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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. 7)
- WVU Vision (p. 7)
- WVU Values (p. 7)
- Commitment to Diversity, Equity, and Inclusion (p. 8)
- West Virginia University Center for Excellence in Disabilities (p. 8)
- Office of Accessibility Services (p. 8)

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 (p. 9)
- West Virginia University Board of Governors (p. 9)
- Equal Opportunity/Affirmative Action Institution (p. 9)
- West Virginia University Administration (p. 10)
- Deans (p. 10)

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. Atilas
- *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 Hulseley
- *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
- Debansu 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, WVU 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. Jackowitz 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. Armbrrecht 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 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. 14)
- Penalties for Academic Dishonesty (p. 15)

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/#probationsuspension>) 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/#probationsuspension>) 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 (p. 15)
- The Appeal Process for Failure to Meet Academic Requirements or Standards (p. 16)
- The Appeal Process for Academic Dishonesty (p. 18)

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/#probationsuspensionstext>).
- 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:

- Undergraduate Academic Probation and Suspension Policy (p. 19)
- Probation Procedures (p. 20)
- Suspension Procedures (p. 20)
- Duration of Suspension (p. 19)
- Appeal of Suspension (p. 19)
- Summer Enrollment for Students Suspended for Fall (p. 19)
- Winter Enrollment (p. 20)
- Immediate Reinstatement after Suspension (p. 20)
- Readmission after Serving Suspension (p. 20)

Undergraduate Academic Probation and Suspension Policy

DEFINITIONS

Fall and Spring are regular terms. Winter and Summer are not.

Policy

This policy concerns academic probation and suspension (referred to below as probation and suspension) in the West Virginia University system. It does not apply to the suspension of financial aid eligibility (<https://financialaid.wvu.edu/applying-for-aid/unsatisfied-requirements/>) or suspension due to violation of the student conduct code (<https://studentconduct.wvu.edu/campus-student-code/>).

Probation: At the end of any regular term (Fall and Spring), any student with an overall grade point average (GPA) below a 2.0 will be on Probation.

Suspension: The accumulation of probationary terms may result in suspension at the end of the Fall and Spring term if the student has a GPA below 2.0. Students are suspended only after a regular term.

- First Suspension: students who earn an overall GPA lower than a 2.0 for three regular terms (consecutive or not) will be placed on Academic Suspension for one calendar year.
- Second Suspension: after returning from their first suspension, students who earn an overall GPA lower than a 2.0 for two additional regular terms (consecutive or not) will be placed on Academic Suspension for one calendar year.
- Third Suspension: after returning from their second suspension, students who earn an overall GPA lower than a 2.0 for two additional regular terms (consecutive or not) will be placed on Academic Suspension for three calendar years.

Schools, colleges, and programs may dismiss from their programs using criteria that are more rigorous than the university requirements described above.

Appeal

Suspended students have until late December or early June (exact date specified in the emailed notice of suspension) to appeal the suspension by following the appropriate workflow as described in the notice of suspension. Students who appeal their suspension and are denied, or who do not appeal it, will be removed from their Spring or Fall term courses. For more information regarding Academic Probation, Suspension and Suspension Appeals (<https://undergraduate.wvu.edu/strategies/probation-and-suspension/>), please visit the Academic Strategies, Curriculum and Assessment website.

Summer Enrollment

Students who are placed on probation or suspended after a spring term may enroll in summer courses in the WVU system. Suspended students who are enrolled in summer courses as of July 1 will not be removed from their fall classes until summer grades are available. Students placed on probation or suspended who rehabilitate their overall GPA to 2.0 or above in the summer will be reinstated to good academic standing, although the probation

or suspension will remain on their academic record and will be counted as if it was served. Only summer courses taken in the WVU system (i.e. WVU Morgantown, WVU Online, WVU Potomac State College, and WVU Institute of Technology) are eligible to raise the GPA for determining reinstatement.

Winter Enrollment

Students who are placed on probation or suspended after the Fall term may enroll in winter courses in the WVU system. Students who rehabilitate their overall GPA to 2.0 or above after the winter intersession will be automatically reinstated to good academic standing, although the probation or suspension remains on their academic record and will be counted as if it was served.

Immediate Reinstatement after Suspension

Students who are suspended and subsequently reinstated following a successful appeal or a successful summer term may be retained in their major for advising. An unserved suspension is recorded as a suspension on the WVU transcript. Students reinstated following a successful academic suspension appeal are placed on contract with their college/school and are required to abide by the terms of an academic contract. For more information to apply for contractual readmission (<https://undergraduate.wvu.edu/strategies/probation-and-suspension/>), please visit the Academic Strategies, Curriculum and Assessment website. Failure to abide by the terms of their contract or to return to good academic standing may result in the enforcement of academic suspension at the end of the term. Suspended students who rehabilitate their overall GPA to 2.0 or above in the summer or winter term will be automatically reinstated from suspension, although the suspension remains on their academic record. Only summer or winter courses taken in the WVU system (i.e. WVU Morgantown, WVU Online, Potomac State College, and WVU Institute of Technology) are eligible to raise the GPA for determining reinstatement.

Readmission after Serving Suspension

Suspended students who wish to be readmitted into the University after their required suspension period must contact the Office of Admissions or appropriate office. Students may or may not be readmitted to their previous major at the discretion of their academic program. Students who are dismissed may transfer to another program if they meet the program's admission requirements and are accepted. Alternatively, they may be advised in the Center for Learning, Advising and Student Success until they are able to be accepted to a program. All reinstated students whose overall GPA is below 2.0 are given a contract that describes the conditions that must be met to avoid suspension in future terms.

After returning from suspension, students who earn an overall GPA lower than a 2.0 for two additional regular terms (consecutive or not) will be placed on academic suspension (refer to *Policy – Suspension*). Courses taken outside the WVU system will not be reflected in a student's GPA until the overall GPA is 2.0 or above and the courses are approved (see WVU Transient Policy).

Probation Procedures

At the conclusion of the fall or spring term, students with an overall GPA below 2.0 are sent a probation letter from the Office of the University Registrar (OUR) or appropriate office via e-mail to their MIX account. This communication informs the student that they have been placed on probation effective for the end of the current term. Students on academic probation will be placed on contract by their College and required to complete specific academic requirements.

Suspension Procedures

At the conclusion of the Fall or Spring term, suspended students are sent a suspension letter from the Office of the University Registrar or student's individual college via e-mail to their MIX account and by post to their permanent address. The letter informs students that they have been suspended from the West Virginia University system and provides information about appealing the suspension.

The suspension is enforced beginning with the next Fall or Spring term. Successful appeals require strict adherence to the terms of the probation contract provided to the probationary student.

Admissions

In this section:

- Introduction (p. 21)
- Robert C. Byrd Health Sciences Center (p. 21)
- Visiting Students Coming to WVU (p. 21)
- Veterans (p. 21)
- Admission Revocation (p. 21)
- Readmission (p. 21)
- Second Degree Students (p. 21)
- Undergraduate Non-Degree Seeking Students (p. 22)
- Academic Forgiveness Policy (p. 22)

- WVU Students Seeking Transient Credit (p. 22)
- Immunization Requirement (p. 23)

Introduction

WVU provides excellent educational programs. The goal of the University's admission policy is to select applicants who will succeed academically and socially. If space is limited, the better-prepared students are admitted.

WVU enrolls a diverse student population. While preference is given to West Virginia residents, qualified students from other states and countries are encouraged to apply. The University is committed to the goal of equal educational opportunity for all students: no candidate is denied admission because of race, religion, color, sex, sexual orientation, marital status, age, handicap or disability, veteran status, or national origin.

The primary focus of the admissions review is on academic potential. All of the required materials submitted by the applicant - application, transcripts, and standardized test scores - are reviewed carefully.

Applications for admission can be found online at WVU Undergraduate Admissions How to Apply (<https://admissions.wvu.edu/how-to-apply/>) page.

Some colleges, schools, programs, and majors have admission standards that exceed the minimal requirements for admission to the University. Admission to the University does not ensure admission into a specific college, school, program, or major.

Robert C. Byrd Health Sciences Center

The undergraduate programs at the Robert C. Byrd Health Sciences Center have specific application periods and requirements. Please refer to the program's website for admission requirements specific to undergraduate health sciences center programs. The undergraduate application is available on the WVU Undergraduate Admissions How to Apply (<https://admissions.wvu.edu/how-to-apply/>) page.

Visiting Students Coming to WVU

Students who want to take a course at WVU and have the credit transferred to another college or university must complete the undergraduate application and select "visiting" for student type. The application can be found at: WVU Undergraduate Admissions How to Apply (<https://admissions.wvu.edu/how-to-apply/>) page under Visiting Students. A new application must be submitted for each term a student wishes to attend.

Students attending a branch campus at either WVU Keyser or WVU Beckley must complete a change of campus form and will not complete the visiting student application. First-Time-Freshmen or First-Time-Transfer students who were rejected or referred from WVU Morgantown cannot enroll as a visiting student for the term (or prior terms) to their rejection.

Veterans

Veterans who do not meet minimum admission requirements may be reviewed for admission by the Admissions Review Committee.

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 Undergraduate 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 in the Academic Standards (<http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification/>) section of the catalog.

Readmission

Students who leave the University for at least one complete fall or spring semester, must submit an application for readmission to the Office of Admissions. Decisions on readmission are based on the student's academic standing.

If another institution(s) was attended, readmission will be based on the WVU academic standing along with academic credit earned at any other institution attended after leaving WVU. In order to be readmitted, students must obtain an overall grade point average of 2.0 at all institutions attended since leaving WVU or attain a combined overall grade point average of 2.0 from all institutions attended including WVU.

Students who were suspended from the University, must apply for readmission. Additional information may be found on the Academic Strategies, Curriculum and Assessment website on the Probation and Suspension (<https://undergraduate.wvu.edu/student-resources/probation-and-suspension/>) page.

Second Degree Students

College graduates who want to earn a second bachelor's degree are required to submit an undergraduate application and official transcripts from all institutions previously attended. The Office of Admissions can only accept transcripts sent directly from the Registrars' Office of these institutions. Transcripts issued to the student, or received via fax, scan or email are not considered official. In general, admission is granted on the basis of a

minimum cumulative grade point average of 2.0 in the first bachelor's degree. Specific majors may have higher requirements. After admission, the individual college and department evaluate the transcript and apply any appropriate credit from the first bachelor's degree toward completion of the second. Students who have earned a bachelor's degree from an accredited college or university will meet all of WVU's General Education Foundations (GEF) requirements. All Credit Residence Requirements (http://catalog.wvu.edu/undergraduate/degree_regulations/#Residency_Requirements) must be met to receive a second bachelor's degree.

Undergraduate Non-Degree Seeking Students

Students with one or more bachelor's degrees from accredited colleges or universities (including WVU) who want to enroll for undergraduate credit may be admitted as non-degree seeking students. Post-baccalaureate students who are not working toward a graduate degree may earn undergraduate credit and will be assessed undergraduate fees. Candidates for admission to this classification who are not graduates of WVU must submit an undergraduate application and an official transcript(s) from the institution(s) granting the undergraduate degree. The Office of Admissions can only accept transcripts sent directly from the Registrar's Office of the institution(s) previously attended. Transcripts issued to the student, or received by fax, scan, or email are not considered official. WVU students need only to apply with an undergraduate application.

WVU will admit students who are not degree candidates but who wish to take courses. If students meet University requirements, they should submit a complete application and official transcripts from all institutions previously attended. If students have completed fewer than twenty-four college-level credits, they should also submit an official high school transcript.

Academic Forgiveness Policy

The West Virginia University system may provide academic forgiveness to some undergraduate students who were not successful in an attempt at higher education within the WVU system or who need forgiveness to qualify for admittance.

POLICIES GOVERNING ACADEMIC FORGIVENESS:

- For the purposes of admission, the West Virginia University system may honor academic forgiveness granted at a previously attended regionally accredited institution. Students requesting admittance who wish to have a previous grant of academic forgiveness honored must have a GPA of 2.0 or higher in at least 24 earned credit hours after academic forgiveness was applied.
- A student may receive academic forgiveness only once.
- Students requesting academic forgiveness cannot have been enrolled at any higher education institution for at least four calendar years.
- Students who receive academic forgiveness from the West Virginia University system will receive credit for all courses completed with a grade of D- or higher during the forgiven period of enrollment. While all grades and credit hours remain on the student's transcript, grades earned during the forgiven enrollment period will not be counted in the student's GPA.
- After receiving forgiveness, the student must satisfactorily complete all coursework required by the academic unit for graduation and at least 15 credit hours in the WVU system for an associate degree or 30 credit hours for a bachelor's degree.
- Students who receive academic forgiveness are not eligible to graduate with Latin honors.
- Academic forgiveness does not supersede some calculations used to determine eligibility for Satisfactory Academic Progress (<https://financialaid.wvu.edu/home/maintain/academic-progress/>) regarding financial aid, scholarships, and the veterans' benefits.
- Some professional programs and other regionally accredited institutions may not honor academic forgiveness conferred by the West Virginia University system. Students receiving academic forgiveness should consult with an academic advisor in the field they wish to pursue.

PROCEDURE:

- Students must complete the Academic Forgiveness form located on the Academic Forgiveness (<https://admissions.wvu.edu/forms-and-procedures/academic-forgiveness/>) page, and provide any requested documentation.
- Students applying for financial aid will need to submit a Free Application for Federal Student Aid (FAFSA) at the Federal Student Aid (<https://studentaid.ed.gov/sa/fafsa/>) webpage and file a Satisfactory Academic Process Appeal (SAP) if necessary.
- The form must be approved by the dean of the intended academic major and the Provost or designee. The Provost or designee makes the final decision regarding admission to WVU under the Academic Forgiveness policy.
- Students applying for Academic Forgiveness must meet with an academic advisor within the academic department they plan to enter.

WVU Students Seeking Transient Credit

In order to take a course or courses at another college or university, students must complete a Transient Equivalency Review Request (<https://treqr.wvu.edu/#/>). To receive such approval, a student must have an overall 2.0 grade-point average. All approved college-level work is accepted for transfer from accredited institutions, provided the above requirements have been met. To view a list of schools and courses already reviewed, visit WVU Undergraduate Admissions (<https://admissions.wvu.edu/>). In addition, an official transcript must be received by the Office of Admissions before any coursework can be counted toward degree requirements. Students cannot choose to transfer courses based on the grades earned. All courses from the institution(s) will be transferred. The academic department will determine what courses satisfy degree requirements.

International students going to their home country for transient study must complete the same Transient Credit Form found at on the Transient Credit Application (<https://admissions.wvu.edu/forms-and-procedures/transient-credit-application/>) page. All students traveling abroad through the

Education Abroad Program should complete the Education Abroad Transient Form which can be found on the Education Abroad website (<https://educationabroad.wvu.edu/home/>).

Immunization Requirements

Requirements for Immunizations (<https://talentandculture.wvu.edu/student-insurance/immunizations/>) are posted on the Talent and Culture website under the Student Insurance Office section.

In this section:

- Freshman Admission Requirements (p. 23)
- General Equivalency Diploma (GED)/Test of Accessing Secondary Completion (TASC)/High School Equivalency Test (HiSET) (p. 24)
- Active Military Service Credit (p. 24)
- Advanced (A) and Advanced Subsidiary (AS) Levels (p. 24)
- Early Admission Program (p. 24)
- ACCESS (Attaining College Credits and Experiences while in Secondary School) (p. 24)
- Pre-Collegiate Examinations - Advanced Placement Program (AP)/College Level Examination Program (CLEP)/International Baccalaureate (IB) (p. 24)

Freshman Admission Requirements

To be considered for freshman admission, a student must:

- Submit an application for admission at WVU Undergraduate Admissions How to Apply
- Pay required application fee.
- Provide all required documents to be reviewed for admission which includes: an official high school transcript and ACT/SAT test scores.
 - Upon graduation, please ask the high school counselor to send an official final high school transcript verifying graduation to the Office of Admissions.

And successfully complete the following high school credits:

- Four units of English (including grammar, composition and literature)
- Four units of social studies/fine arts (any combination of social studies, fine arts or humanities will fulfill the requirement; combination must include U.S. studies/history)
- Three units of college preparatory mathematics (units must be Algebra I or higher, Math I or higher and include Algebra II; Transitional Math for High School Seniors will also be accepted)
- Three units of science (recommended units include biology, chemistry, physics, anatomy and environmental science)
- Two units of the same world language (American Sign Language is acceptable)

High school grade point average and comprehensive tests are the major criteria used to determine admission to WVU. WVU accepts either ACT (American College Testing) or SAT (Scholastic Aptitude Test) scores. The following is a list of the grade point average and test score criteria:

- Residents (high school graduates from West Virginia)
 - 2.0 grade point average
 - Composite ACT score of 19 or a combined Math and Evidence-Based Reading and Writing SAT score of 990
- Non-residents
 - 2.5 overall grade point average
 - Composite ACT score of 21 or a combined Math and Evidence-Based Reading and Writing SAT score of 1060

If space is available and the required high school units, GPA, and test scores are met, the student will be admitted. Therefore, we encourage eligible students to apply as soon as possible after August 1 of their senior year. If one of the requirements is not met, students may still apply, and the Admissions Review Committee will review the application. If appropriate, students should submit a written statement explaining any extenuating circumstances that may have affected their academic performance. Each application is reviewed individually and given full consideration.

Students who graduate less than five years before their admission request must present ACT or SAT scores with the admission application. If it has been more than five years since the student's class graduated from high school or a GED was earned and no other college or university has been attended, WVU may waive some of the admission requirements.

In response to COVID-19, admissions requirements for test optional applicants can be found at <https://admissions.wvu.edu/how-to-apply/first-time-freshmen/admission-requirements> (<https://admissions.wvu.edu/how-to-apply/first-time-freshmen/admission-requirements/>).

General Equivalency Diploma (GED)/Test of Assessing Secondary Completion (TASC)/ High School Equivalency Test (HiSET)

In lieu of a high school diploma, students are eligible for admission consideration having attained any one of the following equivalent credentials.

Students passing the Test Assessing Secondary Completion (TASC) will need to submit their State of West Virginia High School Equivalency Diploma.

A high school transcript must also be mailed to the WVU Office of Admissions. More information about the TASC exam can be found on the Test Assessing Secondary Completion (<https://tasctest.com/>) webpage.

The GED will be accepted for students who took the GED prior to January 2014, or from a state that does not administer the (TASC) exam. Students who have completed a General Equivalency Diploma (GED) with an average standard score of 2250 (450) or above must request that the State Department of Education mail copies of scores to the WVU Office of Admissions. In addition, a high school transcript must also be mailed to the WVU Office of Admissions.

The West Virginia Higher Education Policy Commission also approved the use of High School Equivalency Test (HiSET). More information about the HiSET exam can be found on the HiSET (<http://hiset.ets.org/states-policy/>) webpage.

Credit for Military Service

WVU accepts the following military transcripts for all service members and veterans.

- Joint Services Transcript (JST)
- Community College of the Air Force (CCAF)

For more information please contact the Office of Admissions (<https://admissions.wvu.edu/>) or visit the Center for Veteran, Military, and Family Programs (<https://wvuveterans.wvu.edu/>).

Advanced (A) and Advanced Subsidiary (AS) Levels

West Virginia University welcomes applications from students with Cambridge International A and AS Level Certificates for advanced placement credit.

A maximum of 8 credits per subject can be awarded for Cambridge International A Level grades of E or above, with the submission of an official Cambridge Examination Certificate. Cambridge International AS Levels with grades of E or above will receive a maximum of 4 credits, with the submission of an official Cambridge Examination Certificate. For more information, please contact the Office of Admissions, International Unit (<http://oiss.wvu.edu/>).

Early Admission Program

WVU will admit a limited number of rising high school seniors who have demonstrated high academic achievement and maturity to enter college before high school graduation. Students who have completed their junior year in high school with 3.5 grade point average or higher and a 26 enhanced ACT Composite or 1240 on the SAT and have completed all requirements for graduation from high school except senior English may apply for early admission. In addition to submitting the freshman admission application and required documents, the principal or guidance counselor must submit a letter supporting the application. The student's parent(s) or guardian(s) must also submit a letter of support for the application. Once the above requirements are met, an interview with the student will be conducted for the Early Admission Program. Accepted students are admitted as full-time students with all of the rights and privileges offered to other students.

ACCESS (Attaining College Credits and Experiences while in Secondary School)

High school students who have completed their junior year with a 3.0 cumulative grade point average may be admitted to enroll in college courses before high school graduation. An ACCESS application for admission must be submitted along with permission from parent(s) or guardian(s) and high school counselor or principal. Coursework completed at the University must be at a level beyond that available in the high school setting.

Pre-Collegiate Examinations - Advanced Placement Program (AP)/College Level Examination Program (CLEP)/International Baccalaureate (IB)

POLICY

Equivalencies for pre-collegiate examinations such as Advanced Placement (AP), International Baccalaureate (IB), or College Level Examination Program (CLEP), are established by the academic unit which teaches the subject, based on the following university rules.

- Initially, a maximum of 4 credits is awarded for each single qualifying exam score. In consultation with their Academic Adviser, students may petition for additional credit based on their score and academic circumstances.
- Once an equivalency has been established and a student has requested that a course be recorded on the transcript, it cannot be removed from the student's record.

- Credit is normally awarded at the 100 level. In some circumstances, departments may request the college or school to award credit for a 200-level course. Credit at or above the 300 level is not granted.
- In certain subjects, direct equivalency to a WVU course is awarded. Many course equivalencies will satisfy General Education requirements.
- Individual programs may decide that non-direct equivalencies fulfill major or minor requirements; equivalencies are reflected in the student's Degree Works audit.
- Examination credit equivalencies posted to the student's transcript count as both attempted and earned credits. Although credit is awarded, no grades are recorded.
- Examination credits are awarded at the point of admission for both freshmen and transfer students. For transfer students, WVU articulates credit based on its established equivalencies. WVU does not honor the articulation made by previous institutions.
- Current students may not earn college credit via CLEP, unless a department does not offer credit-by-examination and the student has secured prior approval.

ADVANCED PLACEMENT PROGRAM (AP)

- Score of 3: equivalent to 3-4 credits of a 100-level course, usually a General Education requirement.
- A score of 4 or better: a direct equivalency may be awarded, at the discretion of the appropriate department. Students may request additional credit when applicable.
- The Advanced Placement chart can be found on the AP, CLEP, IB, Cambridge International and Military Service Credit page on the WVU Office of Admissions website.

COLLEGE LEVEL EXAMINATION PROGRAM (CLEP)

- Incoming freshmen may request credit equivalencies for CLEP exams they passed at the time of admission to WVU.
- A minimum score of 55 is required to earn credit equivalencies, although some programs may require a higher score.
- The CLEP chart can be found on the AP, CLEP, IB, Cambridge International and Military Service Credit page on the WVU Office of Admissions website.

INTERNATIONAL BACCALAUREATE (IB)

- Standard Level (SL): no equivalencies
- Higher Level (HL)
 - Score of 4 or 5: equivalent to 3-4 credits of a 100-level course, usually a General Education requirement.
 - Score of 6 or better: a direct equivalency may be awarded, at the discretion of the appropriate department. Students to request additional credit when applicable.
- Diploma (DP): students who earn the diploma with a minimum score of 32/45 (71%) will have fulfilled all general education requirements. Coursework will be posted on the transcript according to the established equivalencies.
- The IB chart can be found on the AP, CLEP, IB, Cambridge International and Military Service Credit page on the WVU Office of Admissions website.

PROCESS

- AP and IB credits: upon registration for their first semester at WVU, freshman students will work with their advisers to have the appropriate credits posted to their transcripts. In consultation with their adviser, students may petition to have additional credits recorded by filling out a petition, based on the equivalencies established by the academic units found on the AP, CLEP, IB, Cambridge International and Military Service Credit (<https://admissions.wvu.edu/how-to-apply/first-time-freshmen/frequently-asked-questions/ap-clep-and-ib-equivalency/>) page.
- CLEP exams results must be submitted at the time of admission. If current students wish to earn credits through CLEP because no credit by examination is offered in that subject at WVU, they must secure permission from the chair or director of their academic unit, as well as that of the chair or director of the unit that offers the course, before filling out a petition. Permission is documented by recording a note in Degree Works.

In this section:

- Transfer Students from Divisional Campuses (p. 25)
- Transfer Students from Other Accredited Institutions (p. 26)
- Application Materials (p. 26)
- Evaluation of Transfer Credit (p. 26)
- Transfer Credit Appeals Process (p. 26)

Transfer Students from Divisional Campuses

Students enrolled at Potomac State College of WVU or WVU Institute of Technology must complete the Change of Campus form to transfer to the Morgantown campus. The form can be found on the WVU Undergraduate Admissions Forms and Procedures (<http://admissions.wvu.edu/r/download/134772/>) page. WVU admission requirements must be met as well as requirements to specific programs.

Students who want to transfer to the Morgantown campus before completing two semesters (24 transferable credits) at our divisional campuses need to meet freshman admission standards.

Transfers from Other Accredited Institutions

WVU welcomes transfer students who have completed post-secondary coursework from regionally accredited colleges or universities. To be admitted as a transfer student at WVU, students must have at least a cumulative 2.0 grade point average in all college work attempted. Transfer students who have fewer than 24 transferable credit hours must also meet freshman admission standards. Some individual programs and majors have different course requirements and higher grade point average requirements.

Application Materials

To be considered for transfer admissions, the following materials are needed:

1. A completed application for undergraduate admission.
2. Official transcripts of all college work attempted must be sent to the Office of Admissions. Admissions can only accept transcripts sent directly from Registrars' offices. Transcripts issued directly to the student, facsimile (fax), scanned or emailed transcripts are not considered official. Before final admission is granted, an official transcript must be submitted covering all courses taken after application to WVU.
3. Applicants having fewer than 24 transferable credit hours must submit ACT or SAT scores and a final high school transcript.

All application materials must be received in the Office of Admissions by August 1 for Fall admission and December 1 for Spring admission.

Evaluation of Transfer Credit

Evaluation of transferable credit will be made after receipt of all final official transcripts and admission to WVU. All college level credits and grades accepted as transfer credit will be used in the calculation of the cumulative grade point average and total attempted and earned credits.

In all cases, the application of transfer credit toward completion of a bachelor's degree is determined by the school or college upon enrollment. The student's academic department will determine which credits will be used to meet degree requirements. If more than 58 semester hours are being transferred, entrance requirements for the specific program must be met. Individual consideration is given to a limited number of students with more than 58 transferable hours who do not meet specific program requirements.

Transfer Credit Appeal Process

Students who transfer credits to WVU, may appeal decisions on how credits were evaluated. Students opting to appeal a transfer evaluation must appeal to the Office of the University Registrar within one semester of the transfer. Appeals should be made in writing and include syllabi or other supporting documents. The Office of the University Registrar's transfer unit will review the appeal and make any technical corrections to work evaluated as needed. If the Office of the University Registrar's transfer unit finds no technical error in how the credit was evaluated, the student's appeal and syllabi will be forwarded to the respective college through which the course or similar course is offered and reviewed by the Dean's designee for a determination. If it is determined the course in question is not equivalent to an existing course, the appeal will be denied. If the appeal is denied, the student may appeal to the Associate Provost for Undergraduate Academic Affairs. The Associate Provost will convene a panel of faculty members to review the appeal. This panel will decide to either uphold the transfer evaluation as it stands or direct that the evaluation be changed. The Associate Provost will notify all parties to the outcome of the process within 60 days of receipt of the appeal by the Office of University Registrar.

In this section:

- International Student Admission (p. 26)
- International General Certificate of Secondary Education (IGCSE) and General Certificate of Secondary Education (GCSE) (p. 28)
- Admission Requirements (p. 28)
- English Language Proficiency (p. 28)
- Financial Documents and Student Visa (p. 29)
- Student Health Insurance (p. 29)

International Student Admission

West Virginia University is authorized under federal law to enroll non-immigrant foreign nationals as international students. International students who wish to enroll as undergraduate students at WVU must comply with the stated academic requirements for admission and with certain additional academic and non-academic requirements.

Application deadlines are as follows:

- Fall Semester – Apply by June 1, all academic documents must be submitted by July 1
- Spring Semester – Apply by October 1, all academic documents must be submitted by November 1
- Summer – Apply by February 15, all academic documents must be submitted by April 1.

Applications submitted after the deadline and incomplete applications will be considered for the next term.

International students applying for admission to WVU must submit the following:

- Completed undergraduate admission application
- Application fee
- Results of the Test of English as a Foreign Language (TOEFL), Academic International English Language Testing System (IELTS), Pearson's Test of English Academic (PTE), or Duolingo English Test (Duolingo). TOEFL results should be sent to WVU directly from the Educational Testing Service (ETS). Academic IELTS results should be sent directly from IELTS. Those who take PTE or Duolingo should identify WVU as a recipient of test results, electronically, through PTE or Duolingo..
- Original or certified copies of an official academic record in original language of issue
- Original or certified copies of all certificates or diplomas in original language of issue
- Official English translations of academic record and certificates/diplomas
- Copy of current passport or visa for visa status

NOTE: Copies of academic records/transcripts, certificates or diplomas from international institutions may be sent by email for review purposes after application. However, original or certified copies of all official records/transcripts, certificates and diplomas must be submitted by mail or special delivery after admission or as soon as possible prior to registration.

Transcripts from US institutions must be sent directly from the US institution to West Virginia University.

Applicants for undergraduate programs must submit all secondary school records as well as all university-level records. Undergraduate transfer applicants should submit course descriptions or syllabi for all courses completed at the university level.

International applicants who have completed high school in the United States will also be required to submit ACT or SAT results.

The above items should be sent to the following address by the application deadline: Office of Admissions, West Virginia University, P.O. Box 6009, 2nd Floor, One Waterfront Place, Morgantown, WV 26505-6009.

If possible, all application material should be submitted at one time. English proficiency (TOEFL, Academic IELTS, PTE Academic or Duolingo) scores and official transcripts from United States institutions should be requested so that all material arrives at WVU close to the same date). Incomplete applications cannot be guaranteed consideration for the desired semester.

Please note: Documents received by WVU, including original documents, become the property of WVU and cannot be returned to or copied for the applicant. Students who have only one original copy of their credentials should submit certified copies.

CHINA HIGHER EDUCATION STUDENT INFORMATION AND CAREER CENTER (CHESICC)

Applicants from Chinese institutions should request and submit official transcripts directly through CHESICC. Requests are processed by CHESICC and will be sent electronically to WVU's Admissions Office. Applicants do not need to submit a paper copy of their transcript. Visit CHESICC at <http://www.chsi.com.cn/> to get started.

WORLD EDUCATION SERVICES (WES)

To expedite the application process, it is recommended, but not required, that all undergraduate students (both freshmen and transfer) who have attended high school, post-secondary educational institutions and colleges or universities outside the United States use World Education Services (<https://www.wes.org/>) to complete professional credential evaluation of all academic work completed. Transfer applicants should request a "course-by-course" International Credential Advantage Package (ICAP). Freshman applicants should request a "document-by-document" International Credential Advantage Package (ICAP). ICAP evaluations include WES certified copies of official documents.

IMPORTANT NOTE ABOUT NAMES ON SUBMITTED DOCUMENTS

Materials from applicants are retained alphabetically, under the family name, as indicated by the applicant on the International Student Admission Application. It is important that all forms, records and correspondence use the same name and spelling. Your name must be as it appears or will appear in your passport. Materials often cannot be matched to files when papers arrive with different names.

International General Certificate of Secondary Education (IGCSE) and General Certificate of Secondary Education (GCSE)

WVU welcomes applications from students with IGCSE and GCSE Level Certificates from Cambridge International for admissions consideration. We require a minimum of 5 subject passes of which two must be English and Mathematics. The average of the grades must be at least a 2.5 (on a 4.0 scale). A passing grade in the subject of English will be accepted as evidence of sufficient English ability.

Admission Requirements

The following are the minimum admissions requirements for international students applying as freshman or undergraduate transfer students.

FRESHMAN

- Must have at least a 2.5 grade-point average on a 4.0 scale for general admission.
- Must meet English proficiency or request conditional admission.
- Please be advised that some majors such as Engineering may reach capacity and therefore will be restricted from entry.
- For direct admission to some colleges and majors, SAT or ACT scores are required and must be sent to WVU directly from the respective testing services. International students are encouraged, but not required, to submit SAT or ACT scores. SAT or ACT scores are useful for determining scholarship eligibility.

TRANSFER

- Must have at least a 2.0 grade-point average on a 4.0 scale for general admission.
- Must meet English Proficiency or request conditional admission.
- In addition, transfer students who have fewer than 24 transferable credit hours, must also meet freshman admission standards and submit secondary school/high school transcripts. Some individual programs and majors have different course requirements and higher grade point average requirements; please review the various program requirements.
- Grades and credits are transferable for college-level courses from regionally accredited U.S. institutions.

Applicants must submit academic records from all secondary and post-secondary institutions attended regardless of whether grades were issued or credit was received. WVU requires that original or certified copies of the original academic documents from non-U.S. institutions be submitted. The required documents include the official academic record (showing course titles, dates taken, and grades received) and diploma(s) or certificate(s) showing degree awarded. These documents must be in the original language of issue; official English translations must be included. Translations must be literal, word-for-word translations and must indicate actual grades received, not an interpretation of the grades. Applicants who have studied in the United States are required to have the institution(s) in the U.S. send the official transcript directly to the WVU Office of Admissions.

English Language Proficiency

All applicants whose **native** language is not English, as determined by WVU, must provide proof of English language proficiency. WVU uses the Test of English as a Foreign Language (TOEFL), the Academic International English Language Testing System (Academic IELTS), Pearson Test of English Academic (PTE), and Duolingo as the measure of English language proficiency. The minimum scores required from such undergraduates are 61 on the internet-based TOEFL; a 6.0 on the Academic IELTS; a 44 on the PTE Academic; or a 90 on Duolingo. Information about registration for the TOEFL can be found at <https://www.ets.org/toefl> (<https://www.ets.org/toefl/>) (WVU's institution code for ETS is 5904). Information about registration for IELTS can be found at <http://www.ielts.org>. Information about registration for the Pearson Test of English can be found at <https://pearsonpte.com/>. And information about registration for the Duolingo English Test can be found at <https://englishtest.duolingo.com/applicants> (<https://englishtest.duolingo.com/applicants/>).

TOEFL/IELTS/PTE/Duolingo results are not required for applicants who have received a high school diploma and have obtained the required ACT/SAT test scores or a bachelor's degree from a school in the United States.

In some cases, SAT Reading or ACT English test scores may be used to meet English proficiency. A passing grade in the subject of English on the IGCSE or GCSE certificates from Cambridge International will be accepted for English proficiency.

Transfer applicants who have completed English composition courses that WVU determines are equivalent to WVU's ENGL 101 and ENGL 102 with a "B" average at a U.S. institution are not required to submit TOEFL/IELTS/PTE/Duolingo scores. Many online English composition courses are not considered equivalent and will require review and approval from the English department.

In some cases, it may be possible to consider applications from students who lack adequate TOEFL/IELTS/PTE/Duolingo scores and who will enroll in WVU's Intensive English Program. Admission to the Intensive English Program does not guarantee admission to the University or to a specific program of study. The IEP application should be submitted online at <http://iep.wvu.edu> or can be sent to WVU Intensive English Program, Eiland Hall, P.O. Box 6297, Morgantown, WV 26506-6297.

Financial Documents and Student Visa

Before WVU can issue the document necessary to apply for a student visa (Form I-20 or Form DS-2019), students must provide proof that they have the adequate financial resources to provide for their expenses incurred while studying at WVU. All financial documents and a copy of the visa or passport must be submitted to the International Students and Scholars Services Office. For more on the student visa process, visit the International Students and Scholars Services (<https://iss.wvu.edu/>) webpage.

Student Health Insurance

International students will be automatically enrolled in our student health plan unless an appropriate waiver has been submitted and approved. Information regarding the plan, enrollment information, waiver forms, etc., can be found at the Student Health Insurance Plan (<http://studentinsurance.wvu.edu/>).

Advising, Enrollment & Grades

In this section:

- Academic Advising (p. 29)
- Degree Works (p. 29)

Academic Advising

Every student at West Virginia University has access to academic advising and will be assigned an advisor. WVU students are required to meet with their academic advisors prior to registering for classes each semester. Advisors assist students in understanding major and University requirements including the General Education Foundations (GEF); course registration planning and processes; program and course prerequisites; and academic standing (e.g. probation and suspension). In addition, advisors may assist students with planning for post-baccalaureate education and careers.

It is the student's responsibility to understand their degree requirements. Students are expected to become familiar with the Undergraduate Catalog and Degree Works and prepare for their own course planning and registration processes.

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:

- Attendance Policy (p. 29)
- Emergency Leave Policy (p. 31)
- Military Leave Policy (p. 31)
- Auditors (p. 32)
- Registration (p. 32)
- Course Withdrawal and University Withdrawal Policy (p. 32)

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. 31).

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 (<http://catalog.wvu.edu/graduate/enrollmentandregistration/#appealstext>).

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. 31).

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 policies 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 (<http://catalog.wvu.edu/graduate/enrollmentandregistration/#appealstext>).

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.

Military Leave Policy

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 (<https://wvuveterans.wvu.edu/>) has additional information on the drill schedule for the West Virginia National Guard and can provide official verification of student's military orders upon request.

Students who will miss more than three weeks of course work due to military obligation should notify faculty members of the circumstances of their absence as far in advance as possible and work with faculty members to agree upon a plan of action. 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.
 - a. Students who withdraw before the end of the 13th week of instruction will be processed for a full refund of their tuition and fees and be administratively removed from their classes. No course grades or credit will be awarded.
2. Withdraw from the University after the 13th week of instruction.
 - a. Students who leave the University for military service after the 13th week of instruction should work with their home college/school's Dean's Office and the Center for Veteran, Military and Family Programs (<https://wvuveterans.wvu.edu/>). The student may also contact the Office of the University Registrar.

The 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. It is anticipated that this would be the outcome in the majority of the courses.

- When it is deemed that no credit can be awarded, the student can be administratively withdrawn from the course or, when possible, given an Incomplete.
- Students called to service after the 13th week but for a relatively short duration (which may include exam week) may arrange for an Incomplete with provision to make up the final exam after completing the period of service.

Students who expect to be separated from the institution for more than three weeks during a particular semester may apply for a Military Leave of Absence.

- Students granted a Military Leave of Absence will not need to apply for readmission nor pay any readmission fees.

PROCEDURES

- Students who receive orders with sufficient advance notice are expected to notify their professors of their upcoming deployment date and meet with their professors to come to an agreement on what regular course assignments they can reasonably complete prior to the deployment date. The details of this arrangement should be included in a contract initialed by both the instructor and the student and kept on file in the Dean's Office. Students should not be penalized for not completing assignments, quizzes, tests, or exams due after their deployment date.
- No advance notice is required if the giving of such notice is precluded by military necessity (as per regulations prescribed by the Secretary of Defense). Instructors may contact the Center for Veteran, Military, and Family Programs (<https://wvuveterans.wvu.edu/>) if they have questions about determining advance notice.

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.

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.

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 (p. 31).*

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 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:

- Grading System (p. 34)
- Pass/Fail Grading (p. 34)
- Incomplete Grade Policy (p. 34)
- Grade Point Average (p. 35)
- Repeat Policy (p. 36)
- Grade Reports (p. 37)
- Dean's and President's List (p. 37)
- Transcripts (p. 37)

Grading System

Grade	Description
A	Excellent (Given only to students of superior ability and attainment)
B	Good (Given only to students who are well above average but not in the highest group)
C	Fair (Average for undergraduate students)
D	Poor but passing (Cannot be counted for graduate credit)
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 (HSC)
S	Satisfactory
U	Unsatisfactory
H	Honors course (Professional school courses only)
IF	Incomplete grade not removed by next regular term (Computed as an F)
UF	Unforgivable F (Not eligible for D/F repeat policy)
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.

Pass/Fail Grading

Non-degree seeking students can take any course P/F. Any full-time, degree-seeking student who has completed fifteen credits or more and has a 2.0 grade point average may take a maximum of four hours each semester or summer term on a pass/fail basis, to a maximum of 18 credits. Any course taken on a pass/fail basis must be a free elective. Courses in the major, courses in other subjects required by the major, courses to be applied to a minor or undergraduate certificate, and courses taken to satisfy University, college, school, or departmental requirements are excluded from pass/fail. For example, courses taken to satisfy general education or foreign language requirements may not be taken for pass/fail grading.

In most cases, experiential education courses (e.g. standalone service learning courses, internships, teaching practicum) are offered Pass/Fail. However, departments and programs may request normal grading for experiential courses or add P/F courses to major requirements by following the appropriate approval process. Such courses are identified in the student program of study, and are excluded from the maximum of 18 P/F credits allowed as free electives.

Advisory Note: Students who plan to apply for admission to a professional program are advised that courses taken on the Pass/Fail option may hinder admission when GPA is a consideration. Consult the admissions office of the professional school to which they intend to apply.

Students should be aware that some schools, scholarship committees, and honorary societies do not find work taken on a non-graded basis (Pass/Fail) acceptable. Employers may view non-graded (Pass/Fail) course work unfavorably. All students, especially those without a declared major, should be very cautious in using the P/F option.

Procedures

- Before being allowed to register P/F for a course offered for regular grading, students will need to meet with their academic advisor to discuss possible effect on graduation. If the adviser agrees, the student will contact the Office of the University Registrar (registrar@mail.wvu.edu?subject=P/F%20Registration) and will have to provide an email from the adviser. Once the registration period has ended, he or she may not revert to a regularly graded course.
- The grade of P does not affect the student's grade point average. However, a grade of F will lower the student's grade point average.
- A course taken P/F may be repeated later for a grade.

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/coursecredittermsclassification/>) section of the catalog.

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
- 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 a grade of IF, which is included in the grade point average.

GRADE POINT AVERAGE

- The institutional GPA is computed based on all work taken in the West Virginia University system for which a student received a letter grade (A-F) except for grades excluded under the provisions of the D/F Repeat Policy.
- The transfer GPA is computed for all domestic and international transfer work from properly accredited institutions.
- The overall GPA is calculated from the combined institutional and transfer GPA.

GPA POLICIES

- The overall GPA is used for graduation status, programmatic standards, academic awards, Latin honors, probation and suspension, and state and federal financial aid eligibility. Please review information on the Student Financial Support and Services (<https://financialaid.wvu.edu/>) page for detailed information regarding financial aid eligibility.
- The transfer GPA is used to decide eligibility for admission to the WVU system and individual majors. Please review Rules Governing Transfer Work in the Coursework Done Out of Residence (http://catalog.wvu.edu/undergraduate/degree_regulations/#Out_of_Residence) Policy.

- To be eligible to receive an undergraduate degree, a student must have an overall GPA of at least 2.0 at the time of graduation. Some degree or certificate programs require an overall GPA higher than a 2.0.
- 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.
- Certificate or degree programs may require higher and/or specifically defined grade point averages. Please refer to the specific program for more information.

GPA CALCULATION

The example below illustrates how to calculate a GPA.

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

- MATH 126 (3 credits) - A
- ENGL 101 (3 credits) - B
- POLS 102 (3 credits) - D
- SPAN 101 (3 credits) - F
- CHEM 111 (4 credits) - C

Multiple 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

- MATH 126 with a grade of A (**3 credits**) * (Letter Grade Value for an A) (**4 points**) = **12 Quality Points**
- ENGL 101 with a grade of B (**3 credits**) * (Letter Grade Value for a B) (**3 points**) = **9 Quality Points**
- POLS 102 with a grade of D (**3 credits**) * (Letter Grade Value for a D) = (**1 point**) = **3 Quality Points**
- SPAN 101 with a grade of F (**3 credits**) * (Letter Grade Value for an F) = (**0 points**) = **0 Quality Points**
- CHEM 111 with a grade of C (**4 credits**) * (Letter Grade Value for a C) = (**2 points**) = **8 Quality Points**

Add the total quality points earned: $12 + 9 + 3 + 0 + 8 = 32$

Add the total number of credit hours attempted: $3 + 3 + 3 + 3 + 4 = 16$

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

GPA calculation = 32 (total number of quality points earned) / 16 (total number of credit hours attempted) = **2.0 semester GPA**

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

Repeat Policy

D/F REPEAT

WVU has a D/F repeat policy for undergraduate students taking undergraduate courses at WVU locations or at other regionally accredited institutions. For transfer students, accepted coursework taken prior to enrollment at WVU from another institution, may be repeated under D/F guidelines at WVU. Coursework taken at WVU locations, may only be repeated **at a WVU location** to obtain D/F repeat calculations.

When a course is D/F repeated, the following procedure occurs:

1. The original grade is disregarded for the purpose of determining the institutional GPA. It is marked as excluded (E) on the transcript in the semester that the student originally took the course, but it is not deleted from the student's record.
2. The second grade is entered on the student's transcript, included in the institutional GPA, and marked as included (I) in the semester that the course was repeated.
3. Grades of Unforgivable F (UF) are not eligible for D/F repeat.

OTHER REPEATED COURSES

Courses repeated, but not eligible for the provisions of the D/F repeat policy, follow this procedure:

1. No course may be attempted more than three times unless approved by the dean of the student's major program. A course is attempted when a grade is recorded on the transcript.
2. The original grade is included in determining the institutional GPA. It is excluded from earned or degree hours and is marked with an (A).
3. The original grade is not deleted from the student's permanent record.

4. The second grade is entered on the student's transcript and marked as included (I) in the semester that the course was repeated.
5. When courses are repeated more than once (including courses originally D/F repeated) the final attempt carries the earned hours. All attempts (excluding an original D/F repeat) are used for determining the institutional GPA.

Grade Reports

During fall and spring semesters, mid-semester and final grades are submitted through the STAR grade entry system each semester. Instructors submit a mid-semester grade for all students in an undergraduate course. These grades are used for counseling in support of student success, are not recorded on the student's official transcript, and disappear from the institution's record system after the semester is completed. A student having an error in a grade received or a grade omitted should contact the instructor immediately.

Final grades are normally due 48 hours after the completion of each final exam. Grades are viewable to students no later than one week after final exam week concludes. The final grades of all seniors provisionally approved for graduation at the close of each semester or summer term are reported to the deans of the students' colleges or schools or the Office of Enrollment Services. Special report forms for this purpose are supplied by the student's dean.

Grades are available through the WVU Portal accessible at <https://portal.wvu.edu>.

Dean's and President's List

Outstanding undergraduate academic achievement is recognized by awarding President's List and Dean's List status to students who obtain a 4.0 or minimally a 3.5 GPA, respectively. Only the highest honor is awarded, and it will be noted on the transcript. Students must be enrolled in a minimum of 12 credit hours of graded courses to be eligible for such recognition with no grades of I (incomplete), NR (not reported), or W (withdrawal). Courses completed with a grade of P, S, or X are excluded from the calculation of credit hours for President's List and Dean's List.

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.

Co-Curricular Programs

In this section:

- Education Abroad (p. 37)
- WVU Exchange Programs (p. 38)
- Faculty-Led Programs (p. 38)
- International Internships (p. 38)
- Affiliate Programs (p. 38)
- Additional Information (p. 38)

Education Abroad

In today's increasingly globalized society, direct international experience is a key component of a complete college education. The WVU Office of Global Affairs manages more than 1,000 exciting and life-enriching programs in over sixty countries all around the world. Education Abroad can be a life-changing cultural experience and supports unique inquiry-based and experiential learning. All WVU students (undergraduate, graduate, and professional) are required to register and have program approval with Global Affairs (<https://international.wvu.edu/>) prior to departure when traveling

abroad on university-related activities. Education Abroad program coordinators guide the student through the education abroad process, assist in choosing a program based on interest and needs, ensure appropriate credit transfer, offer travel advice, and provide cultural information about living and learning overseas.

