completing this degree will have the necessary theoretical knowledge and critical understanding of occupational and environmental health problems, including analytical and methodological research skills, to investigate, evaluate and find solutions to public health challenges. To this end, students should expect rigorous course work and training typical of a Ph.D. program.

The Department of Occupational and Environmental Sciences has a close collaboration with the National Institute of Occupational Safety and Health (NIOSH), which shares our Health Sciences campus in Morgantown. Collaborating NIOSH faculty add important enrichment and mentorship potential for the interested student.

FACULTY

CHAIR

- Weimin Gao - PhD (University of Pittsburgh)

PROFESSORS

- Lan Guo - PhD (West Virginia University)
- Christopher Martin - MD (Memorial University of Newfoundland)

ASSOCIATE PROFESSORS

- Anna Allen - MPH, MD (West Virginia University)
- Robert Gerbo - MD (West Virginia University)
- Chuanfang Jin - MD (Shanxi Medical University)

CLINICAL ASSOCIATE PROFESSOR

- Michael McCawley - PhD (New York University)

ASSISTANT PROFESSORS

- Travis Knuckles - PhD (North Carolina State University)
- Jennifer Lultschik - MD (University of Toronto Faculty of Medicine)

LECTURER

- Doug Boyer - PhD (West Virginia University)

EMERITUS

- Rachel T. Abraham - MD, MPH (Emory University)
- Alan Ducatman - MD, MSc (City University of New York)

Admissions

If you are ready to apply to the West Virginia University School of Public Health, the admissions team is here to assist you.

MASTER OF PUBLIC HEALTH (MPH) IN OCCUPATIONAL AND ENVIRONMENTAL HEALTH SCIENCES

ADMISSION GUIDELINES

- Baccalaureate degree from an accredited college or university with a preferred overall GPA of 3.0.
- GRE scores of 150 Verbal (preferred), 147 Quantitative (preferred), and 3.0 Analytical Writing.
- *International Students Only:* TOEFL scores: minimum 550 paper-based or 213 computer-based, IELTS (minimum 6.5), or or PTE score of 53-55.

APPLICATION PROCESS

Our CEPH accredited Master of Public Health program participates in the Schools of Public Health Application Service (SOPHAS), http://www.sophas.org/. **The MPH Admissions process has two steps**. (1) All **MPH applications** must be submitted through the national SOPHAS service and (2) applicants must also submit a WVU Graduate application, https://graduateadmissions.wvu.edu/.

In addition to the application, applicants must submit to SOPHAS a statement of purpose and objectives, official GRE test scores, three letters of reference, a current resume/curriculum vitae, and all university transcripts. SOPHAS requires **original transcripts** from **ALL** U.S. and International institutions attended (even Study Abroad).

There is a SOPHAS application fee. Applicants must indicate their first choice of MPH major and may also indicate a second choice. A maximum of two choices is allowed.

- E-submit your application as soon as the applicant entered information is complete. Do NOT wait for SOPHAS to receive transcripts, recommendations or test scores.

- Plan Ahead! Allow up to 4 weeks for SOPHAS to verify grades, process, and mail your application to your designated institutions after your documents have been received.

- SOPHAS grants fee waivers based upon financial need for Peace Corps Volunteers, McNair Scholars, Gates Millennium Scholars Program, AmeriCorps, U.S., and International applicants.

Once the department has reviewed the SOPHAS application, students will receive a communication from the WVU School of Public Health regarding their recommendation for acceptance and instructions to complete the WVU graduate application and pay the application fee.

*Important: When sending GRE scores for consideration for admission to WVU, please use the WVU School of Public Health College GRE **code: 0157**. This code MUST be used, otherwise, your GRE score will not be reported to SOPHAS and your application will be incomplete. Incomplete applications cannot be reviewed for an admissions decision. [Each program at West Virginia University has a specific code.]*

DOCTOR OF PHILOSOPHY (PH.D.) IN PUBLIC HEALTH SCIENCES (OCCUPATIONAL AND ENVIRONMENTAL HEALTH SCIENCES MAJOR)

ADMISSION GUIDELINES

- A Master's degree in Public Health or a closely related field is strongly preferred. Exceptional applicants with a Bachelor's degree in a relevant field may also be considered.
- A minimum GPA of 3.0 is required, 3.5 is preferred.

- The following GRE scores are preferred: Verbal 150; Quantitative 155; and Writing 3.5.
- WVU requires international students to submit TOEFL scores. Preferred scores are as follows: 550 on the paper-based test; 213 on the computer-based test; and 80 on the internet-based test. The IELTS (minimum score 6.5) or PTE score of 53-55 can be used in lieu of TOEFL.

APPLICATION PROCESS

Applying to the Ph.D. program is a two-step process in which prospective students first submit an application through the national SOPHAS service, http://www.sophas.org/. If you are accepted into to the PhD program by the School, the next step is for you to complete a WVU Graduate Application, https://graduateadmissions.wvu.edu/.