WVU Exchange Programs

WVU exchange programs are managed directly by Global Affairs in conjunction with over 65 select partner institutions around the world. These programs offer WVU students the opportunity to study abroad for a semester or year at a sister institution. Students pay regular WVU tuition and fees, and the host school provides full reciprocal services at a campus abroad. Room and board are paid either to WVU or the exchange institution, depending on the exchange agreement. WVU maintains exchange relationships with over 50 partner institutions across the globe.

Faculty-Led Programs

Faculty-led programs are education abroad experiences developed and organized by WVU faculty members in conjunction with the Office of Global Affairs. Students study in rigorous but exciting programs where coursework is directly supervised by WVU faculty members. These programs, available throughout the year, are focused on either general education or on specific disciplines. WVU offers over 50 short term programs annually, in a variety of different subjects and locations.

Contact Education Abroad by visiting the Education Abroad (<https://educationabroad.wvu.edu/>) website for a current listing of upcoming programs.

International Internships

International Internships are customized, professional placements. Typically, summer internships are 8-weeks in length and students participate in a reflective course for six WVU credits during their time abroad. Students work with trusted providers to find the placement that best fits their experience and professional career goals. Past locations have included Australia, Ireland, New Zealand, and Spain.

Affiliate Programs

Affiliate programs are education abroad opportunities available to WVU students through affiliations with various education abroad organizations. Affiliate programs are available during the fall, spring, and summer terms as well as for a complete academic year. Students pay program fees directly to the affiliate organization.

Additional Information

Students must submit application materials to Education Abroad (<https://educationabroad.wvu.edu/>) and complete the mandatory pre-departure orientation process for credit transfer approval. Students may enroll in courses to fulfill major, minor, General Education Foundations (GEF) requirements or elective credit. Students must be in good academic and disciplinary standing before acceptance to WVU programs or to affiliate programs abroad. Participation in these programs also requires a minimum 2.5 grade point average. Exceptions may be made under special circumstances through appeal to Education Abroad, and are subject to approval of faculty leaders or program coordinators. Financial Aid is available for many programs. WVU Promise Scholarship funds may also be used for certain programs. For more information, visit the Student Financial Support and Services (<https://financialaid.wvu.edu/>) website.

For more information, please visit the Education Abroad (<https://educationabroad.wvu.edu/>) website or visit the office in B-3 Purinton House, PO Box 6313, Morgantown, WV 26506.

In this section:

- Nature of the Program (p. 39)
- Benefits (p. 39)
- Curriculum (p. 39)
- General Military Course (GMC) (p. 39)
- Professional Officer Course (POC) (p. 39)
- USAF 100: Leadership Laboratory (LLab) (p. 40)
- USAF 131/132: Heritage and Values of the United States Air Force (p. 40)
- USAF 251/252: Team and Leadership Fundamentals (p. 40)
- USAF 371/372: Leading People and Effective Communication (p. 40)
- USAF 481/482: National Security Affairs/Preparation for Active Duty (p. 40)
- In-College Scholarship Program (p. 40)
- Uniform Wear (p. 40)
- Time Requirements (p. 40)
- U.S. Air Force Academy (p. 40)

Nature of the Program

The U.S. Air Force officer education program at WVU has been in existence since 1948 and is designed to provide training that will develop leadership, managerial, and interpersonal skills vital to a professional U.S. Air Force officer. Its purpose is to recruit qualified students for an opportunity to commission in the U.S. Air Force. WVU hosts the only Air Force ROTC (AFROTC) detachment in West Virginia.

BENEFITS

Enrolling in AFROTC provides the opportunity to:

- Compete for entry into the Professional Officer Course (POC) and earn an Air Force Commission.
- Earn academic elective credit that can be potentially applied toward the requirements for undergraduate majors at WVU, as well as the leadership studies minor program.
- Compete for AFROTC in-college scholarships that pay up to full tuition, fees, provides a book stipend, and provides a tax-free monthly stipend between \$300 and \$500 based on academic year.
- Receive free career counseling from full-time AFROTC representatives.
- Try AFROTC during freshman and sophomore years without obligation (unless you are awarded an AFROTC scholarship).
- Develop leadership and teambuilding skills.

Curriculum

The curriculum in Aerospace Studies is divided into two distinct areas: The General Military Course (GMC) and the Professional Officer Course (POC).

Students interested in becoming cadets should enroll in the following courses:

Entering Freshmen: During Fall Semester, sign up for USAF 131 and USAF 100. During Spring Semester, sign up for USAF 132 and USAF 100.

Entering Sophomores: During Fall Semester, sign up for USAF 131, USAF 251, and USAF 100. During Spring Semester, sign up for USAF 132, USAF 252, and USAF 100.

Minor Code - U040

Minimum grade of C in all courses fulfilling minor requirements.

Minimum GPA of 2.5 required.

USAF 251	Air and Space Power 1	1
USAF 252	Air and Space Power 2	1
USAF 371	Leadership Studies 1	3
USAF 372	Leadership Studies 2	3
USAF 481	National Security/Active Duty 1	3
USAF 482	National Security/Active Duty 2	3
Complete 6 credit hours in any HIST or POLS courses.		6
Total Hours		20

General Military Course (GMC)

GMC includes USAF 131/132, 251/252, and Leadership Laboratory (LLab) and corresponds to the freshman and sophomore years of your academic program. This is the first part of AFROTC's four- and three-year programs. GMC is composed of a one-hour class and two-hour LLab per week. Two credit hours are awarded for each semester course successfully completed. GMC is available to all WVU students.

Professional Officer Course (POC)

The POC corresponds to the junior and senior years of your academic program. The POC is designed to provide highly qualified junior officers for the U.S. Air Force. Admission is based on such factors as leadership, scholarship, physical qualifications, and academic major. Successful completion of the POC qualifies you for appointment as a second lieutenant in the Air Force upon college graduation. Instruction averages three hours per week plus LLab throughout the four semesters. Three hours of credit are awarded for each of the four semesters in the POC program. To qualify for the POC, you must meet all the qualifications for the GMC and:

- Have two academic years remaining
- Be able to obtain United States citizenship by second POC semester
- Be at least 18 years old, or 17 with a parent or legal guardian's consent
- Be medically qualified
- Be selected by a board of U.S. Air Force officers

- Complete a field training course the summer prior to entering
- Complete all graduation and commissioning requirements as follows:
 - a. Maintain a Cumulative GPA of 2.0 or higher (min 2.5 if on USAF scholarship)
 - b. Must commission (graduate) before age 39 (pilots age 29)
 - c. Pass the Air Force Physical Fitness Assessment (PFA)

USAF 100 Leadership Laboratory (LLab)

Leadership laboratory takes an average of two hours per week, every semester, throughout the student's enrollment in AFROTC. Instruction is conducted in an organized cadet corps with a progression of experiences designed to develop each student's leadership potential. LLab involves a study of Air Force customs and courtesies, drill and ceremonies, physical fitness, career opportunities, and the lifestyle and duties of an Air Force junior officer. Students develop leadership potential in a practical, supervised training laboratory, which typically includes field trips to air force installations.

USAF 131/132: Heritage and Values of the United States Air Force

Survey course that introduces students to the United States Air Force. It provides an overview of the basic characteristics, missions, and organization of the Air Force. The course includes an overview of AFROTC and AFROTC special programs.

USAF 251/252: Team and Leadership Fundamentals

Designed to provide a fundamental understanding of both leadership and team building. Students will learn methods and perspectives on self-assessment, followership, problem solving, motivation, human relations, and ethical decision making.

USAF 371/372: Leading People and Effective Communication

Designed to build on the leadership fundamentals taught in USAF 251/252. Students will learn about leadership, management, professional knowledge, leadership ethics, and communication skills required of an Air Force officer. Case studies are used as a means of exercising practical application of concepts.

USAF 481/482: National Security Affairs/Preparation for Active Duty

Examines the national security process, regional studies, leadership ethics, and USAF doctrine. Topics include the military as a profession, officership, military justice, civilian control of the military, active duty preparation, and issues affecting military professionalism.

In-College Scholarship Program

Outstanding students from any academic discipline may be eligible to compete for an in-college scholarship. Each year a number of scholarships are made available for cadets in their freshman or sophomore year. Usually, a greater percentage of scholarships are available for students majoring in engineering, scientific, mathematical, or nursing fields. AFROTC may pay up to 100 percent of tuition and fees, provide a textbook stipend, and provide a tax-free monthly allowance between \$300 and \$500 based on academic year.

Uniform Wear

Air Force ROTC cadets are required to wear a uniform to ROTC classes and leadership laboratories. Freshmen cadets are required to wear an AFROTC polo and khaki slacks for LLab and class, USAF PT gear (provided) for physical training. Sophomore cadets and above are provided uniforms. Air Force ROTC cadets may purchase their uniforms upon successful completion of the ROTC program.

Time Requirements

On average, freshman and sophomore cadets can spend 7 to 10 hours a week in AFROTC activities. This includes the required 1 hour in the classroom, 2 hours at LLab, 2 hours at physical training sessions, and other obligations such as Field Training preparation, flight meetings, Flag detail, etc. Juniors and seniors will spend 10 to 15 hours a week in AFROTC activities. This includes 3 hours in the classroom, 2 hours at LLab, 2 hours at physical training sessions, and other obligations related to leadership positions in the AFROTC.

U.S. Air Force Academy

The president of WVU may annually nominate five outstanding AFROTC cadets to the U.S. Air Force Academy. A nomination does not guarantee acceptance into the Air Force Academy. Applicants are recommended by the professor of aerospace studies to the WVU president during January of each year.

In this section:

- Nature of the Program (p. 39)
- Basic Course (p. 41)
- Advanced Course (p. 41)

- Leadership Laboratory (p. 42)
- Military Science Minor (p. 42)
- Two-Year Program (p. 42)
- Simultaneous Membership Program (SMP) (p. 42)
- Judge Advocate General (JAG) Programs (p. 42)
- Graduate Medical Programs (p. 43)
- ROTC Scholarship Program (p. 43)
- Army ROTC Nursing Program (p. 43)
- Army ROTC Nursing Scholarships (p. 43)
- Additional Opportunities (p. 44)

Nature of the Program

The curriculum includes the skills expected of a U.S. Army officer, including how to motivate co-workers, cope with unexpected challenges, organize large, complex tasks, and an introduction to the army's values-based leadership techniques. Additionally, students learn skills in demand today in the civilian and business worlds such as teamwork, tact, and effective communications. There are two- and four-year ROTC programs. The traditional four-year program is composed of the Basic Course and the Advanced Course.

The Basic Course

The first two years compose the Basic Course. This includes:

MILS 101	Military Science	2
MILS 102	Military Science	2
MILS 201	Military Science	2
MILS 202	Military Science	2
PE 110	Military Physical Conditioning	1

These courses involve classroom studies in such subjects as military history, leadership development, and national defense. Students can enroll in the program for the first two years without incurring any future military obligation. However, students who desire to make a commitment to obtain a U.S. Army commission at graduation can commit as early as their sophomore year, compete for an ROTC contract, and receive a tax-free monthly stipend of \$420 per month as a contracted cadet. After successful completion of the Basic Course, students can apply for admission into the Advanced Course.

The Advanced Course

After successful completion of the Basic Course, students wishing to earn a commission as an officer in the U.S. Army must enter the Advanced Course. It is required for all contracted cadets and students who have received an ROTC scholarship. Classes required are:

MILS 301	Military Science	3
MILS 302	Military Science (Military Science)	3
MILS 401	Military Science	3
MILS 402	Military Science	3
PE 110	Military Physical Conditioning	1
Select one of the following:		3
HIST 210	Modern Military History	
HIST 256	History of the American Revolution: 1763-1790	
HIST 453	Civil War and Reconstruction	
HIST 460	World War II in America	

Weekly Leadership Lab

During this part of the program, students will put their management and leadership skills to the test while continuing to hone the traits required for commissioning into the U.S. Army. As a cadet in the Advanced Course, you will spend approximately five weeks of the summer between your junior and senior years attending Advanced Camp at Fort Knox, Kentucky. At this course, students receive intensive training in leadership, basic tactics, physical fitness, land navigation, negotiating a confidence obstacle course, and rappelling. They also have the opportunity to lead other cadets through challenging military missions.

While enrolled in the program, ROTC textbooks, uniforms, and essential materials are furnished at no cost. Additionally, Advanced Course students receive a tax-free monthly stipend allowance of \$420 per month.

Leadership Laboratory

Leadership laboratory is conducted two hours per week every Thursday afternoon throughout the student's enrollment in Army ROTC. Instruction is conducted in an organized cadet corps with a progression of experiences designed to develop each student's leadership potential.

Leadership laboratory involves the practical application of leadership lessons taught during classroom instruction. The leadership laboratories involve application of field craft, drill and ceremonies, physical fitness, rappelling, rifle marksmanship, team and leadership exercises, and career opportunities. Leadership lab is required for all recipients of an Army ROTC Scholarship and contracted cadets.

Military Science Minor

Minor Code - U041

Students enrolled in the Army ROTC program may receive a military science minor by completing the Advanced Courses listed below. A minimum cumulative GPA of 2.0 is required in these courses.

MILS 301	Military Science	3
MILS 302	Military Science	3
MILS 401	Military Science	3
MILS 402	Military Science	3
Select 1 of the following:		3
HIST 210	Modern Military History	
HIST 256	History of the American Revolution: 1763-1790	
HIST 453	Civil War and Reconstruction	
HIST 460	World War II in America	
Total Hours		15

The Two-Year Program

(Sophomores, Junior College Transfers, and Partnership Schools)

If students miss the first two years of Army ROTC, the two-year program offers the opportunity to achieve the same goals and benefits as the four-year program, but at an accelerated pace. This is designed for sophomores who were unable to take the Basic Course, students transferring after attending a junior college or another institution, or for students attending one of our partnership schools. In this program, students first attend Basic Camp at Fort Knox, Kentucky, in the summer between their sophomore and junior years. This is a fully paid, four-week training camp designed to be an accelerated version of the two years of leadership development training cadets receive during their first two years of Army ROTC. The course is broken into four phases where cadets begin physical training, drill and ceremonies, team development, combat water survival, and land navigation. Upon graduation from Basic Camp, students may compete for two-year, campus-based scholarships if their minimum GPA is a 2.5, and they will graduate within four semesters. Those cadets who successfully complete Basic Camp and contract may be eligible to receive a \$5,000 incentive bonus.

Additionally, if a student is currently in the National Guard (Army or Air Force), U.S. Army Reserve, a Veteran from any service, has two years of Senior ROTC (SROTC) experience from another service, or has High School Junior ROTC (JROTC) experience of three years or more, he or she may qualify for entry into the Advanced Course under the two-year program. Students must have a minimum of 59 hours of college credit with a 2.0 (or better) GPA.

Simultaneous Membership Program (SMP)

Students currently in the Army National Guard or U.S. Army Reserve can participate in the Advanced Course as an SMP cadet. Benefits of the SMP include immediate advancement to sergeant (E5) for pay purposes in their current unit, receipt of any Montgomery G.I. Bill, GI Bill-kicker (if negotiated during enlistment), \$420 monthly tax-free stipend, and any tuition assistance offered by the service. Currently the West Virginia National Guard pays \$7000 towards the in-state tuition rate for either undergraduate or graduate studies. The U.S. Army Reserve offers student loan repayment and \$4,800 annually in tuition assistance.

Information on these programs may be obtained through the WVU ARMY ROTC webpage, calling (304) 293-7546 or e-mailing armyrotc@mail.wvu.edu.

For a detailed overview of Army ROTC, students can call 1-800-USA-ROTC or view online at ARMY ROTC (<https://www.goarmy.com/rotc.html>).

Judge Advocate General (JAG) Programs

The JAG Corps is the oldest "law firm" in the U.S., dating back to 1775. There are approximately 1,500 active duty (full-time) attorneys and 2,600 Reserve and National Guard (part-time) attorneys. Students in the Advanced Course should take the LSAT prior to the fall of their senior year. They must then request an educational delay and branch JAG. If accepted to the law school of the student's choice, the educational delay may be granted. While in law school, students may apply for one of 100 summer internships offered by the JAG Corps.

Graduate Medical Programs

The Army offers a variety of graduate programs to ROTC graduates. These include specialties in nursing, dentistry, medicine, psychology, optometry, and veterinary medicine. Interested students must apply for educational delay following graduation and commissioning.

ROTC Scholarship Program

In addition to world-class leadership training, Army ROTC also offers generous scholarships to qualified students. These scholarships are based solely on the student's merits, not financial needs. These merit-based scholarships are available for two, two and a half, three, three and a half, and four years and are available for both graduate and undergraduate programs. These scholarships pay full tuition and fees or room and board (up to \$5,000/each semester). They also provide \$600 per semester for books and include a \$420 per month tax-free stipend, for up to 10-months a year (during the academic school year). Four-year scholarships are normally reserved for applicants who are high school seniors. The application process starts by applying online at the ARMY ROTC (<https://www.goarmy.com/rotc.html>) website or by calling: 1-800-USA-ROTC to receive an application by mail. The remaining scholarships are considered campus-based scholarships given at the discretion of the professor of military science.

Students must meet the following requirements for a four-year Army ROTC scholarship:

- Be a citizen of the United States
- Be between the ages of 17 and 26
- Have a high school cumulative grade point average of at least 2.5
- Score a minimum of 1000 on the SAT (math/verbal) or 19 on the ACT (excluding the required writing test scores)
- Meet the Army's physical and height/weight standards
- Be of good moral character
- Exhibit a strong desire to become an Army officer
- Possess leadership potential to become an effective leader. These include appearance, personality, academic excellence, extracurricular activities, and physical fitness
- Be medically qualified by passing a Department of Defense Medical Evaluation Board health physical and eye exam
- Must be eligible for a secret security clearance

Students must meet the following requirements for a three-and-a half, three, two-and-a half and two-year scholarships:

- Be a citizen of the United States
- Be between the ages of 17 and 27
- Have a college grade point average of at least 2.5
- Have a high school diploma or equivalent
- Meet the Army's physical and height/weight standards
- Be of good moral character
- Exhibit a strong desire to become an Army officer. Possess leadership potential to become an effective leader. These include appearance, personality, academic excellence, extracurricular activities, and physical fitness
- Be medically qualified by passing a Department of Defense Medical Evaluation Board health physical and eye exam
- Must be eligible for a secret security clearance

Army ROTC Nursing Program

Being an Army nurse is one of the most rewarding careers imaginable. Army nurses are officers—and as such are highly respected professionals. They have the opportunity to assume leadership positions in a hospital setting far more quickly than those working in the private sector. They also have the personal satisfaction of caring for the men and women who defend our freedom.

The Army ROTC program offers some unique hands-on opportunities for nursing students that are not available anywhere else. With the Nurse Summer Training Program (NSTP), Army ROTC nurse cadets have the opportunity for a paid, three-week assignment to army hospitals throughout the United States and Germany. While participating in the program, cadets are introduced to the Army Medical Department (AMEDD) and to the roles and responsibilities of an army nurse corps officer. Cadets gain hands-on experience, under the guidance of an experienced army nurse, allowing them to hone their clinical skills and become comfortable with developing their professional skills as a member of the U.S. Army Healthcare Team. For more information go online to ARMY ROTC Nurse Training & Scholarship Program (<https://www.goarmy.com/rotc/courses-and-colleges/programs/nursing.html>).

Army ROTC Nursing Scholarships

Army ROTC offers qualified undergraduate nursing students two-, three-, and four-year scholarships. These scholarships are merit-based and are awarded to those who possess a strong record of academic achievement and who demonstrate that they have the potential to become leaders. These scholarships defray the full cost of tuition and provide a tax-free allowance for books and necessary materials. Additionally, those awarded an Army

ROTC nursing scholarship are eligible to receive a tax-free stipend up to \$420 per month, to help defray living expenses, for up to ten months of the academic year. The scholarships would pay full in-state or out-of-state tuition and fees. There will also be incentive items given during their junior and senior years. The nursing scholarship will also cover the cost of the NCLEX review course as well as the cost of the NCLEX test.

Additional Opportunities

Students enrolled in the Army ROTC program can participate in numerous fully funded military training opportunities during their summer breaks. These opportunities include, but are not limited to Airborne School, Air Assault School, Mountain Warfare School, Pentagon Internship Program, Project Global Officer (GO), and the Nurse Summer Training Program. There are also opportunities to study abroad through numerous fellowship programs.

Degree Regulations

In this section

- Undergraduate Degree Requirements (p. 44)
- Credit Residence Requirements (p. 44)
- Coursework Done Out of Residence (p. 45)
- Credit Validation (p. 46)

Undergraduate Degree Requirements

All undergraduate degree programs include the General Education Foundations (GEF), require a minimum grade point average of 2.0 or higher, and require a minimum of 120 credit hours. In addition, the various colleges and schools may determine their own specific graduation requirements, which may include additional course or credit requirements, minimum course grades, and grade point averages higher than a 2.0.

Every undergraduate degree program at WVU requires that students satisfactorily complete the General Education Foundations. For General Education Foundations definitions, please see the list of approved GEF courses (<http://registrar.wvu.edu/gef/>). All undergraduate students at WVU are also required to fulfill a Capstone course. Please note that transfer courses do not fulfill the Capstone requirements. Capstone courses can never be transferred from another institution, including courses taken while studying abroad.

Students entering WVU as an undergraduate student with fewer than 24 hours must also earn a passing grade in a First Year Seminar course in their first semester at WVU. Those who do not pass the course must re-enroll for subsequent semesters until they earn a passing grade.

FIRST YEAR SEMINAR (FYS) WAIVER OR EXEMPTION POLICY

Transfer and Non-Traditional Students

Transfer students who have earned 24 or more hours at another institution will have the first-year seminar course (FYS) waived regardless of college (course number indicator of 191). Transfer students who earned credit for a freshman seminar course with similar learning outcomes at another regionally accredited institution can have the course approved as their FYS through the transfer equivalency process (TESS). Students who enroll at WVU more than four years after high school graduation, or who have been absent from the institution for more than four years, may have the FYS waived by their college or school.

Note: Students granted a waiver will need to make up the credit hour allocated to the FYS in the Course Program of Study.

Dual Enrolled High School Students

Students enrolling as first-time freshmen who are not four years out of high school are not eligible to have the FYS waived regardless of earned credits.

Credit Residence Requirements

In order to meet residency requirements at West Virginia University locations for a bachelor's degree, students must complete a minimum of 90 total credit hours in residence or 30 of the final 36 credit hours in residence to earn a WVU degree. Individual colleges, schools, or departments may have additional residence requirements as part of their degree or major requirements. Students should consult their respective academic unit with questions regarding specific degree or major residence requirements. Coursework taken at other WVU system campuses, WVU administered credit by examination, placement credit, study abroad credit, military credit and experiential learning credit will not interrupt the final 30 credit hours in residence if earned during this period.

In order to meet residency requirements at WVU Potomac State College for an associate's degree, students who have completed all undergraduate work in another West Virginia public higher education system must complete at least 18 hours of work at WVU Potomac State College; 8 of the last 16 hours must be on campus, or complete the final 15 credit hours of work at PSC. Transfer students whose undergraduate work has been completed outside of the West Virginia public higher education system must complete a minimum of 45 total credit hours in residence or complete the final 15 credit hours of work in residence at PSC. Student's may also be required to earn up to 8 credit hours in residence for major fields.

Note: Resident credit hours are not synonymous with West Virginia State residency definitions for tuition purposes.

Coursework Done Out of Residence Policy

DEFINITIONS

Transfer students are West Virginia University students who have completed post-secondary coursework at a regionally accredited college or university after graduation from high school, but before registering at WVU. Courses brought to WVU upon original matriculation are called transfer work.

Transient students are current West Virginia University students who temporarily matriculate at another accredited institution to take courses to be recorded on their WVU transcript or who return to the University after an absence of one calendar year or less. Courses brought in to WVU from another institution are called transient work. Transient work includes:

- Military credit validated by the American Council on Education (ACE).
- Collegiate work approved through the appropriate workflow and completed at another regionally accredited institution in the United States.
- Collegiate work approved through the appropriate workflow and completed at colleges and universities outside of the United States which are accredited or approved by the Ministry of Education (or other appropriate governmental agency) of the country in which they are located.

RULES GOVERNING TRANSFER WORK

- Transfer students must have earned a 2.0 GPA in baccalaureate-level work at their institution of origin to be eligible for admission to the West Virginia University system. Individual programs may require a higher transfer GPA and/or other prerequisites for admittance as noted in the University catalog. More information can be found on the [WVU Undergraduate Admissions website \(https://admissions.wvu.edu/\)](https://admissions.wvu.edu/).
- Any remedial courses, or courses taken from a non-regionally accredited institution, that have been included in the grade point average of the institution of origin will be removed before consideration for admission to the West Virginia University system.
- Transfer students who have fewer than twenty-four transferable credit hours must also meet freshman admission standards.
- Upon matriculation to WVU, transfer students holding an Associate of Arts (A.A.) or Associate of Science (A.S.) degree from a regionally accredited institution shall be deemed as having satisfied the WVU general education requirement.
- When applying transfer coursework to the WVU system transcript, all credit and grades earned at a regionally or internationally accredited institution will transfer to West Virginia University.
- Transfer credit is adherent to WVU policies. This includes, but is not limited to, repeated coursework policies and D/F repeat calculations (<http://catalog.wvu.edu/undergraduate/enrollmentandregistration/#Repeat>). If you have questions on how this will impact your standing at WVU, please contact transfercredit@mail.wvu.edu.

RULES GOVERNING TRANSIENT WORK

- Approved transient courses will be assigned a WVU subject code, course number, grade, and credits and will be recorded on the student's transcript. Unapproved transient courses will be assigned credits and a grade of CR, but will not be translated into an equivalent WVU course. These courses will be designated as NOEQ 1NT and will not fulfill any requirements.
- Only students with a 2.0 GPA will be approved to take course(s) in transient. Students who have matriculated at WVU may take a maximum of eighteen (18) credit hours in transient, no more than nine (9) hours of which may be used to fulfill the major requirements indicated in the university catalog. Transient courses taken prior to fall of 2019 are exempt from the 18/9 restriction, as are courses taken through education abroad, the military, or at other WVU system campuses.
- Students who are advised by the Center for Learning, Advising, and Student Services (CLASS), may take up to the maximum allowable hours in transient. Once a major is declared, the new college can decide to allow or deny further transient work at the Dean's discretion.
- Courses taken in transient and approved by the student's college are recorded on the transcript and must be accepted by all WVU degree programs.
- Transient work may violate the [Credit Residency Requirement \(http://catalog.wvu.edu/undergraduate/degree_regulations/#Residency_Requirements\)](http://catalog.wvu.edu/undergraduate/degree_regulations/#Residency_Requirements) and render the student ineligible for graduation.
- Courses completed for a grade other than W (Withdraw) in residence may not be repeated at another school for degree credit via the transient process.
- Students must have completed the required WVU prerequisites to take a course for transient credit or receive WVU credit for a course.
- Undergraduate transfer/transient coursework taken prior to the completion of a baccalaureate degree will not be posted to the student's academic record towards another degree in the WVU system. Undergraduate transfer/transient work taken after completion of a baccalaureate degree may be posted to the academic record towards a second degree in the WVU system.
- A student with extraordinary documented circumstances may appeal a decision regarding transfer or transient credit to the appropriate dean.

PROCEDURES

- Prospective domestic and international transfer students will work through the TERR system to have their coursework reviewed and evaluated. Determining course equivalencies, retroactive evaluation of NOEQ courses, and requesting an appeal will follow the appropriate workflow. Once transfer coursework has posted to the WVU transcript, students will work with their departmental adviser to select courses for their first semester at West Virginia University and have their advising hold lifted.

- Transient students should work closely with their adviser before they take a course at another institution with the intent of posting the course to their WVU transcript. Detailed instructions for initiating the transient request process can be found on the transfer and transient resource page (<https://registrar.wvu.edu/transfer/>).
 - The transient process should be completed before registering and paying tuition at another institution. Requesting approval for retroactive transient work is strongly discouraged and is done at the student's own risk.
 - Students should meet with their adviser to discuss the appropriateness of the courses they are planning to transfer and to be informed of the policies governing transient credits.
 - Requests for transient credit must be submitted through the transient application, found on the transfer and transient resource page (<https://registrar.wvu.edu/transfer/>), and approved by the advisor and appropriate dean.
 - If the course(s) a student plans to take at another domestic or international institution is not already articulated in the TESS system, the student is responsible for submitting all necessary information required for review through the TERR portal accessible via the transfer and transient resource page (<https://registrar.wvu.edu/transfer/>).

Credit Validation

Students seeking to complete an undergraduate degree after a significant break in enrollment may be asked to retake certain upper-division courses in their major to validate their subject knowledge (or otherwise demonstrate mastery). This requirement to re-enroll or demonstrate subject mastery in a course is at the discretion of the department chair and dean.

All prior coursework completed at WVU will be factored into the student's institutional GPA. Coursework deemed to be insufficient to meet current course standards may be treated as elective credit but will not satisfy major requirements (as allowed by the student's academic major). Transfer coursework will be evaluated per the University's Transfer Policy.

In this section:

- Awarding Degrees (p. 46)
- Double Majors (p. 46)
- Dual Degrees (p. 47)
- Second Degrees (p. 47)
- Reverse Transfer (p. 47)
- Diploma Retention Policy (p. 47)

Awarding Degrees

All degrees (p. 51) 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 at their major department's academic dean's office and the dean has certified completion of all degree requirements.

A student becomes eligible to graduate when they complete the requirements of the University, college or school, and major degree program according to the Undergraduate Catalog in effect at the time the student first entered WVU. 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 seven years previously, the student must complete the requirements in a catalog that is no more than seven years old.

Students must observe any program changes that are enacted by the West Virginia University Faculty Senate, West Virginia University Board of Governors, the West Virginia Higher Education Policy Commission, or by local, state, or federal law.

WVU policy dictates that, in view of their professional responsibilities to the general public, the faculty of a professional school may recommend to the president of the University, in writing, that a student be removed from its rolls. The recommendation of the faculty must indicate that the student is not fit to meet the qualifications and responsibilities of the profession.

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

Double Majors

The double major is the awarding of one degree with two majors offered by one college/school. For instance, a student who completes majors in English and History earns one B.A. degree. A student who completes multiple majors with the same degree designation offered by different colleges/schools will be awarded dual degrees. The completion of double or multiple majors must lead to the same degree and can only be achieved simultaneously. Students must be accepted into each major and fulfill all requirements of each major in addition to satisfying all University requirements. Students who complete multiple majors within one degree will be awarded one degree, and the transcript will list the degree and each major.

Dual Degrees

The dual degree is the concurrent awarding of two distinct baccalaureate degrees (i.e. B.A., B.S., B.S.E., B.S.J., B.S.B.A.). Dual degrees will not be awarded when a student has completed a double major with the same degree designation. Students pursuing two majors in different degree programs are expected to have the full range of skills, competencies, and experiences as students graduating from each of the programs independently. Therefore, students must be admitted into each degree program and fulfill all requirements for each degree. Students should pay particular attention to GEF requirements for each degree. Simultaneous completion of dual baccalaureate degrees requires students to complete a minimum of 30 unique credit hours that are not used to satisfy their primary degree requirements. For example, if the student's primary degree program requires a minimum of 120 credit hours, the student must complete a minimum of 150 credit hours to earn both degrees.

Second Degrees

Some students decide to continue their undergraduate studies after receiving their first bachelor's degree. Students who attempt to earn dual baccalaureate degrees from WVU but do not fully complete requirements for both degrees simultaneously will become second degree candidates. Students who have previously earned a bachelor's degree, whether from WVU or another institution, must complete a minimum of 30 hours beyond the first degree. Second degree candidates must meet all requirements for their degree program, major, college/school and the University, including residence requirements. General Education Foundations (GEF) requirements, however, are generally considered satisfied by completion of the first undergraduate degree. In the event that courses taken for the first bachelor's degree are required courses for the second degree program, the college or school granting the second degree may approve course substitutions. In no circumstance may the coursework in the second degree program be fewer than 30 credit hours after the conferral of the first degree.

Reverse Transfer

Students who are admitted to a professional program in their last year of bachelor's degree coursework may request reverse transfer of professional coursework to fulfill the requirements of the bachelor's degree at WVU. Students are required to complete at least 90 hours of the three-year curriculum at WVU with no more than 30 credits transferring in from a regionally accredited professional program. Examples of professional programs may include but are not limited to: Doctor of Veterinary Medicine, Doctor of Medicine, Doctor of Dental Science, etc.

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.

In this section:

- Graduation (p. 47)
- Graduation with Honors (p. 47)

Graduation

In order to graduate, a student is required to complete an application for graduation the semester or summer term in which they expect to graduate. If a student is uncertain about graduation requirements, the student should meet with their academic advisor for guidance.

Graduation with Honors

WVU recognizes distinguished academic achievement by awarding degrees cum laude, magna cum laude, and summa cum laude. This distinction can be awarded on initial or second baccalaureates and specified entry-level professional degrees. Students who received academic forgiveness are not eligible to graduate with honors. All eligible candidates for a baccalaureate with a GPA of 3.8 or higher graduate summa cum laude. Those with a grade point average of less than 3.8, but equal to or above 3.6, graduate magna cum laude. Those with a GPA of less than 3.6, but equal to or above 3.4, graduate cum laude.

The GPA for honors consideration is based on baccalaureate-level college work attempted through the final semester. This calculation includes baccalaureate-level college work attempted at institutions accredited by regional accreditors in the United States. Credit hours earned with a grade of P or S are not considered in the determination. Grades of F, however, are computed as hours attempted.

Students must meet residency requirements at WVU to be considered for graduation with honors.

The GPA for honors consideration for entry-level professional degrees is based on baccalaureate-level and professional-level work attempted through the last semester. This calculation includes baccalaureate-level and professional-level college work attempted at all regionally accredited higher education institutions attended. Credit hours earned with a grade of P or S are not considered in the determination.

Students entering and completing a second baccalaureate program, following completion of the initial degree are eligible to receive the honors designation. The GPA for graduation with honors on second baccalaureates shall be computed on all baccalaureate-level work, excluding credit earned with a P or S. This includes work completed for the first degree as well.

The grade point average through the penultimate semester will be used for notations in the commencement programs.

FERPA

In this section:

- Notice to Students Regarding FERPA (p. 48)
- Designation of Directory Information (p. 48)
- Designation of Limited Use Directory Information (p. 48)
- Withholding Directory Information (p. 48)
- Parent/Guest Access to Online Student Records (p. 49)

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

IN THIS SECTION:

- Application Process (p. 49)
- Aid Offer Notification (p. 49)
- Employment Opportunities (p. 49)

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. 49)
- Consequences of Withdrawal (p. 50)

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.

Minors

In this section:

- General Statement (p. 50)
- Requirements (p. 50)
- Procedures for Declaring and Completing a Minor (p. 50)

General Statement

Each academic unit in the University may, at its discretion, offer formal academic minors. The University does not require that an academic program unit offer a minor or that its students take a minor. Minors will be described in the catalog and identified on the student's transcript in the same manner that majors are identified. If a department requires a concentration of courses in a secondary area and that concentration is not a formal minor, then the department should refer to this group of courses as an 'area of emphasis' rather than a 'minor' in order to avoid confusion.

Requirements

Requirements for a minor are set by the academic unit offering the minor. Substitutions may not be made without written approval of the minor department. Minors must include at least fifteen hours of course work, with a minimum of nine hours at the upper division level (course numbers 300 or above). Units offering a minor may require specific courses and/or may require a minimum performance standard for courses taken to fulfill minor requirements (e.g., "a GPA of 2.0 across courses counted toward the minor is required" or "a grade of 'C' or higher must be earned in all courses counted toward the minor"). Courses in the minor may not be taken pass/fail.

Students may not earn a minor in the same field as their major. Courses required for completion of the student's major may be applied to the completion of a minor, so long as that minor is not in the same field (i.e., offered by the same academic unit) as the major. Each minor must have a minimum of 9 unique credit hours distinct from any other academic credential.

For rules concerning minors that are part of the multidisciplinary studies degree, see the Programs for Multidisciplinary and Interdisciplinary Studies (<https://mds.wvu.edu/>) website.

The declaration of academic minors does not change or supersede specific college requirements or policies.

Procedures for Declaring and Completing a Minor

Students declare minors once they enter their major fields of study. A student interested in completing a minor (or minors) works with the major advisor to incorporate minor requirements into schedule planning. Students are welcome to consult with advisors in the minor department. Students who wish to complete a minor in music, women's studies, leadership studies, or ROTC must work directly with advisors for those programs.

The following steps must be followed to assure that completion of a minor is appropriately recognized and posted to the student's transcript:

1. Complete an Academic Status Update (ASU) Form with their advisor.
2. Indicate minor(s) on the Application for Graduation. Failure to declare a minor on the Application for Graduation will result in the minor not appearing on the transcript, regardless of declaration on the ASU form.
3. Review the minor requirements are completed with the major advisor. The student's major advisor/major college advisement office certifies that all minor requirements have been completed.

Note: Minors are only awarded at the time of the conferral of a baccalaureate degree and for dual degree students will only appear once on a transcript.

Programs, Courses & Credits

In this section:

- Academic Definitions (p. 51)
- Rules for Attaining Multiple Credentials (p. 53)
- Modality Definitions (p. 53)

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 Policies (<http://catalog.wvu.edu/graduate/graduatecertificates/>) for credit limitations applicable to earning a certificate. See Credit Sharing Limitations for Graduate Degrees and Majors (p. 53) 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:

- Accelerated Bachelor's/Master's Programs (p. 54)
- Undergraduate Certificate Programs (p. 55)
- Minors (p. 55)

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

Undergraduate Certificate Programs

For a complete list of certificates and information on WVU's undergraduate certificates, please see our Undergraduate Certificates page (p. 61).

Minors

For a complete list of minors and information on WVU's minors, please see our Minors page (p. 50).

In this section:

- Abbreviations Used in Course Listings (p. 55)
- Course Number Guide (p. 55)
- Common Course Numbers & Descriptions (p. 56)
- Eligibility to Enroll in 500-Level Courses (p. 56)
- Graduate Credit via Senior Petition (p. 56)
- Independent and Directed Study Classes (p. 57)
- Finals and Last Week of Classes (p. 57)

Abbreviations Used in Course Listings

Abbreviation	Description
HR	credit hours per course
Lec	lecture period
Rec	recitation period
Lab	laboratory period
GLAB	graded lab
WEB	web-based course
CONC	concurrent - listed with PR meaning the course may be completed at the same time as enrollment in the course for which it is listed
PR	prerequisite - course must be completed in a term prior to enrollment in the course for which it is listed
Coreq	co-requisite - courses must be taken in the same term
Consent	consent of instructor required
CR	credit but no grade

Course Number Guide

For convenience, each course of study is designated by the name of the department in which it is given and by the number of that course. The guide for numbering courses is as follows:

Courses 1–99 Developmental and community college certificate courses (does not require WVU Faculty Senate approval) and undergraduate professional development courses (courses that are designed for professional development and require students to possess a high school diploma. These courses do not count toward graduation).

Courses 100 Freshmen/Underclassmen: Intended primarily for freshmen, although upper-division students may take these courses if needed to complete degree requirements.

Courses 200 Sophomores/Underclassmen: Intended primarily for sophomores. These courses may have 100 or 200-level prerequisites.

Courses 300 Juniors/Upperclassmen: Intended primarily for juniors. These courses may have extensive prerequisites or be limited to specific majors.

Courses 400 Seniors/Upperclassmen: Intended primarily for seniors and graduate students. These courses are typically limited to advanced undergraduate students and graduate students within a particular major or degree program.

Courses 500 Undergraduate Seniors and Master's Level: Courses intended for advanced undergraduate students and graduate students. Undergraduate students must receive approval to enroll in 500-level courses.

Courses 600 Master's Level: Courses intended for master's degree students (no undergraduates permitted).

Courses 700 Master's and Doctoral Degree Level: Courses intended for doctoral students and advanced master's students (no undergraduates permitted).

Courses 800 Master's and Doctoral Degree Level: Courses intended for students in graduate-level professional programs (no undergraduates permitted).

Courses 900 Professional Development: Courses intended for professional development. Students must possess a bachelor's degree. These courses do not count toward graduation and are not applicable towards a graduate degree. Grading is S/U only.

Undergraduate Common Course Numbers & Descriptions

199. Orientation to [subject/field]. 1-2 Hr. Orientation to degree programs and requirements, departmental resources, curriculum options, student responsibilities, and opportunities.

293. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

298. Honors. 1-3 Hr. PR: Students in Honors Program and consent by the honors director. Independent reading, study, or research.

393. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

490. Teaching Practicum. 1-3 Hr. PR: Consent. Teaching practice such as a tutor or assistant.

491. Professional Field Experience. 1-18 Hr. PR: Consent. (May be repeated up to a maximum of 18 hours.) Prearranged experiential learning program to be planned, supervised, and evaluated for credit by faculty and field supervisors. Involves temporary placement with public or private enterprise for professional competence development.

492. Directed Study. 1-3 Hr. Directed study, reading, and/or research.

493. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

494. Seminar. 1-3 Hr. PR: Consent. Presentation and discussion of topics of mutual concern to students and faculty.

495. Independent Study. 1-6 Hr. Faculty-supervised study of topics not available through regular course offerings.

496. Senior Thesis. 1-3 Hr. PR: Consent.

497. Research. 1-6 Hr. Independent research projects.

498. Honors, 1-3 Hr. PR: Students in Honors Program with consent by the honors director. Independent reading, study, or research.

499. Global Service Learning. 1-3 Hr. PR: Consent. Theory and practice of global service-learning. The main objective will be to pair the experiential aspects of meaningful and sustained service in the host community with work from the student's anchor course by offering a methodological framework for cultural immersion and community service as well as adding to the content of the anchor course.

Eligibility to Enroll in 500-Level Courses

Advanced undergraduate students may request permission to enroll in a graduate course numbered 500-599. Undergraduate students may not enroll in 600 or above level courses unless they are enrolled in a master's degree program as part of an ABM program. To qualify, students must be classified as either a Junior or Senior and have a minimum of a 3.0 cumulative grade point average on a 4.0 scale. To enroll in 500-599 courses, students must complete an Undergraduate Application to Enroll in 500-Level Courses, found on the Office of the University Registrar's website under the Forms (<https://registrar.wvu.edu/forms/>) tab and Registration section, and have it approved. Non-WVU students will also be required to submit an undergraduate application for admission and have his or her official transcripts sent to the Office of Admissions from all of the colleges and universities previously attended; the transcript cannot be one sent to the student or by email or fax.

Graduate Credit via Senior Petition

Students classified as seniors may begin graduate study early through the University's senior petition policy. Senior petition applies only to courses numbered 400–599, and students can receive only 15 graduate hours through the senior petition process. If a student is permitted to receive graduate credit, that credit cannot count toward the undergraduate degree. To qualify, students must be classified as seniors and have a minimum of a 3.0 cumulative grade point average on a 4.0 scale. To be granted permission to earn graduate credit as an undergraduate senior, students must complete the Senior Petition to Earn Graduate Credit, found on the Office of the University Registrar's website under the Forms (<https://registrar.wvu.edu/>)

forms/) tab and Registration section, and have this approved. Students enrolled in a master's degree program as part of an ABM program may enroll in graduate-level courses approved for their program without completing a Senior Petition.

Independent Study Classes

Independent study classes are offered to students in order to provide opportunities for content exploration not typically offered via the normal course rotation.

Students interested in pursuing independent study should contact their academic advisers to determine if independent study is a viable option for them and to identify the process specific to their college and major.

Directed Study Classes

Directed study classes may occasionally be contracted when:

1. The student has achieved a GPA of 2.0 or higher,
2. The course requested for directed study is a requirement for graduation under the student's major, and
 1. There is no possibility of taking the course by the expected graduation date, or
 2. Unavoidable schedule conflict between required courses that are part of a sequence for which a real hardship would occur for the student to be able to complete their program within the expected time frame.

Students should consult with their academic advisers to see if directed study is a viable option for them. All requests for directed study classes require official approval.

Finals and Last Week of Classes

- Final Examination Policy (p. 57)
- Multiple Examinations on the Same Day (p. 57)
- Evening Classes (p. 58)
- Two-Semester Courses (p. 58)
- Common Examinations (p. 58)
- Last Week of Classes and Preparation Days (p. 58)

FINAL EXAMINATION POLICY

The last week of each semester of the academic year is designated as finals week. Final examinations for the summer term are given on the last day of classes. The undergraduate final examination schedule for each academic term is determined by the Office of the University Registrar (<https://registrar.wvu.edu/>) at the Morgantown location, the Office of Academic Affairs (<https://www.potomacstatecollege.edu/about/contact-us/>) at the WVU Potomac State College, and the Office of the Registrar (<https://techregistrar.wvutech.edu/>) at WVU Institute of Technology. The final examination date and time for a class is determined by the class meeting time.

No change in time from the published official examination schedule is permitted without approval of the dean of the college or school and the Provost's designee at the Morgantown location, Dean of Academic Affairs at the WVU Potomac State College, or the Campus Provost at WVU Institute of Technology. Finals are held in the location of the regularly scheduled class meeting unless students are otherwise notified.

No class-related activity, except for office hours, may be scheduled during the finals week.

Except for evening classes (see below), no final examinations may be given before the examination period begins, and no change in time from that published in the official examination schedule is permitted without approval. An instructor with a compelling reason to change the time of an examination must obtain the approval of the dean of the college or school and the Provost's designee at the Morgantown location, Dean of Academic Affairs at WVU Potomac State College location, or the Campus Provost at WVU Institute of Technology location. The instructor must then announce the alternative examination procedure to the students via their official institutional email address.

Assignments given in place of a final exam or "take-home" final examinations, excluding projects or assignments that are intended to be completed across the entire semester, may not be due before the final examination date and time for that class.

A student may address complaints related to the final examination procedures in a course to the dean of the college or school in which the course is offered.

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MULTIPLE EXAMINATIONS ON THE SAME DAY

If a student has more than three final examinations on a single day, they may contact one of their instructors to schedule a make-up examination. If an arrangement cannot be made, the student should contact an associate dean's office.

If students have two final examinations scheduled during the same common examination time period, they must contact the departments administering the common examinations to make arrangements for a make-up examination.

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EVENING CLASSES

Final examinations for evening classes (classes meeting at 6 p.m. or later, or classes meeting at 4 p.m. or later if the class meets once a week) are scheduled during the last week of class. Final examinations for evening classes at WVU Institute of Technology occur during finals week and are on the undergraduate final examination schedule from the Office of the Registrar (<https://techregistrar.wvutec.edu/>) at WVU Institute of Technology.

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TWO SEMESTER COURSES

In a course extending over two semesters with continuous subject matter, the second-semester final examination may include content from the first semester.

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COMMON EXAMINATIONS

Some multi-section courses use a common examination time, as indicated on the Schedule of Final Exams.

No courses other than those listed on the final examination schedule may use a common examination time. On the Morgantown location, common examinations may only be administered for courses in which the total course enrollment exceeds 500 students or there are more than 20 sections of the course. Finals are held in the location of the regularly scheduled class meeting unless students are otherwise notified.

If a department wants a course to be considered for a common final examination, the unit will need to demonstrate that it is not possible to generate multiple equivalent exams from a test bank, or that, because of documented issues of academic dishonesty, a common examination is required to ensure the integrity of the test. Requests for a common final examination must be reviewed by the Academic Policy Committee, which will make a recommendation to the appropriate provost.

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LAST WEEK OF CLASSES AND PREPARATION DAYS

When the calendar permits, a preparation day for finals will be added to the academic calendar. Preparation days for finals are free days on which no papers are due, no quizzes or examinations are administered, and there are no class-related activities other than office hours.

In undergraduate courses of 16 weeks duration, no substantial examinations or quizzes may be given during the last week of classes preceding finals except for practical laboratory tests and make-up examinations. An examination or quiz is considered substantial if it covers 20% percent or more of the course content, or represents more than 20% of the final grade. Exceptions to this policy must be approved by the dean of the college or school.

Additionally, as per Board of Governor's Academic Rule 2.5, instructors who administer such assessments must provide meaningful feedback to students prior to the final examination for the course.

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In this section:

- Classification of Students (p. 58)
- Course Overload (p. 59)
- Credit Hour Definition (p. 59)
- Credit by Exam (p. 60)
- Experiential Learning (p. 60)

Classification of Students

Undergraduate students are classified as freshmen, sophomores, juniors, or seniors. These classifications are based upon the number of hours completed. The classifications are as follows:

Classification	Hours
Freshman	1-29 Earned Credit Hours, Inclusive
Sophomore	30-59 Earned Credit Hours, Inclusive
Junior	60-89 Earned Credit Hours, Inclusive
Senior	90 or More Earned Hours

Course Overload

Undergraduate students are not permitted to enroll in more than 20 credits in a fall or spring semester or 14 credits in a summer semester without approval. The student's dean or dean's designee may approve requests of 21 credits in the fall or spring semester or 15 credits in the summer semester. Requests to enroll in 22 credits or more must be approved by the student's dean or dean's designee and the Associate Provost for Undergraduate Academic Affairs.

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.

Credit by Exam

Currently enrolled students with life experiences in an academic subject area may seek to receive credit for a course(s) upon demonstration of competency. Credit is given when a satisfactory degree of competency as defined by the academic unit is shown; no grades will be awarded.

Students may only attempt a course's credit by exam once. Students may not be, or have been, registered in the current term in the course for which they are seeking credit by exam. Students may not seek credit by exam for any course in which they have previously earned a failing grade.

Beyond the comprehensive assessment measure used to determine competency, an academic unit may also ask a student to prepare a self-evaluation statement prior to taking the exam. The purpose of the statement is to help determine competency as well as to identify the methods by which it was achieved.

WVU administered credit by examination and placement credit is recorded on the transcript as transfer credit, but it does not violate the requirement for 30 of the final 36 credit hours to be taken in residence.

Contact the appropriate academic unit to determine if a course is available for credit by exam.

Prior Learning Experience

In certain cases, and at the discretion of an academic unit, currently enrolled students with documented but untranscribed 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 transcribed credit in their program and to evaluate the potential benefits and financial aid implications of receiving prior learning credit.

WVU administered credit by examination and placement credit is recorded on the transcript as transfer credit, but it does not violate the requirement for 30 of the final 36 credit hours to be taken in residence.

Experiential Learning

Each academic unit has a policy of general applicability controlling the allocation of credit for ad hoc experiential learning. No credit shall be granted for ad hoc experiential learning that is not sanctioned by an approved policy. At a minimum, each discipline shall adhere to accreditation standards of that discipline with respect to credits given toward student advancement based on experiential learning. There should be an equivalence in quantity and quality of ad hoc experiential learning effort and conventional academic effort for a set amount of credit within a discipline. Credit awarded for experiential learning will be posted as transfer work to West Virginia University with the course number of three zeros (000). The course prefix will vary by department granting credit. Credits applied to a student's record through experiential learning will count in degree (or earned) hours. No formal grade will be entered. While WVU administered experiential learning credit will be excluded from WVU residence credit, it does not interrupt the final thirty credit hours in residence if earned during this period.

Tuition, Fees and Residency

In this section:

- Cost of an Academic Year's Work (p. 60)
- Identification Card (p. 60)

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.busrider.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.

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).

Undergraduate Certificates

Academic Certificate Policies

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 will issue an official certificate of completion.

Academic certificates at the undergraduate level may only be awarded simultaneously with a baccalaureate degree. Completion of an academic certificate will be noted on students’ transcripts.

Certificate programs may require admission to the certificate program prior to enrollment in specified certificate courses. Students must be admitted to the certificate program in order to be awarded the certificate.

See information on Undergraduate Multiple Curricula on the Academic Definitions (http://catalog.wvu.edu/undergraduate/programs_courses__enrollment/#academicdefinitionstext) tab for rules concerning the application of credits.

- Biomedical Engineering (p. 62)
- Early Childhood Development (p. 62)
- Global Competency (p. 63)
- Global Engagement (p. 64)

- Global Mountaineers Certificate Program (p. 65)
- Infant/Toddler Education (p. 73)

Biomedical Engineering

Undergraduate Certificate in Biomedical Engineering

CERTIFICATE CODE - CU02

The Department of Chemical and Biomedical Engineering administers a certificate program in biomedical engineering that is open to all students with appropriate prerequisites, which are: basic biology (BIOL 115/BIOL 116), mathematics through MATH 261 (differential equations), CHEM 115/CHEM 115L, and CHEM 116/CHEM 116L and a working knowledge of organic chemistry, specifically the naming conventions for, and knowledge of charge distribution in, organic molecules. Currently, the certificate program consists of at least 16 credit hours listed below. As other courses are added in the biomedical engineering area, more choices of elective courses will be made available.

Required Courses

Choose one of the following:		4-5
BIOL 235 & BMEG 236	Human Physiology and Quantitative Analysis in Human Physiology	
BIOL 117 & BIOL 118	Introductory Physiology and Introductory Physiology Laboratory	
BMEG 201	Introduction to Biomedical Engineering	3

Electives

Choose three of the following:		9
BMEG 311	Biomaterials	
BMEG 310	Biomedical Imaging	
BMEG 340	Biomechanics	
BMEG 480	Cellular Machinery	
BMEG 481	Applied Bio-Molecular Modeling	
BMEG 482	Introduction to Tissue Engineering	

Total Hours	16
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Certificate Learning Outcomes

BIOMEDICAL ENGINEERING

Students graduating with the Biomedical Engineering Certificate will demonstrate:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Early Childhood Development

Undergraduate Certificate in Early Childhood Development

CERTIFICATE CODE - CU09

The Early Childhood Development Certificate is a specialized curriculum designed for those who work in Pre-K classrooms in the public school, Head Start and child care centers who must obtain a specific body of knowledge and need specific written recognition for their ability to work with preschool children.

There are 15 credit hours in the Early Childhood Development certificate program. The certificate program is not attached to a degree in Child Development and Family Studies. Credit hours earned in the Early Childhood Development certificate can be applied to degree requirements for those

students who want to pursue a degree. This CDFS certificate will incorporate the West Virginia Core Knowledge and Core Competencies and the West Virginia Early Standards Framework: Early Learning Standards in order to include the most recent requirements set forth by WV agencies responsible for preschool children.

After completing the certificate in Early Childhood Education, students will:

- Demonstrate knowledge of social, emotional, cognitive, language, motor, and physical development of young children in the family and preschool contexts through course assignments and field placements.
- Reflect on their knowledge and skills of teaching and interacting with young children through course assignments, self-evaluations, and communication with faculty.
- Apply their knowledge of how young children learn in the creation and preparation of educational activities in inclusive environments.
- Differentiate between the different domains of development, explain how the domains of development are interconnected, and apply that knowledge when working with young children to capitalize children's growth and development across domains.
- Engage in field experiences with preschoolers and young school age children where their knowledge of early childhood development will be applied in the classroom setting.

Required Courses

CDFS 110	Families Across the Life Span	3
CDFS 212	Development in Early and Middle Childhood	3
CDFS 316	Child Development Practicum	3
CDFS 430	Best Practices in Pre-K Movement	3
CDFS 491A	Professional Field Experience	3
Total Hours		15

Certificate Learning Outcomes

EARLY CHILDHOOD DEVELOPMENT

Upon completion of the certificate students should be able to:

- Demonstrate knowledge of social, emotional, cognitive, language, motor, and physical development of young children in the family and preschool contexts through course assignments and field placements.
- Reflect on their knowledge and skills of teaching and interacting with young children through course assignments, self-evaluations, and communication with faculty.
- Apply their knowledge of how young children learn in the creation and preparation of educational activities in inclusive environments.
- Differentiate between the different domains of development, explain how the domains of development are interconnected, and apply that knowledge when working with young children to capitalize children's growth and development across domains.
- Engage in field experiences with preschoolers and young school age children where their knowledge of early childhood development will be applied in the classroom setting.

Global Competency

Undergraduate Certificate in Global Competency

CERTIFICATE CODE - CU01

OBJECTIVE

To provide students the opportunity to develop global competencies by working effectively across cultural and linguistic barriers while focusing on engineering and computer science issues that transcend their own culture.

LEARNING OUTCOMES

- Students will acquire basic knowledge of other languages and cultures while acquiring or applying engineering or computer science skills consistent with their programs of study.
- Students will develop communication and interpersonal skills to work with people of different backgrounds.
- Students will acquire an appreciation for contemporary issues and of the role of engineering or computer science solutions in a societal context.

GLOBAL COMPETENCIES DEFINED

- The ability to work effectively in different international settings
- An awareness of the major currents of global change and the issues arising from such changes

- Knowledge of global organizations and business activities
- The capacity for effective communication across cultural and linguistic boundaries
- Personal adaptability to diverse cultures

COMPONENTS OF THE CERTIFICATE PROGRAM

- Language and Culture Component: 6-9 credit hours completed at either WVU or a foreign academic institution (recognized by WVU's Office of International Programs) in international language, culture, literature, art or history. The courses need to be associated with the host country or region. If the foreign academic institution has a primary language requirement other than English the student can count no more than six credit hours of language in the language of the foreign academic institution toward the certificate. These credit hours can be applied to WVU's GEF requirement as appropriate.
- Engineering or Computer Science Major Coursework Component: 6-9 credit hours of engineering or computer science course work completed internationally, either from a foreign academic institution or through a WVU sponsored program applicable to the student's major at WVU. A minimum of 6 credit hours need to be equivalent to WVU upper division courses (300 and above). The student's course work must include significant mentorship of engineering or computer science learning activity, involving both WVU students and foreign students. At least 3 credit hours must involve experiential learning activities, which may include an industry based internship, design class, or project with report and presentation or other team based activities, for example. Each individual Statler College department will be responsible for selecting the admissible graded coursework through the respective curriculum committee.
- Social Service Component: one credit hour, minimum of social or civic engagement. This can include participation in Engineers without Borders or participation in activities in professional society student chapters with a social impact. The community service must include oversight at a professional or academic level (in other words, either a faculty member, or engineering or computer science professional should be involved).

After the aforementioned requirements are fulfilled, the Certificate of Global Competencies will only be issued to participating students upon graduation from the degree program involved with the international activity.

Certificate Learning Outcomes

GLOBAL COMPETENCY

Description

Upon completion of the certificate students should be able to:

- Students will acquire basic knowledge of other languages and cultures while acquiring or applying engineering or computer science skills consistent with their programs of study.
- Students will develop communication and interpersonal skills to work with people of different backgrounds.
- Students will acquire an appreciation for contemporary issues and of the role of engineering or computer science solutions in a societal context.

Global Engagement

Undergraduate Certificate in Global Engagement

CERTIFICATE CODE - CU08

Students in the Eberly College, may earn this Certificate, regardless of their major. Completion of the Global Engagement Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. Students must complete fifteen hours of approved courses and have the option to earn part of the certificate on campus, or to earn all of their credits abroad by completing one of the two options described below.

OPTION 1: LANGUAGE-INTENSIVE OPTION (15 CREDITS MINIMUM)

Language Component

6-9 credit hours of academic coursework in one language other than English, beyond the core language requirement (typically 204 or the equivalent, as determined by the Department of World Languages, Literature, and Linguistics), completed at either WVU or a foreign academic institution; **and**

International Coursework Component

6-9 credit hours, beyond the language component (above) requirement, of coursework bearing the "G" designator.*

OPTION 2: TRAVEL-INTENSIVE OPTION (15 CREDITS MINIMUM):

15 credit hours of coursework bearing the "G" designator.* It is recommended that at least part of this coursework be earned during an extended, semester-long experience.

- * Courses carrying the "G" designation are approved for the designation by the Office of International Programs and include courses taken abroad either with WVU, at an exchange university, or through another higher education school or organization. WVU offers approximately 60 WVU faculty-led programs per year, with one to three academic courses typically offered in each faculty-led program. There are over 50 exchange linkages with universities abroad, many of them comprehensive and some specialized in areas such as health sciences, engineering, business, language, etc. WVU also has agreements with approximately one dozen affiliate programs (ISEP, for example), each with a wide selection of programs and courses. An Eberly College student may take advantage of any WVU "G" courses for which he/she meets the pre-requisites or restrictions. Courses to be counted toward academic major requirements must be approved by the designated authority in the student's major program.

Certificate Learning Outcomes**GLOBAL ENGAGEMENT**

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

- Demonstrate knowledge of diverse cultures.
- Demonstrate ability to communicate and interact effectively with people of different cultural background.
- Apply their knowledge of contemporary issues and global social contexts to their course work and their broader citizenship.

Global Mountaineers Certificate Program**Undergraduate Certificate in Global Mountaineers****CERTIFICATE CODE - CU10**

The Global Mountaineers Certificate program provides WVU undergraduate students the opportunity to develop global competencies by building core skills, knowledge, and applications without adding significant time to degree. Students will focus on foreign language proficiency, education abroad or internship experiences, and a central group of courses focused on global issues and/or intercultural knowledge. Students must pass all components of the Certificate in order to complete the program.

Introduction Course

GLO 101	Introduction to Global Competence	1
Language Component (See table below) *		6
Core Course Component (See table below) **		6
Education Abroad/Internship Component ***		1-6
GLO 486	Global Competency Summative Experience	1
Total Hours		15

* Students will complete 6 hours of foreign language study (a language other than English or the student's native language). Such study may occur on campus at WVU, at another institution (either domestic or abroad), or via credit by exam or AP credit.

** Students will complete 6 hours of coursework on campus from an approved list of courses on intercultural exploration and/or global issues.

*** Students will complete 1-6 credit hours of education abroad, either through WVU or with an approved foreign institution or program.

LANGUAGE COURSES*

ARBC 101	Elementary Modern Standard Arabic 1	3
ARBC 102	Elementary Modern Standard Arabic 2	3
ARBC 203	Intermediate Modern Standard Arabic 1	3
ARBC 204	Intermediate Modern Standard Arabic 2	3
ARBC 303	Arabic Conversation 1	3
ARBC 304	Arabic Conversation 2	3
ARBC 305	Advanced Arabic Structure	3
ARBC 306	Readings in Arabic	3
CHIN 101	First Year Chinese 1	3
CHIN 102	First Year Chinese 2	3
CHIN 203	Second Year Chinese 1	3

CHIN 204	Second Year Chinese 2	3
CHIN 271	Intensive Mandarin Chinese 1	3
CHIN 293	Special Topics	1-6
CHIN 301	Third Year Chinese 1	3
CHIN 302	Third Year Chinese 2	3
CHIN 303	Readings in Modern Chinese 1	3
CHIN 304	Readings in Modern Chinese 2	3
CHIN 461	Business Chinese	3
CHIN 465	Chinese Media	3
CHIN 471	Intensive Mandarin Chinese 2	3
CHIN 490	Teaching Practicum	1-3
CHIN 491	Professional Field Experience	1-18
CHIN 493	Special Topics	1-6
CHIN 494	Seminar	1-3
CHIN 495	Independent Study	1-6
CHIN 496	Senior Thesis	1-3
CHIN 498	Honors	1-3
FRCH 100	Intensive Elementary French	6
FRCH 101	Elementary French 1	3
FRCH 102	Elementary French 2	3
FRCH 200	Intensive Intermediate French	6
FRCH 203	Intermediate French 1	3
FRCH 204	Intermediate French 2	3
FRCH 293	Special Topics	1-6
FRCH 301	Language Through Civilization	3
FRCH 302	Language Through Culture	3
FRCH 303	Structure and Communication	3
FRCH 304	Advanced Readings	3
FRCH 393	Special Topics	1-6
FRCH 401	Oral Expression	3
FRCH 402	Phonetics and Pronunciation	3
FRCH 421	Survey of Literature 1	3
FRCH 422	Survey of Literature 2	3
FRCH 431	French Civilization	3
FRCH 432	Contemporary Culture	3
FRCH 433	Francophone Cultures	3
FRCH 450	French Cinema	3
FRCH 461	Commercial French 1	3
FRCH 490	Teaching Practicum	1-3
FRCH 491	Professional Field Experience	1-18
FRCH 492	Directed Study	1-3
FRCH 493	Special Topics	1-6
FRCH 494	Seminar	1-3
FRCH 495	Independent Study	1-6
FRCH 496	Senior Thesis	1-3
FRCH 498	Honors	1-3
GER 101	Introduction to German Language and Culture 1	3
GER 102	Introduction to German Language and Culture 2	3
GER 203	Intermediate German 1: The German-Speaking World	3
GER 204	Intermediate German 2: Life in Germany	3
GER 222	German Pronunciation	3
GER 246	Introduction to German Film	3

GER 271	The German Experience 1	3
GER 293	Special Topics	0-6
GER 301	Language and Society	3
GER 302	Conversations in Context 2: Germany Today	3
GER 303	Youth Culture in German-Speaking Countries	3
GER 304	Culture and Science in German-speaking Countries	3
GER 361	German for Professional Purposes	3
GER 362	German for STEM	3
GER 393	Special Topics	1-6
GER 401	TurboDeutsch: Intensive German in Review	3
GER 431	German Literature: Fables/Fairy Tales/Enlightenment -Romanticism	3
GER 432	German Literature: Since Romanticism	3
GER 440	German Cultural History: 350-1700	3
GER 441	German Cultural History Since 1945	3
GER 471	The German Experience 2	3
GER 490	Teaching Practicum	1-3
GER 491	Professional Field Experience	1-18
GER 492	Directed Study	1-3
GER 493	Special Topics	1-6
GER 494	Seminar	1-3
GER 495	Independent Study	1-6
GER 496	Senior Thesis	1-3
GER 498	Honors	1-3
ITAL 101	Elementary Italian 1	3
ITAL 102	Elementary Italian 2	3
ITAL 203	Intermediate Italian 1	3
ITAL 204	Intermediate Italian 2	3
ITAL 293	Special Topics	1-6
ITAL 301	Language Through Culture	3
ITAL 302	Italian Through Film	3
ITAL 303	Composition and Conversation	3
ITAL 304	Advanced Conversation	3
ITAL 331	Survey of Italian Literature 1	3
ITAL 332	Survey of Italian Literature 2	3
ITAL 371	L'Italia Dal Vivo	3
ITAL 393	Special Topics	1-6
ITAL 431	Italian Folktales	3
ITAL 432	Modern Italian Civilization	3
ITAL 490	Teaching Practicum	1-3
ITAL 491	Professional Field Experience	1-18
ITAL 493	Special Topics	1-6
ITAL 495	Independent Study	1-6
ITAL 496	Senior Thesis	1-3
ITAL 498	Honors	1-3
JAPN 101	Elementary Japanese 1	3
JAPN 102	Elementary Japanese 2	3
JAPN 203	Intermediate Japanese 1	3
JAPN 204	Intermediate Japanese 2	3
JAPN 293	Special Topics	1-6
JAPN 301	Conversation and Composition 1	3
JAPN 302	Conversation and Composition 2	3
JAPN 303	Advanced Structure	3

JAPN 304	Advanced Reading	3
JAPN 441	Japanese Culture	3
JAPN 490	Teaching Practicum	1-3
JAPN 491	Professional Field Experience	1-18
JAPN 493	Special Topics	1-6
JAPN 494	Seminar	1-3
JAPN 495	Independent Study	1-6
JAPN 496	Senior Thesis	1-3
JAPN 498	Honors	1-3
PORT 101	Elementary Portuguese 1	3
PORT 102	Elementary Portuguese 2	3
PORT 203	Intermediate Portuguese 1	3
PORT 204	Intermediate Portuguese 2	3
PORT 293	Special Topics	1-6
PORT 490	Teaching Practicum	1-3
PORT 491	Professional Field Experience	1-18
PORT 493	Special Topics	1-6
PORT 494	Seminar	1-3
PORT 496	Senior Thesis	1-3
PORT 498	Honors	1-3
RUSS 101	Elementary Russian 1	3
RUSS 102	Elementary Russian 2	3
RUSS 203	Intermediate Russian 1	3
RUSS 204	Intermediate Russian 2	3
RUSS 293	Special Topics	1-6
RUSS 301	Conversation and Composition 1	3
RUSS 302	Conversation and Composition 2	3
RUSS 303	Advanced Structure and Reading 1	3
RUSS 304	Advanced Structure and Reading 2	3
RUSS 331	The Russian Short Story	3
RUSS 332	The Russian Short Story	3
RUSS 341	Survey of Russian Literature	3
RUSS 342	Survey of Russian Literature	3
RUSS 351	Russian Through Music	3
RUSS 352	Russian in Action	3
RUSS 393	Special Topics	1-6
RUSS 450	Modern Russian Society	3
RUSS 451	Russian Culture	3
RUSS 452	Business and Political Russian	3
RUSS 490	Teaching Practicum	1-3
RUSS 491	Professional Field Experience	1-18
RUSS 493	Special Topics	1-6
RUSS 494	Seminar	1-3
RUSS 495	Independent Study	1-6
RUSS 496	Senior Thesis	1-3
RUSS 498	Honors	1-3
SPAN 100	Intensive Elementary Spanish	6
SPAN 101	Elementary Spanish 1	3
SPAN 102	Elementary Spanish 2	3
SPAN 200	Intensive Intermediate Spanish	6
SPAN 203	Intermediate Spanish 1	3
SPAN 204	Intermediate Spanish 2	3

SPAN 260	Intensive Intermediate Spanish in Latin America	3-6
SPAN 293	Special Topics	1-6
SPAN 310	Spanish for Heritage Speakers	3
SPAN 311	Readings in Spanish	3
SPAN 312	Writing in the Hispanic World	3
SPAN 313	Spanish Through Media	3
SPAN 314	Spanish Conversation	3
SPAN 330	Latin American Culture	3
SPAN 331	Early Spanish American Literature	3
SPAN 332	Modern Spanish American Literature	3
SPAN 333	Spanish American Literature	3
SPAN 334	Seminar in Spanish American Literature	3
SPAN 335	Seminar in Spanish-American Culture	3
SPAN 340	Culture of Spain	3
SPAN 341	Early Literature of Spain	3
SPAN 342	Modern Literature of Spain	3
SPAN 343	Spanish Literature	3
SPAN 360	Intensive Advanced Spanish in Latin America	3-6
SPAN 361	Commercial Spanish	3
SPAN 370	Advanced Spanish Language in Spain	3
SPAN 371	Introduction to Spanish Culture in Spain	3
SPAN 393	Special Topics	1-6
SPAN 401	Grammar Review	3
SPAN 480	Issues in the Hispanic World	3
SPAN 481	Hispanic Presence in the World	3
SPAN 490	Teaching Practicum	1-3
SPAN 491	Professional Field Experience	1-18
SPAN 492	Directed Study	1-3
SPAN 493	Special Topics	1-6
SPAN 494	Seminar	1-3
SPAN 495	Independent Study	1-6
SPAN 496	Senior Thesis	1-3
SPAN 498	Honors	1-3

CORE COURSES**

ARHS 101	Landmarks of World Art	3
ARHS 120	Survey of Art History 1	3
ARHS 160	Survey of Art History 2	3
ARHS 225	GPS-Introduction to Italian Culture	3
ARHS 321	Ancient Greek Art and Architecture	3
ARHS 325	Ancient Roman Art and Architecture	3
ARHS 402	History of Chinese Ceramics	3
ARHS 405	Chinese Language and Culture History	3
ASP 220	Introduction to Africana Studies	3
COMM 316	Intercultural Communication	3
DANC 251	World Dance	3
DANC 252	African Dance	2
ENGL 226	Non-Western World Literature	3
ENGR 230	Exploring Culture and Technology of Germany Study Abroad	3
FCLT 161	The Many Latin Americas	3
FCLT 206	Introduction to Japanese Culture	3
FCLT 210	Chinese Civilization and Culture	3

FCLT 240	Italian-American Experience	3
FCLT 250	Russian Fairy Tales	3
FCLT 260	Cultures of Mexico	3
FCLT 280	Science Fiction: East and West	3
FCLT 281	Vampire: Blood and Revolution	3
FCLT 306	Japanese Culture and Cinema	3
FCLT 310	Chinese Cinema	3
FCLT 321	Norse Mythology	3
FCLT 380	Holocaust: Eastern Europe Film and Literature	3
FCLT 381	Contemporary Polish Cinema	3
FCLT 382	Polish Cinema: Kieslowski	3
FCLT 460	Sexuality and Gender in Hispanic Cinema	3
FLIT 216	Chinese Literature Translation 1	3
FLIT 217	Chinese Literature in Translation 2	3
FLIT 235	French Literature in Translation 1	3
FLIT 236	French Literature in Translation 2	3
FLIT 238	African Women Writers	3
or WGST 215	African Women Writers	
FLIT 239	Francophone Literature in Translation	3
FLIT 240	Italian Women Writers	3
FLIT 256	Russian Literature Translation 1	3
FLIT 257	Russian Literature Translation 2	3
FLIT 266	Latin American Literature	3
FLIT 285	Brazilian Literature Translation	3
FLIT 316	Arab Women Writers	3
GEOG 102	World Regions	3
GEOG 108	Human Geography	3
GEOG 243	Geography of Africa	3
GEOG 244	Geography of the Middle East	3
HIST 104	Latin America: Past and Present	3
HIST 105	The Middle East	3
HIST 106	East Asia: An Introduction	3
HIST 179	World History to 1500	0 or 3
HIST 180	World History Since 1500	0 to 3
HIST 203	Introduction to Medieval Europe	3
HIST 204	Renaissance and Reformation	3
HIST 205	Absolutism & Enlightenment	3
HIST 207	Revolutionary Europe	3
HIST 209	Twentieth Century Europe	3
HIST 217	History of Russia to 1917	3
HIST 218	History of Russia: 1900-Present	3
HIST 221	History of Modern Germany	3
HIST 225	Gandhi and Beyond: Modern History of South Asia	3
HIST 241	Latin America: Culture, Conquest, Colonization	3
HIST 242	Latin America: Reform and Revolution	3
HIST 281	Peasants to Agribusiness: History and Problems of Modern Agriculture	3
HIST 320	Pre-Colonial Africa	3
HIST 321	Colonial Africa and Independence	3
HIST 325	Modern China	3
HIST 330	History of Italy, 1200-1800	3
HIST 350	The Aztec, Maya, and Inca	3
HIST 415	Early Modern Law & Society	3

HIST 417	World War II in Europe	3
HIST 420	USSR and After: 1953 to Present	3
HIST 421	Hitler and the Third Reich	3
HIST 423	History of Fascism	3
HIST 424	Britain 1455-1603	3
HIST 428	East Africa Since 1895	3
HIST 433	West Africa to 1885	3
HIST 434	West Africa from 1885	3
HIST 439	History of Modern Mexico	3
HN&F 350	Cross-Cultural Cuisine	0 or 3
HONR 207	Global Studies and Diversity	3
HUM 107	The Humanities of Egypt	3
HUM 109	The Italian Renaissance	3
JRL 445	International Media 1	1 to 3
LING 101	Introduction to Language	3
LING 311	Introduction to Structural Linguistics	3
MUSC 116	Music in World Cultures	3
MUSC 355	Chamber Music: Steel Band 1	0-1
MUSC 356	Chamber Music: African	1
MUSC 357	Chamber Music: Brazilian	1
MUSC 358	Chamber Music: Ethnic	0-1
MUSC 359	Chamber Music: Taiko	1
MUSC 477	Music of Africa	3
RELG 102	Introduction to World Religions	3
RELG 219	The History of Christianity	3
RELG 222	History and Practice of Judaism	3
RELG 231	Religions of China and Japan	3
RELG 232	History and Practice of Islam	3
RELG 301	Studies in Asian Scriptures	3
SEES 101	Introduction to Slavic and Eastern European Studies	3
SM 275	The Olympic Games	3
SM 375	Sport in the Global Market	3
SOCA 105	Introduction to Anthropology	0 or 3
SOCA 254	Cultural Anthropology	3
SOCA 350	Latin American Culture	3
SOCA 354	Mesoamerican Archaeology	3
SOCA 450	Archaeology of Ancient States	3
SOWK 147	Human Diversity	3
THET 170	World Theatre and Drama	3
Global Issues Courses		
AGEE 101	Global Food and Agricultural Industry	0 or 3
BIOL 105	Environmental Biology	3
BIOL 107	Biotechnology and Society	3
DSGN 340	Design for Energy Efficiency	3
ENVP 155	Elements of Environmental Protection	3
EXPH 235	Introduction to Global Issues in Exercise Physiology	3
FDST 200	Food Science and Technology	3
GEOG 102	World Regions	3
GEOG 106 & GEOG 107	Physical Geography Laboratory and Physical Geography	4
GEOG 108	Human Geography	3

GEOG 150 & GEOG 149	Digital Earth and Digital Earth Lab	1-4
GEOG 205	Climate and Sustainability	3
GEOG 207	Climate and Environment	3
GEOG 209	Economic Geography	3
GEOG 210	Urban Geography	3
GEOG 241	Geography of Europe	3
GEOG 302	Political Geography	3
GEOG 307	Biogeography: Theory and Method	3
GEOG 310	Global Issues	3
GEOG 312	Migration and Human Rights	3
GEOG 317	Climatological Analysis	3
GEOG 411	Rural and Regional Development	3
GEOG 415	Global Environmental Change	3
GEOG 425	Urban and Regional Planning	3
GEOG 443	African Environment and Development	3
HN&F 126	Society and Food	3
HN&F 171	Introduction to Human Nutrition	3
RESM 140 or DSGN 140 or PLSC 140	Sustainable Living Sustainable Living Sustainable Living	3
POLS 103	Global Political Issues	0 or 3
POLS 250	Introduction to Comparative Politics	3
POLS 260	Introduction to International Relations	0 or 3
POLS 338	Environmental Policy	3
POLS 350	Government of Japan	3
POLS 351	Russian and Post-Soviet Politics	3
POLS 352	Politics of the European Union	3
POLS 353	Western Democratic Governments	3
POLS 354	Government of China	3
POLS 355	Governments of Latin America	3
POLS 356	Politics of the Middle East	3
POLS 358	Politics of Africa	3
POLS 359	Politics of Terrorism	3
POLS 360	International Political Economy	3
POLS 361	International Law and Institutions	3
POLS 362	Comparative Foreign Policy	3
POLS 363	International Law	3
POLS 365	Foreign Policy Decision-Making	3
POLS 368	Politics of War and Peace	3
POLS 369	Far East International Affairs	3
POLS 370	Dictatorship and Democratization	3
POLS 450	Elections and Political Parties Around the World	3
POLS 452	European Union Law/Legal Systems	3
POLS 453	European Union Law/Institutions	3
POLS 460	Gender and International Relations	3
POLS 461	Transformation of War	3
SOCA 417	Sociology of Globalization	3
SOCA 457	Social Movements	3
SOCA 458	Environmental Anthropology	3
WGST 345	Women in International Development	3
WMAN 150	Principles of Conservation Ecology	3

NOTES:

- Courses for the Core Course Component would need to be approved by an ad hoc faculty body that would evaluate a course's fit with the global goals. This component course list would be a sub-set of Gen Ed course, as well other courses submitting by the units for inclusion.
- Students and advisors may add the Certificate by completing the ASU form (Academic Status Update) and submitting it to the OUR.
- Credit sharing limitations:
 - No more than 6 credits earned from a *different* institution or applied to both a certificate and a degree can be used to meet certificate requirements, with the exception noted below. Applicability of credits earned from a different institution to certificate requirements is the decision of the program offering the certificate.

Certificate Learning Outcomes

GLOBAL MOUNTAINEERS CERTIFICATE PROGRAM

Upon completion of the Global Mountaineers Certificate, students will be able to:

- Demonstrate the ability to communicate effectively and appropriately in at least one other language;
- Demonstrate intercultural knowledge and awareness of global issues;
- Synthesize intercultural experiences and knowledge;
- Apply and develop intercultural knowledge in a global setting.

Infant/Toddler Education

Undergraduate Certificate in Infant/Toddler Education

CERTIFICATE CODE - CU06

The Infant/Toddler Certificate is a specialized curriculum designed for child care teachers and providers, Head Start teachers and WVU students who want to obtain this specific body of knowledge and who need specific written recognition for their ability to work with young children birth through three years of age. The specific body of knowledge in infancy and the toddler years satisfies new state and federal mandates that teachers of very young children must have formal recognition of their training with infants and toddlers to obtain and/or maintain employment. There are 19 hours in the Infant/Toddler Certificate program. This CDFS certificate incorporates the West Virginia core knowledge and core competencies and the West Virginia Early Standards Framework: Infant/Toddler in order to include the most recent requirements set forth by WV agencies responsible for the birth-three years. The certificate is free standing or can be taken with a degree program.

After completing the certificate in Early Childhood Education, students will:

- Demonstrate knowledge of social, emotional, cognitive, language, motor, and physical development of infants and toddlers, as well as the best practices for facilitating infant and toddler growth in these domains.
- Apply the major theories of infant and toddler development to the home and classroom context.
- Construct and create positive and enriched infant and toddler environments that optimize development in all domains, and set the stage for lifelong learning.
- Translate research on infant and toddler development for application in the home and classroom context.
- Use their knowledge of how infants and toddlers develop to prepare educational activities in inclusive environments that facilitate growth globally, as well as within specific domains of development.

Required Courses

CDFS 110	Families Across the Life Span	3
CDFS 211	Infant Development	4
CDFS 430	Best Practices in Pre-K Movement	3
CDFS 431	Infant Toddler Language and Literacy	3
CDFS 432	Early Socio-Emotional Development	3
CDFS 491A	Professional Field Experience	3
Total Hours		19

Certificate Learning Outcomes

INFANT/TODDLER EDUCATION

Upon completion of the certificate students should be able to:

- Demonstrate knowledge of social, emotional, cognitive, language, motor, and physical development of infants and toddlers, as well as the best practices for facilitating infant and toddler growth in these domains.
- Apply the major theories of infant and toddler development to the home and classroom context.
- Construct and create positive and enriched infant and toddler environments that optimize development in all domains, and set the stage for lifelong learning.
- Translate research on infant and toddler development for application in the home and classroom context.
- Use their knowledge of how infants and toddlers develop to prepare educational activities in inclusive environments that facilitate growth globally, as well as within specific domains of development.

Veterans

In this section:

- Center for Veteran, Military and Family Programs (p. 74)
- Registration for Veterans (p. 75)
- Student Account Policies (p. 75)
- Graduate Credit Hours for Full Time Status (p. 75)

Center for Veteran, Military and Family Programs

The Center for Veteran, Military and Family Programs (<https://wvuveterans.wvu.edu/home/>) (CVMF) at WVU assists in providing academic, personal and professional support for all military connected students in a safe and welcoming environment. The center is open to all veterans, armed forces personnel and dependents of current and former military service members.

For information on how to start your VA benefits:

U.S. Department of Veteran Affairs (<https://www.va.gov/>)

WV Educational Encouragement Program (<https://apps.wv.gov/WVEEP/>)

Center for Veteran, Military and Family Programs (<https://wvuveterans.wvu.edu/>)

VETERANS

All students receiving VA benefits for the first time will need to apply by going to U.S. Department of Veteran Affairs (<https://www.va.gov/>). If you are approved, you will be sent a Certificate of Eligibility (CoE) in the mail. Please note this process may take four to six weeks. Visit the Center for Veteran, Military and Family Programs (<https://wvuveterans.wvu.edu/home/>) to view additional documentation needed for benefit certification.

Undergraduate students who wish to receive the full stipend of VA Educational benefits in the fall and spring semesters, must maintain a minimum of 12-degree pursuant credit hours. Degree pursuant coursework can be defined as courses recorded as degree requirements, degree electives, course prerequisites, required general education courses, and minors **required** by a given major as stated in the WVU Catalog (<http://catalog.wvu.edu/>). Students receiving Chapter 31, 33, or 1606, will need to submit a DD-214 to ROTC@mail.wvu.edu in order to receive credit for basic training and advanced individualized schooling. Reserve Officers' Training Corps (ROTC) or Military Science (MILS) courses and elective non-degree applicable courses, such as PE courses, do not count as degree pursuant courses except those fulfilling general education requirements or elective hours to complete major (if applicable). To be certified for terms other than fall/spring, contact the Center for Veteran, Military and Family Programs (<https://wvuveterans.wvu.edu/>) to discuss the amount of credits needed for full time status.

Students receiving benefits need to be aware that charges for housing and meal plans will be the student's responsibility to pay up front. Stipends from the VA will begin approximately one month after the certification process is completed.

Undergraduate students receiving benefits must declare a major or non-exploratory pathway by the time they reach 29 earned hours. Students must matriculate into their intended degree program by 59 earned hours. If this does not happen, the student cannot be certified for benefit payment.

Graduate students who wish to receive VA Educational benefits, should follow the rate of pursuit calculator located at the Center for Veteran, Military and Family Programs (<https://wvuveterans.wvu.edu/>) to determine the amount of benefit he/she will receive. The number of credit hours, along with the number of weeks in class, will determine if full time status is met. Only degree pursuant coursework will be counted toward VA certification. Please speak with your academic adviser to confirm credits are degree pursuant.

For VA purposes, students receiving benefits will be certified as on-campus, hybrid (low-modality) or online. On-campus and hybrid programs receive a higher rate for Basic Allowance for Housing (BAH) than online. Visit <https://www.va.gov/gi-bill-comparison-tool/> to compare rates. Hybrid programs are those in which on-campus student attendance is required at least one time per term. Students must sign in for the academic session and inform the professor to send proof of attendance to the certifying official on campus. The certifying official will recertify benefits at the higher BAH rate. Meetings that take place before or after the class begins or ends (such as orientations), will not count toward hybrid certification. *BAH will not be affected for active duty students receiving Federal Tuition Assistance.

For more information on modality definitions, visit WVU Catalog (http://catalog.wvu.edu/undergraduate/programs_courses__enrollment/#Modality).

PRIOR CREDIT EVALUATION

All student veterans are required to submit a Prior Credit Evaluation Form within two semesters of coming to WVU in order to be certified for benefits. It will be the student's responsibility to inform a certifying official if his/her major has changed. The certifying official will send a Prior Credit Evaluation Form to the student's adviser to list the amount of credits to be used for the new major of choice.

Contact Information:

The Center for Veteran, Military, and Family Programs (CVMF) at WVU Mountainlair, Room 214

Email: veterans@mail.wvu.edu

Phone: 304-293-8825

Website: <https://wvuveterans.wvu.edu/>

Facebook: WVUVeteransHQ

Twitter: @WVUVeterans

Registration for Veterans

West Virginia University offers priority registration to veterans as part of the Forever GI Bill - Harry W. Colmery Veterans Educational Assistance Act.

Additional important information regarding attendance, leave policies and withdraw policies can be found under the Enrollment tab of the Advising, Enrollment and Grades (<http://catalog.wvu.edu/undergraduate/enrollmentandregistration/>) section of the catalog.

Student Account Policies

Policies are in place concerning late fees, financial holds, removal from class and collections. Students should review the Student Accounts Financial Responsibility (<https://studentaccounts.wvu.edu/policies/>) page for the most up to date information about Payment Due Dates, Late Payment Fees, Financial Holds and the Collection Policy.

SECTION 103

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).

GRADUATE CREDIT HOURS FOR FULL TIME STATUS

<https://wvuveterans.wvu.edu/current-students/graduate-credits-for-full-time-status> (<https://wvuveterans.wvu.edu/current-students/graduate-credits-for-full-time-status/>)

Agriculture, Natural Resources, and Design- Davis College of

The Davis College offers students career paths that are exciting and rewarding. Through our diverse academic programs, students and faculty team up to discover agricultural practices that increase yields while improving the environment, producing bio-based energy alternatives, creating more nutritious and flavorful foods, restoring degraded ecosystems, conserving forests and natural resources, and designing both built and natural environments. Graduates of the Davis College pursue scientific and management careers that foster the wise management, utilization, and conservation of our soils, water, forests, wildlife, domestic animals, food, fiber, and living spaces.

The Davis College helps students adjust to their major and get to know their fellow students and professors. Distinguished faculty share their knowledge through hands-on learning in the field, classroom, and lab, and through academic advising. In the Davis College, we are committed to helping students succeed through a strong academic support system. Whether students are interested in animals, design, the environment, biosciences, or food and health, the Davis College is the perfect place for academic and personal growth.

Majors

At the WVU Davis College of Agriculture, Natural Resources and Design, we pride ourselves on our small-school environment and high-quality undergraduate education – while offering all of the resources of a large university.

We're more than a college – we're a community. At the Davis College, we'll know your name (and your major – and probably your hometown, too). You'll get a personalized education with the quality and opportunities of a top research university.

SCHOOL OF AGRICULTURE AND FOOD

- Animal and Nutritional Sciences
- Environmental Microbiology
- Biochemistry
- Environmental, Soil and Water Sciences
- Horticulture
- Human Nutrition and Foods
- Sustainable Food and Farming

SCHOOL OF DESIGN AND COMMUNITY DEVELOPMENT

- Agricultural and Extension Education
- Design Studies
- Environmental and Community Planning
- Fashion, Dress and Merchandising
- Interior Design
- Landscape Architecture

SCHOOL OF NATURAL RESOURCES

- Agribusiness Management
- Energy Land Management
- Environmental and Energy Resources Management
- Environmental and Natural Resource Economics
- Forest Resources Management
- Recreation, Parks, and Tourism Resources
- Wildlife and Fisheries Resources
- Wood Science and Technology

About the College

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.

Accredited Programs

The following programs within the College are accredited by nationally or internationally recognized organizations:

- Agricultural and Extension Education (National Council for Accreditation of Teacher Education)
- Forest Resources Management (Society of American Foresters)
- Interior Design (National Association of Schools of Art and Design)
- Landscape Architecture (Society of Landscape Architecture)
- Recreation, Parks and Tourism Resources (Society of American Foresters)
- Wood Science and Technology (Society of Wood Science and Technology)

Honoraries and Student Organizations

You're encouraged to become active in honoraries and student professional associations and organizations. Within the College, outstanding students may be chosen for membership in Alpha Tau Alpha, Gamma Sigma Delta, Phi Upsilon Omicron or Alpha Zeta. There are over twenty student clubs and organizations that you can get involved with.

Multidisciplinary Studies Major

The Davis College offers a Multidisciplinary Studies major that requires completion of three minors – two from the Davis College and one in another WVU college. This major provides flexibility in defining an academic program that fits your career goals.

Pre-Agriculture, Forestry, and Consumer Sciences Major

Undecided about your major or career path? The Pre-Agriculture, Forestry, and Consumer Sciences major allows you to explore different academic areas before choosing a major. Students who meet WVU admissions requirements may be accepted directly into this major.

In this major, General Education Foundations courses are combined with introductory courses from majors that interest you to help you make an informed decision. You're encouraged to talk with professors throughout the college to gain knowledge of the many career options.

You cannot complete graduation requirements in this major.

ADMINISTRATION

INTERIM DEAN

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

ASSOCIATE DEAN OF 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

- Alan Collins - Ph.D. (Oregon State University)
Division of Resource Economics and Management
- Sven Verlinden - Ph.D. (Perdue University)
Division of Plant and Soil Science
- Robert Burns - Ph.D. (Pennsylvania State University)
Division of Forestry and Natural Resources
- Peter Schaeffer - Ph.D. (University of Southern California)
Division of Animal and Nutritional Science

- Peter Butler - MLA (Iowa State University)
School of Design and Community Development

Degree Designation Learning Outcomes

BACHELOR OF SCIENCE (BS)

Upon graduation, students will have attained the following knowledge bases, and career competency skills:

- A working knowledge of the basic sciences and scientific methods.
- A working knowledge of their discipline.
- The ability to write and present scholarly information.
- The ability to integrate knowledge and possess problem solving/critical thinking skills necessary for professional and social development and life-long learning and civic engagement.

BACHELOR OF SCIENCE IN AGRICULTURE (BSAGR)

Upon graduation, students will have attained the following discipline knowledge bases, and career competency skills:

- Graduates will acquire a high level of competency in the basic sciences required for disciplinary competency.
- Graduate will integrate basic knowledge and managerial skills related to the animal, plant, nutritional and food sciences disciplines.
- Graduates will acquire sufficient written and oral communication skills, problem solving and critical thinking skills to effectively impact lifelong societal and professional developments critical to their respective discipline of interest.
- Graduates will attain depth of knowledge relative to the scope of subfields of the animal, food and nutritional sciences disciplines.

BACHELOR OF SCIENCE IN FORESTRY (BSF)

Upon graduation, students will have attained the following knowledge bases and career competency skills:

- Ability in preparing and delivering effective oral presentations.
- Proficiency in English composition, technical/business writing, and writing for non-professional audiences.
- Ability to read with comprehension a variety of documents, and critically evaluate opposing viewpoints.
- Understanding of the components, patterns, and processes of biological and ecological systems across spatial and temporal scales.
- Understanding of molecular biology, cells, organisms, populations, species, communities, and ecosystems.
- Understanding of physical and chemical properties, measurements, structure, and states of matter.
- Ability to understand and use the basic approaches and applications of mathematics and statistics for analysis and problem solving.
- Understanding of, and an ability to address, moral and ethical questions and an ability to use critical reasoning skills.
- Understanding of human behavior and social and economic structures, processes, and institutions of importance across a broad range of societies.
- Understanding of the diverse dimensions of the human experience and culture.
- Understanding of taxonomy and ability to identify forest and other tree species, their distribution, and associated vegetation and wildlife.
- Understanding of soil properties and processes, hydrology, water quality, and watershed functions.
- Understanding of ecological concepts and principles including the structure and function of ecosystems, plant and animal communities, competition, diversity, population dynamics, succession, disturbance, and nutrient cycling.
- Ability to make ecosystem, forest, and stand assessments.
- Understanding of tree physiology and the effects of climate, fire, pollutants, moisture, nutrients, genetics, insects and diseases on tree and forest health and productivity.
- Ability to identify and measure land areas and conduct spatial analysis.
- Ability to design and implement comprehensive inventories that meet specific objectives using appropriate sampling methods and units of measurement.
- Ability to analyze inventory data and project future forest, stand, and tree conditions.
- Ability to 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.
- Ability to analyze the economic, environmental, and social consequences of forest resource management strategies and decisions.
- Ability to develop management plans with specific multiple objectives and constraints.
- Understanding of the 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.
- Understanding of the valuation procedures, market, and non-market forces that avail humans the opportunities to enjoy non-consumptive products and services of forests.
- Understanding of the administration, ownership, and organization of forest management enterprises.

- Understanding of forest policy and the processes by which it is developed.
- Understanding of how federal, state, and local laws and regulations govern the practice of forestry.
- Understanding of 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.
- Ability to understand the integration of technical, financial, human resources, and legal aspects of public and private enterprises.

BACHELOR OF SCIENCE IN LANDSCAPE ARCHITECTURE (BSLA)

Upon graduation students will have attained the following knowledge bases and career competency skills.

- The competencies required for entry level positions in the profession of landscape architecture.
- Critical and creative design thinking and the ability to understand, apply and communicate the subject matter of the professional curriculum
- Application of a design process including project definition, problem identification, information collection, analysis, synthesis, conceptualization and implementation.