The SOPHAS application requires:

- Official test scores
- Official transcripts from all US institutions attended
- A Personal Statement
- 3 Letters of Recommendation
- Current CV/Resume

Applicants must indicate their first choice of Major and may indicate a second choice (you are allowed a maximum of two choices).

There is a SOPHAS application fee. However, SOPHAS grants fee waivers based upon financial need for McNair Scholars, Gates Millennium Scholars, as well as for AmeriCorps and Peace Corps Volunteers.

TIPS for completing the SOPHAS application:

- APPLY EARLY! Allow up to 4 weeks for SOPHAS to verify your transcripts and test scores and send them to the Universities to which you have applied. *Your application may not be reviewed if it does not contain verified transcripts and test scores.*
- *When submitting your GRE scores,* **be sure to use the college code 0157 for the WVU School of Public Health.** *This code MUST be used so that verified scores are sent by SOPHAS to the WVU School of Public Health for review.*
- Submit your application once you have provided the required information. DO NOT wait for SOPHAS to receive transcripts, recommendations or test scores prior to submitting your application.

Personal Statement

The Personal Statement is a critical piece of the application. The content of the Statement and the applicant's writing skills will be evaluated in the admissions decision. The Statement should address the following in no more than 1000 words:

- What is it about Public Health that interests you?
- What is it about your selected major, specifically, that interests you?
- What are your career goals?
- What topics or areas of research do you wish to pursue and why? If you have identified a potential dissertation topic, briefly describe that as well.
- Which faculty members in the SPH do you see as being potential mentors to help you succeed in your area of interest?

Applicants should also include any additional information about their interests, background, prior experience, or special circumstances that may be helpful to the SPH Admissions Committee.

Letters of Recommendation

Three letters of recommendation are required. At least two of these should be from people who can attest to your academic abilities.

Deadlines

Please refer to SOPHAS for the current deadline. Applications received after this deadline will not be considered. All admissions are for the Fall semester. We do not admit students into the Ph.D. program in the Spring or Summer semesters.

Review process

All completed and verified SOPHAS applications are first reviewed by the Admissions Committees of the major to which an applicant has applied (EPID, OEHS, or SBHS). Candidates that are recommended for admission at this level, are put forth to the SPH Doctoral Admissions Committee, which makes the final decisions on admissions and funding.

Advanced Standing for Applicants with a Master's Degree

Students who enter the Ph.D. program with an MPH or approved Master's degree are eligible for *Advanced Standing*. This allows students to complete an abbreviated course of study that takes between 2 and 3 years to complete, depending on the student's past course work and current interests.

Master of Public Health

MPH Major in Occupational and Environmental Health Sciences Description

The MPH degree with a major in Occupational and Environmental Health Sciences provides students with the practical skills needed to solve occupational and environmental health problems. Students will focus on understanding occupational and environmental processes and their effects on humankind, as well as developing the skills needed to assess and address their health consequences.

Upon completion of the MPH degree with a major in Occupational and Environmental Health Sciences, students will be prepared to either continue their graduate education at the doctoral level or begin a career as consultants, managers, and leaders in public health practice, research settings, government, or industry, addressing such issues as environmental pollution related to air, water, and waste, occupational health hazards, and work-related injury. The degree and major are ideal for recent college graduates or early to mid-career public health professionals seeking to develop or advance their current careers.

Occupational and Environmental Health Sciences Major Competencies

In addition to the standard MPH Foundational Competencies required of all MPH students, our major in Occupational and Environmental Health Sciences also prepares students to meet five competencies specific to the major. These include:

1. Appraise potential hazards in an occupational or environmental setting.
2. Execute methodologies of primary and secondary prevention for environmental health issues.
3. Recommend appropriate methods for the control of occupational hazards.
4. Demonstrate the influence of toxicological principles on public health outcomes.
5. Detect and critique the strengths and weaknesses of the occupational injury surveillance systems used in the US.

MAJOR REQUIREMENTS

A final GPA of 3.0 or higher is required for the successful completion of the program.

Students must earn a minimum grade of "C-" in all PUBH and OEHS coursework.

MPH Foundational Courses:		
PUBH 610	Contemporary Foundations of Public Health Practice	2
PUBH 611	Epidemiology for Public Health Practice	2
PUBH 612	Research Translation and Evaluation in Public Health Practice	4
PUBH 620	Building and Sustaining Public Health Capacity	2
PUBH 621	Public Health Prevention and Intervention	3
PUBH 630	MPH Field Practicum	3
PUBH 640	Leadership and Collaboration in Public Health	3
PUBH 641	Systems Thinking in Public Health Practice	2
PUBH 696	Graduate Seminar	1
OEHS Major Courses:		
OEHS 610	Environmental Practice	3
OEHS 620	Occupational and Environmental Hazard Assessment	4
OEHS 622	Public Health Toxicology	3
OEHS 623	Occupational Injury Prevention	3
Capstone		2
OEHS 629	Capstone	
Electives		