BACHELOR OF SCIENCE IN RECREATION (BSR)

Upon graduation, students will have attained the following knowledge bases and career competency skills:

- Ability in preparing, and delivering effective oral presentations.
- A proficiency in English composition, technical/business writing, and writing for non-professional audiences.
- Ability to read with comprehension a variety of documents, and critically evaluate opposing viewpoints.
- Understanding of the components, patterns, and processes of biological and ecological systems across spatial and temporal scales.
- Understanding of molecular biology, cells, organisms, populations, species, communities, and ecosystems.
- Understanding of physical and chemical properties, measurements, structure, and states of matter.
- Ability to understand and use the basic approaches and applications of mathematics and statistics for analysis and problem solving.
- Understanding of, and an ability to address, moral and ethical questions and an ability to use critical reasoning skills.
- Understanding of human behavior and social and economic structures, processes, and institutions of importance across a broad range of societies.
- Understanding of the diverse dimensions of the human experience and culture.
- Knowledge of the elements of botany, zoology, entomology, plant pathology, plant physiology, and genetics essential to an understanding of higher-order ecological processes.
- Understanding of taxonomy and systematics and ability to identify dominant and/or ecologically significant components of the flora and fauna of ecosystems at regional to continental scales.
- Knowledge of the important life history characteristics of dominant and special-concern species.
- Knowledge of soil properties and processes, hydrology, water quality, and watershed functions.
- Understanding of ecological concepts and principles including the structure and function of ecosystems, plant and animal communities, competition, diversity, population dynamics, succession, disturbance, and nutrient cycling.
- Understanding of the effects of climate, fire, pollutants, moisture, nutrients, insects and diseases, and other environmental factors on ecosystem health and functioning at local and landscape scales.
- Ability to identify, measure, and map land areas and conduct spatial analyses.
- Ability to design and implement accurate inventories and assessments of dominant or critical ecosystem components and services, ecosystem properties, and indicators of ecosystem health, including trees and other vegetation, vertebrate fauna, biodiversity, soil and water resources, timber, and recreational opportunities.
- Ability to summarize and statistically analyze inventory and assessment data, evaluate the status of important ecosystem components, describe and interpret interactions and relationships, and project future ecosystem conditions.
- Understanding of the valuation procedures, including market and nonmarket forces that apply to ecosystem goods and services such as timber, water, recreational opportunities, carbon and nutrient cycling, and plant and animal biodiversity.
- Ability to explain the relationships between demand, costs of production, and availability of those goods and services.
- Ability to describe procedures for measuring stakeholder values and managing conflicts in the evaluation and establishment of management objectives.
- Ability to evaluate and understand the economic, ecological, and social trade-offs of alternative land uses and ecosystem management decisions at local, regional, and global scales.
- Knowledge and understanding of environmental policy as applied to ecosystems and the processes by which it is developed.
- Ability to develop and apply prescriptions for manipulating the composition, structure, and function of ecosystems to achieve management objectives, and understand the impacts of those prescriptions at local and landscape scales.
- Ability to identify and control or mitigate specific threats to ecosystems such as insects, diseases, fire, pollutant stressors, and invasive plants or animals.

- Knowledge of the methods and procedures unique to the production of ecosystem goods and services such as timber, recreation, water, and wildlife populations.
- Ability to describe the process of adaptive management and its application to the management of ecosystems.
- Understanding of how federal, state, and local laws and regulations apply to management practice.
- Ability to develop management plans with specific objectives and constraints that are responsive to ownership or stakeholder goals and demonstrate clear and feasible linkages between current condition and desired future condition.
- Understanding of professional ethics, including the Society of American Foresters Code, and recognition of the responsibility to adhere to ethical standards in the practice of ecosystem management on behalf of clients and the public.
- Ability to integrate the knowledge, understanding, and skills from prior coursework in the development of collaborative solutions to realistic management problems.

BACHELOR OF MULTIDISCIPLINARY STUDIES (BMDS)

Upon graduation, students will have attained the following knowledge bases and career competency skills:

- Knowledge of and aptitude with principles, practices, facts, concepts, theories and tools in three minor areas
- The ability to write and present information
- The ability to analyze problems from different perspectives, recognize uncertainties, propose options, construct predictions, and make sound decisions using appropriate information resources and analytical tools

Admissions

The general high school credit requirements for admission into the Davis College are the same as those required by the University.

All students are admitted directly to the College and are assigned a faculty advisor.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Davis College of Agriculture, Natural Resources and Design (<https://www.davis.wvu.edu/>).

Davis College of Agriculture, Natural Resources, and Design Minors

There are a wide variety of approved minors in the Davis College. Minors can be combined with major fields to broaden or further focus the student's academic studies. In addition, three minors can be combined in a Multidisciplinary Studies (MDS) major. You can earn an MDS degree in the Davis College or in other WVU colleges.

SCHOOL OF AGRICULTURE AND FOOD

- Applied and Environmental Microbiology (http://catalog.wvu.edu/undergraduate/minors/applied_and_environmental_microbiology/)
- Environmental Protection (http://catalog.wvu.edu/undergraduate/minors/environmental_protection/)
- Equine Studies (http://catalog.wvu.edu/undergraduate/minors/equine_management/)
- Family and Consumer Science (http://catalog.wvu.edu/undergraduate/minors/family_and_consumer_sciences/)
- Food Science and Technology (http://catalog.wvu.edu/undergraduate/minors/food_science_and_technology/)
- Food Service Production (http://catalog.wvu.edu/undergraduate/minors/food_service_production/)
- Horticulture (<http://catalog.wvu.edu/undergraduate/minors/horticulture/>)
- Nutrition and Food Studies (<http://catalog.wvu.edu/undergraduate/minors/nutritionandfoodstudies/>)
- Pest Management (http://catalog.wvu.edu/undergraduate/minors/pest_management/)
- Soil Science (http://catalog.wvu.edu/undergraduate/minors/soil_science/)

SCHOOL OF DESIGN AND COMMUNITY DEVELOPMENT

- Fashion Merchandising (http://catalog.wvu.edu/undergraduate/minors/fashion_merchandising/)
- Landscape Studies (http://catalog.wvu.edu/undergraduate/minors/landscape_studies/)
- Rural Community Development (http://catalog.wvu.edu/undergraduate/minors/rural_community_development/)
- Sustainable Design (http://catalog.wvu.edu/undergraduate/minors/sustainable_design/)

SCHOOL OF NATURAL RESOURCES

- Agribusiness Management (http://catalog.wvu.edu/undergraduate/minors/agribusiness_management/)
- Agriculture and Natural Resources Law (<http://catalog.wvu.edu/undergraduate/minors/agriculturalandnaturalresourceslaw/>)
- Arboriculture (<http://catalog.wvu.edu/undergraduate/minors/arboriculture/>)
- Conservation Ecology (http://catalog.wvu.edu/undergraduate/minors/conservation_ecology/)
- Environmental Economics (http://catalog.wvu.edu/undergraduate/minors/environmental_economics/)

- Forestry Resource Management (http://catalog.wvu.edu/undergraduate/minors/forest_resource_management/)
- Recreation, Parks, and Tourism Resources (http://catalog.wvu.edu/undergraduate/minors/recreation_parks_and_toursim_resources/)
- Sustainable Low-Rise Residential Construction (<http://catalog.wvu.edu/undergraduate/minors/sustainablelowriseresidentialconstruction/>)
- Wildlife and Fisheries Resources (http://catalog.wvu.edu/undergraduate/minors/wildlife_fisheries_resources_management/)
- Wood Science and Technology (http://catalog.wvu.edu/undergraduate/minors/wood_science_and_technology/)

Accreditation

Agricultural & Extension Education- Agricultural Teacher Education within the Davis College of Agriculture, Natural Resources, and Design has specialized accreditation through the National Council on Accreditation of Teacher Education.

Forest Resources Management within the Davis College of Agriculture, Natural Resources, and Design has specialized accreditation through the Society of American Foresters.

Interior Design within the Davis College of Agriculture, Natural Resources, and Design has specialized accreditation through the National Association of Schools of Arts and Design.

Landscape Architecture within the Davis College of Agriculture, Natural Resources, and Design has specialized accreditation through the Landscape Architecture Accreditation Board of the American Society of Landscape Architecture.

Recreation, Parks & Tourism Resources within the Davis College of Agriculture, Natural Resources, and Design has specialized accreditation through the Society of American Foresters.

Wood Science & Technology within the Davis College of Agriculture, Natural Resources, and Design has specialized accreditation through the Society of Wood & Technology.

School of Agriculture and Food

Programs of Study

The School of Agriculture is home to the Division of Animal and Nutritional Sciences and Division of Plant and Soil Sciences. The Division of Animal and Nutritional Sciences houses majors in Animal & Nutritional Science, Human Nutrition & Food, and Biochemistry. Biochemistry is part of the Intercollegiate Undergraduate Program in Biochemistry, a collaboration between the Davis and Eberly Colleges. The Division of Plant and Soil Sciences administers majors in Applied and Environmental Microbiology, Agroecology, Environmental Protection and Horticulture. As a student in this school, you may pursue a degree that enables you to go to graduate schools and professional programs, study basic sciences and their application, pursue a career in commercial agriculture, or work for federal or state agencies. The pre-professional programs of applied and environmental microbiology and biochemistry, among others, meet requirements for entry into professional school programs such as veterinary and human medicine, allied health professions, the pharmaceutical industry, and other graduate level programs.

Courses that you will take in the school of agriculture depend on a student's particular program. The school of agriculture offers a diverse range of course work and classes range from applied and environmental microbiology, animal and human nutrition, plant science, and soil science to environmental sciences, animal production, biochemistry, animal and plant breeding and genetics, food science, animal and plant pathology, physiology, horticulture, and agroecology. To assist in equipping yourself for one of the varied careers in agriculture, you will take supporting courses in other divisions of the Davis College and in other colleges. The programs are flexible and permit you to obtain a broad background and take sufficient courses in one area during the last two years to prepare you for your postgraduate career choice. Other programs are geared towards preparing you to tackle the applied problems found in the agriculture and green industry right out of college.

Pre-Professional Programs (Veterinary Medicine, Human Medicine, Pharmacy, Law, and Allied Health Professions)

The bachelor of science programs in Animal & Nutritional Sciences, Applied & Environmental Microbiology Biochemistry, Human Nutrition & Food, among others, provide students with the academic requirements for entry into professional schools or colleges of veterinary medicine. The West Virginia Higher Education Policy Committee has agreements for positions with the School of Veterinary Medicine at Mississippi State University and the Virginia-Maryland Regional College of Veterinary Medicine for students who have been a West Virginia resident for at least the past five years at the time of application. Students in Applied and Environmental Microbiology can pursue an accelerated environmental microbiology Master's program that can earn students a Master of Science degree in 5 years facilitating access to professional programs. Because only a limited number of students are accepted into graduate programs and veterinary medicine each year, students are urged to have alternative goals.

FACULTY

DIVISION DIRECTORS

- Sven Verlinden - Ph.D. (Purdue University)
Plant and Soil Sciences
- Peter Schaeffer - Ph.D. (University of Southern California)
Animal and Nutritional Sciences

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 Hubbard - Ph.D. (University of Idaho-Moscow)
Fresh water supply regimes, Biogeochemical cycling, ecohydrology
- Jacek Jaczynski - Ph.D. (Oregon State University)
Food science and technology
- Matthew A. Jenks - Ph.D. (Purdue University)
Plant genetics, specialty crops
- 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 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, Land use
- Janet C. L. Tou - Ph.D. (University of Toronto)
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 PROFESSORS

- Kimberly M. Barnes - Ph.D. (University of Nebraska)
Lipid metabolism

- 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 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 PROFESSORS

- 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
- 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

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 - M.P.H., M.S., R.D. (West Virginia University)
Human nutrition and foods
- Margaret A. Minch - D.V.M. (Ohio State University)
Veterinary medicine
- Crystal E. Smith - Ed.D. (West Virginia University)
Equine management
- Youyoun Moon - Ph.D. (Ohio State University)
Molecular plant science

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

FACULTY EMERITI

- Barton Baker
- John A. Balasko
- John F. Baniecki
- Bradford C. Bearce
- Alan R. Biggs
- 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
- David D. Moran - Hydrodynamics and mathematics
- 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 Nutritional Sciences, B.S., B.S.Agr.

Degrees Offered

- Bachelor of Science
- Bachelor of Science in Agriculture

Bachelor of Science - Animal & Nutritional Sciences Major

The curriculum in science, with its flexible design, provides the necessary background in biochemistry, chemistry, mathematics, physics, and modern concepts of biology in preparation for professional schools of dentistry, human medicine, optometry, pharmacy, veterinary medicine or graduate study in such fields as animal breeding, animal physiology, biochemistry and nutrition.

Bachelor of Science in Agriculture - Animal & Nutritional Sciences Major

This curriculum provides the necessary background in agricultural economics, agronomy, breeding, nutrition, and physiology to prepare for careers in production and management of dairy, livestock or poultry, and in food processing and technology.

Click the link below to view the corresponding Degree Requirements and Suggested Plans of Study.

- Bachelor of Science in Agriculture - Animal & Nutritional Sciences (p. 86)
- Bachelor of Science - Animal & Nutritional Sciences (p. 87)

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

ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing
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3-6

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.

CURRICULUM REQUIREMENTS FOR BACHELOR OF SCIENCE IN AGRICULTURE - ANIMAL & NUTRITIONAL SCIENCES MAJOR

Select one of the following: 6

ENGL 101 & ENGL 102	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research	
ENGL 103	Accelerated Academic Writing	
GEF2 Science & Technology (may also fulfill program Science requirements)		
GEF3 Mathematics & Technology (may also fulfill program Science requirements)		
GEF Requirements 4 - 8		21
A&VS 191	First-Year Seminar	1
Biological and Physical Sciences Requirements (students must take 24 hours of science courses)		
Biology		8
A&VS 251 and/or PLSC 206 may be substituted for biology courses		
Chemistry		8
College Algebra or equivalent		3
Science Electives		5
Courses in Agriculture		42

Elect a minimum of a three-credit course, excluding Assigned Topics, in each of the following categories. Elect additional courses to obtain a total of 45 hours in the college.

Animal Science		
Plant Science		
Soil Science		
Agriculture Economics		
Capstone Experience		3
A&VS 402	Values and Ethics	
A&VS 491	Professional Field Experience	
A&VS 496	Senior Thesis	
Fulfills Writing and Communication Skills Requirement		3
A&VS 402	Values and Ethics	
A&VS 451	Current Literature in Animal Science	
Free Electives (Number of electives may vary depending on GEF courses taken. Students must earn at least 120 credits to graduate.)		20
Total Hours		120

SUGGESTED PLAN OF STUDY FOR BACHELOR OF SCIENCE IN AGRICULTURE - ANIMAL & NUTRITIONAL SCIENCES MAJOR

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF)		3 A&VS 150	2
A&VS 191		1 ARE 150 (GEF)	3

Select one of the following (GEF):	4 BIOL 102 & BIOL 104	4
BIOL 101 & BIOL 103	CHEM 112 & 112L	4
A&VS 251 PLSC 206	GEF	3
CHEM 111 & 111L	4	
MATH 124 (GEF 3)	3	
	15	16
Second Year		
Fall	Hours	Spring
		Hours
ENGL 102 (GEF)		3 PLSC 206
A&VS 251		4 ANPH 301
WMAN 150 (GEF)		3 Science elective
Science elective		3 GEF
GEF		3 GEF
	16	16
Third Year		
Fall	Hours	Spring
		Hours
ANNU 361		3 AGRN 202
ANPR 341		3 AGRN 203
ANPR 343		1 ANPH 400
ARE 382		3 ANPR 338
GEF		3 Electives
Elective		3
	16	15
Fourth Year		
Fall	Hours	Spring
		Hours
ARE 435		3 A&VS 402
ANPR 339		2 Capstone
A&VS 409		3 Electives
Agriculture Course		4
Elective		2
	14	12

Total credit hours: 120

CURRICULUM REQUIREMENTS FOR BACHELOR OF SCIENCE - ANIMAL & NUTRITIONAL SCIENCES MAJOR

Select one of the following:		6
ENGL 101 & ENGL 102	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research	
ENGL 103	Accelerated Academic Writing	
GEF 4-8		21
A&VS 191	First-Year Seminar	1
Science requirements		
Students must reach 40 hours of science credits		
Biology Requirement (also fulfills GEF 2 requirement)		8
Chemistry Requirement		8
Physics Requirement		8
Math Requirement (also fulfills GEF 3 requirement)		6
Calculus or Advanced Chemistry Requirement		8

CHEM 231	Organic Chemistry: Brief Course	
CHEM 231L	Organic Chemistry: Brief Course - Laboratory	
CHEM 233	Organic Chemistry	
CHEM 234	Organic Chemistry	
CHEM 235	Organic Chemistry Laboratory	
CHEM 236	Organic Chemistry Laboratory	
AGBI 410	Introductory Biochemistry	
MATH 150	Applied Calculus	
MATH 153	Calculus 1a with Precalculus	
MATH 154	Calculus 1b with Precalculus	
MATH 155	Calculus 1	
MATH 156	Calculus 2	
Science Electives (as necessary to reach at least 40 hours of science credits)		2
Courses in Agriculture		21
Capstone Experience		3
A&VS 402	Values and Ethics	
A&VS 491	Professional Field Experience	
A&VS 496	Senior Thesis	
Writing and Communication Skills Requirement		3
A&VS 402	Values and Ethics	
A&VS 451	Current Literature in Animal Science	
Free Electives (Number of electives may vary; students must earn a minimum of 120 credits to graduate)		25
Total Hours		120

SUGGESTED PLAN OF STUDY FOR BACHELOR OF SCIENCE - ANIMAL & NUTRITIONAL SCIENCES MAJOR

First Year

Fall	Hours	Spring	Hours
A&VS 191		1 A&VS 150	2
ENGL 101 (GEF 1)		3 BIOL 117 & BIOL 118	4
CHEM 115 & 115L		4 CHEM 116 & 116L	4
BIOL 115 & BIOL 116 (GEF 2)		4 MATH 128 (if needed or GEF)	3
Depending on QRA score select one of the following (GEF 3):		3 GEF 4	3
MATH 124			
MATH 126			
MATH 129			
MATH 150			
MATH 153			
MATH 155			
		15	16

Second Year

Fall	Hours	Spring	Hours
A&VS 251		4 ANNU 260	3
CHEM 233		3 CHEM 234	3
CHEM 235		1 CHEM 236	1
PHYS 101		4 PHYS 102	4
ENGL 102 (GEF 1)		3 GEF 6	3

GEF 5		3 GEF 7	3
		18	17
Third Year			
Fall	Hours	Spring	Hours
ANPH 301		3 GEN 371	4
AGBI 410		3 GEF 8	6
AEM 341		4 Elective	3
Elective		3	
GEF 8		3	
		16	13
Fourth Year			
Fall	Hours	Spring	Hours
Electives		9 Electives	7
Science Elective		3 Capstone	3
		Writing and Communication Skills Requirement	3
		12	13

Total credit hours: 120

Major Learning Outcomes

ANIMAL & NUTRITIONAL SCIENCES

1. Graduates will acquire a high level of competency in the basic sciences required for disciplinary competency.
2. Graduates will integrate basic knowledge and managerial skills related to the animal, nutritional and food sciences disciplines.
3. Graduates will acquire sufficient written and oral communication skills, problem solving and critical thinking skills to effectively impact lifelong societal and professional developments critical to their respective discipline of interest.
4. Graduates will attain depth of knowledge relative to the scope of subfields of the animal and nutritional sciences:
 - a. Animal production, management and marketing
 - b. Animal nutrition
 - c. Environmental stewardship

Environmental Microbiology, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

The major in environmental microbiology is ideal for students desiring a career at the forefront of human and plant health, industry, food science, and the environment. In this curriculum, future professional microbiologists are prepared with basic backgrounds in the areas of microbial ecology, environmental microbiology, soil microbiology, public health microbiology of food and water, plant pathology, and molecular biology. With supporting coursework in such areas as organic chemistry, biochemistry, genetics, plant science, soil science, physics, calculus, and statistics students will be well prepared for employment, further educational training at the graduate level, or for professional school (medical and dental school). Employment opportunities include: environmental laboratories (federal, state, and private); pharmaceutical industry; food industry (food production and food safety); and clinical laboratories in the health care industry. This major requires 120 total hours.

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

ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

General Education Foundation (1, 4, 5, 6, 7)		18
ANRD 191	First-Year Seminar	1
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory (GEF 8)	4
BIOL 117 & BIOL 118	Introductory Physiology and Introductory Physiology Laboratory (GEF 8)	4
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2)	4
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory (GEF 8)	4
MATH 150	Applied Calculus (or higher (GEF 3)	3
STAT 211	Elementary Statistical Inference	3
Required Courses		
AEM 216	Living in a Microbial World	3
AEM 341	General Microbiology	4
AEM 401	Environmental Microbiology (fulfills Capstone & Writing and Communication Skills requirements)	4
AEM 470	Microbes and Global Change	3
AGBI 410	Introductory Biochemistry	3
BIOL 219 & BIOL 220	The Living Cell and The Living Cell Laboratory	4
CHEM 233	Organic Chemistry	3
CHEM 235	Organic Chemistry Laboratory	1
CHEM 234	Organic Chemistry	3
CHEM 236	Organic Chemistry Laboratory	1
GEN 371	Principles of Genetics	4
PHYS 101	Introductory Physics 1	4
PHYS 102	Introductory Physics 2	4
PPTH 401	General Plant Pathology	4
Restricted Electives		15
AEM 445	Food Microbiology	
AEM 449	Food Microbiology Lab	
AEM 493	Special Topics	
AEM 495	Independent Study	
AGRN 202	Principles of Soil Science	
AGRN 203	Principles of Soil Science Laboratory	
AGRN 410	Soil Fertility	
AGRN 425	Environmental Soil Management	
ARE 382	Agricultural and Natural Resources Law	

BIOL 312	Introduction to Virology	
BIOL 454	Immunology	
BIOL 455	Evolution of Infectious Diseases	
BIOL 456	Microbial Symbiosis	
BIOL 463	Global Ecology	
ENTO 404	Principles of Entomology	
ENTO 412	Pest Management	
ENVP 355	Environmental Sampling and Analysis	
ENGL 305	Technical Writing	
ENVP 460	Environmental Impact Assessment	
PPTH 409	Nematology	
PPTH 470	Forest Pest Management	
PPTH 493	Special Topics	
PPTH 495	Independent Study	
PPTH 503	Mycology	
Free Electives		19
Total Hours		120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ANRD 191		1 BIOL 117 & BIOL 118 (GEF 8)	4
BIOL 115 & BIOL 116 (GEF 8)		4 CHEM 116 & 116L (GEF 2)	4
CHEM 115 & 115L (GEF 2)		4 STAT 211	3
ENGL 101 (GEF 1)		3 GEF 4	3
MATH 150 (GEF 3)		3 GEF 5	3
		15	17

Second Year

Fall	Hours	Spring	Hours
AEM 216		3 AEM 341	4
ENGL 102 (GEF 1)		3 BIOL 219 & BIOL 220	4
PHYS 101		4 CHEM 234 & CHEM 236	4
CHEM 233		3 PHYS 102	4
CHEM 235		1	
		14	16

Third Year

Fall	Hours	Spring	Hours
AGBI 410		3 AEM 470	3
GEN 371		4 GEF 6	3
Restricted Electives		3 GEF 7	3
Free Elective		4 Restricted Electives Free Elective	3
		14	15

Fourth Year

Fall	Hours	Spring	Hours
PPTH 401		4 AEM 401	4
Restricted Electives		6 Restricted Elective	3

Free Electives	5 Free Electives	7
	15	14

Total credit hours: 120

Major Learning Outcomes

ENVIRONMENTAL MICROBIOLOGY

The learning outcomes of the applied and environmental microbiology are centered on establishing well-rounded individuals that can solve real world problems and seize opportunities as they relate to environmental, food, water, and soil microbiology. Students will be able to take on leadership functions in a variety of careers, manage laboratories, and have a foundational knowledge of genetics, biochemistry, plant pathology, food science, soil and water science that prepares them for graduate programs.

Upon completion of the major the students should be able to:

- Communicate effectively about microorganisms and their impact in and on the environment.
- Isolate and identify microorganisms from a variety of environments.
- Use a variety of methods to determine nutritional strategies and physiology of microorganisms.
- Determine and consult on the cause, and propose solutions for, problems involving microorganisms.
- Assist in managing medical and environmental laboratories and consulting services that diagnose and solve microbiological problems and develop opportunities in microbiology.

Accelerated BS/MS Applied Environmental Microbiology

CURRICULUM REQUIREMENTS

GEF 1, 4, 5, 6, and 7		18
AGRL 111	Professions in Agriculture	1
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2)	4
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory (GEF 8)	4
MATH 150	Applied Calculus (GEF 3)	3
Select one of the following:		3
ECON 225	Elementary Business and Economics Statistics	
STAT 211	Elementary Statistical Inference	
Required Courses		
AGBI 410	Introductory Biochemistry	3
AGRN 202	Principles of Soil Science	3
AGRN 203	Principles of Soil Science Laboratory	1
CHEM 233 & CHEM 235	Organic Chemistry and Organic Chemistry Laboratory	4
CHEM 234 & CHEM 236	Organic Chemistry and Organic Chemistry Laboratory	4
AEM 341	General Microbiology	4
AEM 401	Environmental Microbiology	4
GEN 371	Principles of Genetics	4
PHYS 101	Introductory Physics (GEF 8)	4
PHYS 102	Introductory Physics (GEF 8)	4
PLSC 206	Principles of Plant Science	4
PPTH 401	General Plant Pathology	4
Restricted Electives		18
AGBI 514	Animal Biotechnology	
BIOL 312	Introduction to Virology	
BIOL 454	Immunology	
BIOL 455	Evolution of Infectious Diseases	
BIOL 456	Microbial Symbiosis	

AEM 420	Soil Microbiology		
AEM 445	Food Microbiology		
AEM 449	Food Microbiology Lab		
AEM 495	Independent Study		
ENVP 355	Environmental Sampling and Analysis		
ENVP 460	Environmental Impact Assessment		
PPTH 470	Forest Pest Management		
Free Electives			14
Total Hours			108

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 (GEF 8)	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 Elective		12 Graduate Electives	12
			12

Total credit hours: 144

NOTE: See Graduate Catalog for Master's degree requirements (M.S. in Applied Environmental Microbiology, Accelerated Program).

Biochemistry, B.S.

Degree Offered

- Bachelor of Science

Students earning a B.S. in Biochemistry are not eligible to earn a B.S. or B.A. in Chemistry or Biology, a B.S. in Animal & Nutritional Sciences, or a minor in Biology.

Nature of the Program

The biochemistry curriculum prepares students for careers requiring a strong background in basic principles of the physical and life sciences. The program is a collaborative effort between the Divisions of Animal and Nutritional Sciences and Plant and Soil Sciences in the Davis College of Agriculture, Natural Resources and Design, and the Departments of Biology and Chemistry in the Eberly College of Arts and Sciences.

Students completing a biochemistry major are prepared for professional employment in the expanding fields of agricultural and environmental sciences, chemical industry, health-related industries and biotechnology-based industries. The curriculum provides students with the interdisciplinary background in biochemistry, biology, chemistry, mathematics, physics and molecular biology necessary as preparation for professional schools of human and veterinary medicine, dentistry, optometry, and pharmacy. It also provides strong preparation for graduate study in fields such as animal and plant agriculture, biochemistry, biology, molecular biology, genetics, biotechnology, chemistry, food science, nutrition and physiology. The curriculum is accredited by the American Society of Biochemistry and Molecular Biology. The degree requirements for a American Chemical Society certified degree can be met within the framework of the program.

Minors

All students have the possibility of earning one or more minors; list of all available minors and their requirements (p. 50). Please note that students may not earn a minor in their major field.

FACULTY

ANIMAL AND NUTRITIONAL SCIENCES DIRECTOR

- Peter V. Schaeffer - PhD (University of Southern California)
Professor of Regional science, Applied microeconomics

BIOLOGY CHAIR

- Richard B. Thomas - Ph.D.
Professor of Physiological plant ecology, Forest ecology, Global climate change

CHEMISTRY CHAIR

- Gregory Dudley - Ph.D. (Massachusetts Institute of Technology)
Eberly Family Distinguished Professor and Department Chair, Natural Product Synthesis, Organic Chemistry

PLANT AND SOIL SCIENCES DIRECTOR

- Sven Verlinden - PhD (Purdue University)
Associate Professor of Horticulture, Post Harvest Physiology, Molecular Biology

PROFESSORS

- Ashok P. Bidwai - Ph.D. (University of Utah)
Molecular genetic analysis of protein kinase, CK2 in Drosophila
- Kenneth P. Blemings - Ph.D. (University of Wisconsin)
Interim Dean of the Davis College, Protein and Amino Acid Metabolism
- Mirjana Bulatovic-Danilovich - PhD (University of Ljubljana, Slovenia)
Extension Specialist, Consumer Horticulture, Master Gardener Program Coordinator
- Rakesh Chandran - PhD (Virginia Tech)
Weed management in horticultural systems, IPM, Innovative strategies for weed control
- Jonathan R. Cumming - Ph.D. (Cornell University)
Environmental plant physiology, Ecophysiology of root-mycorrhizal-soil interactions, Urban ecology
- Robert A. Dailey - Ph.D. (University of Wisconsin)
Reproductive physiology
- Kevin Daly - Ph.D. (University of Arizona)

- Sensory neurobiology, Neural coding, Brain-behavior interactions, Comparative psycho-biology
- Stephen DiFazio - Ph.D. (Oregon State University)
Plant genomics, Molecular ecology, Plant population genetics, Biotechnology risk assessment
 - Cindy Fitch - Ph.D. (Case Western Reserve University)
Associate Dean of Programming & Research, WVU Extension
 - Terry Gullion - Ph.D. (William and Mary)
Physical chemistry, Solid State NMR, Biological Materials, Polymers
 - Lisa A. Holland - Ph.D. (University of North Carolina-Chapel Hill)
Analytical chemistry, Micro-separations, High-throughput drug screening
 - Jason Hubbard - PhD (University of Idaho-Moscow)
Fresh water supply regimes, Biogeochemical cycling, Ecohydrology
 - Jacek Jaczynski - Ph.D. (Oregon State University)
Food Safety
 - P. Brett Kenney - Ph.D. (Kansas State University)
Muscle protein functionality
 - Fred L. King - Ph.D. (University of Virginia)
Analytical chemistry, Mass spectrometry, Trace elements, Gas-phase chemistry
 - Hillar Klandorf - Ph.D. (British Council for National Academic Awards)
Oxidative stress and aging
 - Kristen Matak - Ph.D. (Virginia Tech)
Food science and human nutrition
 - Louis M. McDonald - PhD (Univeristy of Kentucky)
Soil Science, Soil Chemistry
 - Joseph S. Moritz - Ph.D. (Kansas State University)
Effect of feed form on animal performance
 - Daniel Panaccione - PhD (Purdue University)
Plant Pathology, Mycology, Mycotoxins, Molecular Biology
 - Yong-Lak Park - PhD (Iowa State University)
Entomology, Geospatial Ecology of Insects, Integrated Pest Management, Spatial Interaction between Insect and Plant Diseases
 - William T. Peterjohn - Ph.D.
Ecosystem ecology
 - Michelle Richards-Babb - PhD (Lehigh University)
Director of the Office of Undergraduate Research, Chemical education
 - Rita V.M. Rio - Ph.D. (Yale University)
Symbioses
 - Kenneth Showalter - Ph.D. (University of Colorado)
Bennett Distinguished Professor, physical chemistry, Chemical kinetics, Multi-stability and oscillating chemical systems
 - Jeffrey Skousen - PhD (Texas A&M University)
Soil Science, Land Reclamation, Soil and Water Conservation, Watershed Restoration
 - Bjorn Soderberg - Ph.D. (Royal Institute of Technology, Sweden)
Organic synthesis using transition metals
 - Robert L. Taylor - PhD (Mississippi State University)
Poultry science, Immunology
 - James A. Thompson - PhD (University of Minnesota)
Soil Science, Pedology, Land Use
 - Janet C. L. Tou - Ph.D. (University of Toronto)
Human nutrition and foods
 - Kung Wang - Ph.D. (Purdue University)
Eberly Distinguished Professor of Chemistry, Organic chemistry
 - Matthew Wilson - Ph.D. (Iowa State University)
Reproductive physiology
 - Jianbo Yao - Ph.D. (McGill University)
Functional genomics

SERVICE PROFESSORS

- Donna Ford-Werntz - Ph.D. (Washington University/Missouri Botanical Garden)
Plant systematics: Portulacaceae, West Virginia flora

TEACHING PROFESSORS

- Margaret A. Minch - DVM (Ohio State University)
Veterinary Medicine

ASSOCIATE PROFESSORS

- Kimberly M. Barnes - Ph.D. (University of Nebraska)
Coordinator, Intercollegiate Undergraduate Program in Biochemistry; Lipid metabolism
- Vagner Benedito - PhD (Wageningen University, The Netherlands)
Genetics and developmental biology, Plant genomics, Functional genetics and plant physiology
- Clifton P. Bishop - Ph.D. (University of Virginia)
Molecular genetics, Developmental biology, Forensic biology
- Scott Bowdridge - Ph.D. (Virginia Tech)
Veterinary immunology
- Andrew Dacks - Ph.D. (University of Arizona)
Neurobiology
- Sarah M. Farris - Ph.D. (University of Illinois at Urbana-Champaign)
Evolution and development of the insect brain, Neuroanatomy
- Eugene E. Felton - Ph.D. (University of Missouri)
Ruminant nutrition
- Jennifer Gallagher - Ph.D. (Yale University)
Systems Biology, Genetics
- Fabien Goulay - Ph.D. (University of Rennes)
Physical chemistry, Laser spectroscopy
- Thomas Griggs - PhD (Texas Tech University)
Agronomy
- Jennifer Hawkins - Ph.D.
Plant comparative genomics, Molecular evolution
- Jessica Hoover - PhD (University of Washington)
Organometallics chemistry, Catalysis
- James B. Kotcon - PhD (University of Wisconsin)
Plant Pathology, Agroecology, Nematology, Organic farming practices
- K. Marie Krause - Ph.D. (University of Wisconsin)
Dairy science nutrition
- Justin Legleiter - Ph.D. (Carnegie Mellon University)
Biophysical chemistry, Atomic force microscopy
- Blake Mertz - Ph.D. (Iowa State University)
Computational biophysics and chemistry
- Melissa Olfert - Dr.P.H., M.S., R.D. (Loma Linda University)
Human nutrition and foods
- Eugenia M. Pena-Yewtukhiw - PhD (University of Kentucky)
Soil Science
- Brian Popp - Ph.D. (University of Wisconsin - Madison)
Organic and organometallic chemistry, catalysis
- Stephen Valentine - Ph.D. (Indiana University)
Mass spectrometric analysis of biomolecules
- Nicole Waterland - PhD (Ohio State University)
Horticulture, Flower Senescence

RESEARCH ASSOCIATE PROFESSORS

- Domingo J. Mata Padrino - Ph.D. (Central University of Venezuela)
Grazing management, organic farming

TEACHING ASSOCIATE PROFESSORS

- Erin Battin - PhD (Clemson University)
Bio-inorganic chemistry
- Nettie Freshour - M.S., R.D. (West Virginia University)
Sports nutrition
- Dana Huebert-Lima - PhD (University of Wisconsin-Madison)
Biology, Epigenetics
- Youyoun Moon - PhD (Ohio State University)
Horticulture
- John Navaratnam - Ph.D. (West Virginia University)
Wetland ecology
- Joshua Osbourn - Ph.D. (University of Pittsburgh)
Organic chemistry
- Betsy Ratcliff - Ph.D. (University of Binghamton-SUNY)
Physical chemistry
- Crystal Smith - Ed.D. (West Virginia University)
Equine studies
- Jennifer Stueckle - Ph.D. (West Virginia University)
Aquatic toxicology
- Mark Tinsley - Ph.D. (Leeds University, England)
Nonlinear dynamics, chemical oscillators, moving precipitation patterns
- Mingming Xu - Ph.D. (Ohio University)
Analytical chemistry
- Stephanie T. Young - PhD (West Virginia University)
Molecular and Forensic Biology

ASSISTANT PROFESSORS

- Craig Barrett - Ph.D.
Evolutionary biology
- Sadie Bergeron - Ph.D. (University of Massachusetts - Amherst)
Developmental genetics
- Edward Brzostek - Ph.D.
Forest ecology and Ecosystem modeling
- Brian Dolinar - Ph.D. (University of Wisconsin - Madison)
Synthetic inorganic chemistry, magnetochemistry, physical inorganic chemistry, computational chemistry
- Tim Driscoll - Ph.D. (Virginia Tech)
Microbial metagenomics
- Daniel L. Frank - PhD (Virginia Tech)
Extension specialist, horticulture
- Zachary Freedman - PhD (Rutgers University)
Environmental Microbiology
- Michael Gutensohn - PhD (University of Cologne, Germany)
Plant biochemistry and genetics, Metabolic engineering, Plant-insect interactions
- Eric Horstick - Ph.D. (University of Michigan)
Developmental genetics, neuroscience, behavioral genetics
- Matthew Kasson - PhD (Pennsylvania State University)
Forest pathology, fungal-insect interactions, fungal phylogenetics
- Teiya Kijimoto - PhD (Tokyo Institute of Technology)
Evolutionary developmental biology of morphological diversification
- Peng Li - Ph.D. (Texas Tech University)
Micro-nano systems
- Gary Marsat - Ph.D. (McGill University)
Neuroscience
- Carsten Milsmann - Ph.D. (Ruhr University Bochum)
Inorganic synthesis and spectroscopy
- Ember Morrissey - PhD (Virginia Commonwealth University)

Environmental Microbiology

- Kevin Shaffer - Ph.D. (West Virginia University)
Extension livestock production specialist
- Cangliang Shen - Ph.D. (Colorado State University)
Food system and human health
- Melissa Ventura-Marra - Ph.D., R.D. (Florida International University)
Healthy aging and nutritional prevention of chronic disease

SERVICE ASSISTANT PROFESSORS

- Zach Fowler - Ph.D.
Arboretum Director

TEACHING ASSISTANT PROFESSORS

- Kevin Barry - Ph.D. (University of Maryland)
General biology
- David Davis - PhD (Virginia Tech)
Landscape, turf, specialty crops
- Melissa Ely - Ph.D. (West Virginia University)
General chemistry
- Kelli George - Ph.D. (Florida State University)
Human nutrition and foods
- Amaris Guardiola - Ph.D.
General biology
- Bremansu Osa-Andrews - Ph.D. (South Dakota State University)
Protein biochemistry

SENIOR LECTURERS

- Sue Raylman - Ph.D.
Animal behavior
- Mark Schraf - M.S. (West Virginia University)
Analytical chemistry
- Elizabeth Thomas - M.S. (Clemson University)
Invertebrate zoology

LECTURER

- Sydha Salihu - Ph.D.
Plant physiology

PROFESSORS EMERITI

- Barton Baker
- John Balasko
- Alan Biggs
- Gary Bissonnette
- William Bryan
- Harry O. Finklea
- Mannon Gallegly
- E. Keith Inskeep
- Charles Jaffe
- Paul Lewis
- William MacDonald
- Joseph Morton
- Robert S. Nakon
- John H. Penn
- Jeffrey L. Petersen

- Alan Sextstone
- Ronald B. Smart

Admissions

- First Time Freshman with a Math ACT score of 22, or a Math SAT score of 540, or who place in Introduction to Chemistry (CHEM 110) are admitted directly to the Biochemistry major.
- Students transferring from another major within WVU and students transferring from another institution are admitted into the major if they meet the above criteria, or have completed CHEM 115, CHEM 115L, BIOL 115, and BIOL 116 with a C- or better in each, and have earned a minimum overall GPA of 2.0.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Biochemistry (<https://admissions.wvu.edu/academics/majors/biochemistry/>) major.

Click the appropriate link below to view the corresponding Biochemistry Track Requirements and Suggested Plans of Study.

- American Chemical Society (ACS) (p. 102)
- American Society of Biochemistry and Molecular Biology (ASBMB) (p. 103)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

- **Writing Requirement;** Biochemistry Bachelor of Science students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and at least two additional **SpeakWrite Certified Courses™** from: BIOL 115, BIOL 117, BIOL 219, BIOL 411, CHEM 403.

UNIVERSITY REQUIREMENTS

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ANRD 191 First-Year Seminar

GEF Requirements: number of credits will vary depending on overlap

PROGRAM REQUIREMENTS

1- STEM Foundations

15

MATH 155 Calculus 1 (Minimum grade of C-)

or MATH 153
& MATH 154 Calculus 1a with Precalculus
and Calculus 1b with Precalculus

MATH 156 Calculus 2 (Minimum grade of C-)

BIOL 115 Principles of Biology
& BIOL 116 and Principles of Biology Laboratory (Minimum grade of C-)

STAT 211	Elementary Statistical Inference	
2- Biochemistry Major Requirements		
Core Requirement		5
AGBI 199	Orientation to Biochemistry	
AGBI 410	Introductory Biochemistry (Minimum grade of C-)	
AGBI 412	Introduction to Biochemistry Wet Laboratory (Minimum grade of C-)	
Biology Requirement		11
BIOL 117 & BIOL 118	Introductory Physiology and Introductory Physiology Laboratory (Minimum grade of C-)	
BIOL 219 & BIOL 220	The Living Cell and The Living Cell Laboratory (Minimum grade of C-)	
BIOL 310	Advanced Cellular/Molecular Biology	
Chemistry Requirement		28
Select one set (Minimum grade of C-):		
CHEM 115 & 115L & CHEM 116 & CHEM 116L & CHEM 215 & CHEM 215L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory and Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory and Introductory Analytical Chemistry and Introductory Analytical Chemistry Laboratory (Minimum grade of C-)	
or:		
CHEM 117 & 117L & CHEM 118 & CHEM 118L	Principles of Chemistry 1 and Principles of Chemistry 1 - Laboratory and Principles of Chemistry 2 and Principles of Chemistry 2 - Laboratory (Minimum grade of C-)	
and all of the following:		
CHEM 233	Organic Chemistry (Minimum grade of C-)	
CHEM 234	Organic Chemistry (Minimum grade of C-)	
CHEM 235	Organic Chemistry Laboratory (Minimum grade of C-)	
CHEM 236	Organic Chemistry Laboratory (Minimum grade of C-)	
CHEM 341	Physical Chemistry: Brief Course	
CHEM 342	Experimental Physical Chemistry	
CHEM 462	Biochemistry 2	
CHEM 464	Biochemistry 2 Laboratory	
A track is required.		31
Number of credits may vary depending on courses selected		
Biochemistry Electives*		
AEM 341	General Microbiology	
AEM 401	Environmental Microbiology	
AEM 420	Soil Microbiology	
AEM 445	Food Microbiology	
AGBI 386	Undergraduate Research Experience 1	
AGBI 403	Applied Biochemistry Literature	
AGBI 486	Undergraduate Research Experience 2	
AGBI 496	Senior Thesis	
AGBI 497	Research	
AGBI 498	Honors	
ANPH 301	Introduction to Animal Physiology	
ANPH 400	Growth and Lactation Physiology	
ANPH 405	Animal Physiology Laboratory	
ANPH 424	Physiology of Reproduction	
A&VS 402	Values and Ethics	
A&VS 451	Current Literature in Animal Science	
A&VS 496	Senior Thesis	

A&VS 497	Research
BIOL 302	Biometry
BIOL 312	Introduction to Virology
BIOL 313	Molecular Basis of Cellular Growth
BIOL 324	Molecular Genetics
BIOL 325	Molecular Genetics Laboratory
BIOL 335	Cell Physiology
BIOL 348	Neuroscience 1
BIOL 349	Neuroscience 2
BIOL 350	Plant Physiology
BIOL 386	Undergraduate Research
BIOL 410	Cell and Molecular Biology Methods
BIOL 411	Introduction to Recombinant DNA
BIOL 413	Molecular Endocrinology
BIOL 414	Molecular Endocrinology-Laboratory
BIOL 415	Epigenetics
BIOL 420	Genomics
BIOL 421	Experimental Biochemistry
BIOL 423	Biochemistry of Nucleic Acids and Proteins
BIOL 424	Protein Structure and Function
BIOL 425	Developmental Genetics
BIOL 426	Molecular Biology of Cancer
BIOL 432	Forensic Biology
BIOL 436	General Animal Physiology
BIOL 440	Comparative Anatomy
BIOL 441	Vertebrate Microanatomy
BIOL 453	Molecular Basis of Disease
BIOL 454	Immunology
BIOL 455	Evolution of Infectious Diseases
BIOL 479	Principles of Systems Neuroscience
BIOL 486	Honors Investigation and Thesis
BIOL 496	Senior Thesis
BIOL 497	Research
CHEM 310	Instrumental Analysis
CHEM 312	Environmental Chemistry
CHEM 339	Organic Syntheses
CHEM 422	Intermediate Inorganic Chemistry
CHEM 460	Forensic Chemistry
CHEM 496	Senior Thesis
CHEM 497	Research
ENTO 404	Principles of Entomology
ENTO 412	Pest Management
FDST 445	Food Microbiology
FDST 449	Food Microbiology Lab
GEN 371	Principles of Genetics
GEN 440	Genetic Engineering Technologies
GEN 450	Applied Developmental Genetics
HN&F 460	Advanced Nutrition
HN&F 473	Medical Nutrition Therapy 1
HN&F 474	Medical Nutrition Therapy 2
HORT 330	Plant Propagation
PLSC 460	Plant Biochemistry

PLSC 497	Research
PPTH 401	General Plant Pathology
VETS 302	Animal Pathology
VETS 401	Veterinary Anatomy
VETS 403	Veterinary Anatomy Laboratory
VETS 405	Parasitology

Capstone Requirement

ASBMB Track, select one of the following options:

AGBI 386 & AGBI 486	Undergraduate Research Experience 1 and Undergraduate Research Experience 2
AGBI 403	Applied Biochemistry Literature

ACS Track, complete both of the following:

CHEM 401 & CHEM 403	Chemical Literature and Undergraduate Seminar
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General Electives **11**

Number of electives may vary depending on course options selected

Total Hours 120

* Qualified Seniors interested in taking 500-level courses as part of their electives should contact their adviser.

AMERICAN CHEMICAL SOCIETY (ACS) TRACK

CHEM 310	Instrumental Analysis	3
CHEM 401	Chemical Literature (Minimum grade of C-)	1
CHEM 403	Undergraduate Seminar	1
CHEM 422	Intermediate Inorganic Chemistry	3
CHEM 497	Research	3
PHYS 111	General Physics (Minimum grade of C-)	4
PHYS 112	General Physics (Minimum grade of C-)	4
Biochemistry Electives (See list above)		12
Total Hours		31

SUGGESTED PLAN OF STUDY FOR THE AMERICAN CHEMICAL SOCIETY (ACS) TRACK**First Year**

Fall	Hours	Spring	Hours
ANRD 191		1 AGBI 199	1
ENGL 101 (GEF 1)		3 BIOL 117 & BIOL 118 (GEF 8)	4
BIOL 115 & BIOL 116 (GEF 2)		4 CHEM 116 & 116L (GEF 8)*	4
CHEM 115 & 115L (GEF 8)*		4 MATH 156	4
MATH 155 (GEF 3)		4 GEF 4	3
		16	16

Second Year

Fall	Hours	Spring	Hours
BIOL 219 & BIOL 220		4 CHEM 234 & CHEM 236	4
CHEM 233 & CHEM 235		4 STAT 211	3
PHYS 111		4 PHYS 112	4
ENGL 102		3 Biochemistry Elective 1 GEF 5	3 3
		15	17

Third Year

Fall	Hours	Spring	Hours
AGBI 410 & AGBI 412		4 CHEM 341 & CHEM 342	4
CHEM 215 & 215L		4 CHEM 462 & CHEM 464	4
BIOL 310		3 General Elective	3
GEF 6		3 GEF 7	3
		14	14

Fourth Year

Fall	Hours	Spring	Hours
CHEM 422		3 CHEM 310	3
CHEM 497		3 CHEM 401	1
Biochemistry Elective 2		3 CHEM 403 (Capstone)	1
General Elective		3 Biochemistry Elective 3	3
General Elective		2 Biochemistry Elective 4 General Elective	3
		14	14

Total credit hours: 120

* CHEM 117/117L and 118/118L may be substituted for CHEM 115/115L, 116/116L, and 215/215L.

AMERICAN SOCIETY OF BIOCHEMISTRY AND MOLECULAR BIOLOGY (ASBMB) TRACK

BIOL 313 or BIOL 410	Molecular Basis of Cellular Growth Cell and Molecular Biology Methods	3
BIOL 423	Biochemistry of Nucleic Acids and Proteins	3
Choose one of the following:		3
AGBI 386 & AGBI 486	Undergraduate Research Experience 1 and Undergraduate Research Experience 2	
AGBI 403	Applied Biochemistry Literature	
PHYS 101 or PHYS 111	Introductory Physics 1 General Physics	4
PHYS 102 or PHYS 112	Introductory Physics 2 General Physics	4
Biochemistry Electives (see list above)		14
Total Hours		31

SUGGESTED PLAN OF STUDY FOR THE AMERICAN SOCIETY OF BIOCHEMISTRY AND MOLECULAR BIOLOGY (ASBMB) TRACK**First Year**

Fall	Hours	Spring	Hours
ANRD 191		1 BIOL 117 & BIOL 118 (GEF 8)	4
ENGL 101 (GEF 1)		3 CHEM 116 & 116L (GEF 8)*	4
BIOL 115 & BIOL 116 (GEF 2)		4 MATH 156	4
CHEM 115 & 115L (GEF 8)*		4 AGBI 199	1
MATH 155 (GEF 3)		4 GEF 4	3
		16	16

Second Year

Fall	Hours	Spring	Hours
BIOL 219 & BIOL 220		4 CHEM 234 & CHEM 236	4
CHEM 233 & CHEM 235		4 STAT 211	3
PHYS 101 or 111		4 PHYS 102 or 112	4
ENGL 102		3 Biochemistry Elective 1 GEF 5	3 3
		<hr/>	<hr/>
		15	17

Third Year

Fall	Hours	Spring	Hours
AGBI 410 & AGBI 412		4 BIOL 313 or 410	3
CHEM 215 & 215L*		4 CHEM 341 & CHEM 342	4
BIOL 310		3 CHEM 462 & CHEM 464	4
GEF 6		3 GEF 7	3
		<hr/>	<hr/>
		14	14

Fourth Year

Fall	Hours	Spring	Hours
BIOL 423		3 Biochemistry Elective 4	4
Biochemistry Elective 2		4 Capstone	3
Biochemistry Elective 3		3 General Elective	3
General Elective		3 General Elective	3
General Elective		2	
		<hr/>	<hr/>
		15	13

Total credit hours: 120

* CHEM 117/117L and 118/118L may be substituted for CHEM 115/115L, 116/116L, and 215/215L.

Degree Progress

- By the end of their third semester in the major students are expected to have completed BIOL 115, 116, 117, 118 and CHEM 115, 115L OR CHEM 115, 115L, 116, 116L, and BIOL 115, 116 with a minimum grade of C- in each course and an overall GPA of 2.0.
- Students must maintain a GPA of at least 2.0 in the major and overall.
- All majors must attend an advising session with their Biochemistry advisor each semester.

Students who do not meet those benchmarks may be removed from the major.

Major Learning Outcomes**BIOCHEMISTRY**

Graduates will demonstrate a working knowledge in the following core concepts:

1. Energy is required by and transformed in biological systems.
2. Macromolecular structure determines function and regulation.
3. Information storage and flow are dynamic and interactive.
4. Discovery requires objective measurement, quantitative analysis, and clear communications.
5. The pervasive role evolution and homeostasis play in shaping the form and function of all biological molecules and organisms.

Environmental, Soil and Water Sciences, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

This major prepares students for careers in areas which safeguard the quality of the environment. The curriculum is built on interdisciplinary training in a broad array of environmental, soil, and water sciences. Recent graduates in this option are employed by municipal, state, and federal governmental agencies; consulting firms, especially those specializing in land reclamation, water quality, or pest management; and companies associated with natural resource industries.

In addition to the required curriculum students can enhance their career qualifications by also completing some or all of the following options:

- A minor in a relevant field (Geology, Resource Economics, Wildlife Conservation, etc.)
- USDA Soil Scientist Certification: thirty hours in biological, physical or earth science, including at least fifteen hours in soils courses such as:

AGRN 410	Soil Fertility	3
AGRN 415	Soil Survey and Land Use	3
AGRN 417	Soil Genesis and Classification	4
AGRN 420	Soil Microbiology	3
AGRN 425	Environmental Soil Management	3
AGRN 430	Soil Physics	3
AGRN 455	Reclamation of Disturbed Soils	3
- USDA Soil Conservationist Certification: thirty hours in natural resources or agricultural disciplines including at least twelve hours from soils, crops, or plant science, with at least three hours in soils and three hours in crop or plant science.
- ENVP 415 Hazardous Waste Training. Equivalent to OSHA 40-hour HAZWOPER course.
- Information on academic requirements for other professional certifications may be obtained at <https://www.agronomy.org/certifications> (<https://www.agronomy.org/certifications/>) or <http://www.naep.org>

Admissions

Students who meet University admission requirements may be accepted directly into Davis College as Environmental, Soil and Water Sciences majors.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Environmental, Soil and Water Sciences (<https://admissions.wvu.edu/academics/majors/environmental-soil-and-water-sciences/>) major.

Click here to view the Suggested Plan of Study (p. 107)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

Required Courses

GEF 1, 5, 6, and 7		15
ENGL 305	Technical Writing	3
BIOL 101 & BIOL 103	General Biology and General Biology Laboratory (GEF 8)	4
BIOL 102 & BIOL 104	General Biology and General Biology Laboratory (GEF 8)	4
Select one of the following pairs (GEF 2 & 8):		8
CHEM 115 & 115L & CHEM 116 & CHEM 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory and Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	
CHEM 111 & 111L & CHEM 112 & CHEM 112L	Survey of Chemistry 1 and Survey of Chemistry 1 - Laboratory and Survey of Chemistry 2 and Survey of Chemistry 2 - Laboratory	
GEOL 101 & GEOL 102	Planet Earth and Planet Earth Laboratory	4
Select one of the following (GEF 3):		3
MATH 124	Algebra with Applications	
MATH 150	Applied Calculus	
ANRD 191	First-Year Seminar	1
AEM 341	General Microbiology	4
AGEE 110	Microcomputer Applications in Agricultural Education	3
AGEE 220	Group Organization and Leadership (GEF 4)	3
AGRN 202	Principles of Soil Science	3
AGRN 203	Principles of Soil Science Laboratory	1
ARE 204	Agribusiness Management	3
ENVP 119	Soil in the City	3
ENVP 155	Elements of Environmental Protection	3
PLSC 206	Principles of Plant Science	4
STAT 211	Elementary Statistical Inference	3
WMAN 150	Principles of Conservation Ecology	3
ENVP/AGRN 425	Environmental Soil Management (Capstone Experience)	3
Restricted Electives		15
AEM/ENVP 401	Environmental Microbiology	
AGRN 455	Reclamation of Disturbed Soils	
AEM 420	Soil Microbiology	
AGBI 410	Introductory Biochemistry	
AGRN 125	Soil Judging	
AGRN 415	Soil Survey and Land Use	
AGRN 430	Soil Physics	
BIOL 361	Plant Ecology	
CE 347	Introduction to Environmental Engineering	
CE 351	Introductory Soil Mechanics	
CHEM 231 & 231L	Organic Chemistry: Brief Course and Organic Chemistry: Brief Course - Laboratory	

ENVP 355	Environmental Sampling and Analysis
ENVP 460	Environmental Impact Assessment
FHYD 444	Watershed Management
GEOL 321	Geomorphology
GEOL 365	Environmental Geology
GEOL 462	Introductory Hydrogeology
GEOL 463	Physical Hydrogeology
GEOL 488	Environmental Geochemistry
PHYS 101	Introductory Physics 1
PHYS 102	Introductory Physics 2
PLSC 491	Professional Field Experience
POLS 338	Environmental Policy
RESM 440	Foundations of Applied Geographic Information Systems
RESM 480	Environmental Regulation
WMAN 446	Freshwater Ecology
WMAN 449	Stream Ecosystem Assessment

Free Electives (used to reach 120 minimum required for degree) 10

Select one Area of Emphasis 17

Total Hours 120

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ANRD 191		1 AGEE 110	3
ENGL 101 (GEF 1)		3 ENVP 155	3
BIOL 101 & BIOL 103 (GEF 8)		4 ENVP 119	3
Select one of the following (GEF 3):		3 BIOL 102 & BIOL 104 (GEF 8)	4
MATH 124		WMAN 150	3
MATH 126			
MATH 150			
GEOL 101 & GEOL 102	4		
	15		16

Second Year

Fall	Hours	Spring	Hours
Select one of the following (GEF 2):		4 PLSC 206	4
CHEM 111 & 111L		Select one of the following (GEF 8):	4
CHEM 115 & 115L		CHEM 112 & 112L	
ENGL 102 (GEF 1)	3	CHEM 116 & 116L	
STAT 211		3 GEF 6	3
GEF 5		3 AGRN 202	3
Restricted Elective		3 AGRN 203	1
	16		15

Third Year

Fall	Hours	Spring	Hours
AEM 341		4 Area of Emphasis Required Course	3
ARE 204		3 Restricted Electives	7
ENGL 305		3 Free Electives	4

GEF 7	3		
Area of Emphasis Required Course	3		
	16		14
Fourth Year			
Fall	Hours	Spring	Hours
AGEE 220 (GEF 4)		3 Area of Emphasis Required Courses	8
ENVP 425 or AGRN 425		3 Restricted Electives	5
Area of Emphasis Required Course	3		
Free Electives	6		
	15		13

Total credit hours: 120

ENVIRONMENTAL ASSESSMENT AND RECLAMATION AREA OF EMPHASIS

ENVP 255	Elements of Environmental Management	3
ENVP 355	Environmental Sampling and Analysis	3
ENVP 455	Reclamation of Disturbed Soils	3
ENVP 460	Environmental Impact Assessment	3
Total Hours		12

SOIL AND WATER SCIENCES AREA OF EMPHASIS

AGRN 125	Soil Judging	1
AGRN 410	Soil Fertility	3
AGRN 415	Soil Survey and Land Use	3
AGRN 417	Soil Genesis and Classification	4
AGRN 420	Soil Microbiology	3
AGRN 430	Soil Physics	3
Total Hours		17

Major Learning Outcomes

ENVIRONMENTAL, SOIL AND WATER SCIENCES

The learning outcomes of the environmental protection major center on developing individuals who are effective stewards of soil and water resources. A thorough science-based curriculum will allow students - after completion of the major - to assess, evaluate, manage, and safeguard soil and water resources and develop plans to use and/or mitigate impacts on these resources. The major emphasizes long term sustainability, conservation, and stewardship balanced with the need to develop soil and water resources for current and future human use.

Soil & Water Sciences Area of Emphasis

- Describe the important roles of soil and water in the environment in agricultural and non-agricultural systems.
- Design and implement sustainable soil and water management practices.
- Evaluate existing soil, water and landscape resources to develop recommendations for sustainable land use practices.

Horticulture, B.S.Agr.

Degree Offered

- Bachelor of Science in Agriculture

Nature of the Program

Horticulture is the art and science of propagating, producing, and marketing of greenhouse, nursery, fruit, and vegetable crops. Students in horticulture study the physiology, culture, harvesting, quality control, sales and utilization of horticultural crops. Horticulture prepares students for careers as greenhouse and nursery managers, landscape contractors, supply company representatives, state and federal nursery inspectors, and educators in public gardens, schools and extension.

[Click here to view the Suggested Plan of Study \(p. 111\)](#)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

Required Courses

GEF 1, 5, 6, and 7		15
ANRD 191	First-Year Seminar	1
BIOL 101 & BIOL 103	General Biology and General Biology Laboratory (GEF 8)	4
BIOL 102 & BIOL 104	General Biology and General Biology Laboratory (GEF 8)	4
CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 - Laboratory (GEF 2)	4
CHEM 112 & 112L	Survey of Chemistry 2 and Survey of Chemistry 2 - Laboratory (GEF 8)	4
MATH 124	Algebra with Applications (GEF 3)	3
PLSC 105	Plants and People: Past and Present	3
A&VS 251	Principles of Animal Science	4
AGRN 202	Principles of Soil Science	3
AGRN 203	Principles of Soil Science Laboratory	1
AGRN 410	Soil Fertility	3
Select one of the following (GEF 4):		3
ARE 150	Introductory Agricultural and Agribusiness Economics	
ECON 201	Principles of Microeconomics (And any 3 credit ARE course)	
ARE 204	Agribusiness Management	3
BIOL 350	Plant Physiology	4
ENTO 404	Principles of Entomology	4
GEN 101	Beginner's Guide-Genetics	3
PLSC 206	Principles of Plant Science	4
PPTH 401	General Plant Pathology	4
Required Horticulture Courses		
HORT 220	General Horticulture	3
HORT 260 or HORT 262	Woody Plant Materials Herbaceous Plant Materials	3

HORT 330	Plant Propagation	3
HORT 444	Handling and Storage of Horticultural Crops	3
HORT 480	Case Studies in Horticulture (fulfills Writing and Communication Skills requirement)	3
Select one of the following:		3
HORT 491	Professional Field Experience	
HORT 496	Senior Thesis	
Horticulture Electives (Students may specialize in the following options if desired)		15
Option 1: Specialty Crop Production		
AGRN 451	Principles of Weed Science	
HORT 441	Garden Center Management	
HORT 443	Fruit & Vegetable Crops	
HORT 445	Greenhouse Management	
HORT 493	Special Topics	
HORT 495	Independent Study	
PLSC 453	Organic Crop Production	
PLSC 444	Western European Gardens, Landscapes and Architecture	
Option 2: Landscape and Turf Management		
AGRN 315	Turfgrass Management	
AGRN 451	Principles of Weed Science	
ENTO/PPTH 471	Urban Tree and Shrub Health	
HORT 260 or HORT 262	Woody Plant Materials Herbaceous Plant Materials	
HORT 493	Special Topics	
LARC 212	History of Landscape Architecture	
Option 3: Public Horticulture		
AGEE 220	Group Organization and Leadership	
AGEE 421	Agricultural and Natural Resource Communications	
BIOL 351/PPTH 471	Plant Diversity	
ENTO 471	Urban Tree and Shrub Health	
HORT 260 or HORT 262	Woody Plant Materials Herbaceous Plant Materials	
HORT 445	Greenhouse Management	
HORT 493	Special Topics	
LARC 212	History of Landscape Architecture	
PLSC 444	Western European Gardens, Landscapes and Architecture	
Option 4: Plant Health Management		
AGRN 451	Principles of Weed Science	
ENTO 412	Pest Management	
ENTO/PPTH 470	Forest Pest Management	
ENTO/PPTH 471	Urban Tree and Shrub Health	
ENTO 493	Special Topics	
ENTO 495	Independent Study	
PPTH 409	Nematology	
PPTH 493	Special Topics	
PPTH 495	Independent Study	
Option 5: Plant Science		
BIOL 351	Plant Diversity	
CHEM 231 & 231L	Organic Chemistry: Brief Course and Organic Chemistry: Brief Course - Laboratory	
GEN 371	Principles of Genetics	
STAT 211	Elementary Statistical Inference	
HORT 493	Special Topics	

HORT 445	Greenhouse Management	
HORT 495	Independent Study	
PLSC 493	Special Topics	
PLSC 495	Independent Study	
Option 6: Entrepreneurship/Ag Business		
ACCT 200	Survey of Accounting	
ARE 110	Agribusiness Accounting	
ARE 382	Agricultural and Natural Resources Law	
ARE 461	Agribusiness Finance	
BUSA 201	Survey of Economics	
BUSA 310	Survey of Business Law	
ENTR 340	Survey of Entrepreneurship	
ENTR 380	Survey of Business Planning	
PLSC 444	Western European Gardens, Landscapes and Architecture	
Free Electives		13
Total Hours		120

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ANRD 191		1 BIOL 102 & BIOL 104 (GEF 8)	4
BIOL 101 & BIOL 103 (GEF 8)		4 PLSC 206	4
ENGL 101 (GEF 1)		3 GEF 5	3
MATH 124 (GEF 3)		3 Free Elective	3
PLSC 105		3	
		14	14

Second Year

Fall	Hours	Spring	Hours
A&VS 251		4 AGRN 202	3
CHEM 111 & 111L (GEF 2)		4 AGRN 203	1
ENGL 102 (GEF 1)		3 CHEM 112 & 112L (GEF 8)	4
HORT 220		3 HORT 330 ARE 150 (GEF 4)	3 3
		14	14

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
BIOL 350		4 ARE 204		3 HORT 491	3
ENTO 404		4 GEF 6			3
GEN 101		3 GEF 7			3
HORT 260		3 Option course 2			3
Option course 1		3 Free Elective			3
		17		15	3

Fourth Year

Fall	Hours	Spring	Hours
AGRN 410		3 HORT 480	3
HORT 444		3 Option course 4	3
PPTH 401		4 Option course 5	3

Option course 3	3 Free Electives	7
	13	16

Total credit hours: 120

Major Learning Outcomes

HORTICULTURE

The learning outcomes of the horticulture programs are centered around mastering skills that will allow students to take on leadership functions and roles in all facets of horticulture. The horticulture program trains students to not only manage horticultural plant materials but also to lead inter- and multi-disciplinary teams to solve current and future problems in the production, marketing, and use of horticultural crops.

Upon completion of the major the students should be able to:

- Demonstrate critical thinking skills and problem solving abilities in areas such as:
 - Basic business concepts
 - Integrated Pest Management (weed science, entomology, plant pathology)
 - Genetics
 - Plant physiology
 - Soil science
 - Microbiology
 - Agrochemistry
- Develop and implement sustainable and profitable production plans, systems and uses
- Analyze methods to improve productivity and efficiency of horticultural and green industry operations
- Be aware of and engage in current issues and people in horticultural production, landscaping, public green space, sustainability, and livable spaces
- Communicate professionally (written and oral) and demonstrating mastery of interpersonal communication skills necessary to lead and engage diverse and interdisciplinary teams

Human Nutrition and Food, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

BECOMING A DIETITIAN

The path to become a registered dietitian nutritionist includes a college degree, completing a dietetic internship from an ACEND-accredited program, and passing the national registration exam. At WVU, students who wish to become a registered dietitian nutritionist must:

1. earn a bachelor's degree and complete the Didactic Program in Dietetics with a cumulative GPA of 2.5;
2. apply for and complete an ACEND-accredited dietetic internship program or Individual Supervised Practice Pathway;
3. pass the Commission on Dietetic Registration's dietetic registration exam;
4. gain licensure if required in your state of practice;
5. maintain continuing education. Note that in 2024, a graduate degree will be required to be eligible to take the Commission on Dietetic Registration exam. In addition to the ACEND-accredited DPD, WVU offers an ACEND-accredited dietetic internship associated with a master's degree. An undergraduate degree from WVU does not guarantee acceptance into the WVU dietetic internship

This program of study is a good pre-professional option for students who wish to pursue the professional school programs of human medicine and the allied health professions.

Students are required to complete core courses as well as courses in food science, nutrition, food service management, sociology, psychology, economics, chemistry, biology, physiology, and microbiology. Students are encouraged to select electives in areas that support anticipated career preferences, e.g., business, food science, nutritional biochemistry, advertising, writing, and exercise physiology. There are required objectives for Didactic Program in Dietetics.

Students must meet cumulative GPA requirements of 2.5 or higher to receive a verification statement, which fulfills the academic requirements for membership in the Academy of Nutrition and Dietetics. After completion of the Didactic Program in Dietetics requirements, seniors are eligible to apply for competitive dietetic internships, by participating in a national match. Acceptance into an internship is not guaranteed. The dietetic internship involves and additional one to two years, depending on the site and whether graduate study is included. Upon completion of the internship, the graduate is eligible to take the examination to become a Registered Dietitian Nutritionist (RDN). Students are also able to receive a verification statement to take the DTR (Diet Tech Registered) exam with a 2.5 GPA or greater.

Click here to view the Suggested Plan of Study (p. 115)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

University Requirements

ANRD 191	First-Year Seminar	1
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General Education Foundation Courses **9**

Exact credits may depend on overlap

Human Nutrition & Foods Core Curriculum

A minimum grade of C- required for all HN&F and HN&F elective courses.

HN&F 171	Introduction to Human Nutrition	3
HN&F 271	Fundamentals of Nutrition	3
HN&F 348	Science of Food Preparation	3
HN&F 350	Cross-Cultural Cuisine	3
HN&F 355	Nutritional Assessment	3
HN&F 364	Nutrition Education & Counseling	3
HN&F 401	Senior Seminar in Nutrition (fulfills Capstone and Writing & Communication Skills requirement)	2

HN&F Electives **18**

HN&F 200	Nutrition/Activity/Health	
HN&F 353	Food Service Systems Management	
HN&F 460	Advanced Nutrition	
HN&F 472	Community and Public Health Nutrition	

HN&F 473	Medical Nutrition Therapy 1	
HN&F 474	Medical Nutrition Therapy 2	
HN&F 491	Professional Field Experience	
HN&F 495	Independent Study	
HN&F 496	Senior Thesis	
HN&F 497	Research	
HN&F 512	Maternal and Child Nutrition	
FDST 308	Food Plant Sanitation	
FDST 365	Muscle Foods Technology	
FDST 367	Muscle Foods Technology Laboratory	
FDST 445	Food Microbiology	
FDST 449	Food Microbiology Lab	
FDST 450	Food Chemistry	
AGBI 512	Nutritional Biochemistry	
ANNU 361	Applied Nutrition	
ANNU 362	Applied Nutrition 2	
Math and Science Requirements		
MATH 124	Algebra with Applications (or higher math placement; minimum grade of C-)	3
STAT 211	Elementary Statistical Inference	3
or ECON 225	Elementary Business and Economics Statistics	
Biology Requirement:		4
BIOL 101 & BIOL 103 & BIOL 102 & BIOL 104	General Biology and General Biology Laboratory and General Biology and General Biology Laboratory	
Or		
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory	4
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	4
Select one of the following:		4
CHEM 231 & 231L	Organic Chemistry: Brief Course and Organic Chemistry: Brief Course - Laboratory	
Students not taking CHEM 231 must take all of the following:		
CHEM 233 & CHEM 235	Organic Chemistry and Organic Chemistry Laboratory	
CHEM 234 & CHEM 236	Organic Chemistry and Organic Chemistry Laboratory	
AGBI 410 or BIOC 339	Introductory Biochemistry Introduction to Biochemistry	3
FDST 200	Food Science and Technology	3
AEM 341	General Microbiology	4
ANPH 301 or PSIO 441	Introduction to Animal Physiology Mechanisms of Body Function	3
Business and Social Science Requirements		
ARE 110 or ACCT 200	Agribusiness Accounting Survey of Accounting	3
AGEE 421	Agricultural and Natural Resource Communications	3
BCOR 370	Managing Individuals & Teams	3
PSYC 101	Introduction to Psychology	3
PSYC 241 or PSYC 251	Introduction to Human Development Introduction to Social Psychology	3

SOCA 101	Introduction to Sociology	3
or SOCA 105	Introduction to Anthropology	

General Electives	19
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Exact credits may depend on overlap

Total Hours	120
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SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ANRD 191		1 BIOL 102 & BIOL 104 (GEF 8)	4
BIOL 101 & BIOL 103 (GEF 2B)		4 CHEM 115 & 115L (GEF 8)	4
HN&F 171 (GEF 8)		3 ARE 110	3
MATH 124 (GEF 3)		3 PSYC 101 (GEF 4)	3
ENGL 101 (GEF 1)		3	
General Elective		2	
		16	14

Second Year

Fall	Hours	Spring	Hours
HN&F 271		3 HN&F 355	3
CHEM 116 & 116L		4 CHEM 231 & 231L	4
ENGL 102 (GEF 1)		3 PSYC 241	3
FDST 200		3 General Elective	4
General Elective		3	
		16	14

Third Year

Fall	Hours	Spring	Hours
HN&F 348		3 HN&F 350 (GEF 5)	3
ANPH 301		3 AGEE 421	3
AEM 341		4 GEF 6	3
AGBI 410		3 HN&F Elective	3
HN&F 364		3 General Elective	3
		16	15

Fourth Year

Fall	Hours	Spring	Hours
BCOR 370		3 HN&F 401	2
HN&F Elective		3 SOCA 105 (GEF 7)	3
HN&F Elective		3 STAT 211	3
HN&F Elective		3 HN&F Elective	3
General Elective		3 HN&F Elective	3
		15	14

Total credit hours: 120

AREA OF EMPHASIS IN DIETETICS

A grade of C- or higher is required in all coursework*

HN&F 353	Food Service Systems Management	3
HN&F 460	Advanced Nutrition	3
HN&F 472	Community and Public Health Nutrition	3
HN&F 473	Medical Nutrition Therapy 1	3

HN&F 474	Medical Nutrition Therapy 2	3
Total Hours		15

* Students must have a minimum GPA of 2.5 and have completed HN&F 201, 271 and CHEM 115 and 115L to be eligible for the Area of Emphasis in Dietetics. Students must declare the Area of Emphasis no later than September 1 of the academic year in which they will be requesting a verification statement. To receive a Didactic Program in Dietetics Verification Statement to sit for the Nutrition and Dietetics Technician Registered (NDTR) exam or to apply for dietetic internships students must graduate from the Human Nutrition & Foods major with a minimum GPA of 2.5, complete the Area of Emphasis in Dietetics, and earn a minimum grade of C- in all HN&F courses.

First Year

Fall	Hours	Spring	Hours
ANRD 191		1 BIOL 102 & BIOL 104 (GEF 8)	4
BIOL 101 & BIOL 103 (GEF 2B)		4 CHEM 115 & 115L (GEF 8)	4
HN&F 171 (GEF 8)		3 ARE 110	3
MATH 124 (GEF 3)		3 PSYC 101 (GEF 4)	3
ENGL 101 (GEF 1)		3	
General Elective		2	
		16	14

Second Year

Fall	Hours	Spring	Hours
HN&F 271		3 HN&F 355	3
ENGL 102 (GEF 1)		3 PSYC 241	3
CHEM 116 & 116L		4 CHEM 231 & 231L	4
FDST 200		3 General Elective	3
General Elective		2 General Elective	2
		15	15

Third Year

Fall	Hours	Spring	Hours
HN&F 348		3 HN&F 353	3
ANPH 301		3 HN&F 350 (GEF 5)	3
AEM 341		4 AGEE 421	3
AGBI 410		3 GEF 6	3
HN&F 364		3 General Elective	3
		16	15

Fourth Year

Fall	Hours	Spring	Hours
HN&F 473		3 HN&F 474	3
HN&F 472		3 HN&F 460	3
BCOR 370		3 HN&F 401	2
HN&F Elective		3 SOCA 105 (GEF 7)	3
General Elective		3 STAT 211	3
		15	14

Total credit hours: 120

Major Learning Outcomes**HUMAN NUTRITION AND FOODS**

1. Graduates will acquire a high level of competency in the basic sciences required for disciplinary competency.
2. Graduates will integrate basic knowledge and managerial skills related to the nutritional and food science disciplines.

3. Graduates will acquire sufficient written and oral communication skills, problem solving and critical thinking skills to effectively impact lifelong societal and professional developments critical to their respective discipline of interest.
4. Graduates will attain depth of knowledge relative to the scope of subfields of human nutritional sciences.

Sustainable Food and Farming, B.S.Agr.

Degree Offered

- Bachelor of Science in Agriculture

Nature of the Program

Sustainable Food and Farming is the interdisciplinary study of how agricultural production of plants and animals affects and is affected by the local environment. Sustainable Food and Farming emphasizes sustainable and environmentally friendly approaches to agricultural production. The Sustainable Food and Farming combines concepts of crop production with those of environmental protection to develop a balance between production and environmental issues. This major provides students the opportunity to specialize in ecological/sustainable aspects of crop production. Potential areas of employment include: farm and environmental consulting, organic farms, parks, lawn care and maintenance companies, agricultural supply companies, cooperative extension, and state and federal government support agencies.

Click here to view Suggested Plan of Study (p. 119)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

GEF 5, 6, 7		9
Required Courses		
ANRD 191	First-Year Seminar	1
BIOL 101 & BIOL 103	General Biology and General Biology Laboratory (GEF 2)	4
BIOL 102 & BIOL 104	General Biology and General Biology Laboratory (GEF 8)	4
Select one of the following: (GEF 1):		6
ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	
CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 - Laboratory (GEF 8)	4

CHEM 112 & 112L	Survey of Chemistry 2 and Survey of Chemistry 2 - Laboratory (GEF 8)	4
MATH 124	Algebra with Applications (GEF 3)	3
AGRN 202 & AGRN 203	Principles of Soil Science and Principles of Soil Science Laboratory	4
AGRN 410	Soil Fertility	3
AGRN 451	Principles of Weed Science	3
ARE 431	Marketing Agricultural Products	3
ARE 150	Introductory Agricultural and Agribusiness Economics (GEF 4)	3
A&VS 251	Principles of Animal Science	4
ENTO 404	Principles of Entomology	4
ENVP 155 or ENVP 119 or PLSC 105 or HN&F 171	Elements of Environmental Protection Soil in the City Plants and People: Past and Present Introduction to Human Nutrition	3
PLSC 206	Principles of Plant Science	4
PPTH 401	General Plant Pathology	4
Required Sustainable Food and Farming Courses		15
AGRN 120	Principles of Agroecology	
AGRN 480	Field Methods and Case Studies in Agroecology (fulfills Writing and Communication Skills requirement)	
Select 2 of the following:		
ENTO 450	Insect Ecology	
PLSC 453	Organic Crop Production	
AGRN 454	Forage Crops	
Pick one of the following		
AGRN 491	Professional Field Experience	
AGRN 495	Independent Study	
AGRN 496	Senior Thesis	
Sustainable Food and Farming Electives (Students may specialize in the following options if desired)		15
Option 1: Crop Science		
AGRN 315	Turfgrass Management	
AGRN 425	Environmental Soil Management	
AGRN 452	Grain and Special Crops	
AGRN 493	Special Topics	
AGRN 495	Independent Study	
BIOL 350	Plant Physiology	
ENTO 412	Pest Management	
GEN 371	Principles of Genetics	
HORT 220	General Horticulture	
HORT 330	Plant Propagation	
HORT 443	Fruit & Vegetable Crops	
HORT 444	Handling and Storage of Horticultural Crops	
HORT 445	Greenhouse Management	
HORT 493	Special Topics	
HORT 495	Independent Study	
PLSC 453	Organic Crop Production	
Option 2: Animal Science/Food Science and Technology		
ANNU 260	Animal Nutrition	
ANPR 341	Beef Production	
ANPR 350	Milk Production	
ANPR 353	Pork Production	
ANPR 356	Small Ruminants	

ANPR 367	Poultry Production
FDST 200	Food Science and Technology
FDST 308	Food Plant Sanitation
FDST 365	Muscle Foods Technology
FDST 445	Food Microbiology
FDST 449	Food Microbiology Lab
HN&F 271	Fundamentals of Nutrition
HN&F 348	Science of Food Preparation
HN&F 353	Food Service Systems Management
HN&F 491	Professional Field Experience
Option 3: Soil Health	
AGRN 415	Soil Survey and Land Use
AGRN 417	Soil Genesis and Classification
AGRN 425	Environmental Soil Management
AGRN 430	Soil Physics
AGRN 452	Grain and Special Crops
AGRN 455	Reclamation of Disturbed Soils
AEM 216	Living in a Microbial World
AEM 341	General Microbiology
AEM 401	Environmental Microbiology
AEM 470	Microbes and Global Change
Option 4: Plant Health Management	
ENTO 412	Pest Management
ENTO 450	Insect Ecology
ENTO 470	Forest Pest Management
ENTO 493	Special Topics
PLSC 453	Organic Crop Production
PPTH 409	Nematology
PPTH 495	Independent Study
PPTH 493	Special Topics
Option 5: Entrepreneurship or Ag Business	
ARE 110	Agribusiness Accounting
ARE 204	Agribusiness Management
ARE 382	Agricultural and Natural Resources Law
ARE 422	New Venture Creation
ARE 435	Marketing Livestock Products
ARE 461	Agribusiness Finance
Free Electives	20
Total Hours	120

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ANRD 191		1 BIOL 102 & BIOL 104 (GEF 8)	4
ENGL 101 (GEF 1)		3 AGRN 202 & AGRN 203	4
MATH 124 (GEF 3)		3 PLSC 206	4
BIOL 101 & BIOL 103 (GEF 2)		4 Free Electives	3
AGRN 120		3	
		14	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 ARE 150 (GEF 4)	3
CHEM 111 & 111L (GEF 8)		4 CHEM 112 & 112L (GEF 8)	4
Free Electives		6 ENVP 119, 155, PLSC 105, or HNF 171	3
GEF 5		3 Option course 1	3
		Free Elective	3
		16	16

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
PPTH 401		4 ARE 431		3 AGRN 491	3
A&VS 251		4 Option course 2		3	
AGRN 451		3 Option course 3		3	
ENTO 450		3 GEF 6		3	
		Free Electives		3	
		14		15	3

Fourth Year

Fall	Hours	Spring	Hours
AGRN 410		3 ENTO 450, PLSC 453, or AGRN 454	3
ENTO 404		4 AGRN 480	3
Option course 4		3 Option course 5	3
Free Elective		3 GEF 7	3
		Free Elective	2
		13	14

Total credit hours: 120

Major Learning Outcomes**SUSTAINABLE FOOD AND FARMING**

Sustainable Food and Farming is the study of relationships among organisms and habitats in agricultural ecosystems. Climate and soil properties, activities of other organisms, and management practices affect the growth and development of plants and animals, the composition of products from them, and other processes that sustain human life and the functioning of other ecosystems. Sustainable Food and Farming extends from organisms to landscapes and connects with economic, political, social, and cultural aspects of food and agricultural systems and their impacts on the biosphere. Principles of Sustainable Food and Farming can be applied to the design and management of sustainable systems that meet human needs and provide other ecosystem services while minimizing their ecological footprint.

Upon completion of the major students should be able to:

- Develop and implement sustainable agricultural production plans and systems.
- Diagnose and solve applied production problems in ways that minimize adverse local, regional and global impacts.
- Develop and communicate recommendations to address environmental, economic, and production outcomes in agriculture.
- Characterize and solve soil potential and plant health problems.

School of Design and Community Development**Nature of the School**

The majors in the School of Design and Community Development focus on improving the quality of life of individuals and groups by designing interactions, educational programs, and services between people and their environments to better address the needs and desires of communities and their residents. We imagine, educate, evaluate, plan, and produce experiences, products, settings and services that have the potential to transform lives. Given the range of our programs and the portability of skills taught in them, outcomes for students vary.

Our graduates find employment in professional design settings and interdisciplinary firms; in communities as teachers, as extension agents, and community development specialists. Graduates create careers as entrepreneurs and in traditional design, business and retail settings. And others find

placement in a wide spectrum of innovative organizations that use design and design thinking as a way to fully understand and engage with their clients and markets. Study abroad is strongly encouraged in all of our programs, and is required in Interior Design.

Accreditation

The agricultural and extension education program is accredited by the National Council for Accreditation of Teacher Education (NCATE). The fashion, dress and merchandising program is an affiliate member of the Textile and Apparel Programs Accreditation Commission (TAPAC). The interior design program is accredited by the National Association of Schools of Art and Design (NASAD). The landscape architecture program is accredited by the American Society of Landscape Architects (ASLA).

FACULTY

DIRECTOR

- Peter Butler - M.L.A. (Iowa State)
Landscape Architecture - Cultural landscape planning and interpretation, Community design processes, Design pedagogy

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 Technical)
Landscape Architecture-Environmental design and planning
- Judith Wasserman - MLA MRP (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, Design education
- Colleen Moretz - M.F.A. (Marywood University)
Fashion Design - Transformative and sustainable practices, Design process, Experimental couture, and market-oriented, Teaching methods-traditional and digital approaches
- Lisa Orr - M.L.A. (University of California at 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 PROFESSORS

- 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
- Vaike Haas - M.L.A. (University of Michigan)
Landscape Architecture-Native species, Stormwater management, Regional greenspace
- J. Chris Haddox - M.S. (West Virginia University)
Design Studies-LEED AP, Green Advantage Certified, Sustainable design and Construction, Green building theory and practice
- Rachel Hendrix - Ph.D. (Mississippi State)
Agricultural education, Agricultural communications, STEM education, Teacher education, Teaching methods
- Shan Jiang - Ph.D. (Clemson University)
Landscape Architecture-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 University)
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 - MA (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

FACULTY EMERITI

- Donald R. Armstrong
- Stacy Gartin
- William H. Hagerty
- Mary Rose Jones
- Layle D. Lawrence
- Marian B. Liddell
- George W. Longenecker
- Nora MacDonald
- Janice I. Yeager

Agricultural and Extension Education, B.S.Agr.

Degree Offered

- Bachelor of Science in Agriculture

Nature of the Program

The agricultural and extension education curriculum is designed to prepare students for entry into agricultural teaching, extension, or other professional employment in government, industry, or entrepreneurship where competence in communications and leadership are required. In order to prepare career-ready graduates, the curriculum provides flexibility to develop programs in options emphasizing teacher preparation, extension education, or production and technical agriculture. Courses are selected by the student in consultation with an advisor that will prepare the student to achieve his or her aspirations.

Admissions

All Agricultural and Extension Education students will enter the major in a basic program of study. Students will devote their freshman and sophomore years (first 59 hours) to the completion of GEF and basic agriculture curriculums.

To continue in the major beyond the sophomore year, a student must apply for and be accepted into one of three areas of emphasis: teacher education, extension education, or agricultural and environmental technology. The application process will occur during the semester a student has completed or will complete the requirements for "junior" status (59 hours or greater) at West Virginia University. Once a student enters an area of emphasis, he/she will proceed through key courses as a member of a cohort composed of students entering the area of emphasis during the same year.

To be admitted into one of three areas of emphasis, a students must complete the following courses: Eng 101, Eng 102, Math 121, Chem 111, Biol 101/103, and AGEE 103.

To enter the teacher education area of emphasis, students must meet the following:

- 2.50 or greater GPA
- Complete AGEE 202
- Successfully complete the PRAXIS CORE tests (Reading, Writing, and Math) (Students are exempt from this requirement if they meet West Virginia Department of Education exemption criteria (currently ACT of 26 or greater or a revised SAT score of 1170 or higher (combined Critical Reading and Math score)).)

To enter the extension education area of emphasis, students must meet the following:

- 2.00 or greater GPA

To enter the agricultural and environmental technology areas of emphasis, students must meet the following:

- 2.00 or greater GPA

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Agriculture and Extension Education major (<https://admissions.wvu.edu/academics/majors/agricultural-and-extension-education/>).

Click the appropriate link below to view the corresponding Area of Emphasis (AOE) Requirements and Suggested Plans of Study.

- Agricultural & Environmental Technology (p. 126)
- Agricultural Teacher Education (p. 124)
- Extension Education (p. 125)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

GEF Requirements 1, 3, 5, 6, & 8 **18**

University Requirements

First Year Seminar		
ANRD 191	First-Year Seminar	1
Capstone Course		
AGEE 489	Agriculture and Extension Education Reflective Seminar (fulfills Writing and Communication Skills requirement)	1

Major Requirements

AGEE 101	Global Food and Agricultural Industry (GEF 7)	3
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AGEE 102	Educational Colloquium in Agricultural and Extension Education	1
AGEE 103	Basics of Agricultural Mechanization	2
AGEE 110	Microcomputer Applications in Agricultural Education	3
or CS 101	Intro to Computer Applications	
AGEE 203	Agriculture Mechanics Practica	3
AGEE 220	Group Organization and Leadership (GEF 4)	3
AGEE 421	Agricultural and Natural Resource Communications	3
AGEE 431	Adult Education in Agriculture and Natural Resources	2
AGEE 440	Principles of Cooperative Extension	2
AGRN 202	Principles of Soil Science	3
AGRN 203	Principles of Soil Science Laboratory	1
ARE 204	Agribusiness Management	3
A&VS 251	Principles of Animal Science	4
PLSC 206	Principles of Plant Science (GEF 2)	4
PSYC 101	Introduction to Psychology (GEF 8)	3
PSYC 241	Introduction to Human Development (GEF 8)	3
Area of Emphasis (Select One)		30
Agriculture Electives		12
Courses from the following subjects: A&VS, AEM, AGBI, AGEE, AGRN, ANNU, ANPH, ANPR, ARE, CDFS, DSGN, ENTO, ENVM, ENVP, FDM, FDST, FMAN, FOR, GEN, HORT, ID, LARC, PLSC, PPTH, RESM, RPTR, WDSC, or WMAN		
Additional electives to reach a minimum of 120 credits (number of credits needed may vary)		15
Total Hours		120

AGRICULTURAL TEACHER EDUCATION AREA OF EMPHASIS

An effective agriculture teacher can assist in the economic and social development of a community. Middle school, high school, and adult classes strengthened by supervised agricultural experience programs are the methods whereby the agriculture teacher helps students become involved and established in production agriculture and off-farm occupations that require agricultural knowledge and skills.

Students completing this program will meet the requirements for certification by the West Virginia Department of Education. The program provides graduates with the opportunity to become qualified to teach in the broad field of agriculture as well as to become prepared to teach in such areas as production, agribusiness, conservation and forestry, agricultural mechanics, processing, horticulture, and natural resources. In addition to teaching, graduates have the opportunity for employment with governmental agencies and in private enterprise.

To be eligible for student teaching and subsequent certification to teach, the student must:

- possess a 2.5 grade point average on the total of all college credits, including hours earned in professional education and technical agriculture courses
- must pass competency tests in reading, writing, mathematics (Praxis Core Academic Skills for Educators) and agriculture content endorsement (Praxis II - Agriculture) prior to student teaching
- must pass the principles of teaching and learning test (Praxis Principles of Learning and Teaching Grades 7-12) for grades 7-12
- complete the required agriculture and professional education courses

REQUIREMENTS

AGEE 202	Site Based Tutoring in Agriculture and Extension Education	1
AGEE 330	Shop Theory and Methods	3
AGEE 426	Directing Future Farmers of America and Supervised Agricultural Experiences	3
AGEE 430	Methods of Teaching Agriculture	3
AGEE 434	Managing Learning Environment	3
AGEE 438	Agriculture Education Curriculum Development	2
AGEE 488	Professional Agricultural Internship	12
RDNG 422	Reading in the Content Areas	3
SPED 304	Special Education in Contemporary Society	3
SPED 360	Differentiation of Instruction for Students with Special Needs	3
Total Hours		36

SUGGESTED PLAN OF STUDY FOR AGRICULTURAL TEACHER EDUCATION AREA OF EMPHASIS

First Year

Fall	Hours	Spring	Hours
ANRD 191		1 AGEE 101 (GEF 7)	3
AGEE 102		1 AGEE 110	3
AGEE 103		2 AGEE 220 (GEF 4)	3
ENGL 101 (GEF 1)		3 PSYC 101 (GEF 8)	3
A&VS 251		4 MATH 121 (GEF 3)	3
Electives		3	
		14	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 AGEE 203	3
PLSC 206 (GEF 2)		4 AGEE 202	1
PSYC 241 (GEF 8)		3 GEF 6	3
ARE 204		3 GEF 8	3
GEF 5		3 Electives	4
		16	14

Third Year

Fall	Hours	Spring	Hours
SPED 304		3 AGEE 426	3
AGRN 202		3 AGEE 434	3
AGRN 203		1 SPED 360	3
AGEE 440		2 RDNG 422	3
AGEE 421		3 Restricted Electives	4
Electives		2	
		14	16

Fourth Year

Fall	Hours	Spring	Hours
AGEE 430		3 AGEE 438	2
AGEE 330		3 AGEE 488	12
AGEE 431		2 AGEE 489	1
Restricted Electives		8	
		16	15

Total credit hours: 120

EXTENSION EDUCATION AREA OF EMPHASIS

This option prepares students with a foundation for extension education, agribusiness positions related to human resource management, international and corporate training and development, agricultural literacy and public relations, political interests, and commodity service organizations.

Coursework in this option will focus on a core of agricultural courses along with emphasis in non-formal education, designing educational/training programs and professional presentations, leadership development, teaching/training methods, and interpersonal communications. A twelve credit, twelve week internship related to the student's career objective is required.

REQUIREMENTS

AGEE 430	Methods of Teaching Agriculture	3
AGEE 491	Professional Field Experience	12
MDIA 101	Media and Society	3
POLS 102	Introduction to American Government	3
POLS 220	State and Local Government	3
POLS 240	Introduction to Public Administration	3

PR 215	Introduction to Public Relations	3
Total Hours		30

SUGGESTED PLAN OF STUDY FOR EXTENSION EDUCATION AREA OF EMPHASIS

First Year

Fall	Hours	Spring	Hours
ANRD 191		1 AGEE 101 (GEF 7)	3
AGEE 102		1 MATH 121 (GEF 3)	3
AGEE 103		2 AGEE 110	3
A&VS 251		4 AGEE 220 (GEF 4)	3
ENGL 101 (GEF 1)		3 PSYC 101 (GEF 8)	3
Electives		3	
		14	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 AGEE 203	3
PLSC 206 (GEF 2)		4 MDIA 101	3
PSYC 241 (GEF 8)		3 GEF 6	3
ARE 204		3 GEF 8	3
GEF 5		3 Elective	3
		16	15

Third Year

Fall	Hours	Spring	Hours
POLS 102		3 POLS 240	3
AGRN 202		3 PR 215	3
AGEE 440		2 AGEE 421	3
AGRN 203		1 Restricted Electives	6
Restricted Electives		6	
		15	15

Fourth Year

Fall	Hours	Spring	Hours
POLS 220		3 AGEE 489	1
AGEE 431		2 AGEE 491	12
Electives		6 Electives	3
AGEE 430		3	
		14	16

Total credit hours: 120

AGRICULTURAL & ENVIRONMENTAL TECHNOLOGY AREA OF EMPHASIS

Today agriculture faces a tremendous challenge to provide food, fiber, and industrial raw supplies for billions of people at a time when resources are becoming more limited. Agriculture, meanwhile, has become more technical and complex, and qualified college graduates are needed to meet the future demands in this vital field.

This option is an undergraduate studies program that allows students some measure of flexibility in meeting their own educational objectives, particularly when those objectives may not be fulfilled entirely by any other single college major. This option prepares students to enter into the broad field of production and technical agriculture. The curriculum combines a broad range of technical courses in animal science, crop and soil science, horticulture, biological systems, agricultural mechanics, and agricultural economics. Additional courses in interpersonal and group leadership and communications training give students a competitive edge in the job market.

Students who desire to become owners, managers, or employees in production and or technical agriculture realize that they need a broad-based preparation. Agriculture presents opportunities in the farming and ranching business and industry, research and development, education, communications, governmental employment, and conservation and recreation.