OEHS Electives Approved by the MPH Program Advisor (May include additional hours of PUBH 630)	4
Other Electives Approved by the MPH Program Advisor	3
Total Hours	44

1. All students in the WVU SPH MPH program are required to maintain a portfolio that demonstrates their ability to meet the competencies associated with the MPH Foundational Courses, the Department Major Courses, and to apply a selection of those competencies in an approved practice-based setting(s). This portfolio must be submitted for review at the end of each academic year, as well as reviewed and approved prior to the successful completion of the program.
2. The MPH degree will be awarded based on successful completion of all academic requirements and demonstrated achievement of competencies via the student portfolio system and class-based evaluations of competency attainment.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours	Summer	Hours
PUBH 610	2	PUBH 620	2	PUBH 630	3
PUBH 611	2	PUBH 621	3		
PUBH 612	4	OEHS 610	3		
OEHS 620	4	OEHS 622	3		
	12		11		3

Second Year

Fall	Hours	Spring	Hours
PUBH 640	3	PUBH 696	1
PUBH 641	2	OEHS 629	2
OEHS 623	3	Elective	5
Elective	2		
	10		8

Total credit hours: 44

Note: With approval from the MPH Program Advisor and the Director of Practice-Based Learning, PUBH 630: MPH Field Practicum can be taken anytime during Year 2.

CULMINATING EXPERIENCE/CAPSTONE

OEHS 629 Capstone is generally to be taken in the last semester of study. In the Capstone, students are required to demonstrate the ability to synthesize and integrate knowledge and competencies across the full breadth of the MPH-OEHS curriculum.

COMPETENCY ASSESSMENT

The MPH degree will be awarded based on successful completion of all academic requirements and demonstrated achievement of the competencies listed above. The OEHS department chair, with input from the OEHS faculty, will review competency performance evidence and determine if the student has achieved the expected competencies. If a determination is made that competencies have not been achieved, the department chair will inform the student of what must be accomplished in order for him/her to demonstrate competency achievement and therefore be recommended for awarding of the MPH degree. This may include taking additional courses.

Doctor of Philosophy

MAJOR REQUIREMENTS

A minimum GPA of 3.0 is required.

BIOS 603	Applied Biostatistics 2	3
BMS 700	Scientific Integrity	1
OEHS 622	Public Health Toxicology	3
OEHS 734	Aerosols and Health	3
OEHS 625	Advanced Toxicology	3
OEHS 796	Graduate Seminar (Taken two times for 1 credit each)	2
PUBH 610	Contemporary Foundations of Public Health Practice	2
PUBH 611	Epidemiology for Public Health Practice	2
PUBH 612	Research Translation and Evaluation in Public Health Practice	4

PUBH 790	Teaching Practicum (Two 1-hour experiences)	2
PUBH 796	Graduate Seminar (Taken two times for 1 credit each)	2
PUBH 797	Research (Two 1-hour research rotations)	2
SBHS 701	Public Health Grant Writing	3
Electives		12
Qualifying Examination - written and oral components		
Dissertation Proposal		
Dissertation Research (minimum credit number shown)		27
PUBH 797	Research	
Dissertation Defense		
OEHS 620	Occupational and Environmental Hazard Assessment	4
Total Hours		75

PROGRAM REQUIREMENTS FOR STUDENTS ENTERING WITH ADVANCED STANDING

Students entering the OEHS PhD program that are admitted with advanced standing (that already hold strongly relevant Master's degrees) will work with the departmental PhD advisor for a recommended course of study. This includes initiating a selection of course credits that can be transferred (600 level and above, graded B or above, passed in the last 5 years) and/or waived that ultimately will be reviewed and approved by the PhD Program Director in consultation with the PhD Advisory Committee. Under typical circumstances a student with a recent MPH degree or similar, can expect to transfer and/or waive up to 20 credits or roughly one year of course work.

ELECTIVES

Courses may be selected from among the many offerings of the Department, the School, or the University's many course offerings. These courses must be discussed with and approved by the student's advisor.

TEACHING PRACTICUMS

Students will complete two (1 credit) teaching practicum (PUBH 790) during which they will spend time in a mentored relationship with a faculty member, assisting with the administration and teaching of a course. These may be graduate or undergraduate level courses. Students who have a strong interest in teaching should also consider taking C&I 789 Teaching in Higher Education (3 credits). This is a general methods course involving instructional concepts and strategies for present/prospective faculty in higher education.

*Full-time HSC-funded stipend students are expected to participate in the SPH teaching mission to a greater degree.

QUALIFYING EXAM

The qualifying examination is the capstone experience for the OEHS PhD program. Successful completion of the examination signifies competence in the field of occupational and environmental health sciences and indicates readiness to engage in independent research. Following completion of the majority of the PhD coursework, students are then eligible to take the qualifying examination, which consists of two components, a written exam and an oral defense as follows:

Written exam: The written exam consists of questions related to occupational and environmental health sciences generally as well as those pertinent to the student's research focus.