The experiences gained through coursework and internships prove invaluable. General agriculture internships in production and technical agriculture, agribusiness, and commodity organizations enable students to enhance their communications, problem-solving and technical abilities, and management and decision making abilities. A twelve credit, twelve week internship related to the student's career objective is required.

REQUIREMENTS

AGEE 491	Professional Field Experience	12
Upper-Level courses selected from the other divisions in the college in consultation with Advisor		24
Courses from the following subjects: AEM, AGBI, AGRN, AGEE, AGRN, ANNU, ANPH, ANPR, ARE, A&VS, CDFS, DSGN, ENTO, ENVM, ENVP, FDM, FDST, FMAN, FOR, GEN, HORT, ID, LARC, PLSC, PPTH, RESM, RPTR, WDSC, or WMAN		
Total Hours		36

SUGGESTED PLAN OF STUDY FOR AGRICULTURAL & ENVIRONMENTAL TECHNOLOGY AREA OF EMPHASIS

First Year

Fall	Hours	Spring	Hours
ANRD 191		1 AGEE 101 (GEF 7)	3
AGEE 102		1 AGEE 110	3
AGEE 103		2 MATH 121 (GEF 3)	3
ENGL 101 (GEF 1)		3 AGEE 220 (GEF 4)	3
A&VS 251		4 PSYC 101 (GEF 8)	3
Electives		3	
		14	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 AGEE 203	3
PLSC 206 (GEF 2)		4 GEF 6	3
PSYC 241 (GEF 8)		3 GEF 8	3
GEF 5		3 Electives	6
ARE 204		3	
		16	15

Third Year

Fall	Hours	Spring	Hours
AGRN 202		3 AGEE 421	3
AGEE 440		2 Upper Level Ag Courses	6
AGRN 203		1 Restricted Electives	6
Upper Level Ag Courses		6	
Restricted Electives		3	
		15	15

Fourth Year

Fall	Hours	Spring	Hours
AGEE 431		2 AGEE 489	1
Upper Level Ag Courses		9 AGEE 491	12
Restricted Electives		3 Upper Level Ag Course	3
		14	16

Total credit hours: 120

Major Learning Outcomes

AGRICULTURE AND EXTENSION EDUCATION

All students in the Agricultural and Extension Education undergraduate program will:

- Complete a core curriculum in general education foundations.
- Complete a core curriculum in basic agricultural knowledge.

- Complete a core curriculum in technology, leadership, and communication.
- Complete at least one area of emphasis (teacher education, extension education, or agricultural and environmental technology) in agricultural and extension education.

Students in the teacher education area of emphasis will:

- Develop the pedagogical skills necessary to enter and be successful in a high school teaching position.
- Complete all PRAXIS tests required for teacher certification in West Virginia.
- Complete a twelve week internship/student teaching placement in a middle/high school agricultural education program.

Students in the extension education area of emphasis will:

- Develop the academic knowledge and skills necessary to enter and succeed in a Master of Science program.
- Develop the educational and communication skills necessary to successfully enter and succeed in an Extension position.
- Complete a twelve week internship in an Extension related position.

Students in the agricultural and environmental technology area of emphasis will:

- Develop the educational and communication skills necessary to successfully enter and succeed in an agriculturally related career.
- Develop the academic knowledge and skills needed to enter and succeed in an agriculturally related career.
- Complete a twelve week internship in an area related to their career goal.

Design Studies, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

Design is a way of thinking (about what might be better), and a process (of iterative prototyping), as well as the product of that thinking and process. The Design Studies program at West Virginia University provides the opportunity for cross-disciplinary study by pairing design thinking and design process courses with an approved minor or approved area of concentration of your choice.

Design Studies is a four-year, student-focused curriculum that is open to all freshmen and to students transferring into the program as long as they meet the GPA requirement. Students must have a minimum GPA of 2.5 overall to enter the program, and must maintain an overall 2.25 GPA throughout their time in the major.

Students meet with their academic advisor at the beginning of their program to determine a program of study for their academic major. Each student, as a requirement for graduation, must participate in a minimum of six credit hours of internship. Internships will be allowed only after the student has finished a minimum of 50% of their minor coursework, and completed the required third year design studies coursework. Typically, internships will occur during the summer between the student's third and fourth years. Internship experiences will be unique to each student and will reflect their area of interest in the design fields.

Career Opportunities

Demand for graduates with Design Studies degrees has traditionally come from production, sales, marketing, and management firms related to design products and studio-trained designers (fashion, interiors, etc.). More recently there has been growing recognition that design thinking/process supports entrepreneurship and innovation in all venues. Internet searches of *Business Week* and/or *Fast Company* using the key word "design" will provide a quick overview of the rapidly expanding career potential in this field.

The offering of an interdisciplinary design major by West Virginia University is unique in the state and within the University. Design Studies brings together positive aspects of the studio-based design majors and the multi-disciplinary studies major to provide a design-focused program that is flexible and student-centered. Acceptance into the program is noncompetitive. Employment in design-related occupations is expected to continue growing.

Click here to view the Suggested Plan of Study (p. 130)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Program Requirements

Specifically, the major consists of:

1. University requirements
2. A common design core
3. Additional design-related courses
4. Internship or professional field experience
5. An approved minor, certificate, or approved concentration contributing to a design-related specialty
6. A capstone experience

Students take a core of design courses to learn and understand the design language. A minor, certificate, or approved area of concentration (e.g. Associates Degree) is required to focus their area of study and provide a context for their design thinking. Finally, design-related requirements and recommended electives are chosen to support the understanding of design in a variety of contexts. The capstone requirement will be met with a one-hour seminar course to prepare for the internship experience, a six-to-nine hour professional field experience or external study and a final course where students synthesize and present their experiences in the work environment. Each student meets individually with her/his advisor to determine the most appropriate coursework choices for all requirements at the beginning of the semester in which they declare Design Studies their major.

Curriculum for the Design Studies major is determined by the area of interest chosen by the student. The area of interest is explored through an approved minor, certificate, or concentration area. A list of minors currently approved for the Design Studies major includes: advertising, arts administration, business administration, communications, disability studies (certificate), electronic media, entrepreneurship, event planning, history/historic preservation, horticulture, landscape studies, photography, public relations, sustainable design and theatre.

NOTES

1. Students must complete a minimum of 120 hours to graduate in this major.
2. Minors may require courses to be taken in summer. Check your specific minor for schedule requirements.
3. All Design Studies majors must complete nine hours of Recommended Electives at the 300 level or above (see advising booklet and requirements for specific minors).
4. GEF choice options are directed by the minor or concentration area chosen by the student. Please see specific requirements for your individual area of study before making course choices.

CURRICULUM REQUIREMENTS**GEF Requirements**

ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	6
BIOL 105 & BIOL 106	Environmental Biology and Environmental Biology Laboratory	4
GEF 3, 4, 5, 6, and 7		15

University Requirements

ANRD 191	First-Year Seminar	1
DSGN 480	Designing Innovative Futures (fulfills Writing and Communication Skills and Capstone requirements)	3
Major Requirements		
Design Studies Core Requirements:		
A minimum grade of C- and minimum GPA of 2.25 is required for all Design Studies Core Requirements		
DSM 130	Introduction to Design	3
DSGN 140	Sustainable Living	3
DSGN 220	Design Thinking	3
ID 330	Design for Quality of Living	3
DSGN 491	Professional Field Experience: Capstone	6
Additional Major Requirements		
WVUE 270	Effective Public Speaking	3
Foreign Language (2 levels of same language)		6
Approved Minor *		15
Minor Related Electives **		27
Design Related Electives		8
Free Electives (Number of electives may vary based on GEF courses and other electives chosen)		14
Total Hours		120

* Approved minors include: Advertising, Arts Administration, Business Administration, Communication Studies, Disability Studies, Electronic Media, Entrepreneurial Studies, Event Planning, History, Horticulture, Landscape Studies, Photography, Public Relations, Sustainable Design, Theatre. Other areas of concentration (e.g. Associates Degrees) must be approved by the Design Studies faculty.

** A minimum of 9 hours must be 300 level classes or above.

SUGGESTED PLAN OF STUDY

The following minimum requirements are set to insure that students who graduate from the program will have the appropriate skill level and knowledge to succeed in their chosen field of professional work. Design studies require a minimum of 120 credit hours for graduation.

First Year

Fall	Hours	Spring	Hours
ANRD 191		1 Design Related Course	3
DSM 130		3 Minor Course	3
ENGL 101 (GEF 1)		3 GEF 3	3
GEFs 4, 5, and 6		9 GEF 7	3
		16	12

Second Year

Fall	Hours	Spring	Hours
BIOL 105 & BIOL 106 (GEF 2)		4 Minor Course	3
DSGN 140		3 DSGN 220	3
ENGL 102 (GEF 1)		3 Foreign Language	3
WVUE 270		3 Minor Related Electives	6
Foreign Language		3	
		16	15

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
ID 330		3 Design Related Course		2 DSGN 491	6
Design Related Course		3 Minor Course		3	
Minor Course		3 Minor Related Electives		7	
Minor Related Elective		3			
		12		12	6

Fourth Year

Fall	Hours	Spring	Hours
Minor Course		3 Free Electives	9
DSGN 480		3 Minor Related Electives	7
Minor Related Elective		4	
Free Elective		5	
		15	16

Total credit hours: 120

FIRST-YEAR LEVEL

Students should begin the Design Studies program with an introduction to design and first-year courses. Students should make an appointment with the program chair at the end of the first semester to determine course selection based on a chosen required minor, certificate or concentration area. Design studies is an open-enrollment major for incoming freshmen. Students may also transfer into the major during either fall or spring semesters as long as they meet the minimum entry requirements. Transfer students must have an overall GPA of a 2.5 to apply for acceptance into the Design Studies major. It is advisable that students interested in transferring into the major make an appointment with the Advising Center (contact Joy Patterson at joy.patterson@mail.wvu.edu) to discuss details prior to officially transferring paperwork.

SECOND-, THIRD-, AND FOURTH-YEAR LEVELS

All design studies students are required to maintain at least an overall 2.25 GPA to remain in the program with good academic standing.

- Students' grades will be monitored each semester.
- Any student who has an overall GPA below 2.25 will be notified and put on academic probation for the upcoming semester. It will be necessary for the student to raise their GPA to the required 2.25 in order to continue in the design studies major coursework.
- Students who have an overall GPA below the required 2.25 will not be allowed to enroll in DSGN, DSM or ID coursework until the GPA has returned to the minimum required.
- Students who have not been permitted to enroll in design courses because of a low GPA may enroll in design courses after they have met the appropriate GPA, space permitting.
- All Design Studies students are required to earn at least a C- in each required Interior Design, Design & Merchandising and Design Studies (DSGN) course.
- Students' grades in DSGN, DSM and ID courses will be monitored each semester.
- Any student who has earned a grade of "D" or lower in any of the DSGN, DSM or ID courses will be notified of the problem and will be expected to repeat the course and earn a grade of C- or above prior to graduation.

Major Learning Outcomes**DESIGN STUDIES**

The primary student learning outcomes for the Design Studies major include preparing students to:

1. Integrate design thinking into the business context provided by their minor course of study,
2. Synthesize knowledge gained through coursework and experiential activities effectively, and explain its application to real work situations within the design profession and selected area(s) of interest in verbal and written formats,
3. Effectively evaluate and use research in the context of a design problem,
4. Share work experience with others and gain a greater understanding of design in a variety of contexts,
5. Understand the daily realities of their professional design area and how those realities relate to the expectations of other design contexts.

Environmental and Community Planning, B.S.**Degree Offered**

- Bachelor of Science

Nature of the Program

Environmental and Community Planning provides you with the knowledge, skills and abilities to help shape your community, region, the state and the world. You'll also gain a deeper understanding of the natural environment, the built environment and human engagement with the environment.

Upon graduation, you'll have expertise in both the analysis and the synthesis of the physical, social, political and economic issues that shape development. The curriculum emphasizes project-based and place-based learning in an interdisciplinary environment. Participation with communities and individuals in envisioning their future is a key component of the planning process. This approach allows you to see how different environments

and situations exist, operate and interact in real-life settings. You'll learn to make informed decisions related to alternative futures in community and environmental development and management.

CURRICULUM REQUIREMENTS

Minimum grade of C- is required in all coursework

ANRD 191	First-Year Seminar	1
GEF Requirements		6
ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1) Accelerated Academic Writing	6
Select one of the following (GEF 2):		4
BIOL 105 & BIOL 106	Environmental Biology and Environmental Biology Laboratory	
GEOG 150 & GEOG 149	Digital Earth and Digital Earth Lab	
STAT 111	Understanding Statistics (GEF 3)	3
DSGN 280	Sustainable Design and Development (GEF 4)	3
COMM 104	Public Communication (GEF 5)	3
LARC 212	History of Landscape Architecture (GEF 6)	3
DSGN 140	Sustainable Living (GEF 7)	3
Landscape Architecture Coursework		
LARC 105	Introduction to Landscape Architecture, Environmental Design and Planning	3
LARC 120	Landscape Architectural Drawing	3
LARC 271	Portfolio Design	1
LARC 350	Landscape Architectural Design 2	4
LARC 351	Landscape Architectural Design 3	4
LARC 448	Design Analysis	2
LARC 450	Advanced Landscape Architectural Design 1 (fulfills Writing and Communication Skills requirement)	5
LARC 451	Advanced Landscape Architectural Design 2	5
LARC 465 or LARC 466	Regional Design Introduction to Urban Design Issues	3
LARC 484	Professional Practice	3
Additional Required Coursework		
AGEE 220	Group Organization and Leadership (GEF 8)	3
DSM 410	The Global Context for Design	3
RESM 440	Foundations of Applied Geographic Information Systems	3
RESM 450	Land Use Planning Law	3
RESM 455	Practice of Land Use Planning	3
General Electives		40
Total Hours		120

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 LARC 212 (GEF 6)	3
LARC 105		3 LARC 271	1
LARC 120		3 COMM 104 (GEF 5)	3
DSGN 140 (GEF 7)		3 STAT 111 (GEF 3)	3
ANRD 191		1 Elective	4
Elective		3	
		16	14

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 RESM 440	3
DSGN 280 (GEF 4)		3 AGEE 220 (GEF 8)	3
Select one of the following (GEF 2):		4 GEF 8	3
BIOL 105 & BIOL 106		Elective	6
GEOG 150 & GEOG 149			
GEF 8	3		
Elective	2		
		15	15

Third Year

Fall	Hours	Spring	Hours
RESM 455		3 LARC 351	4
LARC 350		4 LARC 448	2
Elective		8 LARC 484	3
		Elective	6
		15	15

Fourth Year

Fall	Hours	Spring	Hours
LARC 450		5 DSM 410	3
LARC 466 or 465		3 LARC 451	5
Elective		7 RESM 450	3
		Elective	4
		15	15

Total credit hours: 120

Major Learning Outcomes**ENVIRONMENTAL AND COMMUNITY PLANNING**

- To provide students with a base of knowledge, skills, and abilities to be ready for professional positions or graduate education in planning.
- To provide students an understanding of planning theory and principles.
- To develop students' skills to undertake and interpret research on planning and related topics.
- To develop students' ability to apply knowledge of planning to issues related to development.
- To develop students' ability to solve real-world problems in varied situations and/or for varied constituencies.
- To develop students' skills in communicating planning issues effectively to community residents, in oral, graphic and written form.
- To prepare students to be future professionals in the field of planning.

Fashion, Dress and Merchandising, B.S.**Degree Offered**

- Bachelor of Science

Areas of Emphasis Offered

- Fashion Design
- Fashion Merchandising

Nature of the Program

Students in the Fashion, Dress and Merchandising (FDM) program explore a broad view of the fashion industry and all the career opportunities it has to offer. From textile production, product design, sourcing, and manufacturing, to retail merchandising and consumer behavior, students learn to appreciate and understand the complexity and dynamism of the modern fashion supply chain. Students may pursue a Fashion Merchandising or a Fashion Design Area of Emphasis (AOE); both curricula consist of a minimum of 120 credit hours. The Fashion Merchandising Area of Emphasis includes a minor

(selected by the student with guidance from their advisor) in either Advertising, Journalism, Public Relations, Strategic Social Media, Event Planning, Entrepreneurial Studies, or Professional Sales.

FDM students are encouraged to seek summer employment in the fashion industry in order to gain experience and integrate coursework into business professional settings. Both AOE's require a 6-credit-hour internship in which students apply textile, apparel, and/or merchandising subject matter in a professional setting.

Program Opportunities

FDM students may elect to participate in a faculty-led, study abroad summer program to observe the textile, apparel, and retail industries in Italy, preferably following her/his freshman or sophomore year. This 6-credit-hour program, *Disegno Italia*, has established connections with fashion schools in Milan, the design capital of Italy.

An elective fashion study tour enables students to observe fashion industry and retail sites, view historic costume displays and collections, and network with graduates of the FDM program. A teaching practicum is another elective opportunity that enables a student to broaden his or her perspective. Students are encouraged to enter design and research competitions and exhibitions sponsored by industry, professional societies, and the University. A student organization, the Fashion Business Association, enriches the student experience by bringing working professionals to campus to share their experiences and providing students with opportunities to develop their leadership skills.

Career Opportunities

All FDM graduates are prepared for entry-level positions in the fashion industry or graduate study. Executive training programs and externship opportunities offered by fashion companies may offer additional training for advanced placement in a career. Positions in the field include buying, allocation/planning, store/brand/social-media/omnichannel management, e-commerce, visual merchandising, product development, fashion promotion, sales, sourcing/logistics, design, and creative direction.

Our students have been successful in gaining admission to graduate school in areas such as historic costume and textiles, social psychology of dress, apparel design, textile design, merchandising, and business. With additional study at the graduate level, students may secure positions with fiber and fabric producers, museums that exhibit and preserve textiles and apparel, colleges and universities, and in upper-level apparel business management. The opportunities are many and the employment possibilities varied.

Click the appropriate link below to view the corresponding Area of Emphasis (AOE) Requirements and Suggested Plans of Study.

- Fashion Design (p. 136)
- Fashion Merchandising (p. 137)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

Maintain a 2.25 overall GPA.

GEF Requirements 2, 5, and 7		10
ANRD 191	First-Year Seminar	1
ENGL 101	Introduction to Composition and Rhetoric (GEF 1)	3
ENGL 102	Composition, Rhetoric, and Research (GEF 1)	3
MATH 124	Algebra with Applications (or higher - GEF 3; Minimum grade of C-)	3
ARHS 101	Landmarks of World Art (GEF 6)	3
or ARHS 120	Survey of Art History 1	
ARHS 160	Survey of Art History 2	3
SOCA 101	Introduction to Sociology (GEF 8)	3
PSYC 101	Introduction to Psychology (GEF 8)	3

Major Requirements

Fashion, Dress & Merchandising Core Courses:

A minimum grade of C- is required in all FDM courses

FDM 110	Introduction to Fashion Business	3
FDM 130	Design Concepts of Dress	3
FDM 211	Introduction to Textiles	3
FDM 220	Fashion, the Body, and Culture	3
FDM 221	Dress History: 1850-Present	3
FDM 360	Fashion Merchandising	3
FDM 411	Fashion Consumer Behavior	3
FDM 491	Professional Field Experience	6

Business Requirements

ADV 215	Principles of Advertising	3
ENGL 304	Business and Professional Writing (fulfills Writing and Communication Skills requirement)	3
Required Emphasis Area (Fashion Design or Merchandising)		27

Capstone Experience

FDM 435	Product Development	3
Electives (used to reach minimum of 120 required for degree)		22

Total Hours		117
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ELECTIVE PRACTICUM

The practicum is an elective, 3-credit course for all FDM students, and is designed to allow students to gain experience and apply their coursework in a professional setting. It is offered through WVU in the summer term only. The practicum is 6-weeks long and is completed during one summer session; students register and pay for 3-credit-hours.

Site Selection: It is up to each student to select and secure his or her own practicum site using all available resources. It is wise to interview at more than one practicum site in order to locate the best possible position. Prior site approval by the practicum course instructor is required. The site must specialize in some aspect of the fashion industry. Students must select a site that will be different from their internship site in order to enhance their competitiveness.

Procedure: Students take the practicum after completing the required prerequisites successfully. An application and approval form, signed contract, and resume are required for registration. All paperwork needs to be complete and submitted by the deadlines or the student will be deleted from the course roster. Prior to embarking on this work experience, all students must participate in the mandatory orientation session(s) which is held at the end of spring semester prior to the practicum.

INTERNSHIP REQUIREMENT

The internship is a required capstone course for all students in the FDM program. It is offered through WVU during the summer term only. All FDM students are required to have a 6-credit-hour internship. This experience is a minimum of eight weeks long and spans both summer terms. All FDM students must register and pay for the credits at the beginning of the summer term and complete the internship during the summer term.

Site Selection: It is up to each student to select and secure his or her own internship site using all available resources including the development of networking contacts. These can be made through the Fashion Business Association, study tour, the WVU Career Services Center, and FDM internship instructors. Students should be prepared to interview when recruiters come to campus during the academic year. It is wise to interview with more than

one internship site in order to locate the best possible position that will lead to an enhancement of career goals. Approval of the site ahead of time by the internship course instructor is required for all proposed sites. The site must specialize in some aspect of fashion merchandising or apparel design.

Procedure: Students may take the internship after completing the required prerequisites successfully. An application and approval form, signed contract, and resume are required for registration. This paperwork needs to be complete and submitted by the summer deadlines or the intern will be deleted from the course roster. Prior to embarking on the internship, all students must participate in the mandatory orientation session(s). The summer orientation session is held at the end of spring semester prior to the internship.

FASHION DESIGN AREA OF EMPHASIS

Fashion Design Emphasis Requirements

FDM 135	Fashion Illustration and Tech Design 1	3
FDM 250	Apparel Design Studio 1	3
FDM 330	Fashion Illustration & Tech Design II	3
FDM 350	Apparel Design Studio 3	3
FDM 393	Special Topics (Apparel Design Studio II)	3
FDM 430	Senior Studio	3
FDM 495	Independent Study	1
Restricted Electives		6
FDM 260	Visual Merchandising	
FDM 361	Merchandise Planning and Control	
FDM 412	Fashion Sourcing and Supply Chain Management	
FDM 421	Dress History: Prehistory-1850	
FDM 422	Fashion Theory	
FDM 460	Sustainability in Fashion	
FDM 461	Omni-Channel Fashion Retailing	
FDM 490	Teaching Practicum	
Study Abroad: Disegno Italia		
THET 105	Costuming	
THET 219	Intermediate Costume Construction	
THET 425	Advanced Costume Construction	

Total Hours

25

SUGGESTED PLAN OF STUDY FOR FASHION DESIGN AREA OF EMPHASIS

Students may enter the FDM program as first-semester freshmen. Enrollment in the required first-year FDM courses is not limited. The following courses have open enrollment and should be taken by all students the first year in the major: FDM 110 and FDM 130. FDM courses are to be taken in sequence. Therefore, it is important that students follow the Suggested Plan of Study that follows. Selected outside courses must be completed prior to enrolling in certain FDM courses.

First Year

Fall	Hours	Spring	Hours
ANRD 191		1 FDM 130	3
FDM 110		3 FDM 230	
GEF 2		4 MATH 124 (GEF 3)	3
ENGL 101 (GEF 1)		3 GEF 5	3
GEF 7		3 ENGL 102 (GEF 1)	3
		14	12

Second Year

Fall	Hours	Spring	Hours
FDM 211		3 FDM 250	3
FDM 220		3 FDM 221	3
FDM 135		3 ENGL 304	3
ADV 215		3 PSYC 101 (GEF 8)	3

SOCA 101 (GEF 8)		3 ARHS 101 or 120 (GEF 6)		3	
		15		15	
Third Year					
Fall	Hours	Spring	Hours	Summer	Hours
FDM 330		3 FDM 350		3 FDM 491	6
FDM 393 (Apparel Design Studio 2)		3 FDM 411		3	
FDM 360		3 CSAD 270 (GEF 4)		3	
ARHS 160 (GEF 8)		3 Restricted Elective		3	
Restricted Elective		3 Elective		3	
		15		15	6
Fourth Year					
Fall	Hours	Spring	Hours		
FDM 430		3 FDM 435		3	
FDM 495		1 Electives		9	
Electives		9			
		13		12	

Total credit hours: 117

FASHION MERCHANDISING AREA OF EMPHASIS

Merchandising Emphasis Requirements

FDM 361	Merchandise Planning and Control	3
FDM 412 or FDM 460	Fashion Sourcing and Supply Chain Management Sustainability in Fashion	3
FDM 461	Omni-Channel Fashion Retailing	3
FDM 471	Fashion Promotion	3
Student must select a minor in consultation with their Faculty Advisor		15
Total Hours		27

SUGGESTED PLAN OF STUDY FOR FASHION MERCHANDISING AREA OF EMPHASIS

Students may enter the FDM program as first-semester freshmen. Enrollment in the required first-year FDM courses is not limited. The following courses have open enrollment and should be taken by all students the first year in the major: FDM 110, FDM 130, FDM 140. FDM courses are to be taken in sequence. Therefore, it is important that students follow the Suggested Plan of Study that follows. Selected outside courses must be completed prior to enrolling in certain FDM courses.

First Year

Fall	Hours	Spring	Hours
ANRD 191		1 FDM 130	3
FDM 110		3 GEF 5	3
GEF 2		4 MATH 124 (GEF 3)	3
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
GEF 7		3 ARHS 101 or 120 (GEF 6)	3
		14	15

Second Year

Fall	Hours	Spring	Hours
FDM 211		3 FDM 221	3
FDM 220		3 ENGL 304	3
ADV 215		3 PSYC 101 (GEF 8)	3
SOCA 101 (GEF 8)		3 Minor Course	3
Minor Course		3 Electives	3
		15	15

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
FDM 360		3 FDM 361		3 FDM 491	6
ARHS 160 (GEF 8)		3 FDM 411		3	
CSAD 270 (GEF 4)		3 Minor Course		3	
Minor Course		3 Electives		6	
Elective		3			
		15			6
					15

Fourth Year

Fall	Hours	Spring	Hours
FDM 412		3 FDM 435	3
FDM 461		3 FDM 471	3
Minor Course		3 Electives	7
Elective		3	
		12	13

Total credit hours: 120

Major Learning Outcomes**FASHION, DRESS AND MERCHANDISING**

Fashion, Dress and Merchandising programs vision is to develop creative, knowledgeable, and effective professionals who are able to contribute to organizations in the global textile and apparel complex and to society, and who are able to continue to grow personally and professionally following graduation. Upon graduation from the FDM program at WVU, students will be able to demonstrate the following knowledge and skills:

1. INDUSTRY PROCESSES, including the ability to:

- Understand and apply knowledge about the roles and functions of various industry sectors in which products are developed, produced, marketed, sold, and consumed, including construction, sourcing, manufacturing, marketing, and merchandising processes.
- Identify and interpret needs and wants of consumers and how industry processes are applied to plan, develop, produce, communicate, and sell profitable product lines.
- Evaluate product quality, serviceability, and regulatory compliance standards.
- Use industry terminology in appropriate ways.
- Understand social, economic, and political boundaries as they relate to the diffusion of products, services, and ideas.

2. APPEARANCE AND HUMAN BEHAVIOR, including the ability to:

- Apply theories, concepts, and research regarding appearance and human behavior to industry and societal problems.
- Understand and apply knowledge about the role of dress as it reflects and shapes intra and inter-cultural interactions.
- Understand and apply knowledge about the interrelationships among historical, sociocultural, and psychological factors of dress and their impact on human behavior, including the effects of life stages, change across time, and culture.

3. AESTHETICS AND THE DESIGN PROCESS, including the ability to:

- Understand and apply knowledge about aesthetics and the design process in relation to dress and appearance management.
- Use the design process to create products that meet marketplace needs.
- Understand how aesthetics and the design process can support quality of life, social responsibility, and sustainability
- Relate the elements and principles of design to product development, use, and evaluation.
- Understand the role of historical, socio-cultural, and psychological factors in aesthetic expression.

4. GLOBAL INTERDEPENDENCE, including the ability to:

- Understand how dynamic and diverse political, cultural, and economic systems impact industry processes.
- Understand how theoretical perspectives on markets, trade, and economic development can be applied to historical and current data on production, consumption, and disposal of products.

5. ETHICS, SOCIAL RESPONSIBILITY, AND SUSTAINABILITY, including the ability to:

- Identify and evaluate issues of social responsibility, professional behavior, and ethics related to the impact of individual, organizational, and corporate decision making.
- Analyze and evaluate issues related to environmental sustainability and environmental impact as they relate to industry activities and processes.

6. CRITICAL AND CREATIVE THINKING, including the ability to:

- Demonstrate critical and creative thinking skills, including the ability to critically evaluate and compare diverse perspectives.
- Identify and understand social, cultural, economic, technological, ethical, political, educational, language, and individual influences on industry issues.
- Apply quantitative and qualitative skills to problem solving within the textile and apparel complex.
- Use appropriate technology to facilitate critical, creative, quantitative, and qualitative thinking within the textile and apparel complex.

7. PROFESSIONAL DEVELOPMENT, including the ability to:

- Communicate ideas in written, oral, and visual forms using appropriate technology.
- Function as team members and leaders within professional and culturally diverse environments.
- Demonstrate the ability to critique oneself and others constructively.
- Apply career planning concepts and job search strategies to the diverse industry opportunities.

These competencies are incorporated across the FDM program curriculum. Students are introduced to these learning goals incrementally as they progress from entry-level courses to and including the capstone internship.

PROGRAM REQUIREMENTS

The following minimum requirements are set to ensure that students who graduate from the program will have the appropriate skill level and knowledge to succeed in this competitive field.

Students must meet the following requirements in order to continue in the program beyond the first year:

1. Maintain a 2.25 overall GPA.
2. All FDM students must earn a C- or above in all FDM courses and MATH 124.
3. Any student who has an overall GPA below 2.25 will be notified of the deficiency and will not be permitted to enroll in FDM courses.
4. Students who have not been permitted to enroll in FDM courses because of a low GPA may enroll in FDM courses after meeting the 2.25 minimum overall GPA, space permitting.
5. Any student who has earned a grade of D+ or lower in any of the FDM courses will be notified of the problem and will not be permitted to enroll in the next sequence of FDM courses.
6. Students who have not been permitted to enroll in the next sequence of FDM courses because of receiving a grade of D+ or lower for one of the required FDM courses may correct the problem by repeating the course(s) the next time it is offered, space permitting, and earning a C- or above. Please note that most FDM courses are offered only once per academic year.

Interior Design, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

Interior designers create architectural interiors that improve inhabitants' quality of life and protect the health, safety, and welfare of the public. The interior design program at West Virginia University prepares students for entry-level interior design practice and meets the education requirement for National Council for Interior Design Qualifications (NCIDQ) certification (<https://www.cidq.org/eligibility-requirements/>). (https://www.cidq.org/eligibility-requirements/) NCIDQ certification is the basic credential required by most states that license interior design professionals. In addition to an educational requirement, NCIDQ certification requires the completion of two years in a professional internship as an interior designer and passing the NCIDQ examination.

The interior design program offers the Bachelor of Science (BS) degree and is accredited by the National Association of Schools of Art and Design (NASAD).

Career Opportunities

Recent alumni of the program are employed by interior design and architecture firms and work in the hospitality, education, healthcare, and real estate sectors, while others have pursued graduate degrees in fields including architecture, historic preservation and sustainability studies. Some have followed paths in design publishing, product sales, social media, and entrepreneurship, to name a few.

According to the United States Department of Labor (*Occupational Outlook Handbook*), the 2018 median pay for interior designers was approximately \$53,370 per year. Employment for interior designers is expected to rise 4% between 2018 and 2028.

Program Opportunities

In addition to study abroad and/or internships, students have opportunities to enroll in courses associated with interior design's allied programs and faculty within the School of Design and Community Development. Courses in product design, sustainability, design studies, and global economies are regularly offered, and a minor in Sustainable Design (http://catalog.wvu.edu/undergraduate/minors/sustainable_design/) is available. Other common minors include Landscape Studies (http://catalog.wvu.edu/undergraduate/minors/landscape_studies/), Entrepreneurial Studies (<http://catalog.wvu.edu/undergraduate/minors/entrepreneurship/>), Event Planning (<http://catalog.wvu.edu/undergraduate/minors/eventplanning/>), Marketing (<http://catalog.wvu.edu/undergraduate/minors/marketing/>), and Strategic Social Media (<http://catalog.wvu.edu/undergraduate/minors/strategicsocialmedia/>).

The interior design program has an active student chapter of the American Society of Interior Designers (ASID), and all interior design majors are encouraged to join its ranks and maintain membership throughout their studies.

ADMINISTRATION

PROGRAM COORDINATOR

- Lee Mullett, Asst. Professor - M.S. Agr, Nat. Res. & Design
ismullett@mail.wvu.edu

FACULTY

ASSOCIATE PROFESSOR

- Ron Dulaney, Jr. - M.Arch (Virginia Tech)
<https://www.davis.wvu.edu/faculty-staff/directory/ron-dulaney-jr>

ASSISTANT PROFESSORS

- Lee Mullett - M.S. Agr, Nat. Res. & Design (WVU)
<https://www.davis.wvu.edu/faculty-staff/directory/lee-mullett>
- Billy Plyler - PhD, Human and Comm. Dev. (WVU)
<https://www.davis.wvu.edu/faculty-staff/directory/billy-plyler>

Admissions

The interior design program at WVU is a competitive access major with required sequential studio course offerings and elective courses in interior design. Three (3) qualifying courses are offered during the first year of study, These are:

- ID 105 Introduction to Interior Architecture (Fall Semester)
- ID 115 Introduction to Architectural Design & Graphics (Fall Semester)
- ID 165 Architecture & Design Foundations (Spring Semester)

To continue in the major beyond the first year, students must successfully complete all three courses with a grade of C- or better. Additionally, in order to become eligible for selection to continue in the second year, a cumulative grade point average (GPA) of 2.67 must be earned in the first-year qualifying courses.

If more than twenty students apply to move forward into the second year, only the top twenty students will be allowed to continue in the major. The top twenty students will be determined based upon:

- Cumulative GPA ranking in the first year qualifying courses
- Performance in the Gateway Project conducted at the end of the first year
- Overall GPA
- A Faculty Interview, if requested by the faculty(Fall Semester)

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Interior Design (<https://admissions.wvu.edu/academics/majors/interior-design/>) major.

Click here to view the Suggested Plan of Study (p. 142)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

Minimum GPA of 2.67 in all ID courses is required

Minimum grade of C- in all ID courses is required

GEF Requirements

GEF 1 (ENGL 101 and ENGL 102; OR ENGL 103)		6
DSGN 340	Design for Energy Efficiency (partially satisfies GEF 2A)	3
GEF 2A		3
GEF 3		3
GEF 5		3
ARHS 120 & ARHS 160	Survey of Art History 1 and Survey of Art History 2 (GEF 6 & partially satisfies GEF 8)	6
Foreign Language (6 credits in the same language - GEF 7 & partially satisfies G8)		6
GEF 8 (3 additional credits from GEF 2-7 categories)		3

University Requirements

ANRD 191	First-Year Seminar	1
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Major Requirements

ID 105	Introduction to Interior Architecture	3
ID 115	Introduction to Architectural Design and Graphics	4
ID 165	Architecture and Design Foundations	4
ID 205	Introduction to Architectural Building Technologies	3
ID 215	Architectural Interior Design and Graphics 1	6
ID 250	History of the Architectural Interior 1	3
ID 265	Architectural Interior Design and Graphics 2	6
ID 280	History of the Architectural Interior 2	3
ID 305	Architectural Interior Building Systems and Construction	3
ID 310	Interior Finishes, Furnishings, and Fixtures	3
ID 315	Advanced Architectural Interior Design 1	4
ID 316	Advanced Architectural Graphics 1	2
ID 335	Light & Color in Architectural Interiors	3
ID 365	Advanced Architectural Interior Design 2	4
ID 366	Advanced Architectural Graphics 2	2

ID 400	Interior Design Internship (120 work hours; OR 3 week Study Abroad Experience)	3
ID 415	Advanced Architectural Interior Design 3	6
ID 425	Professional Practices in Architectural Interior Design	3
ID 465	Advanced Architectural Interior Design 4	6
Electives (Number of electives may vary based on GEF and other courses selected; students must earn 120 credits to graduate)		12
Total Hours		117

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ID 105		3 ID 165	4
ID 115		4 ARHS 160 (partially satisfies GEF 8)	3
ARHS 120 (GEF 6)		3 ENGL 101 (GEF 1)	3
ANRD 191		1 GEF	3
GEF		3 GEF	3
		14	16

Second Year

Fall	Hours	Spring	Hours
ID 215		6 ID 265	6
ID 250		3 ID 205	3
ENGL 102 (partially satisfies GEF 1)		3 ID 280	3
Foreign Language (GEF 7)		3 Foreign Language (partially satisfies GEF 8)	3
		15	15

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
ID 315		4 ID 365		4 ID 400 (120 hours; OR 3 week Study Abroad Experience)	3
ID 316		2 ID 366			2
ID 335		3 ID 425			3
ID 305		3 ID 310			3
DSGN 340 (partially satisfies GEF 2A)		3 CSAD 270 (GEF 4)			3
		15		15	3

Fourth Year

Fall	Hours	Spring	Hours
ID 415		6 ID 465	6
GEF		3 Free Electives	6
Free Electives		6	
		15	12

Total credit hours: 120

Major Learning Outcomes

INTERIOR DESIGN

Interior designers create architectural interiors that improve inhabitants' quality of life and protect the health, safety, and welfare of the public. Upon graduation from the interior design program at WVU, students will be able to demonstrate entry-level professional competencies that include:

- applying the elements and principles of design to the analysis and development of architectural interiors;
- understanding relationships between architecture, architectural interiors, interior artifacts, and the human condition – through historical, theoretical, social, and scientific lenses;
- utilizing hand and computer drawing and modeling technologies, techniques and conventions in the study, visualization, and presentation of architectural interiors;
- selecting and integrating appropriate building materials and construction assemblies; building systems; finishes, furnishings & equipment (FFE); and codes during the design of architectural interiors;
- understanding professional and ethical responsibilities, opportunities, and constraints associated with interior design practices.

These competencies are introduced in both design studio and lecture courses and are developed and expanded incrementally along the curriculum. The holistic integration and synthesis of these competencies in the design of architectural interiors are centered in design studio courses which are rigorous laboratories and typically have a high number of contact/meeting hours in relation to credit hours.

Maintaining Good Standing

In order to remain in the program, interior design students are required to maintain at least a 2.67 GPA in ID courses. Students' GPAs will be monitored each semester. Any student who has an ID GPA below 2.67 will be notified of the deficiency and will have one semester to raise their ID GPA to 2.67 or above. Students who do not raise their ID GPA to 2.67 or above after one semester may not be permitted to enroll again in interior design courses.

All interior design students are required to earn at least a C- in all ID courses.

All studio courses are to be taken sequentially. Any student who has earned a grade of D+ or lower in any of the interior design studio courses will be notified of the problem and will not be permitted to enroll in their next ID studio course until the course in which a D+ or lower was earned is repeated and completed with a grade of C- or higher. Interior design studio courses are: ID 115, ID 165, ID 215, ID 265, ID 315, ID 365, ID 415, and ID 465. Any student who earns a grade of D+ or lower in ID 465 must retake it and earn a C- or higher in order to graduate with a major in Interior Design.

Typically, only one section of each interior design course is offered annually. Therefore, repeating a studio course adds one year to the student's college career.

Computer Expectation Policy

All students are expected to have, upon the first day of the ID 115 course (typically in the fall of 1st year), a computer that meets the interior design program's hardware and software specifications. These specifications are updated annually for incoming 1st year students and published by the beginning of May. Please consult the Interior Design webpage <https://designcomm.wvu.edu/undergraduate/majors/interior-design> (<https://designcomm.wvu.edu/undergraduate/majors/interior-design/>) for a full copy of the current policy.

Internships and Studying Abroad

Graduation from the interior design program requires 3 credits (ID 401) through an approved summer three-week study abroad through a WVU authorized program or 3 credits (ID 400) through an approved summer internship of at least 120 hours. These credits should be taken in the summer after the 3rd year.

Landscape Architecture, B.S.L.A.

Degree Offered

- Bachelor of Science in Landscape Architecture

Nature of the Program

Landscape architecture is the art of design, planning, and arranging natural and man-made elements on the land. It applies cultural and scientific knowledge with concern for the conservation and stewardship of natural and aesthetic amenities to create an environment that serves a useful and enjoyable purpose. This involves consideration of the quality of life in urban and natural settings, as well as the interaction of humans with nature. The landscape architecture program at West Virginia University strives to equip students with techniques and skills through problem-solving in design theory, site construction, land use planning, and planting design. It emphasizes a philosophy of responsibility and commitment to ethical standards regarding the natural environment, personal relationships, and professional practice.

The faculty represents a multi-disciplinary team with practical experience in creative and scientific research, design, consultation, and public service. This diversity is the nucleus of the program, allowing for a strong undergraduate curriculum supplemented by related courses in the arts, sciences, engineering, and planning, reflecting the needs of the Appalachian region and current trends within the profession.

Graduates of the program can assume traditional landscape architectural roles, e.g., positions with design consulting firms, governmental planning departments, construction firms, transportation planning agencies, etc. In addition, WVU graduates are prepared for design and planning positions meeting the needs common to West Virginia and other rural areas.

The landscape architecture program is fully accredited by the Landscape Architecture Accreditation Board of the American Society of Landscape Architects. To graduate students must complete a minimum of 120 total credits. Students will typically complete more than the 120 total credit minimum.

Click here to view the Suggested Plan of Study (p. 145)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

In addition to the following curriculum requirements, students will be required to work at least one summer in an approved landscape architecture office or equivalent. Student will be required to earn a grade of C- or better in all of their Landscape Architecture/Horticulture Courses.

Timely completion of required MATH courses are critical for advancement in this program of study.

GEF Requirements (4, 5, 7, and 8)		18
ENGL 101 & ENGL 102	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1)	6
Select one of the following (GEF 2):		4
PLSC 206	Principles of Plant Science	
BIOL 101 & BIOL 103	General Biology and General Biology Laboratory	
BIOL 105 & BIOL 106	Environmental Biology and Environmental Biology Laboratory	
Select one of the following or higher (GEF 3):		3
MATH 124	Algebra with Applications	
MATH 126	College Algebra	
MATH 129	Pre-Calculus Mathematics	
MATH 150	Applied Calculus	
LARC 212	History of Landscape Architecture (GEF 6)	3
University Requirements		
ANRD 191	First-Year Seminar	1
Capstone Course		
LARC 451	Advanced Landscape Architectural Design 2	5
Major Requirements		
LARC 105	Introduction to Landscape Architecture, Environmental Design and Planning	3
LARC 120	Landscape Architectural Drawing	3

LARC 121	Landscape Architectural Graphics	3
LARC 223	Computer Graphics in Landscape Architecture	3
LARC 224	Digital Design Graphics for Landscape Architecture	2
LARC 231	Landscape Construction Materials and Methods	3
LARC 250	Theory of Landscape Architectural Design	3
LARC 251	Landscape Architectural Design	3
LARC 261	Planting Design	3
LARC 330	Landscape Architectural Construction 1	4
LARC 331	Advanced Grading & Stormwater	4
LARC 350	Landscape Architectural Design 2	4
LARC 351	Landscape Architectural Design 3	4
LARC 360	Natural Systems Design	4
LARC 450	Advanced Landscape Architectural Design 1	5
LARC 452	Contemporary Issues in Landscape Architecture	2
LARC 484	Professional Practice	3
HORT 260	Woody Plant Materials	3
RESM 440	Foundations of Applied Geographic Information Systems	3
Select one of the following:		3
LARC 465	Regional Design	
LARC 466	Introduction to Urban Design Issues	
Electives		15
Total Hours		120

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
LARC 105		3 ENGL 101 (GEF 1)	3
LARC 120		3 LARC 121	3
LARC 223		3 LARC 224	2
ANRD 191		1 GEF 4, 5, 7, or 8	6
Select one of the following (GEF 2):		4	
BIOL 101 & BIOL 103			
BIOL 105 & BIOL 106			
PLSC 206			
Select one of the following or higher (GEF 3):		3	
MATH 124			
MATH 126			
MATH 129			
MATH 150			
		17	14

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 LARC 212 (GEF 6)	3
HORT 260		3 LARC 231	3
LARC 250		3 LARC 251	3
GEF 4, 5, 7, or 8		6 LARC 261	3
		RESM 440	3
		15	15

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
LARC 330		4 LARC 331		4 Summer Professional Experience	
LARC 350		4 LARC 351		4	
LARC 360		4 LARC 484		3	
GEF 4, 5, 7, or 8		3 GEF 4, 5, 7, or 8		3	
		Elective		3	
		15			17
					0

Fourth Year

Fall	Hours	Spring	Hours
LARC 450		5 LARC 451	5
LARC 452		2 Elective	7
LARC 465 or 466		3	
Elective		5	
		15	12

Total credit hours: 120

Major Learning Outcomes**LANDSCAPE ARCHITECTURE**

Graduates of the Program will complete coursework and an internship(s) providing the knowledge and skills in environmental design problem solving, design theory, site construction, land use planning, community development, and ecological design to enter into and thrive in the profession of Landscape Architecture.

Graduates of the program are prepared to assume traditional landscape architectural roles, e.g., positions with design consulting firms, governmental design and planning departments, construction firms, transportation planning agencies, etc. To accomplish this goal graduates will:

1. Demonstrate a working knowledge of the core skills and techniques of landscape architecture including; graphic communication – both hand graphics and computer based, environmental analysis, design development methods and processes, and site engineering and design implementation.
2. Demonstrate knowledge in allied fields such as plant ecology, community design, environmental restoration, and urban design that are critical adjuncts to the practice of landscape architecture.
3. Develop and present project results through graphic, written, and oral presentations.
4. Have the problem solving / critical thinking skills necessary for focused professional development, as well as for broader social development and life-long learning and community participation and engagement.

School of Natural Resources

Robert C. Burns, Division Director of Forestry and Natural Resources
email: robert.burns@mail.wvu.edu (Robert.Burns@mail.wvu.edu)

Alan R. Collins, Division Director of Resource Economics and Management
email: alan.collins@mail.wvu.edu (gdsouza@mail.wvu.edu)

Programs of Study

The School of Natural Resources is home to programs in Agribusiness Management; Energy Land Management; Environmental and Energy Resources Management; Environmental and Natural Resources Economics; Forest Resources Management; Recreation, Parks, and Tourism Resources; Wildlife and Fisheries Resources; and Wood Science and Technology. As a student in this school you may pursue a degree that enables you to begin a career in agribusiness management; arboriculture and urban forestry; conservation ecology; environmental and resource economics; fisheries biology; forest management; forest products industry; land management; natural resources (including energy) management; outdoor recreation, and wildlife biology. Students are also well-prepared for graduate study in these or allied fields.

Courses that you will take in the School depend on a student's particular program. A primary mission of the School of Natural Resources is to further the understanding, stewardship, and sustainable use of renewable natural resources by educating students to become knowledgeable professionals and citizens, advancing and communicating research knowledge, and providing technical information and professional service to society. Students completing a Bachelor of Science degree in the School of Natural Resources fulfill broad general education foundation requirements, Bachelor of

Science degree requirements, and a study of at least one discipline in depth. The School of Natural Resources strives to spark a passion in our students for the principles of stewardship and sustainability of our renewable natural resources by:

- offering students the education to assume leadership roles
- advancing research knowledge
- providing technical information and professional service to society

Accreditation

The B.S.F. in Forest Resources Management and B.S. in Recreation, Parks, and Tourism Resources are accredited by the Society of American Foresters. The Wildlife and Fisheries Resources curriculum requires the coursework needed for professional certification by The American Fisheries Society (Fisheries emphasis) or The Wildlife Society (Wildlife emphasis) under 2014 guidelines. The Wood Science and Technology program is accredited by the Society of Wood Science and Technology. The Energy Land Management program is one of twelve programs in North America accredited by the American Association of Professional Landmen.