Oral defense: The oral component consists of a defense of student's answers to the written exam and includes additional questions that further test the student's understanding of key concepts in occupational and environmental health sciences and knowledge specific to the student's research focus. The oral defense of the written exam must be attempted within two academic weeks of completing the written exam. *Note: Students are not eligible to begin their dissertation, or sign up for dissertation credits, until they have successfully completed both components of the qualifying examination.*

RESEARCH

The research component of the OEHS PhD program consists of both a dissertation (27 credits, minimum) and completion of two research rotations (2 credits).

Research Rotations: Students will complete two research rotations during their first year, meeting and working with research faculty with similar interests to the student's in order to identify potential mentors for their dissertation research.

Dissertation**:** Students will complete a dissertation in which they design and conduct an original work of research. First, students will develop a proposal for an original research project. This proposal will be presented and defended orally before the student's dissertation committee. Upon successful completion of the proposal defense, students are admitted to PhD candidacy and may then complete their dissertation research. There are two options for the dissertation format, a traditional book format or a three Journal Article Format (JAF). The decision of which format to use is something that students should discuss with their committee chairperson. Regardless of the format selected, students must have a minimum of one first-authored

publication based on their dissertation topic area, at least under review in a peer-reviewed journal before they can defend their dissertation. While the required publication may come from one of the student's three dissertation articles if using the JAF, this is not mandatory. Upon completion of the written dissertation, the student will present and defend their work before the dissertation committee. *Note: The dissertation defense is open to all members of the WVU community and the public.*

University Doctoral Degree Requirements: For further details on WVU's requirements for Doctoral programs please visit the following website: http://catalog.wvu.edu/graduate/advisingcoursesdegrees/degree_regulations/.

PLAN OF STUDY

Upon matriculating into the PhD program, students should contact the OEHS PhD Program Coordinator, or their advisor if already identified, to discuss the course requirements and to develop a plan of study (POS) to meet their individual needs. Below is a suggested POS with the minimum requirements for students entering the program with a BA/BS. *Note: Research credits show below reflect the minimum requirements. Students may enroll in additional research credits as necessary to achieve the degree competencies.*

First Year

Fall	Hours	Spring	Hours
BMS 700	1	BIOS 603	3
PUBH 610	2	PUBH 797	1
PUBH 611	2	SBHS 701	3
PUBH 612	4	OEHS 622	3
PUBH 796	1		
OEHS 620	4		
	14		10

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
PUBH 790	1	OEHS 796	1	Qualifying Exam	
PUBH 796	1	PUBH 790	1		
PUBH 797	1	Elective 2	3		
Elective 1	3	Elective 3	3		
OEHS 625	3	OEHS 734	3		
	9		11		0

Third Year

Fall	Hours	Spring	Hours
OEHS 796	1	PUBH 797	10
PUBH 797	7		
Elective 4	3		
Dissertation Proposal			
	11		10

Fourth Year

Fall	Hours
PUBH 797	10
Dissertation Defense	
	10

Total credit hours: 75

DOCTOR OF PHILOSOPHY

Program Competencies

- Develop effective strategies for teaching in higher education
- Review and synthesize pertinent literature and formulate focused research questions that address identified knowledge gaps
- Design and conduct original research that uniquely contributes to the public health scientific knowledge
- Disseminate research findings through appropriate peer-reviewed publications and presentations, and to other public health community audiences

Major Competencies

- Analyze issues and problems in occupational and environmental health and safety using critical evaluation, applied research methodology, and statistical methods
- Characterize the human health effects of major environmental and occupational hazards, both acute and chronic, including: air pollution, contamination of drinking water, and physical hazards
- Analyze sources, pathways, and routes of exposure to environmental and occupational hazards, identify populations at high risk of exposure, and communicate that risk effectively
- Create programs that protect the environment using proven technologies and novel approaches

Social and Behavioral Sciences, M.P.H., Ph.D.

Degrees Offered

- Master of Public Health
- Doctor of Philosophy

Nature of the Program

MPH IN SOCIAL AND BEHAVIORAL SCIENCES

The MPH degree with a major in Social and Behavioral Sciences (SBHS) addresses the behavioral, social, and environmental factors related to individual and population health and health disparities over the life span. Research and practice in this track contributes to the development, administration, and evaluation of programs and policies in public health to promote and sustain healthy environments and lives for individuals and populations.

A student who graduates with an MPH degree with a major in Social and Behavioral Science from WVU will be qualified to work and provide leadership in public health and research settings at national, state or local levels, or work in the public or private sector on health promotion program implementation and evaluation efforts.

PH.D. IN PUBLIC HEALTH SCIENCES (SOCIAL AND BEHAVIORAL SCIENCES MAJOR)

The mission of the Ph.D. in Public Health Sciences, Social and Behavioral Sciences Major, is to provide state of the art doctoral education in the theory and application of social and behavioral science to a select group of highly qualified and committed students desiring to transform public health. Our program trains students using a research intensive curriculum led by a distinguished faculty at the cutting edge of public health science. This program emphasizes both evidence-based, theory-driven primary prevention of disease and injury and health promotion research and practice. Graduates will complete their degrees with a competitive record of research achievement, ready to embark on high-impact research careers.

The curriculum is designed so that students receive a methodologically-intense training and one-on-one research experience with faculty in Social and Behavioral Sciences, typically over a three- to four-year period. The first years of the program emphasize research and statistical methods complemented by theoretical and process-oriented coursework relevant to Social and Behavioral Sciences. During the latter years of the program, students are engaged in their dissertation research while given the freedom to further diversify their training by choosing electives.

FACULTY

CHAIR

- Keith Zulllig, Professor - Ph.D. (University of South Carolina)

PROFESSORS

- Linda Alexander - Ed.D. (University of Virginia)
- Geri Dino - Ph.D. (Kansas State University)
- Ranjita Misra - Ph.D. (Old Dominion University)

ASSOCIATE PROFESSORS

- Christiaan Abildso - Ph.D. (West Virginia University)
- Alfgeir Kristjansson - Ph.D. (Karolinska Institute)

ASSISTANT PROFESSORS

- Elizabeth Claydon - Ph.D. (West Virginia University)
- Danielle Davidov - Ph.D. (West Virginia University)
- Nancy O'Hara Tompkins - Ph.D. (University of Maryland)

TEACHING ASSISTANT PROFESSOR

- Audra Hamrick - MA (West Virginia University)
- Janet B. Hunt - MPH (University of Tennessee)
- Toni Morris - Ed.D., M.S. (West Virginia University)

ADJUNCT PROFESSORS

- Ahmed Aboraya - M.D. (Cairo University)
- Lesley Cottrell - Ph.D. (West Virginia University)
- Samuel Zizzi - Ed.D. (West Virginia University)

ADJUNCT ASSOCIATE PROFESSORS

- Joy Buck - Ph.D. (University of Virginia)
- Cindy Fitch - Ph.D. (Case Western Reserve University)
- Michael Mann - Ph.D. (University of Florida)
- Melissa Olfert - Ph.D. (Loma Linda University)

ADJUNCT ASSISTANT PROFESSORS

- John Blosnich - Ph.D. (West Virginia University)
- Michael Brumage - M.D., MPH (West Virginia University)
- Janie Leary - Ph.D. (West Virginia University)
- Thomas Sims - M.A. (Georgia State University)
- Megan Smith - Ph.D. (West Virginia University)

ADJUNCT INSTRUCTOR

- Janet Reger-Nash - M.S. (University of California)

RESEARCH ASSISTANT PROFESSORS

- Adam Baus - Ph.D. (West Virginia University)
- Traci Jarrett - Ph.D. (West Virginia University)
- Cecil Pollard - M.A. (West Virginia University)
- Samantha Shawley-Brzoska - Ph.D. (West Virginia University)

FACULTY EMERITI

- William Reger-Nash - Ed.D. (West Virginia University)
- Pete Shaffron - Ed.D.
- Kenneth Simon - Ed.D. (Columbia University)

Admissions

If you are ready to apply to West Virginia University School of Public Health, the admissions team is here to assist you.

MASTER OF PUBLIC HEALTH (MPH) IN SOCIAL AND BEHAVIORAL SCIENCES

ADMISSION GUIDELINES

- Baccalaureate degree from an accredited college or university with a preferred GPA of 3.0
- GRE scores of 146 (verbal), 144 (quantitative), 3.0 (analytical writing)
- TOEFL scores (minimum 550 paper-based) (minimum 213 computer-based). Internet-Based TOEFL (iBT) minimum score recommended for admission, which is an 80 (20 or higher in each of the four sections). The IELTS (minimum score 6.5) or PTE score of 53-55 can be used in lieu of TOEFL. *International Students Only.*

APPLICATION PROCESS

Our CEPH accredited Master of Public Health program participates in the Schools of Public Health Application Service (SOPHAS), http://www.sophas.org/. **The MPH Admissions process has two steps**. (1) All **MPH applications** must be submitted through the national SOPHAS service and (2) applicants must also submit a WVU Graduate application, https://graduateadmissions.wvu.edu/.

In addition to the application, applicants must submit to SOPHAS a statement of purpose and objectives, official GRE test scores, three letters of reference, a current resume/curriculum vitae, and all university transcripts. SOPHAS requires **original transcripts** from **ALL** U.S. and International institutions attended (even Study Abroad).

There is a SOPHAS application fee. Applicants must indicate their first choice of MPH major and may also indicate a second choice. A maximum of two choices is allowed.

- E-submit your application as soon as the applicant entered information is complete. Do NOT wait for SOPHAS to receive transcripts, recommendations or test scores.
- Plan Ahead! Allow up to 4 weeks for SOPHAS to verify grades, process, and mail your application to your designated institutions after your documents have been received.
- SOPHAS grants fee waivers based upon financial need for Peace Corps Volunteers, McNair Scholars, Gates Millennium Scholars Program, AmeriCorps, U.S., and International applicants.