FACULTY

DIVISION DIRECTORS

- Robert C. Burns (Director, Division of Forestry and Natural Resources) - Ph.D. (The Pennsylvania State University)
- Alan R. Collins (Director, Division of Resource Economics and Management) - Ph.D. (Oregon State University)

PROFESSORS

- James T. Anderson - Ph.D. (Texas Tech University)
Wildlife ecology and management
- Robert C. Burns - Ph.D. (The Pennsylvania State University)
Understanding recreational behavior, motivations, and satisfaction levels
- Alan R. Collins - Ph.D. (Oregon State University)
Resource economics
- Ben Dawson-Andoh - Ph.D. (University of British Columbia)
Wood microbiology and chemistry
- John W. Edwards - Ph.D. (Clemson University)
Wildlife ecology and management
- Kyle J. Hartman - Ph.D. (University of Maryland)
Aquatic ecology, Fish management
- David W. McGill - Ph.D. (The Pennsylvania State University)
Woodland owner outreach, forest regeneration
- Joseph F. McNeel - Ph.D. (Virginia Tech)
Forest harvest and operations
- J. Todd Petty - Ph.D. (University of Georgia)
Stream and river ecology, watershed assessment and restoration
- Chad Pierskala - Ph.D. (University of Minnesota)
Public resource land management and agricultural tourism
- 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, Berkeley)
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)
Ecotourism

- Levan Elbakidze - Ph.D. (Texas A&M University)
Shale gas; water and energy economics
- Xiaoli Etienne - Ph.D. (University of Illinois)
Econometric methods in agriculture and energy
- Kathryn Arano Gazal - Ph.D. (Mississippi State University)
Forest economics and policy
- Jamie Shuler - 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. (West Virginia University)
Agribusiness and entrepreneurship; Extension
- 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)
Watershed and forest hydrology

ASSISTANT PROFESSORS

- 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
- Shawn Grushecky - Ph.D. (West Virginia University)
Energy land management
- Christopher Lituma - Ph.D. (University of Tennessee)
Ornithology and bird ecology
- Suhyun Jung - Ph.D. (University of Minnesota)
Environmental and natural resource economics
- Gloria Oporto - Ph.D. (University of Maine)
Biomaterials
- Christopher Rota - Ph.D. (University of Missouri)
Applied vertebrate ecology
- Ana Claudia Sant' Anna - Ph.D. (Kansas State University)
Agribusiness and finance
- Heather Stephens - Ph.D. (Ohio State University)
Resource, energy and regional economics

VISITING ASSISTANT PROFESSORS

- Charlene Kelly - Ph.D. (Virginia Tech)
Watershed biogeochemistry
- Kirsten Stephan - Ph.D. (University of Idaho)
Soil and vegetation management

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

Agribusiness Management, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

The goal of this major is to provide students with a breadth of knowledge that will prepare them for entry-level management positions or starting their own enterprise in a variety of rural, land-based, agricultural and/or food-related businesses. Students with this major can expect to find employment in: agribusiness (including nursery and landscaping) firms or farms; financial institutions; or state and federal government agencies dealing with land use, food and agriculture. Employment in these areas requires the essential components of this major: a broad educational background combined with knowledge of managing natural resource-based businesses. By selecting appropriate coursework in consultation with their advisor, the flexibility of this major provides students with the opportunity to create their own area of expertise or follow course tracks for entrepreneurship, equine management, food science and technology, horticulture, or livestock, as well as to pursue coursework in preparation for graduate school.

Click here to view the Suggested Plan of Study (p. 150)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum Requirements

Minimum GPA of 2.0 is required for this major

GEF Requirements 1, 2, 5, 6, 7, & 8		25
ANRD 191	First-Year Seminar	1
Required Courses		
AGEE 110 or CS 101	Microcomputer Applications in Agricultural Education Intro to Computer Applications	3
ARE 110	Agribusiness Accounting	3
ARE 150 or ECON 201	Introductory Agricultural and Agribusiness Economics (GEF 4) Principles of Microeconomics	3
ARE 204	Agribusiness Management	3
ARE 360	Current Issues In Agriculture (fulfills Writing and Communication Skills requirement)	3
ARE 382	Agricultural and Natural Resources Law	3

ARE 422	New Venture Creation	3
ARE 431	Marketing Agricultural Products	3
ARE 461	Agribusiness Finance	3
ARE 482	Enterprise Operation Law	3
ARE 484	Agribusiness Strategic Management	3
ARE 488	Career Development	1
ECON 202	Principles of Macroeconomics (GEF 8)	3
Capstone Experience:		3
ARE 491	Professional Field Experience	
or ARE 496	Senior Thesis	
STAT 111	Understanding Statistics (GEF 3)	3

Restricted Electives**30**

The restricted electives must be selected in consultation with the advisor, include at least four courses from the Davis College, and selected from the list below:

Upper-division (300-400 level) courses from the following subjects: ADV, AGBI, AGEE, ARE, AGRN, ANNU, ANPH, ANPR, A&VS, AEM, BIOL, COMM, DSGN, ECON, ENLM, ENTO, ENTR, ENVP, FIN, FDST, FMAN, FOR, GEOG, GEOL, HORT, HN&F, LARC, LDR, PLSC, POLS, PSYC, PR, RPTR, RESM, SOCA, WMAN, WGST, and WDSC.

STAT at 200-level or higher.

AGEE 220	Group Organization and Leadership
AGRN 202 & AGRN 203	Principles of Soil Science and Principles of Soil Science Laboratory
ARE 220	Introductory Environmental and Resource Economics
ANNU 260	Animal Nutrition
A&VS 251	Principles of Animal Science
A&VS 281	Introduction to Equine Care and Use
DSGN 280	Sustainable Design and Development
FDST 200	Food Science and Technology
HORT 220	General Horticulture
MATH 150	Applied Calculus
PLSC 206	Principles of Plant Science
POLS 210	Law and the Legal System

Free Electives to reach minimum 120 credits for degree (number of electives may vary)

21

Total Hours

120

Suggested Plan of Study**First Year**

Fall	Hours	Spring	Hours
ARE 150 (GEF 4)		3 STAT 111 (GEF 3)	3
ENGL 101 (GEF 1)		3 AGEE 110 or CS 101	3
GEF 5, 6, or 7		3 GEF 5, 6, or 7	3
GEF 2		4 GEF 5, 6, or 7	3
ANRD 191		1 Free Elective	3
		14	15

Second Year

Fall	Hours	Spring	Hours
ARE 110		3 ECON 202 (GEF 8)	3
ARE 204		3 Restricted Elective	3
ENGL 102 (GEF 1)		3 Restricted Elective	3
Restricted Elective		3 Free Elective	3
Free Elective		3 GEF 8	3
		15	15

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
ARE 360		3 ARE 431		3 ARE 491	3
ARE 382		3 ARE 461		3	
ARE 488		1 ARE 482		3	
Restricted Elective		3 Restricted Elective		3	
Restricted Elective		3 Free Elective		4	
GEF 8		3			
		16			3

Fourth Year

Fall	Hours	Spring	Hours
ARE 422		3 ARE 484	3
Restricted Elective		3 Restricted Elective	3
Restricted Elective		3 Restricted Elective	3
Free Elective		4 Free Elective	4
		13	13

Total credit hours: 120

Major Learning Outcomes**AGRIBUSINESS MANAGEMENT**

After completing this major students will be able to:

1. Demonstrate an understanding of major concepts in accounting, management, marketing, finance, and business law.
2. Utilize relevant software for analysis in business applications.
3. Demonstrate critical thinking skills and problem solving abilities related to agribusiness management.
4. Communicate effectively in a business or professional setting (written and oral).
5. Work cooperatively within a business or professional setting.

Energy Land Management, B.S.**Degree Offered**

- Bachelor of Science

Nature of the Program

This major focuses on energy land management and how it relates to energy development with an emphasis on the management, coordination, and development of surface and mineral interests. This program provides a strong foundation in the key aspects of energy land management and produces trained professionals that are critically needed in the energy and regulatory sectors. Upon completion of this program, students will understand how energy lands are managed and associated energy resources can be developed and used for maximum social, economic, and environmentally responsible benefit. Students will develop a detailed knowledge related to the identification and leasing of mineral estates; be proficient in drilling site development, transportation planning, pipeline development, and route planning; will have a thorough knowledge of post-processing planning and infrastructure development; and comprehend the ethical, regulatory, and environmental framework in which they must operate.

Click here to view the Suggested Plan of Study (p. 153)

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**

ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing
---------------------------------------	---

3-6

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.

Curriculum Requirements

GEF 1, 4, 5, 6, 7, & 8	21
Energy Land Track	15
ANRD 191	First-Year Seminar
GEOL 101 & GEOL 102	Planet Earth and Planet Earth Laboratory (GEF 2B)
GEOL 103 & GEOL 104	Earth Through Time and Earth Through Time Laboratory (GEF 8)
STAT 201 or STAT 211	Applied Statistical Modeling (GEF 8) Elementary Statistical Inference
MATH 124	Algebra with Applications (GEF 3)
Geology	3
GEOL 472	Energy Geology
Policy	3
Select one of the following:	
FOR 421	Renewable Resources Policy and Governance
FOR 438	Human Dimensions Natural Resource Management
ARE 450	Agriculture, Environmental and Resource Policy
Computer	3
CS 101 or FOR 240	Intro to Computer Applications Introduction to Computing in Natural Resources
Natural Resource Management	18
Select six from the following:	
AGRN 455	Reclamation of Disturbed Soils
ARE 220	Introductory Environmental and Resource Economics
ARE 360	Current Issues In Agriculture
ARE 382	Agricultural and Natural Resources Law
ARE 410	Environmental and Resource Economics
ENVP 460	Environmental Impact Assessment
FHYD 444	Watershed Management
FMAN 212	Forest Ecology
FOR 140	West Virginia's Natural Resources
FOR 326	Remote Sensing of Environment
RESM 480	Environmental Regulation
WDSC 422	Harvesting Forest Products
WDSC 444	Bio-based Energy Systems
WMAN 150	Principles of Conservation Ecology
WMAN 200	Restoration Ecology
ARE 201	Principles of Resource and Energy
WMAN 160	Ecology of Invading Species
ENVP 155	Elements of Environmental Protection

ENLM 415 Midstream Energy Planning and Development

Business Perspective 15

Select one of the following minors:

Agribusiness Management

General Business

Or select five of the following:

ECON 200 Survey of Economics

ACCT 200 Survey of Accounting

BCOR 320 Legal Environment of Business

BCOR 330 Information Systems and Technology

BCOR 340 Principles of Finance

BCOR 360 Supply Chain Management

BCOR 370 Managing Individuals & Teams

BCOR 380 Business Ethics

ARE 110 Agribusiness Accounting

ARE 482 Enterprise Operation Law

ARE 204 Agribusiness Management

ARE 431 Marketing Agricultural Products

ARE 461 Agribusiness Finance

Energy Land Management

ENLM 150 Introduction to Energy Land Management 3

ENLM 200 Principles of Energy Land Management 3

ENLM 220 Energy Production & Operations 3

ENLM 300 Ethics and Negotiations for Energy Land Managers 3

ENLM 390 Land and Lease Analysis 3

ENLM 400 Energy Land Management Contracts 1 3

ENLM 420 Energy Land Management Contracts 2 3

ENLM 442 GIS Skills for Energy Land Management 3

ENLM 450 Energy Land Management Strategic Planning (Capstone Experience and fulfills Writing and Communication Skills requirement) 3

ENLM 491 Professional Field Experience 3

Electives (may vary depending on GEF overlap) 12

Total Hours 120

SUGGESTED PLAN OF STUDY**First Year**

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 GEOL 103 & GEOL 104 (GEF 8)	4
MATH 124 (GEF 3)		3 ENLM 150	3
GEOL 101 & GEOL 102 (GEF 2B)		4 Elective	3
ANRD 191		1 GEF 5	3
GEF 8		3 GEF 6	3
		14	16

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 Natural Resource Management 1	3
ENLM 200		3 FOR 240	3
STAT 201 or 211 (GEF 8)		3 Elective	3
Business Choice		3 ENLM 390	3

ENLM 220		3 GEF 7		3	
		15		15	
Third Year					
Fall	Hours	Spring	Hours	Summer	Hours
Natural Resource Management 2		3 ENLM 400		3 ENLM 491	3
ENLM 300		3 Natural Resource Management 3		3	
ENLM 442		3 GEOL 472		3	
Business Choice		3 Business Choice		3	
GEF 4		3 Elective		3	
		15		15	3
Fourth Year					
Fall	Hours	Spring	Hours		
Natural Resource Management 4		3 Business Choice		3	
Natural Resource Management 5		3 ENLM 450		3	
Policy		3 Elective		3	
ENLM 420		3 Natural Resource Management 6		3	
Business Choice		3			
		15		12	

Total credit hours: 120

Major Learning Outcomes

ENERGY LAND MANAGEMENT

This new B.S. degree program and major will provide undergraduate students a knowledge-based framework that will develop skillsets essential to a successful career in Energy Land Management. Upon graduation from this degree program and major, students will be able to:

- Effectively communicate with stakeholders, peers, and other professionals in both written and oral forms.
- Design operational plans that integrate industry and public stakeholder goals as to minimize impacts of energy development on local environments and create a positive community relationship
- Evaluate the types of interests in energy resource ownership including explaining the differences between mineral and surface estates, as well as the ability to interpret mineral and surface deeds
- Demonstrate professional knowledge and be able to negotiate the key elements of energy-related leases and operating agreements under accepted standards of practice
- Develop budgets and financial projections associated with energy development and the economics related to multiple energy production systems

Environmental and Energy Resources Management, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

The objective of this major is to examine the interdisciplinary relationships involved in the business of energy production and utilization along with associated environmental management, regulatory and policy issues. This major will provide a strong foundation for students interested in pursuing a career in the growing energy and environmental sectors of the economy, whether in private business, government, consulting, or for entrepreneurial ventures of their own design. The program emphasizes the core components of both business and STEM (science, technology, engineering and math) learning in its curriculum.

[Click here to view the Suggested Plan of Study \(p. 157\)](#)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

General Requirements

ENGL 101 & ENGL 102	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1)	6
MATH 150	Applied Calculus (GEF 3)	3
ARE 150 or ECON 201	Introductory Agricultural and Agribusiness Economics (GEF 4) Principles of Microeconomics	3
GEF 5, 6, 7		9
ANRD 191	First-Year Seminar	1

Major Requirements

ARE 187	Energy Resource Economics (GEF 8)	3
ARE 201	Principles of Resource and Energy	3
ARE 382	Agricultural and Natural Resources Law	3
ARE 488	Career Development	1
ARE 491	Professional Field Experience (Capstone Experience)	3

Select one of the following (GEF 8):

ECON 225 or STAT 211	Elementary Business and Economics Statistics Elementary Statistical Inference	
ECON 202	Principles of Macroeconomics (GEF 8)	3
RESM 440	Foundations of Applied Geographic Information Systems	3
RESM 480	Environmental Regulation	3

Lab Science Requirement 12

Select 12 credits from the following:

AGRN 202 & AGRN 203	Principles of Soil Science and Principles of Soil Science Laboratory	
BIOL 101 & BIOL 103	General Biology and General Biology Laboratory	
CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 - Laboratory	
GEOL 101 & GEOL 102	Planet Earth and Planet Earth Laboratory	

GEOL 103 & GEOL 104	Earth Through Time and Earth Through Time Laboratory
PHYS 101	Introductory Physics 1
PLSC 206	Principles of Plant Science
Restricted Electives*	36
Energy. Choose 12 credits. Six credits must be at the 400 level.	
ARE 440	Futures Markets and Commodity Prices
ARE 445	Energy Economics
ARE 485	Economics of Water Resources and Energy
DSGN 340	Design for Energy Efficiency
DSGN 470	Leadership in Energy and Environmental Design Green Building Systems
ENGR 310	Energy Engineering
GEOL 472	Energy Geology
RESM 450	Land Use Planning Law
RESM 460	Energy Project and Program Management
WDSC 444	Bio-based Energy Systems
Environment. Choose 12 credits. Six credits must be at the 400 level.	
AGRN 455 or ENVP 455	Reclamation of Disturbed Soils Reclamation of Disturbed Soils
ARE 485	Economics of Water Resources and Energy
ENVP 355	Environmental Sampling and Analysis
ENVP 415	Hazardous Waste Training
ENVP 460	Environmental Impact Assessment
GEOG 205	Climate and Sustainability
GEOG 207	Climate and Environment
GEOG 415	Global Environmental Change
RESM 444	Advanced GIS for Natural Resource Management
WMAN 200	Restoration Ecology
Economics and Entrepreneurship. Choose 12 credits. Six credits must be at the 400 level.	
AGEE 421	Agricultural and Natural Resource Communications
ARE 204	Agribusiness Management
ARE 220	Introductory Environmental and Resource Economics
ARE 380	Agribusiness Sales and Management
ARE 401 or ECON 301	Applied Demand Analysis Intermediate Micro-Economic Theory
ARE 410	Environmental and Resource Economics (fulfills Writing and Communication skills requirement)
ARE 422	New Venture Creation
ARE 431	Marketing Agricultural Products
ARE 445	Energy Economics
ARE 450	Agriculture, Environmental and Resource Policy
ARE 461	Agribusiness Finance
ARE 482	Enterprise Operation Law
ARE 484	Agribusiness Strategic Management
ECON 302	Intermediate Macro-Economic Theory
Free Electives to reach minimum 120 credits for degree (number of electives may vary)	25
Total Hours	120

* Selected and approved in consultation with advisor. Must include at least four courses from each of the four restricted elective categories: Economics, Energy, Entrepreneurship, and Environment.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ANRD 191		1 ARE 187 (GEF 8)	3
ARE 150 (GEF 4)		3 GEOL 101 & GEOL 102	4
ARE 201		3 MATH 150 (GEF 3)	3
ENGL 101 (GEF 1)		3 GEF 5, 6, or 7	3
BIOL 101 & BIOL 103 (GEF 2B)		4 Free Elective	3
		14	16

Second Year

Fall	Hours	Spring	Hours
ARE 204 (Entrepreneurship/ Economics)		3 AGRN 202 & AGRN 203	4
ENGL 102 (GEF 1)		3 ECON 202 (GEF 8)	3
GEOG 205 (Environment)		3 STAT 211 (GEF 8)	3
GEF 5, 6, or 7		3 GEF 5, 6, or 7	3
Free Elective		3 Free Electives	3
		15	16

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
ARE 220 (Entrepreneurship/ Economics)		3 ARE 482 (Economics and Entrepreneurship)		3 ARE 491	3
ARE 488		1 ENVP 415 (Environment)			3
ENGR 310 (Energy)		3 RESM 450 (Energy)			3
RESM 440		3 RESM 480			3
Free Elective		3 Free Elective			3
		13		15	3

Fourth Year

Fall	Hours	Spring	Hours
ARE 382		3 AGRN 455 (Environment)	3
DSGN 340 (Energy)		3 ARE 431 (Entrepreneurship/ Economics)	3
GEOG 207 (Environment)		3 RESM 460 (Energy)	3
Free Electives		6 Free Electives	4
		15	13

Total credit hours: 120

Major Learning Outcomes

ENVIRONMENTAL AND ENERGY RESOURCE MANAGEMENT

After completing this major students will be able to:

1. Demonstrate an understanding of major concepts in energy and environmental resource economics, legal issues related to natural resource and environmental management, and enterprise creation and demonstrate critical thinking skills and problem solving abilities related to these areas.
2. Utilize relevant software for data analysis in energy and environmental applications and general business settings.

3. Communicate effectively in a business or professional setting (written and oral).
4. Work cooperatively within a business or professional setting.

Environmental and Natural Resource Economics, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

The objective of this major is to provide students with the necessary training for the application of economic theory and analysis to environmental and natural resource issues. The flexibility of this major allows students to design (with their advisor) a program of study which focuses on environmental and natural resource issues tailored to the student's own interests (such as water use and quality, soil protection, waste management, ecosystem management, and land use). The curriculum reflects the breadth of training required to prepare students for careers in private and government sectors dealing with environmental and natural resource management and policy analysis.

Students with this major can expect to find employment with state and federal government agencies or with private industry in environmental policy analysis and management of natural resources. Many students, upon completion of this degree, may find it desirable to obtain a graduate degree to expand their career opportunities. Students completing this degree will be prepared for graduate study in environmental and natural resource economics and policy.

Click here to view the Suggested Plan of Study (p. 159)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

GEF Requirements		29
*Must include two 4 credit courses each with a laboratory.		
ANRD 191	First-Year Seminar	1
AGEE 110 or CS 101	Microcomputer Applications in Agricultural Education Intro to Computer Applications	3-4
ARE 150 or ECON 201	Introductory Agricultural and Agribusiness Economics (GEF 4) Principles of Microeconomics	3
ARE 187	Energy Resource Economics (GEF 8)	3
ARE 220	Introductory Environmental and Resource Economics	3
ARE 382	Agricultural and Natural Resources Law	3

ARE 410	Environmental and Resource Economics (Counts as Writing Course Requirement)	3
ARE 445	Energy Economics	3
ARE 450	Agriculture, Environmental and Resource Policy	3
ARE 488	Career Development	1
ARE 496	Senior Thesis (Capstone Experience) *	3
ECON 202	Principles of Macroeconomics	3
ECON 225	Elementary Business and Economics Statistics (or equivalent)	3
ECON 301	Intermediate Micro-Economic Theory	3
ECON 302	Intermediate Macro-Economic Theory	3
ECON 421	Introduction to Mathematical Economics	3
ECON 425	Introductory Econometrics	3
Calculus Requirement:		3
MATH 150	Applied Calculus	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 155	Calculus 1	
RESM 440	Foundations of Applied Geographic Information Systems	3
RESM 480	Environmental Regulation	3
Restricted Electives (selected in consultation): **		22
AGRN 202	Principles of Soil Science	
AGRN 203	Principles of Soil Science Laboratory	
Student must select either an approved minor or at least four courses at the 300 or 400 level in AGRN, ARE, ECON, ENVP, FMAN, or FOR.		
Free Electives		13
Total Hours		120

* Consult with Undergraduate Coordinator for approval of Capstone Experience (Senior Thesis).

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ANRD 191		1 ARE 150 (GEF 4)	3
ENGL 101 (GEF 1)		3 CS 101	4
MATH 124 (GEF 3)		3 ENVP 155 (Suggested Restricted Elective - GEF 8)	3
GEF 2 (Science with Lab)		4 ECON 225	3
GEF 5, 6, or 7		3 MATH 150	3
		14	16

Second Year

Fall	Hours	Spring	Hours
ARE 187		3 AGRN 202 & AGRN 203 (Suggested Restricted Elective)	4
ARE 220		3 ECON 202	3
ENGL 102 (GEF 1)		3 GEF 5, 6, 7	3
GEF 8 (Science with Lab)		4 Free Elective	3
GEF 5, 6, or 7		3 Free Elective	3
		16	16

Third Year

Fall	Hours	Spring	Hours
ARE 382		3 ARE 440 (Suggested Restricted Elective)	3
ARE 488		1 ARE 445	3
ECON 301		3 ECON 302	3
RESM 440		3 RESM 480	3
Restricted Elective		3 Free Elective	3

Free Elective		3		
		16		15
Fourth Year				
Fall	Hours	Spring		Hours
ARE 496		1 ARE 410		3
ECON 421		3 ARE 450		3
ENVP 355 (Suggested Restricted Elective)		3 ARE 496		2
Restricted Elective		3 ECON 425		3
Free Elective		3 Free Elective		3
		13		14

Total credit hours: 120

Major Learning Outcomes

ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS

After completing this major students will be able to:

1. Apply the tools of economic analyses to environmental issues.
2. Demonstrate how to apply economic theory to the management of renewable and non-renewable natural resources.
3. Articulate the laws and regulations related to environmental protection, energy use, and management of natural resources.
4. Demonstrate the utilization of quantitative analysis tools.
5. Communicate effectively in a business or professional setting (written and oral).

Forest Resources Management, B.S.F.

Degree Offered

- Bachelor of Science in Forestry

Nature of the Program

This curriculum is designed to prepare graduates for a career in the management of forests and associated natural resources. In forestry, we face growing demands for wood products along with increasing public consciousness of the value of wild lands for recreation, wildlife habitat, watershed protection, aesthetics, and environmental protection. Our curriculum is designed to provide a balanced but business-centered approach to forest management. The major emphasis is on management and utilization of timber resources, but we also orient students to management of forests for recreation, wildlife, and water. We also stress the importance of forest ecology, environmental protection, and aesthetic qualities in forest management. Students can elect to add an Area of Emphasis in Arboriculture & Urban Forestry as part of the FRM major.

Curriculum Structure

We are accredited by the Society of American Foresters and require the completion of 120 credit hours of coursework. Required courses include biological, physical, and social sciences, English composition, communication, mathematics, forest science and management, and liberal studies. We require a five-week summer field practice; this period, along with laboratories in several of many of our courses, provides ample opportunity to gain field experience. Overall, we have designed the curriculum to provide the needed blend of scientific, technical, and managerial knowledge professionals need to manage public or private forest resources. Elective hours are used to develop additional professional competence in specialized areas. Once students meet the two-year experience requirement, they are qualified to be a registered forester in the state of West Virginia. Students can also pursue the Area of Emphasis in Arboriculture & Urban Forestry or minors in Recreation, Conservation Ecology, or Wood Science among the many minors available throughout the University.

Career Opportunities

Our graduates find a variety of career opportunities. Many are professional foresters with governmental agencies, such as the U.S.D.A. Forest Service and state forestry services, and many others are employed by private wood industries such as lumber and wood products companies and pulp and paper companies. Many of our graduates work in private forestry consulting or have chosen a career in urban forestry or as arborist with national or local tree care companies. Other employment opportunities include careers in utility vegetation management as well as natural resources managers for oil and gas companies in the Appalachian region. In addition, a significant number of our students go on to graduate school, studying a wide range of scientific and technical specializations to prepare them for research, teaching, or advanced managerial careers.

As a graduate professional forester, you could expect to do field work such as estimating the volume and value of areas of timberland, planning and supervising timber harvesting operations, and doing forest protection work including fire, insect, and disease control. Managerial work would

include planning timber crop rotations; evaluating the economics of alternative forest management plans; and planning for integration of forest land for recreation, timber, watershed, wildlife, and environmental protection. With experience and proven performance in these activities, professional foresters often advance to executive management positions in public forestry agencies or forest products industries. Field work for an arborist includes: climbing and pruning trees, installation and plant health care, pest diagnosis and treatment, tree risk assessment, and tree protection during construction activity.

Click here to view the Suggested Plan of Study (p. 163)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

The Writing and Communications Skills requirement in the FRM curriculum is fulfilled through the different major courses that FRM students are required to take, as well as in FRM elective courses. Most of these FMAN courses (e.g., FMAN 212, FMAN 222, FMAN 311, FMAN 320, FMAN 330, FMAN 423, FMAN 433, FMAN 434) have significant writing components where students are required to prepare full technical reports like laboratory reports, management plan write-ups, and other writing assignments. Most of these writing requirements provide a feedback mechanism to students' writing (e.g., reports are corrected then given back to students for revisions). In addition to addressing the writing skills of students, some of these courses also require students to deliver oral presentations, particularly in the capstone course (FMAN 434).

Major in Forest Resources Management Requirements

A minimum GPA of 2.0 is required for all Forest Resources Management major courses.

Any required FOR, FMAN, or FHYD course must be completed with a final grade of C- or better.

Some major requirements will fulfill specific GEF requirements. Please see curriculum requirements listed below for details on which additional GEF you will need to select.

ANRD 191	First-Year Seminar	1
ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	6
Choose from one of the following:		4
BIOL 101 & BIOL 103	General Biology and General Biology Laboratory	
BIOL 115 & 115	Principles of Biology and Principles of Biology	
Choose from one of the following:		4
CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 - Laboratory	
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory	

ECON 201	Principles of Microeconomics	3
MATH 124	Algebra with Applications	3
MATH 150	Applied Calculus	3
STAT 211	Elementary Statistical Inference	3
COMM 104	Public Communication	3
AGRN 202	Principles of Soil Science	3
AGRN 203	Principles of Soil Science Laboratory	1
Choose from one of the following:		4
ENTO 470	Forest Pest Management	
PPTH 470	Forest Pest Management	
FHYD 444	Watershed Management	3
FMAN 212	Forest Ecology	3
FMAN 222	Forest Mensuration	4
FMAN 311	Silvicultural Systems	4
FMAN 330	Principles of Forestry Economics	4
FMAN 400	Forest Resources Management Field Practice	6
FMAN 433	Forest Management	3
FMAN 434	Forest Resources Management Planning (Capstone Experience)	3
FOR 205	Dendrology	3
FOR 206	Winter Dendrology	1
Choose from one of the following:		3
FOR 240	Introduction to Computing in Natural Resources	
CS 101	Intro to Computer Applications	
FOR 326	Remote Sensing of Environment	3
FOR 421	Renewable Resources Policy and Governance	3
FOR 438	Human Dimensions Natural Resource Management	3
PLSC 206	Principles of Plant Science	4
WDSC 223	Wood Anatomy and Structure	3
WDSC 232	Wood Grading and Procurement	3
WDSC 422	Harvesting Forest Products	3
WMAN 234	Forest Wildlife Management	3
Restricted Electives		14
FMAN 315	Survey of Arboriculture	
FMAN 251	Forest Fire Protection	
FMAN 320	Arboriculture and Urban Trees	
FMAN 322	Advanced Forest Measurements	
FMAN 413	Regional Silviculture	
FMAN 423	Urban Forest Management	
FMAN 440	Forestry Consulting	
FMAN 450	Forest Valuation and Investment	
FMAN 490	Teaching Practicum	
FMAN 491	Professional Field Experience	
FMAN 496	Senior Thesis	
FOR 140	West Virginia's Natural Resources (also fulfills GEF 8 requirement)	
FOR 340	Natural Resource Entrepreneurship	
FOR 424	Vegetation of West Virginia	
FOR 425	Global Forest Resources	
FOR 426	Global Forest Resources Practicum	
FOR 470	Problems in Forestry, Wood Science, Wildlife, or Recreation	
FOR 491	Professional Field Experience	
FOR 495	Independent Study	

GEF 6 and 7	6
Total Hours	120

* ENGL 101 and 102 will fulfill 6 credits of GEF 1 requirement. Choosing ENGL 103 will also fulfill 3 credits of GEF 1 requirement. If ENGL 103 is chosen, the student must also choose another 3 credits of ENGL writing course to fulfill the 6 credits ENGL requirements for the FRM curriculum.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 PLSC 206	4
Choose one of the following (GEF 2):		4 MATH 150 (GEF 8)	3
BIOL 101 & BIOL 103		FOR 240 or CS 101	3
BIOL 115 & BIOL 116		FRM Elective	3
Choose one of the following (GEF 8):		4 GEF 6	3
CHEM 111 & 111L			
CHEM 115 & 115L			
ANRD 191		1	
MATH 124 (GEF 3)		3	
		15	16

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 FMAN 222	4
FOR 205		3 ECON 201 (GEF 4)	3
STAT 211 (GEF 8)		3 WMAN 234	3
FMAN 212		3 FOR 326	3
GEF 7		3 FRM Elective	3
		15	16

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
FMAN 311		4 FMAN 330		4 FMAN 400	6
WDSC 223		3 AGRN 202			3
FOR 438		3 AGRN 203			1
FRM Elective		3 WDSC 232			3
		FOR 206			1
		FRM Elective			3
		13		15	6

Fourth Year

Fall	Hours	Spring	Hours
FMAN 433		3 ENTO 470 or PPTH 470	4
FOR 421		3 FMAN 434	3
WDSC 422		3 COMM 104 (GEF 5)	3
FHYD 444		3 FRM Elective	2
		12	12

Total credit hours: 120

ARBORICULTURE & URBAN FORESTRY AREA OF EMPHASIS

All courses that count toward this area of emphasis must be completed with a minimum grade of C-.

Minimum GPA of 2.0 as required by the Forest Resource Management major.

Required Courses

FMAN 320	Arboriculture and Urban Trees	3
FMAN 423	Urban Forest Management	3
FMAN 491	Professional Field Experience	3

Restricted Electives - select one

AGRN 315	Turfgrass Management	3
AGRN 410	Soil Fertility	
ARE 110	Agribusiness Accounting	
ARE 204	Agribusiness Management	
FMAN 315	Survey of Arboriculture	
FMAN 440	Forestry Consulting	
HORT 260	Woody Plant Materials	
HORT 330	Plant Propagation	
PPTH 401	General Plant Pathology	
WDSC 341	Wood Mechanics	

Total Hours

12

Major Learning Outcomes

FOREST RESOURCES MANAGEMENT

Students graduating from the Forest Resources Program should be able to:

Knowledge

- Describe, identify, and quantify forest ecosystem resources across different parts of the central Appalachian region and different biomes.

Comprehension

- Describe the assemblages of flora and fauna across the landscape and identify patterns and potential impacts of management and restoration activities as they relate to freshwater ecosystem services (water quality, quantity, habitat), soils, and ecological principles.
- Explain ecological processes, including the effects of human impacts, as they pertain to the sustainable forest management.

Application

- Develop and evaluate forest management alternatives based on knowledge from forest mensuration, silviculture, forest ecology, forest economics, forest hydrology and soils, and forest policy.
- Quantify forest resources and predict future growth using growth and yield models.

Synthesis

- Develop a forest management plan for forest landowners.
- Prepare and present forest management plan recommendations through technical writing and oral presentation.

Recreation, Parks, and Tourism, B.S.R.

Degree Offered

- Bachelor of Science in Recreation

Nature of the Program

The recreation, parks, and tourism resources major prepares students for careers providing outdoor recreation and tourism opportunities for a wide range of public, commercial, and non-profit agencies. This is a natural resource management degree program, emphasizing the ecological, economic, social, and psychological aspects of managing outdoor recreation and tourism resources. A required core of natural resource-based recreation and tourism management courses is complemented by forestry and natural resource management emphasis courses and other required University courses.

Visit the recreation, parks, and tourism resources (<https://forestry.wvu.edu/undergraduate/majors/recreation-parks-and-tourism/>) major page for more information or e-mail the program coordinator at: David.Smaldone@mail.wvu.edu. Come visit our Recreation, Parks, and Tourism Resources office in the Division of Forestry and Natural Resources, 325 Percival Hall, P.O. Box 6125, West Virginia University, Morgantown, WV 26506-6125.

Professional Preparation and Areas of Emphasis

The professional preparation program in Recreation, Parks, and Tourism Resources is grounded in the RPTR core required courses and capped with a professional internship program, usually during the summer following the student's junior year. Students are encouraged to develop focused emphasis areas in specialties such as park and outdoor recreation, adventure recreation, or sustainable tourism through careful selection of focused electives. RPTR majors are also urged to seek both volunteer and paid seasonal employment and service learning opportunities in the recreation, parks, and tourism field to enhance their employability when graduating. Finally, RPTR majors are mentored into becoming active in professional societies and associations such as the student-led Professional Recreation and Park Society, Society of American Foresters, and National Recreation and Park Association, and they are encouraged to earn professional certification in areas such as sustainable tourism, leadership, and wilderness first responder.

Click here to view the Suggested Plan of Study (p. 167)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

Recreation, Parks, and Tourism Requirements

ANRD 191	First-Year Seminar	1
ENGL 101 & ENGL 102 or ENGL 103 & ENGL 305	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1) Accelerated Academic Writing and Technical Writing	6
MATH 124	Algebra with Applications (or higher: GEF 3)	3
STAT 211	Elementary Statistical Inference (GEF 8)	3
Select one of the following (GEF 2):		4
BIOL 101 & BIOL 103	General Biology and General Biology Laboratory	
BIOL 102 & BIOL 104	General Biology and General Biology Laboratory	
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	
Select one of the following (GEF 8):		4
BIOL 105 & BIOL 106	Environmental Biology and Environmental Biology Laboratory	

CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 - Laboratory	
WDSC 100	Forest Resources in United States History (GEF 5)	3
PSYC 101	Introduction to Psychology (GEF 4)	3
GEF 6		3
Natural Resource Management Requirements		
WMAN 150	Principles of Conservation Ecology (GEF 7)	3
FOR 140	West Virginia's Natural Resources (GEF 8)	3
FOR 240	Introduction to Computing in Natural Resources	3
FOR 421	Renewable Resources Policy and Governance	3
FOR 438	Human Dimensions Natural Resource Management	3
FOR 205 or FOR 424	Dendrology Vegetation of West Virginia	3
Choose 1 of the following:		3
FOR 340	Natural Resource Entrepreneurship	
ARE 220	Introductory Environmental and Resource Economics	
Any BUSA course		
AGEE 421	Agricultural and Natural Resource Communications †	3
FMAN 212	Forest Ecology	3
FOR 310	Elements of Silviculture	3
Select one of the following:		3
RPTR 249	GIS in Recreation and Tourism	
RESM 440	Foundations of Applied Geographic Information Systems	
Select 1 of the following:		3
COMM 100 & COMM 102	Principles of Human Communication and Fundamentals of Interpersonal Communication	
COMM 104	Public Communication	
WVUE 270	Effective Public Speaking	
RPTR Core Requirements		
RPTR 142	Introduction to Recreation, Parks and Tourism *	2
RPTR 145	Recreation Services for Special Populations	3
RPTR 148	Wilderness First Responder	3
RPTR 239	Sustainable Tourism Development *	3
RPTR 242	Environmental and Cultural Interpretation * †	3
RPTR 335	Management in Recreation, Parks and Tourism Organizations *	3
RPTR 433	Recreation Resource Management	3
RPTR 450	Social Research Methods in Natural Resource Management	3
RPTR 485	Professional Development Seminar (Capstone Experience) *	1
RPTR 491	Professional Field Experience	6
Area of Emphasis (1 Area Required)		12
Focused Electives		12
Total Hours		120

* At the end of the junior year, after completing the above required RPTR courses (noted with the *), students must complete an approved 400-hour internship of not less than eight weeks with a recreation, parks, or tourism agency. Most recreation internships occur during the summer months.

† AGEE 421 and RPTR 242 fulfill the Writing and Communication Skills requirement.

SUGGESTED PLAN OF STUDY**First Year**

Fall	Hours	Spring	Hours		
ENGL 101 (GEF 1)		3 WMAN 150 (GEF 7)		3	
BIOL 101 & BIOL 103 (GEF 2)		4 PSYC 101 (GEF 4)		3	
RPTR 142		2 WDSC 100 (GEF 5)		3	
FOR 140 (GEF 8)		3 RPTR 242		3	
MATH 124 (or higher: GEF 3)		3 ENGL 102 (GEF 1)		3	
ANRD 191		1			
		16		15	

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
Select one of the following (GEF 8):		4 FOR 240		3 RPTR 148	3
BIOL 105 & BIOL 106		STAT 211 (GEF 8)		3	
CHEM 111 & 111L		WVUE 270		3	
FOR 205		3 RPTR Emphasis Course		3	
RPTR 239		3 RPTR 145		3	
FOR 340		3			
		13		15	3

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
FMAN 212		3 GEF 6		3 RPTR 491	6
RPTR 335		3 RPTR 485		1	
RPTR 433		3 Focused Elective		3	
RPTR Emphasis Course		3 RPTR Emphasis Course		3	
GIS Class		3 RPTR 450		3	
		15		13	6

Fourth Year

Fall	Hours	Spring	Hours		
FOR 310		3 RPTR Emphasis Elective		3	
FOR 421		3 AGEE 421		3	
FOR 438		3 Focused electives		3	
Focused electives		3 Focused electives		3	
		12		12	

Total credit hours: 120

ADVENTURE RECREATION AREA OF EMPHASIS REQUIREMENTS

RPTR 251	Leadership in Experiential Education	3
RPTR 150	Backcountry Living Skills	3
RPTR 325	Challenge Course Facilitation	3
or RPTR 326	Canopy Tour Facilitation	
RPTR 200-400 Level Elective		3
(Additional Electives are chosen after consultation with your advisor.)		
Total Hours		12

PARK AND OUTDOOR RECREATION AREA OF EMPHASIS REQUIREMENTS

RPTR 251	Leadership in Experiential Education	3
RPTR 365	Planning and Design in Recreation, Parks and Tourism	3
FMAN 423	Urban Forest Management	3
RPTR 200-400 Level Electives		3
(Additional Electives are chosen after consultation with your advisor.)		
Total Hours		12

SUSTAINABLE TOURISM AREA OF EMPHASIS REQUIREMENTS

BUSA 330	Survey of Marketing	3
GEOG 425	Urban and Regional Planning	3
or GEOG 209	Economic Geography	
or ARE 411	Rural Economic Development	
RPTR 472	Tourism System and Destination Management	3
RPTR 200-400 Level Elective		3
(Additional Electives are chosen after consultation with your advisor.)		
Total Hours		12

Major Learning Outcomes**RECREATION, PARKS, AND TOURISM**

Students graduating from the RPTR program shall be able to:

1. 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. Design and conduct field relevant research to address natural resource based recreation and tourism questions and problems (or design and execute a project).
3. Analyze and interpret research data that addresses natural resource based recreation and tourism questions and problems (or projects).
4. Communicate effectively in writing and oral presentations to professional and lay audiences about issues in the RPTR field.
5. Remain current with contemporary issues within one's field and related areas.

Wildlife and Fisheries Resources, B.S.**Degree Offered**

- Bachelor of Science

Nature of the Program

The wildlife and fisheries resources curriculum prepares students for professional positions as wildlife and fish biologists, natural resources conservation officers, wildlife and fisheries managers and planners, wildlife or fisheries communication specialists, wildlife and fisheries toxicologists, and environmental consultants. The program is unique in the region as our graduates are fully trained in both the wildlife and fisheries fields. The curriculum provides a solid basic background in biology, ecology, and natural resource management. Students fulfilling this program will select a concentration in wildlife or fisheries (or both) to meet the requirements for professional certification as either a wildlife biologist (certified through The Wildlife Society) or fisheries biologist (certified through The American Fisheries Society). A careful selection of restricted electives enables students to specialize in related natural resource areas and to have the opportunity for widening employment in other environmental fields. Other options can be tailored to your objectives. Students will be able to consult with their advisor in the selection of courses from a group of restricted electives to develop their area of emphasis.

Special Opportunities

Students will have special opportunities to enhance their education in the WVU Wildlife and Fisheries Resources Program. The Program has student chapters of The American Fisheries Society, The Wildlife Society, and the Society for Conservation Biology. Student participation in these organizations leads to opportunities for further field experience with state and federal agency biologists, graduate students, and faculty. A USGS Fish and Wildlife Cooperative Research Unit is also housed within our program. This unit provides three additional faculty members conducting extensive research programs all around the country. In addition, the WVDNR provides a liaison biologist to the Unit that provides a direct link from students to the state's natural resources agency. Undergraduates benefit from the personnel at the Unit in several ways: the Unit and liaison provide federal and state contacts

for employment opportunities; the Unit research programs may provide summer employment on fish and wildlife projects, and faculty in the Unit also teach in our program.

All of our faculty are involved with graduate training. This active research program provides invaluable classroom experiences as faculty remain up-to-date with all the latest studies and methods in the field. Students also benefit through volunteer experiences and summer employment opportunities for students working on research projects.

In the Wildlife and Fisheries Resources Program, you will be advised by caring faculty members who understand what it will take to be successful in this field. All students are required to take a Professional Experience course (internship) as part of the curriculum, but we encourage students to get as much additional experience working with professionals throughout their time in the program. The curriculum also includes a capstone class that allows students to showcase their learning through management plans and research projects.

Career opportunities in wildlife and fisheries are expanding. Even so, we encourage our students to consider going for advanced degrees when they finish here. Such qualified seniors find that assistantships are readily available due to the solid course background, training, and experience they received while here at WVU.

Click here to view the Suggested Plan of Study (p. 170)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

A minimum of C- must be obtained in all courses required for the major.

Core Requirements

ANRD 191	First-Year Seminar	1
ENGL 101	Introduction to Composition and Rhetoric	3
ENGL 102	Composition, Rhetoric, and Research	3
Select one of the following sets:		8
BIOL 101 & BIOL 103	General Biology and General Biology Laboratory	
BIOL 102 & BIOL 104	General Biology and General Biology Laboratory	
OR		
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	
BIOL 117 & BIOL 118	Introductory Physiology and Introductory Physiology Laboratory	
Select one of the following:		4

CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 - Laboratory				
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory				
MATH 124	Algebra with Applications (GEF 3)				3
STAT 211	Elementary Statistical Inference				3
WVUE 270	Effective Public Speaking				3
WMAN 100	The Tradition of Hunting				3
WMAN 150	Principles of Conservation Ecology				3
WMAN 175	Introduction to Wildlife and Fisheries				3
WMAN 205	Wildlife-Fisheries Camp				3
WMAN 224	Vertebrate Natural History				3
WMAN 234	Forest Wildlife Management				3
WMAN 300	Wildlife and Fisheries Techniques (fulfills Writing and Communication skills requirement)				4
WMAN 313	Wildlife Ecosystem Ecology				4
WMAN 330	Conservation Genetics				3
WMAN 421	Renewable Resources Policy and Governance				3
Select one of the following:					3
WMAN 425	Mammalogy				
WMAN 426	Ornithology				
BIOL 433	Herpetology				
WMAN 445	Introduction to Fisheries Management				3
WMAN 446	Freshwater Ecology				4
WMAN 450	Advanced Wildlife and Fisheries Management (Capstone; fulfills Writing and Communication skills requirement)				4
WMAN 491	Professional Field Experience				3
AGRN 202	Principles of Soil Science				3
AGRN 203	Principles of Soil Science Laboratory				1
FOR 205	Dendrology				3
Select one of the following:					3
FOR 240	Introduction to Computing in Natural Resources				
CS 101	Intro to Computer Applications				
RESM 440	Foundations of Applied Geographic Information Systems				3
Policy & Administration--select one of the following:					3
ARE 382	Agricultural and Natural Resources Law				
ARE 450	Agriculture, Environmental and Resource Policy				
ENVP 460	Environmental Impact Assessment				
FOR 438	Human Dimensions Natural Resource Management				
POLS 338	Environmental Policy				
RESM 450	Land Use Planning Law				
RESM 480	Environmental Regulation				
GEF 6					3
Select 1 Required Area of Emphasis					24
Notes:					
** An additional English writing based course will be needed for certification requirements if ENGL 103 is taken.					
Total Hours					120

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours	Summer	Hours
ANRD 191		1 WMAN 150 (GEF 7)		3 WMAN 205	3
ENGL 101 (GEF 1)		3 Select one of the following:		4	

WMAN 100 (GEF 5)	3	BIOL 102 & BIOL 104			
WMAN 175 (GEF 8)	3	BIOL 117 & BIOL 118			
Select one of the following (GEF 2):	4	GEF 6 requirement		3	
BIOL 101 & BIOL 103		Area of Emphasis Course		3	
BIOL 115 & BIOL 106					
MATH 124 (GEF 3)	3				
	17			13	3

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
Select one of the following (GEF 8):		4 ENGL 102 (GEF 1)		3 WMAN 491	2
CHEM 111 & 111L		FOR 240		3	
CHEM 115 & 115L		WVUE 270 (GEF 4)		3	
FOR 205		3 WMAN 234		3	
STAT 211 (GEF 8)		3 AGRN 202		3	
WMAN 224		3 AGRN 203		1	
		13		16	2

Third Year

Fall	Hours	Spring	Hours		
WMAN 300		4 WMAN 313		4	
WMAN 421		3 WMAN 330		3	
WMAN 491		1 Select one of the following:		3	
FOR 310 (or other Area of Emphasis Course)		3 BIOL 433			
Area of Emphasis Course		3 WMAN 425			
		WMAN 426			
		Area of Emphasis Course		3	
		14		13	

Fourth Year

Fall	Hours	Spring	Hours		
WMAN 445		3 WMAN 446		4	
RESM 440		3 WMAN 450		4	
Policy & Administration Course		3 Area of Emphasis Course		3	
Area of Emphasis Course		3 Area of Emphasis Course		3	
Area of Emphasis Course		3			
		15		14	

Total credit hours: 120

FISHERIES SCIENCES AREA OF EMPHASIS REQUIREMENTS

*A minimum of C- must be obtained in all courses required for the area of emphasis.