Once the department has reviewed the SOPHAS application, students will receive a communication from the WVU School of Public Health regarding their recommendation for acceptance and instructions to complete the WVU graduate application and pay the application fee.

*Important: When sending GRE scores for consideration for admission to WVU, please use the WVU School of Public Health College GRE **code: 0157**. This code MUST be used, otherwise, your GRE score will not be reported to SOPHAS and your application will be incomplete. Incomplete applications cannot be reviewed for an admissions decision. [Each program at West Virginia University has a specific code.]*

DOCTOR OF PHILOSOPHY (PH.D.) IN PUBLIC HEALTH SCIENCES (SOCIAL AND BEHAVIORAL SCIENCES MAJOR)

ADMISSION GUIDELINES

- A Master's degree in Public Health or a closely related field is strongly preferred. Exceptional applicants with a Bachelor's degree in a relevant field may also be considered.
- A minimum GPA of 3.0 is required, 3.5 is preferred.
- The following GRE scores are preferred: Verbal 150; Quantitative 155; and Writing 3.5.
- WVU requires international students to submit TOEFL scores. Preferred scores are as follows: 550 on paper-based; 213 on computer-based; and 80 on internet-based test. The IELTS (minimum score 6.5) or PTE score of 53-55 can be used in lieu of TOEFL.

APPLICATION PROCESS

Applying to the Ph.D. program is a two-step process in which prospective students first submit an application through the national SOPHAS service, http://www.sophas.org/. If you are accepted into the Ph.D. program by the School, the next step is for you to complete a WVU Graduate Application, https://graduateadmissions.wvu.edu/.

The SOPHAS application requires:

- Official test scores
- Official transcripts from all US institutions attended
- A Personal Statement
- 3 Letters of Recommendation
- Current CV/Resume

Applicants must indicate their first choice of Major and may indicate a second choice (you are allowed a maximum of two choices).

There is a SOPHAS application fee. However, SOPHAS grants fee waivers based upon financial need for McNair Scholars, Gates Millennium Scholars, as well as for AmeriCorps and Peace Corps Volunteers.

TIPS for completing the SOPHAS application:

- APPLY EARLY! Allow up to 4 weeks for SOPHAS to verify your transcripts and test scores and send them to the Universities to which you have applied. Your application may not be reviewed if it does not contain verified transcripts and test scores.
- When submitting your GRE scores, **be sure to use the college code 0157 for the WVU School of Public Health.** This code MUST be used so that verified scores are sent by SOPHAS to the WVU School of Public Health for review.
- Submit your application once you have provided the required information. DO NOT wait for SOPHAS to receive transcripts, recommendations or test scores prior to submitting your application.

Personal Statement

The Personal Statement is a critical piece of the application. The content of the Statement and the applicant's writing skills will be evaluated in the admissions decision. The Statement should address the following in no more than 1000 words:

- What is it about Public Health that interests you?
- What is it about your selected major, specifically, that interests you?
- What are your career goals?
- What topics or areas of research do you wish to pursue and why? If you have identified a potential dissertation topic, briefly describe that as well.
- Which faculty members in the SPH do you see as being potential mentors to help you succeed in your area of interest?

Applicants should also include any additional information about their interests, background, prior experience, or special circumstances that may be helpful to the SPH Doctoral Admissions Committee.

Letters of Recommendation

Three letters of recommendation are required. At least two of these should be from people who can attest to your academic abilities.

Deadlines

Please refer to SOPHAS for the current deadline. New applications received after this deadline will not be reviewed. All admissions are for the Fall semester. We do not admit students into the Ph.D. program in the Spring or Summer semesters.

Review Process

All completed and verified SOPHAS applications are first reviewed by the Admissions Committees of the major to which an applicant has applied (EPID, OEHS, or SBHS). Candidates that are recommended for admission at this level, are put forth to the SPH Doctoral Admissions Committee, which makes the final decisions on admissions and funding.

Advanced Standing for Applicants with an Approved Master's Degree

Students who enter the Ph.D. program with an MPH or approved Master's degree are eligible for *Advanced Standing*. This allows students to complete an abbreviated course of study that takes between 2 and 3 years to complete, depending on the student's past course work and current interests.

Master of Public Health

MPH Major in Social and Behavioral Sciences Description

The MPH degree with a major in Social and Behavioral Sciences (SBHS) addresses the behavioral, social, and environmental factors related to individual and population health and health disparities over the life span. Research and practice in this track contributes to the development, administration, and evaluation of programs and policies in public health to promote and sustain healthy environments and lives for individuals and populations.

A student who graduates with an MPH degree with a major in Social and Behavioral Science from WVU will be qualified to work and provide leadership in public health and research settings at national, state or local levels, or work in the public or private sector on health promotion program implementation and evaluation efforts.

Social and Behavioral Sciences Major Competencies

In addition to the standard MPH Foundational Competencies required of all MPH students, our major in Social and Behavioral Sciences also prepares students to meet five competencies specific to the major. These include:

1. Practice community engagement principles when addressing public health problems.
2. Appraise qualitative and quantitative data used in evaluating factors associated with improving public health.
3. Employ social behavioral theories & frameworks designed to describe public health problems and improve public health interventions.
4. Recommend interventions likely to improve public health.
5. Organize interventions, including the assessment, planning, implementation, and evaluation of public health interventions.
6. Communicate effectively among diverse stakeholders.

Major Requirements

A final GPA of 3.0 or higher is required for the successful completion of the program.

Students must earn a minimum grade of "C-" in all PUBH and SBHS coursework.

MPH Foundational Courses:

PUBH 610	Contemporary Foundations of Public Health Practice	2
PUBH 611	Epidemiology for Public Health Practice	2

PUBH 612	Research Translation and Evaluation in Public Health Practice	4
PUBH 620	Building and Sustaining Public Health Capacity	2
PUBH 621	Public Health Prevention and Intervention	3
PUBH 630	MPH Field Practicum	3
PUBH 640	Leadership and Collaboration in Public Health	3
PUBH 641	Systems Thinking in Public Health Practice	2
PUBH 696	Graduate Seminar	1
SBHS Major Courses:		
SBHS 616	Introduction to Public Health Interventions for Social and Behavioral Scientist	4
SBHS 617	Community Engagement and Advocacy in Public Health	2
SBHS 611	Community Assessment	3
SBHS 615	Intervention Design	3
SBHS 620	Implementing and Managing Public Health Programs	3
SBHS 613	Public Health Program Evaluation	3
SBHS 629	Capstone Course	2
SBHS 693	Professional Orientation (Special Topics)	2
Total Hours		44

1. All students in the WVU SPH MPH program are required to maintain a portfolio that demonstrates their ability to meet the competencies associated with the MPH Foundational Courses, the Department Major Courses, and to apply a selection of those competencies in an approved practice-based setting(s). This portfolio must be submitted for review at the end of each academic year, as well as reviewed and approved prior to the successful completion of the program.
2. The MPH degree will be awarded based on successful completion of all academic requirements and demonstrated achievement of competencies via the student portfolio system and class-based evaluations of competency attainment.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
PUBH 610	2	PUBH 620	2
PUBH 611	2	PUBH 621	3
PUBH 612	4	SBHS 611	3
SBHS 616	4	SBHS 617	2
		SBHS 693A	1
	12		11

Second Year

Fall	Hours	Spring	Hours
PUBH 640	3	PUBH 630	3
PUBH 641	2	PUBH 696	1
SBHS 615	3	SBHS 613	3
SBHS 620	3	SBHS 629	2
SBHS 693 (Special Topics)	1		
	12		9

Total credit hours: 44

Doctor of Philosophy

MAJOR REQUIREMENTS

A minimum GPA of 3.0 is required.

BIOS 603	Applied Biostatistics 2	3
BIOS 604	Applied Biostatistics 3	3
BMS 700	Scientific Integrity (and Ethics)	1
PUBH 610	Contemporary Foundations of Public Health Practice	2
PUBH 611	Epidemiology for Public Health Practice	2

PUBH 612	Research Translation and Evaluation in Public Health Practice	4
PUBH 790	Teaching Practicum (Two 1-hour experiences)	2
PUBH 796	Graduate Seminar (Taken 2 times for 1 credit)	2
PUBH 797	Research (Two 1-hour research rotations)	2
SBHS 701	Public Health Grant Writing	3
SBHS 715	Intervention Design	3
SBHS 760	Survey Research Methods	3
SBHS 761	Qualitative Research Methods (Offered only during even years)	3
SBHS 763	Advanced Evaluation Public Health (Offered only during odd years)	3
Electives		12
Qualifying Examination - written and oral components		
Dissertation Proposal		
Dissertation Research (minimum credit number shown)		27
PUBH 797	Research	
Dissertation Defense		
Total Hours		75

PROGRAM REQUIREMENTS FOR STUDENTS ENTERING WITH ADVANCED STANDING

Students entering the SBHS PhD program that are admitted with advanced standing (that already hold strongly relevant Master's degrees) will work with the departmental PhD advisor for a recommended course of study. This includes initiating a selection of course credits that can be transferred (600 level and above, graded B or above, passed in the last 5 years) and/or waived that ultimately will be reviewed and approved by the PhD Program Director in consultation with the PhD Advisory Committee. Under typical circumstances a student with a recent MPH degree or similar, can expect to transfer and/or waive up to 20 credits or roughly one year of course work.

ELECTIVES

Courses may be selected from among the department's, School of Public Health's, or university's many course offerings. This will allow students to develop an area of focus. These courses will be discussed and approved with the faculty advisor.

TEACHING PRACTICUMS

Students will complete two (1 credit) teaching practicums (PUBH 790) during which they will spend time in a mentored relationship with a faculty member, assisting with the administration and teaching of a course. These may be graduate or undergraduate level courses. Students who have a strong interest in teaching should also consider taking C&I 789 Teaching in Higher Education (3 credits). This is a general methods course involving instructional concepts and strategies for present/prospective faculty in higher education.

Full-time HSC-funded stipend students are expected to participate in the SPH teaching mission to a greater degree.

QUALIFYING EXAMINATION

The Qualifying Examination is the capstone experience for Ph.D. program coursework. Successful completion of the examination signifies competence in the field of public health sciences and indicates readiness to engage in independent research. Following completion of the majority of the PhD coursework, students are then eligible to take the qualifying examination, which consists of two components, a written exam and an oral defense as follows:

Written exam: The written exam consists of questions related to social and behavioral sciences generally as well as those pertinent to the student's research focus.

Oral defense: The oral component consists of a defense of student's answers to the written exam and includes additional questions that further test the student's understanding of key concepts in social and behavioral sciences and knowledge specific to the student's research focus. The oral defense of the written exam must be attempted within two academic weeks of completing the written exam. *Note: Students are not eligible to begin their dissertation, or sign up for dissertation credits, until they have successfully completed both components of the qualifying examination.*

RESEARCH

The research component of the SBHS PhD program consists of both a dissertation (27 credits, minimum) and completion of two research rotations (2 credits).

Research Rotations: Students will participate in two research rotations in their first year, meeting and working with research faculty with similar interests in order to develop mentorship for dissertation research.

Dissertation**:** Students will complete a dissertation in which they design and conduct an original work of research. First, students will develop a proposal for an original research project. This proposal will be presented and defended orally before the student's dissertation committee. Upon successful completion of the proposal defense, students are admitted to PhD candidacy and may then complete their dissertation research. There are two options for the dissertation format, a traditional book format or a three Journal Article Format (JAF). The decision of which format to use is something that students should discuss with their committee chairperson. Regardless of the format selected, students must have a minimum of one first-authored publication based on their dissertation topic area, at least under review in a peer-reviewed journal before they can defend their dissertation. While the required publication may come from one of the student's three dissertation articles if using the JAF, this is not mandatory. Upon completion of the written dissertation, the student will present and defend their work before the dissertation committee. *Note: The dissertation defense is open to all members of the WVU community and the public.*

University Doctoral Degree Requirements: For further details on WVU's requirements for Doctoral programs please visit the following website: http://catalog.wvu.edu/graduate/advisingcoursesdegrees/degree_regulations/.

PLAN OF STUDY

Upon matriculating into the PhD program, students should contact the SBHS PhD Program Coordinator, or their advisor if already identified, to discuss the course requirements and to develop a plan of study (POS) to meet their individual needs. Below is a suggested POS with the minimum requirements for students entering the program with a BA/BS. *Note: Research credits show below reflect the minimum requirements. Students may enroll in additional research credits as necessary to achieve the degree competencies.*

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours		
PUBH 610	2	BIOS 603	3		
PUBH 611	2	PUBH 797	1		
PUBH 612	4	SBHS 763	3		
PUBH 796	1	SBHS 715	3		
BMS 700	1				
	10		10		

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
BIOS 604	3	PUBH 790	1	Qualifying Exam	
PUBH 790	1	SBHS 760	3		
PUBH 796	1	SBHS 701	3		
PUBH 797	1	SBHS 761	3		
Elective 1	3	Elective 3	3		
Elective 2	3				
	12		13		0

Third Year

Fall	Hours	Spring	Hours		
PUBH 797	7	PUBH 797	10		
Elective 4	3				
Dissertation Proposal					
	10		10		

Fourth Year

Fall	Hours		
PUBH 797	10		
Dissertation Defense			
	10		

Total credit hours: 75

Major Learning Outcomes

SOCIAL AND BEHAVIORAL SCIENCES

Social and Behavioral Sciences MPH Major Competencies

- Practice community engagement principles when addressing public health problems.
- Appraise qualitative and quantitative data used in evaluating factors associated with improving public health.
- Employ social behavioral theories & frameworks designed to describe public health problems and improve public health interventions.
- Recommend interventions likely to improve public health.
- Organize interventions, including the assessment, planning, implementation, and evaluation of public health interventions.
- Communicate effectively among diverse stakeholders.

DOCTOR OF PHILOSOPHY

Program Competencies

- Develop effective strategies for teaching in higher education
- Review and synthesize pertinent literature and formulate focused research questions that address identified knowledge gaps
- Design and conduct original research that uniquely contributes to the public health scientific knowledge
- Disseminate research findings through appropriate peer-reviewed publications and presentations, and to other public health community audiences

Major Competencies

- Display broad knowledge and application of relevant public health social and behavioral theories to health promotion and disease prevention strategies
- Demonstrate rigorous understanding of methodological and statistical principles that enhance research in the public health sciences
- Create comprehensive translational intervention and evaluation plans in research or practice settings to inform policy or practice.

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