Physical Sciences: select two of the following:

CHEM 112 & 112L	Survey of Chemistry 2 and Survey of Chemistry 2 - Laboratory	
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	
CHEM 231 & 231L	Organic Chemistry: Brief Course and Organic Chemistry: Brief Course - Laboratory	
CHEM 233 & CHEM 235	Organic Chemistry and Organic Chemistry Laboratory	
GEOL 101 & GEOL 102	Planet Earth and Planet Earth Laboratory	
GEOL 203	Physical Oceanography	
GEOL 321	Geomorphology	
PHYS 101	Introductory Physics 1	
AGRN 225	Advanced Soil Judging	
AGRN 410	Soil Fertility	
AGRN 415	Soil Survey and Land Use	
AGRN 417	Soil Genesis and Classification	
AGRN 420	Soil Microbiology	
AGRN 425	Environmental Soil Management	
AGRN 455	Reclamation of Disturbed Soils	
Fisheries--select one of the following:		3
BIOL 341	Ichthyology	
WMAN 314	Marine Ecology	
WMAN 449	Stream Ecosystem Assessment	
WMAN 550	Fish Ecology	
Quantitative Sciences--select one of the following:		3
MATH 150	Applied Calculus	
STAT 312	Intermediate Statistical Methods	
STAT 511	Statistical Methods 1	
Restricted Electives: *		12
Notes:		
** Any 100-400 level course in Biology (BIOL), Geology (GEOL), Forestry (FOR), Forest Management (FMAN), Wildlife and Fisheries (WMAN), or Resource Management (RESM) agreed upon between the student and the advisor.		
Total Hours		24

WILDLIFE SCIENCES AREA OF EMPHASIS REQUIREMENTS

*A minimum of C- must be obtained in all courses required for the area of emphasis.

Physical Sciences: select one of the following:		3
CHEM 112 & 112L	Survey of Chemistry 2 and Survey of Chemistry 2 - Laboratory	
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	
CHEM 231 & 231L	Organic Chemistry: Brief Course and Organic Chemistry: Brief Course - Laboratory	
CHEM 233 & CHEM 235	Organic Chemistry and Organic Chemistry Laboratory	
GEOL 101 & GEOL 102	Planet Earth and Planet Earth Laboratory	
GEOL 203	Physical Oceanography	
GEOL 321	Geomorphology	
PHYS 101	Introductory Physics 1	
AGRN 225	Advanced Soil Judging	
AGRN 410	Soil Fertility	
AGRN 415	Soil Survey and Land Use	

AGRN 417	Soil Genesis and Classification	
AGRN 420	Soil Microbiology	
AGRN 425	Environmental Soil Management	
AGRN 455	Reclamation of Disturbed Soils	
Botany--select one of the following:		3
BIOL 350	Plant Physiology	
BIOL 351	Plant Diversity	
BIOL 353	Flora of West Virginia	
BIOL 361	Plant Ecology	
BIOL 363	Plant Geography	
BIOL 450	Plant Systematics	
FOR 424	Vegetation of West Virginia	
PLSC 206	Principles of Plant Science	
Forestry		3
FOR 310	Elements of Silviculture	
Wildlife Biology--select from WMAN 425, WMAN 426, or BIOL 433 if not used above, or one of the following:		3
WMAN 221	Interpretive Bird Study	
WMAN 250	Big Game Ecology and Management	
WMAN 260	Waterfowl Ecology	
Restricted Electives*		12
Notes:		
** Any 100-400 level course in Biology (BIOL), Geology (GEOL), Forestry (FOR), Forest Management (FMAN), Wildlife and Fisheries (WMAN), or Resource Management (RESM) agreed upon between the student and the advisor.		
Total Hours		24

Major Learning Outcomes

WILDLIFE AND FISHERIES RESOURCES

Upon the successful completion of a Wildlife and Fisheries Resources degree students will be able to:

- Comprehend the historical importance of wildlife and fisheries management, and the role contemporary agencies play in wildlife and fisheries management in the United States.
- Demonstrate expertise on the life-history characteristics of game and non-game wildlife and fishes.
- Identify and classify using common and Latin names West Virginia trees, plants, reptiles, mammals and fishes by sight and birds and amphibians by sight and sound.
- Explain and employ commonly used wildlife and fisheries management principles, methods, and techniques.
- Define, explain, and apply knowledge regarding biological and chemical processes, population ecology and population dynamics, community and ecosystem ecology, aquatic ecology (lakes, streams, and rivers), terrestrial ecology (forests and grasslands) and wetland ecology in relation to wildlife and fisheries management and research applications.
- Demonstrate laboratory, computer and quantitative skills relevant to wildlife and fisheries science.
- Critically evaluate peer-reviewed literature and apply research findings to the conservation and management of wildlife and fisheries resources.
- Conduct a research project or compose a management plan focused on wildlife or fisheries that includes project design, collecting, analyzing and interpreting data, and reporting results as a research paper or management plan in appropriate scientific style, and presenting the project to their peers.

Wood Science and Technology, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

Accredited by the Society of Wood Science and Technology (SWST), the Wood Science and Technology curriculum prepares students in key skill sets using hands-on cutting-edge technology, innovation in new product development, marketing, and manufacturing to directly work in an ever-growing the U.S. forest products industry (biorefining, renewable materials, and sustainable construction). According to the American Forest and Paper Association (AF&PA), the U.S. forest products industry is one of the top ten manufacturing sector employers, which employs about one million workers and accounts

for approximately six percent of the total U.S. manufacturing GDP. Some examples of products include: energy efficient green building construction materials, lignocellulosic materials for packaging, pharmaceutical and catalysis applications, highly advanced carbon materials for adsorption and electrochemical applications, energy and fuels applications from lignocellulosic materials, green fibers for textile and paper applications, and sporting goods. One of the most sensible alternatives to reduce global warming is the use of wood as a raw material in manufacturing of various products, which enables an environmentally friendly method to store atmospheric carbon in various wood products for prolonged periods. The Wood Science and Technology curriculum is highly focused on these aspects of the forest products industry.

Professional Areas of Emphasis

Students may choose a specialized professional area of emphasis in:

- Processing
- Utilization
- Renewable Materials Marketing
- Sustainable Low-Rise Residential Construction

PROCESSING AREA OF EMPHASIS

The Area of Emphasis in Processing provides flexibility within the context of a fundamental wood science and renewable materials-based curriculum by requiring that students complete a minor plus specialized wood processing courses and restricted electives. Students transferring into wood science and technology from a related discipline may use the previous major instead of a minor as the area of emphasis provided the student has passed at least fifteen semester hours of core coursework from the previous discipline as indicated by a common course prefix (i.e., FMAN) with a C grade or better and has received approval from the wood science and technology faculty. Potential careers include, but are not limited to production of wood products and other renewable plant-based materials (including residential construction materials and components, furniture and cabinets, and engineered wood products); marketing of building and related products; and research.

UTILIZATION AREA OF EMPHASIS

The Area of Emphasis in Utilization consists of forestry, wood science, restricted electives, and related courses. The Utilization area of professional emphasis prepares graduates for careers in timber harvesting, forest engineering, primary processing of wood products, and timber procurement.

RENEWABLE MATERIALS MARKETING AREA OF EMPHASIS

The Renewable Materials Marketing Area of Emphasis prepares students for a career in marketing of wood and other renewable materials and products. Specific careers may include retail or wholesale marketing, sales, purchasing, or distribution of products.

SUSTAINABLE LOW-RISE RESIDENTIAL CONSTRUCTION AREA OF EMPHASIS

The Sustainable Low-Rise Residential Construction Area of Emphasis prepares students for careers in management, supervision, and specifying of materials for single family and multi-family, low-rise residential (i.e. town houses and 2-3 story apartment buildings) construction.

Special Opportunities

A regional center for development of the wood products industry, the Appalachian Hardwood Center, is allied with the Wood Science and Technology Program. The center's staff frequently provides opportunities for educational and professional development of wood science and technology students. Students sometimes find part-time employment in the research program of the center as well as with the faculty's teaching and research program.

Career Opportunities

The U.S. forest products industry employs about one million workers. West Virginia University is one of the nine American universities, which provide accredited programs specifically designed to educate professionals to manage and provide technical expertise to the industry. The unique manufacturing sector focus of the program and the large base of potential employers result in an excellent job market for wood science and technology graduates. Career opportunities are quite diverse. The jobs span the spectrum from standing timber through manufacture of products to their marketing, distribution, and end use. Graduates may work in sawmills as production managers or as timber procurement foresters, buying timber and planning harvesting operations in accordance with sound forest management and environmental practices. They may also gain employment as quality assurance managers, production supervisors, and process engineers for companies that manufacture furniture, cabinets, state-of-the-art engineered wood products, renewable construction and bioproducts. Graduates may become product designers and estimators, purchasers and sellers of materials and services, or supervisors and managers of residential construction projects. Some of our graduates go on to graduate school in wood science or related disciplines, including forestry, business administration, and engineering. They work in all parts of the nation and in both rural and urban communities, yet approximately half find employment in West Virginia. Many of the leaders in the nation's wood products industry are WVU graduates.

Click the appropriate link below to view the corresponding Area of Emphasis (AOE) Requirements and Suggested Plans of Study.

- Processing (p. 177)
- Renewable Materials Marketing (p. 178)

- Sustainable Low-Rise Residential Construction (p. 179)
- Utilization (p. 180)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

Students seeking the B.S. in Wood Science and Technology must select from one of four Areas of Emphasis.

First-Year Seminar

ANRD 191	First-Year Seminar	1
Select one of the following (GEF 1):		6
ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	
BIOL 101 & BIOL 103	General Biology and General Biology Laboratory (GEF 2)	4
Select one of the following (fulfills Writing and Communication Skills requirement):		3
ENGL 304	Business and Professional Writing	
ENGL 305	Technical Writing	
Select one of the following (GEF 8):		4
CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 - Laboratory	
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory	
MATH 150	Applied Calculus (GEF 3)	3
PHYS 101	Introductory Physics 1 (GEF 8)	4
STAT 211	Elementary Statistical Inference (GEF 8)	3
BUSA 201	Survey of Economics (GEF 4)	3
FOR 203	Careers in Natural Resources Management 2	1
FOR 205	Dendrology	3
FOR 240	Introduction to Computing in Natural Resources	3
FOR 438	Human Dimensions Natural Resource Management	3
FMAN 222	Forest Mensuration	4
WDSC 100	Forest Resources in United States History (GEF 5)	3

WDSC 223	Wood Anatomy and Structure	3
WDSC 232	Wood Grading and Procurement	3
WDSC 340	Physical Properties of Wood	3
WDSC 341	Wood Mechanics	3
WDSC 362	Forest Product Decision-Making	4
WDSC 413	Wood Chemistry	3
WDSC 422	Harvesting Forest Products	3
WDSC 465	Wood-based Composite Materials	3
WDSC 491	Professional Field Experience	3
Capstone Experience:		4
WDSC 480	Senior Projects 1	
WDSC 481	Senior Projects 2	
GEF 6 and GEF 7		6
Complete an Areas of Emphasis *		34
Total Hours		120

* For advanced students transferring into wood science and technology from a related major to qualify, the area of emphasis must:

1. Include a core consisting of at least fifteen semester hours of coursework from the student's previous major
2. Must all be from a single discipline as indicated by the course prefix (i.e., FMAN)
3. Must have been passed with a C grade or better, and
4. Must be approved by the Wood Science and Technology Faculty

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 BUSA 201 (GEF 4)	3
ANRD 191		1 FOR 240	3
WDSC 100 (GEF 5)		3 MATH 150 (GEF 3)	3
BIOL 101 & BIOL 103 (GEF 2)		4 Approved GEF 06	3
WDSC 223		3 Approved GEF 07	3
		14	15

Second Year

Fall	Hours	Spring	Hours
CHEM 111 & 111L (GEF 8)		4 WDSC 232	3
ENGL 102 (GEF 1)		3 PHYS 101 (GEF 8)	4
FOR 205		3 FOR 203	1
AoE Requirement		6 STAT 211 (GEF 8)	3
		AoE Requirement	3
		16	14

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
WDSC 341		3 WDSC 340		3 WDSC 491	3
WDSC 413		3 FMAN 222			4
WDSC 422		3 ENGL 304 or 305			3
AoE Requirement		6 AoE Requirement			6
		15		16	3

Fourth Year

Fall	Hours	Spring	Hours
FOR 438		3 WDSC 465	3
WDSC 362		4 WDSC 481	2
WDSC 480		2 AoE Requirement	7

AoE Requirement	6	
	15	12

Total credit hours: 120

PROCESSING AREA OF EMPHASIS

WDSC 330	Wood Machining	3
WDSC 337	Wood Adhesion and Finishing	3
WDSC 351	Forest Products Protection	3
University Approved Minor *		15
Restricted Electives *		10
Total Hours		34

* Credit hours for the minor and restricted electives are estimates and are dependent upon selected minor. A minimum of 34 credit hours is needed under the area of emphasis. Restricted electives must contribute to the student's professional development and must be approved by the student's advisor.

SUGGESTED PLAN OF STUDY FOR THE PROCESSING AREA OF EMPHASIS

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 BUSA 201 (GEF 4)	3
WDSC 223		3 FOR 240	3
ANRD 191		1 MATH 150 (GEF 3)	3
WDSC 100 (GEF 5)		3 GEF 6	3
BIOL 101 & BIOL 103 (GEF 2)		4 GEF 7	3
		14	15

Second Year

Fall	Hours	Spring	Hours
Select one of the following (GEF 8):		4 ORIN 164 or 260	1
CHEM 111 & 111L		PHYS 101 (GEF 8)	4
CHEM 115 & 115L		WDSC 232	3
ENGL 102 (GEF 1)		3 STAT 211 (GEF 8)	3
FOR 205		3 Approved Restricted Elective	3
Approved Restricted Elective		3	
Approved Restricted Elective		3	
		16	14

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
WDSC 330 (Alt. Yr.)		3 ENGL 304 or 305		3 WDSC 491	3
WDSC 341		3 FMAN 222		4	
WDSC 413		3 WDSC 340		3	
WDSC 422		3 WDSC 351		3	
Minor Requirement		3 Minor Requirement		3	
		15		16	3

Fourth Year

Fall	Hours	Spring	Hours
FOR 438		3 WDSC 465	3

WDSC 337	3	WDSC 481	2
WDSC 362		4 Minor Requirements	6
WDSC 480		2 Approved Restricted Elective	1
Minor requirement	3		
	15		12

Total credit hours: 120

RENEWABLE MATERIALS MARKETING AREA OF EMPHASIS

ACCT 201	Principles of Accounting	3
ARE 204	Agribusiness Management	3
ARE 461	Agribusiness Finance	3
BUSA 330	Survey of Marketing	3
WDSC 470	Marketing Forest Products	3
Select 1 of the following Minors: *		15
Agribusiness Management		
Business Administration		
Entrepreneurial Studies		
Restricted Elective *		4
Total Hours		34

* Credit hours for the minor and restricted electives are estimates and are dependent upon selected minor. A minimum of 34 credit hours is needed under the area of emphasis. Restricted electives must contribute to the student's professional development and must be approved by the student's advisor.

SUGGESTED PLAN OF STUDY FOR RENEWABLE MATERIALS MARKETING AREA OF EMPHASIS**First Year**

Fall	Hours	Spring	Hours
BIOL 101 & BIOL 103 (GEF 2)		4 BUSA 201 (GEF 4)	3
ENGL 101 (GEF 1)		3 MATH 150 (GEF 3)	3
ANRD 191		1 FOR 240	3
WDSC 100 (GEF 5)		3 GEF 6	3
WDSC 223		3 GEF 7	3
		14	15

Second Year

Fall	Hours	Spring	Hours
ACCT 201		3 ORIN 164 or 260	1
ARE 204		3 PHYS 101 (GEF 8)	4
Select one of the following (GEF 8):		4 STAT 211 (GEF 8)	3
CHEM 111 & 111L		WDSC 232	3
CHEM 115 & 115L		Approved Restricted Elective	3
ENGL 102 (GEF 1)		3	
FOR 205		3	
		16	14

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
WDSC 341		3 ENGL 304 or 305		3 WDSC 491	3
WDSC 413		3 FMAN 222		4	

WDSC 422	3	WDSC 340	3
Minor requirement	3	WDSC 470 (alt. yr.)	3
Minor requirement	3	Minor Requirement	3
	15		16

Fourth Year

Fall	Hours	Spring	Hours
FOR 438		3 ARE 461	3
WDSC 362		4 BUSA 330	3
WDSC 480		2 WDSC 481	2
Minor requirement		3 WDSC 465	3
Minor requirement		3 Approved Restricted Elective	1
	15		12

Total credit hours: 120

SUSTAINABLE LOW-RISE RESIDENTIAL CONSTRUCTION AREA OF EMPHASIS

ID 240	Codes and Interior Construction	2
SAFM 470	Managing Construction Safety	3
DSGN 340	Design for Energy Efficiency	3
WDSC 320	Sustainable Construction	3
Select 1 of the following Minors: *		15
Agribusiness Management		
Business Administration		
Entrepreneurial Studies		
Sustainable Design		
Restricted Electives *		8
Total Hours		34

* Credit hours for the minor and restricted electives are estimates and are dependent upon selected minor. A minimum of 34 credit hours is needed under the area of emphasis. Restricted electives must contribute to the student's professional development and must be approved by the student's advisor.

SUGGESTED PLAN OF STUDY FOR SUSTAINABLE LOW-RISE CONSTRUCTION AREA OF EMPHASIS**First Year**

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 BUSA 201 (GEF 4)	3
WDSC 223		3 FOR 240	3
ANRD 191		1 MATH 150 (GEF 3)	3
WDSC 100 (GEF 5)		3 GEF 6	3
BIOL 101		4 GEF 7	3
& BIOL 103 (GEF 2)			
	14		15

Second Year

Fall	Hours	Spring	Hours
Select one of the following (GEF 8):		4 ORIN 164 or 260	1
CHEM 111 & 111L		PHYS 101 (GEF 8)	4
CHEM 115 & 115L		WDSC 232	3
ENGL 102 (GEF 1)		3 Minor Requirement	3
FOR 205		3 STAT 211 (GEF 8)	3

Restricted Elective		3			
Restricted Elective		3			
		16		14	
Third Year					
Fall	Hours	Spring	Hours	Summer	Hours
WDSC 341		3 WDSC 340		3 WDSC 491	3
WDSC 413		3 FMAN 222		4	
WDSC 422		3 ENGL 304 or 305		3	
Minor requirement		3 WDSC 320		3	
Minor requirement		3 ID 240		2	
		15		15	3
Fourth Year					
Fall	Hours	Spring	Hours		
DSGN 340		3 SAFM 470		3	
FOR 438		3 WDSC 465		3	
WDSC 362		4 WDSC 481		2	
WDSC 480		2 Minor requirement		3	
Minor requirement		3 Restricted elective		2	
		15		13	

Total credit hours: 120

UTILIZATION AREA OF EMPHASIS

FHYD 444	Watershed Management	3
FMAN 212	Forest Ecology	3
FMAN 311	Silvicultural Systems	4
FMAN 330	Principles of Forestry Economics	4
FOR 326	Remote Sensing of Environment	3
WDSC 444	Bio-based Energy Systems	3
WMAN 234	Forest Wildlife Management	3
Restricted Electives *		11
Total Hours		34

* Restricted electives must contribute to the student's professional development and must be approved by the student's advisor.

SUGGESTED PLAN OF STUDY FOR THE UTILIZATION AREA OF EMPHASIS**First Year**

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 BUSA 201 (GEF 4)	3
ANRD 191		1 FOR 240	3
WDSC 100 (GEF 5)		3 MATH 150 (GEF 3)	3
BIOL 101 & BIOL 103 (GEF 2)		4 GEF 6	3
WDSC 223		3 GEF 7	3
		14	15

Second Year

Fall	Hours	Spring	Hours
Select one of the following (GEF 8):		4 WDSC 232	3
CHEM 111 & 111L (GEF 8)		ORIN 164 or 260	1
CHEM 115 & 115L		PHYS 101 (GEF 8)	4

ENGL 102 (GEF 1)		3 STAT 211 (GEF 8)		3	
FOR 205		3 Approved Restricted Elective		3	
FMAN 212		3			
Approved Restricted Elective		3			
		16			14
Third Year					
Fall	Hours	Spring	Hours	Summer	Hours
ENGL 304 or 305		3 FMAN 222		4 WDSC 491	3
WDSC 341		3 FOR 326		3	
WDSC 413		3 WDSC 340		3	
WDSC 422		3 WMAN 234		3	
WDSC 444		3 Approved Restricted Elective		3	
		15			16
Fourth Year					
Fall	Hours	Spring	Hours		
FMAN 311		4 WDSC 465		3	
FOR 438		3 FMAN 330		4	
WDSC 362		4 FHYD 444		3	
WDSC 480		2 WDSC 481		2	
Approved Restricted Electives		2			
		15			12

Total credit hours: 120

Major Learning Outcomes

WOOD SCIENCE AND TECHNOLOGY

The Wood Science and Technology program established specific expected learning goals as part of the program's assessment plan. The plan was approved by the West Virginia University administration and the West Virginia Higher Education Board of Governors in 2007. The Society of Wood Science and Technology (SWST) Accreditation Standards were adopted as the stated expected learning goals of the plan, and include the following:

- Graduates will demonstrate a fundamental background in preparatory and general education courses in compliance with the requirements established by West Virginia University, the West Virginia Board of Governors, and the Accreditation standards of the Society of Wood Science and Technology.
- Graduates will demonstrate a firm understanding of basic wood sciences, including anatomy and biology of wood formation; wood identification; physical properties; mechanical properties; chemical characteristics and properties; wood degradation and deterioration; and composite materials.
- Graduates will demonstrate knowledgeable related to wood processing and manufacturing, including mechanical reduction of the raw material, drying processes, manufacture of solid wood products, manufacture of composite materials, chemical wood processing, and wood protection and enhancement.
- Graduates will be able to compare and contrast a variety of complex contemporary issues of wood use, including demand, use, and impact of use on society and the environment; applications of wood and wood-based materials; choosing and specifying appropriate wood-based products; policy, regulation, environmental and other societal issues; professional ethics; and health, safety, and security issues.
- Graduates will demonstrate competence in an area of professional emphasis that compliments their wood science and technology education.

Bachelor of Multidisciplinary Studies, B.MdS.

Degree Offered

- Bachelor of Multidisciplinary Studies

Nature of the Program

The Multidisciplinary Studies (MDS) major in the College of Agriculture, Natural Resources, and Design is a flexible degree program which allows students and their advisors to tailor a set of courses which meets the student's interests and career plans. The major was developed in response

to increasing demands from employers and students for broad-based educational programs which prepare students for our rapidly changing society and economies. There are an increasing number of students who wish to tailor their education to their career interests without being constrained by traditional academic majors. The Davis College MDS program is distinct from others at WVU and is oriented toward students who want to focus their studies on the academic areas of the College.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

GEF Requirements		34
ANRD 191	First-Year Seminar	1
Davis College Minor 1		15
Davis College Minor 2		15
1 additional Minor		15
Capstone *		1
Electives to reach 120 minimum credits **		39
Total Hours		120

* The student is required to complete a capstone course under the direction of his or her advisor.

** The student, along with their faculty advisor from the Davis College, chooses three minors and a program of elective courses, which fits the student's focus and career objectives. Students are not limited to courses in a particular area, but will have the opportunity to develop expertise in several areas with a multidisciplinary focus.

First Year

Fall	Hours	Spring	Hours
ANRD 191		1 GEF 3	3
ENGL 101 (GEF 1)		3 GEF 5	3
GEF 2B		4 GEF 6	3
GEF 4		3 Minor 1 Course	3
Elective		3 Minor 3 Course	3
Elective		1	
	15		15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 Minor 1 Course	3

GEF 7		3 Minor 2 Course		3
Minor 1 Course		3 Minor 3 Course		3
Minor 2 Course		3 Elective		3
Minor 3 Course		3 Elective		3
		15		15
Third Year				
Fall	Hours	Spring		Hours
GEF 8		3 GEF 8		3
Minor 1 Course		3 Minor 1 Course		3
Minor 2 Course		3 Minor 2 Course		3
Minor 3 Courses		3 Minor 3 Course		3
Elective		3 Elective		3
		15		15
Fourth Year				
Fall	Hours	Spring		Hours
Capstone Course		1 Elective		3
GEF 8		3 Elective		3
Minor 2 Course		3 Elective		3
Elective		3 Elective		3
Elective		3 Elective		3
Elective		2		
		15		15

Total credit hours: 120

Major Learning Outcomes

MULTIDISCIPLINARY STUDIES

Upon graduation, students will have attained the following knowledge bases and career competency skills:

- Knowledge of and aptitude with principles, practices, facts, concepts, theories and tools in three minor areas
- The ability to write and present information
- The ability to analyze problems from different perspectives, recognize uncertainties, propose options, construct predictions, and make sound decisions using appropriate information resources and analytical tools

Arts and Sciences- Eberly College of

History of the College

Starting with the initial charter of WVU by the Legislature in 1867, the liberal arts and the sciences were important and central elements of the University. The College of Arts and Sciences was formally created in 1895, and eleven students received degrees from the college in 1896. In the 1911–12 academic years, the West Virginia Chapter of Phi Beta Kappa was established within the College of Arts and Sciences.

On July 1, 1993, the name of the college was changed to the Eberly College of Arts and Sciences to recognize and commemorate the generosity of the Eberly family, the Eberly Foundation, and the Eberly Family Charitable Trust.

Today, the Eberly College of Arts and Sciences awards degrees to around 2,000 students every year. It remains the heart of West Virginia University, providing students with a liberal education in the areas of literature and the humanities, mathematics and natural sciences, and social and behavioral sciences. In addition to teaching, the College's 420 faculty members are actively engaged in research and scholarship, publishing approximately 600 articles and five or more books each year.

Mission

The primary mission of the Eberly College of Arts and Sciences is to promote the full development of the student as an individual and as a member of society. Students earning degrees in the College fulfill certain broad basic-education requirements and study at least one subject in some depth. The degree requirements are intended to carry forward what is usually termed "a general education," thus providing a foundation for continued growth and development after graduation.

ADMINISTRATION

DEAN

- R. Gregory Dunaway - Ph.D. (University of Cincinnati)
Dean

ASSOCIATE DEANS

- Valérie Lastinger - Ph. D. (University of Georgia)
Academic Affairs
- Asuntina S. Levelle - J.D. (West Virginia University)
Financial Planning and Management
- Duncan Lorimer - Ph.D. (University of Manchester)
Research
- Michael Perone - Ph.D. (University of Wisconsin-Milwaukee)
Faculty

ASSISTANT DEAN

- Patricia Moline - Master of Music Education in Arts Administration, Master of Music in Opera Performance (Florida State University)

Degree Designation Learning Outcomes

BACHELOR OF ARTS (B.A.)

A primary mission of the Eberly College of Arts and Sciences is to promote full development of each student as an individual and as a member of society. Students completing a Bachelor of Arts degree in the Eberly College fulfill broad general education foundation requirements, Bachelor of Arts degree requirements, study of at least one discipline in depth, and complimentary coursework that spans disciplinary boundaries. The hallmark of an Arts and Sciences education is opportunity for students to craft programs of study that integrate interests and address aspirations through a combination of major and minor, or dual major, areas of study.

Bachelor of Arts degree programs in the Eberly College integrate

- Knowledge of central principles, practices, facts, concepts, theories, and disciplinary tools in a major area of concentration
- Skills in communication using a variety of channels including writing, speaking, reading, listening, and viewing
- Practice in analyzing and solving problems, recognizing ambiguities, proposing alternatives, drawing inferences, developing imaginative approaches, constructing predictions, and making reasoned decisions using appropriate information resources and analytical tools
- Study of a foreign language to attain an intermediate level of proficiency for interacting in a non-native language and culture
- Opportunities for defining relationships between the student's degree program and post-baccalaureate goals

BACHELOR OF MULTIDISCIPLINARY STUDIES (B.M.D.S.)

A primary mission of the Eberly College of Arts and Sciences is to promote full development of each student as an individual and as a member of society. Students completing a Bachelor of Multidisciplinary Studies degree in the Eberly College complete broad general education foundation requirements, MDS core requirements, and three academic minors that work together to achieve individual educational and/or career goals. The BMDS degree program does not limit students to courses of study in a particular college or school, but rather stresses the importance of breadth of knowledge and cross-disciplinary communication.

The Bachelor of Multidisciplinary Studies degree program in the Eberly College integrates

- Knowledge of and aptitude with principles, practices, facts, concepts, theories and tools in three minor areas of concentration
- Communication skills using a variety of channels including writing, speaking, reading, listening, and viewing
- Practices derived from specialized knowledge in individual disciplines to analyze problems from divergent perspectives, recognize ambiguities, propose alternatives, draw inferences, develop imaginative approaches, construct predictions, and make reasoned decisions using appropriate information resources and analytical tools
- Multidisciplinary techniques fostering students' ability to communicate strengths of their self-chosen course of study
- Opportunities for defining relationships between the student's degree program and post-baccalaureate goals

BACHELOR OF SCIENCE (B.S.)

A primary mission of the Eberly College of Arts and Sciences is to promote full development of each student as an individual and as a member of society. Students completing a Bachelor of Science degree in the Eberly College fulfill broad general education foundation requirements, Bachelor of Science degree requirements, and study of at least one discipline in depth. The hallmark of an Arts and Sciences education is opportunity for students to craft programs of study that integrate interests and address aspirations through a combination of major and minor, or dual major, areas of study.

Bachelor of Science degree programs in the Eberly College integrate

- Knowledge and skills of central principles, practices, facts, concepts, theories, and disciplinary tools in a major area of concentration
- Skills in communication using a variety of channels including writing, speaking, reading, listening, and viewing
- Practice in analyzing and solving problems, recognizing ambiguities, proposing alternatives, drawing inferences, developing imaginative approaches, constructing predictions, and making reasoned decisions using appropriate information resources and analytical tools
- Application of scientific principles and methods across three natural and/or computational science disciplines
- Opportunities for defining relationships between the student's degree program and post-baccalaureate goals

BACHELOR OF SOCIAL WORK (B.S.W.)

The mission of the School of Social Work's B.S.W. program is to prepare social work practitioners who are dedicated to upholding the ethical standards of the social work profession. An important focus of the West Virginia University School of Social Work is our focus on practice in small towns and rural communities, including the well-being of older adults. Our mission emphasizes the importance of preparing social workers with the necessary knowledge, values, and skills to practice effectively at the micro, mezzo, and macro levels of intervention in settings consistent with our rural context. Students completing a Bachelor of Social Work degree complete broad general education foundation requirements and work within the School of Social Work that is designed:

- To prepare undergraduate students for professional, competent, entry-level generalist practice, with an emphasis on rural and small-town settings, through a curriculum including liberal arts and social work foundations; human behavior in the social environment; practice, policy, and assessment/research with individuals, families, groups, communities, and society
- To prepare students for practice with diverse, vulnerable, and oppressed populations and to further social and economic justice
- To prepare students to engage in effective practice that is responsive to changing the social context with an existing value base and ethical standards of the social work profession
- To provide a foundation to develop an identity as a professional social worker and conduct oneself accordingly

REGENTS BACHELOR OF ARTS (R.B.A.)

West Virginia University offers the Regents Bachelor of Arts (R.B.A.) as an innovative degree program designed to meet the unique needs of adult learners and non-traditional students. Specifically, the R.B.A. provides a comprehensive general education and individualized curriculum designed to align with the needs of each student. The R.B.A. program is designed to be flexible and can be tailored toward goals/aspirations such as pursuing a graduate/professional degree, transitioning into a new career, increasing one's marketability within an established career, and/or fulfilling a life-long goal of completing a bachelor's degree. The R.B.A. program can be completed either on campus or online at one's own pace. Additionally, R.B.A. students may pursue any Minors (<http://catalog.wvu.edu/undergraduate/minors/#minorsofferedtext>) offered through West Virginia University or Areas of Emphasis unique to the R.B.A. program. Moreover, R.B.A. offers unique opportunities not available through traditional degree programs. The R.B.A. program offers F-Forgiveness (<https://rba.wvu.edu/degree-info/f-forgiveness-policy/>) to students if the failing grades are obtained four years or more prior to admission/readmission to the program. Additionally, eligible students may acquire college credit for professional, volunteer, and military experiences in select areas via the many credit for prior learning options (<https://rba.wvu.edu/credit-for-prior-learning/>) available through the R.B.A. program.

Pursuing the R.B.A. program and utilizing the unique opportunities available through the program provides many students with a time efficient and cost effective avenue to obtain a Bachelor of Arts degree.

The Regents Bachelor of Arts degree program in the Eberly college enables students to:

- Develop foundational habits of academic life and cultural literacy; disciplinary ways of knowing and posing questions; conducting inquiry; making arguments; close reading, analysis, critical thinking; numerical analysis and scientific method; effective writing and speaking; academic research; systematic problem solving; rigorous academic study
- Develop and refine skills of Learning Goal 1; encounter and examine issues of multiculturalism, diversity, social justice, and citizenship; refines over-reaching area of emphasis
- Integrate learning; apply knowledge and skills to contemporary problems and ethical quandaries; self-reflective projects and narratives; connect past with future

Degree Options

The Eberly College of Arts and Sciences offers the following degrees:

- Bachelor of Art (B.A.). See B.A. tab above.
- Bachelor of Science (B.S.). See B.S. tab above.
- Bachelor of Multidisciplinary Studies (B.M.D.S.). See Multidisciplinary Studies Program link.
- Bachelor of Social Work (B.S.W.). See School of Social Work link.
- Regents Bachelor of Arts (R.B.A.). See Regents Bachelor of Arts link.

Minors

Most major programs in the Eberly College of Arts and Sciences also offer academic minors. In addition, minors are available in Africana Studies, Developmental Studies, Gerontology, Leadership Studies, LGBTQ Studies, Medical Humanities and Health Studies, Native American Studies, and Statistics. If a student successfully completes the requirements for a minor, it will be recorded on the student's official record and will appear on transcripts.

Requirements for academic minors are set by the department offering the minor. A minor must include at least fifteen hours of coursework with a minimum of nine hours at the upper-division level (courses numbered 300 or above). Each minor requires 9 unique credits not shared with another minor, major, or area of emphasis. Specific courses may be required as well as a minimum grade or grade point average for courses in the minor. Courses in the minor may not be taken pass/fail. The minor field may not be the same as the student's major field.

Certificate Programs

GLOBAL ENGAGEMENT

CERTIFICATE CODE - CU08

Students in the Eberly College, may earn this Certificate, regardless of their major. Completion of the Global Engagement Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. Students must complete fifteen hours of approved courses and have the option to earn part of the certificate on campus, or to earn all of their credits abroad by completing one of the two options described below.

OPTION 1: LANGUAGE-INTENSIVE OPTION (15 CREDITS MINIMUM)

Language Component

6-9 credit hours of academic coursework in one language other than English, beyond the core language requirement (typically 204 or the equivalent, as determined by the Department of World Languages, Literature, and Linguistics), completed at either WVU or a foreign academic institution; **and**

International Coursework Component

6-9 credit hours, beyond the language component (above) requirement, of coursework bearing the "G" designator.*

OPTION 2: TRAVEL-INTENSIVE OPTION (15 CREDITS MINIMUM):

15 credit hours of coursework bearing the "G" designator.* It is recommended that at least part of this coursework be earned during an extended, semester-long experience.

* Courses carrying the “G” designation are approved for the designation by the Office of International Programs and include courses taken abroad either with WVU, at an exchange university, or through another higher education school or organization. WVU offers approximately 60 WVU faculty-led programs per year, with one to three academic courses typically offered in each faculty-led program. There are over 50 exchange linkages with universities abroad, many of them comprehensive and some specialized in areas such as health sciences, engineering, business, language, etc. WVU also has agreements with approximately one dozen affiliate programs (ISEP, for example), each with a wide selection of programs and courses. An Eberly College student may take advantage of any WVU “G” courses for which he/she meets the pre-requisites or restrictions. Courses to be counted toward academic major requirements must be approved by the designated authority in the student’s major program.

- Bachelor of Arts Majors (p. 187)
- University Requirements / General Education Curriculum (p. 187)
- College Requirements (p. 188)
- Credit Limitations (p. 189)
- 42-Hour Rule (p. 189)

Bachelor of Arts

- Anthropology
- Biology
- Chemistry
- Chinese Studies
- Communication Studies
- Criminology
- Economics
- English
- English Secondary Education
- Environmental Geoscience
- French
- Geography
- German Studies
- History
- Interdisciplinary Studies
- International Studies
- Mathematics
- Philosophy
- Physics
- Political Science
- Psychology
- Religious Studies
- Russian Studies
- Social Studies Secondary Education
- Sociology
- Spanish
- Women's and Gender Studies

Bachelor of Arts Requirements

Students must complete WVU General Education Curriculum requirements, College B.A. requirements, major requirements, and electives to total 120 hours. For programs that offer both the B.A. and the B.S. (Biology, Chemistry, Mathematics, Physics, Psychology), students may earn either the B.A. or the B.S. degree, but not both. Some combination of majors and minors are not permissible because the areas of study are too similar. They are indicated on the section of the majors and/or minors affected.

University Requirements / General Education Curriculum

Students who would like for transfer credits to be applied to University requirements, (GEF and Capstone) or to College requirements, need to seek approval from the Associate Dean of Academic Affairs (see ECAS Undergraduate webpages).

Every student at West Virginia University has to fulfill the requirements for the General Education Foundations. The main purpose of this curriculum is to ensure that all graduates are exposed to a variety of fields, as described in the 8 GEF Areas. Please read the full description of the GEF (<http://registrar.wvu.edu/gef/>) and of the policies that govern it; a list of all the courses (<http://registrar.wvu.edu/gef/>) that meet all the various GEF Areas can be found on the Office of the University Registrar. Students are strongly encouraged to work with their advisers to select GEF courses that may broaden and strengthen their interest in their major field. GEF courses can also be used to explore new areas to which students have not yet been exposed.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CAPSTONE EXPERIENCE

The capstone experience is defined as an academic experience in which students demonstrate, in a significant project that has both an oral and a written component, their abilities to gather information, to think critically and to integrate the theoretical and/or practical knowledge that they acquired throughout their undergraduate careers, and to reflect on the ethical issues that are implicit in their projects.

Students completing several majors need to complete one Capstone course per major. Because of their unique concept, Capstone courses can never be transferred from another institution, including study abroad. List of current capstone courses (http://registrar.wvu.edu/current_students/capstone_courses/).

Individual department requirements may be more directive than the College's core B.A. requirements, so long as those requirements are met. Students who would like for transfer credits to be applied to the College B.A. requirements need to seek approval from the Associate Dean of Academic Affairs.

College Requirements

FOREIGN LANGUAGE.

Any student earning a Bachelor of Arts in the Eberly College must complete at minimum level 204 (fourth semester) of a foreign language. Students with no prior instruction in a language will satisfy this requirement by successful completion of courses 101, 102, 203, and 204 (or other approved courses) in that language. Students with prior instruction in a language should take the placement test in that language and begin at the level they are placed and complete 204. Students who place beyond the 204 level will satisfy the requirement by successful completion of one appropriate 300-level course in that language. (For information about placement and explanation of various options and other approved courses, see listings under World Languages, Literatures, and Linguistics in the WVU Undergraduate Catalog, go to: <https://worldlanguages.wvu.edu/>, or contact the department.) Courses used to fulfill this requirement are in addition to those used to fulfill any other requirement, including GEF requirements. An exception is made for students earning a minor in Arabic Studies, Chinese Studies, French, Italian Studies, Japanese Studies, Russian Studies or Spanish, as the 204 course may count for the minor curriculum.

FINE ARTS.

Students must satisfactorily complete a minimum of three semester hours focused on the fine arts. Completion of a course that meets GEF Area 6 (The Arts and Creativity) will fulfill this requirement.

GLOBAL STUDIES AND DIVERSITY

Students must satisfactorily complete three semester hours of study focused on the global issues and/or the role of diverse perspectives within contemporary society. Completion of a course that meets GEF Area 7 (Global Studies & Diversity) will fulfill this requirement.

GRADE POINT AVERAGE

A cumulative GPA of 2.0 is required for graduation. All departments and degree programs in the College require a minimum cumulative grade point average of 2.0 (C) for admission and graduation; some departments or programs require a higher grade point average (overall or in the discipline). See specific departments for requirements.

WRITING AND COMMUNICATION SKILLS

The Eberly College of Arts and Sciences is committed to fostering students' abilities in writing, speaking, visual presentations, and multimedia communication. The College's SpeakWrite initiative helps students approach writing and speaking situations they encounter in their classes, in their work, and in their community by assessing:

- **Purpose:** What exactly do I want to happen?
- **Audience:** Who is reading, listening, or viewing?
- **Conventions:** What is expected in this context?
- **Trouble spots:** What could get in the way of my goals?

SpeakWrite Principles:

- **Engagement.** When students speak and write purposefully and thoughtfully in their classes, they are engaged. They are ready to enter conversations in their fields and in their communities. They are developing a critical skill, valued by employers and society, that is a hallmark of an Arts and Sciences education.
- **Practice.** Effective communication is a complex activity that cannot be mastered in a single course. It is the responsibility of the entire academic community. Students need practice conveying the knowledge they gain as they complete their majors.
- **Discipline-Specific Knowledge and Abilities.** People write and speak with a particular *purpose*, to a particular *audience*, in a particular context defined by particular *conventions*. Speaking and writing in the majors is most effectively guided by those with discipline-specific expertise.

The Eberly Writing Studio is available as a resource, consultant, and partner for faculty teaching SpeakWrite courses--and their students.

Several Eberly College undergraduate programs are **SpeakWrite Certified™**. SpeakWrite Certified Programs incorporate and develop students' written, verbal, visual, and mediated communication skills in coursework across the curriculum. Students completing majors in SpeakWrite Certified Programs automatically fulfill the WVU General Education Foundations (GEF) writing and communication skills requirement.

Students completing Eberly College programs that do not carry SpeakWrite Certification fulfill the writing and communication skills requirement by completing ENGL 101 and 102 (or 103), and a minimum of two additional program-designated SpeakWrite Certified courses.

Credit Limitations

42-Hour Rule

There is no limit to the number of credits students can earn in a subject. However, in Bachelor of Arts (B.A.) programs in the Eberly College, a maximum of forty-two hours in one subject (e.g., BIOL, FRCH, POLS) may be counted toward the minimum hours for graduation. If a B.A. student exceeds forty-two credits in one subject, then the excess must be matched by an equal number of credits in any other subject. For example, if the minimum hours for graduation is 120, and a student earns forty-six hours in COMM (42 + 4), that student will require 124 hours to graduate (120 + 4). If the minimum hours for graduation is 120, and a student earns forty-three hours in PSYC (42 + 1), that student will require 121 hours to graduate (120 + 1).

Please note that some courses are excluded from the 42-Hour Rule count:

1. 191 (first-year seminar) and 491 (professional field experience) courses in any subject are excluded from the 42-Hour count.
2. For English (ENGL), the 42-Hour count excludes ENGL 101 and ENGL 102 or ENGL 103; for English majors who obtain a concentration in Creative Writing or Professional Writing and Editing (PWE), a maximum of 60 hours in English (in addition to ENGL 101 and ENGL 102 or ENGL 103) may be included within the 120 hours required for graduation.
3. For foreign languages, the 42-Hour count excludes the three to twelve hours used to fulfill the B.A. foreign language requirement of the Eberly College of Arts and Sciences.
4. For Sociology and Anthropology (SOCA), the count is done separately for Anthropology, Criminology, and Sociology (42 hours in Sociology courses and 42 hours in Anthropology courses). Normally Anthropology courses are the SOCA courses with a "5" as the middle number: 252, 254, 355, 358, 450, etc.
5. For Environmental Geoscience, students may not earn more than 50 credits of GEOG and GEOL combined. If they have earned over 50 credits in the two subject, they will need a proportional number of hours in non-GEOG and non-GEOL courses.

- Bachelor of Science Majors (p. 190)
- University Requirements / General Education Curriculum (p. 190)
- College Requirements (p. 191)

Bachelor of Science

- Biology
- Chemistry
- Forensic Biology
- Forensic Chemistry
- Forensic Examiner
- Geology
- Mathematics
- Neuroscience
- Physics
- Psychology

Bachelor of Science Requirements

Students must complete WVU General Education Foundation requirements, College B.S. requirements, major requirements, and electives to total 120 hours. For programs that offer both the B.A. and the B.S. (Biology, Chemistry, Mathematics, Physics, Psychology), students may earn either the B.A. or the B.S. degree, but not both.

University Requirements / General Education Curriculum

Students who would like for transfer credits to be applied to University requirements, (GEF and Capstone), need to seek approval from the Associate Dean of Academic Affairs (see ECAS Undergraduate webpages).

Every student at West Virginia University has to fulfill the requirements for the General Education Foundations. The main purpose of this curriculum is to ensure that all of graduates are exposed to a variety of fields, as described in the 8 GEF areas. Please read the full description of the GEF (<http://registrar.wvu.edu/gef/>) and of the policies that govern it; a list of all the courses (<https://registrar.wvu.edu/curriculum-catalog/general-education-foundations-gef/>) that meet all the various GEF areas can be found on the Office of the University Registrar. Students are strongly encouraged to work with their advisers to select GEF courses that may broaden and strengthen their interest in their major field. GEF courses can also be used to explore new areas to which students have not yet been exposed.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CAPSTONE EXPERIENCE

The Capstone experience is defined as an academic experience in which students demonstrate, in a significant project that has both an oral and a written component, their abilities to gather information, to think critically and to integrate the theoretical and/or practical knowledge that they acquired throughout their undergraduate careers, and to reflect on the ethical issues that are implicit in their projects.

Students completing several majors need to complete one Capstone course per major. Because of their unique concept, Capstone courses can never be transferred from another institution, including study abroad. List of current Capstone courses (http://registrar.wvu.edu/current_students/capstone_courses/).

Individual department requirements may be more directive than the College's core B.S. requirements, so long as those requirements are met. Students who would like for transfer credits to be applied to the College B.S. requirements need to seek approval from the Associate Dean of Academic Affairs.

College Requirements

1. Foreign Language. Students completing an Eberly College bachelor of science program are encouraged (but not required) to complete two semesters of one foreign language beyond language taken at the high school level. Individual B.S. programs may require foreign language.
2. Global Cultures and Diversity. Students must satisfactorily complete three semester hours of study of global issues and/or the role of diverse perspectives within contemporary society. Completion of a course that meets GEF Area 7 (Global Studies & Diversity) will fulfill this requirement.
3. Mathematics. Satisfactory completion of Math 150 (<http://catalog.wvu.edu/search/?search=Math+150>), or MATH 155 or (MATH 153 and MATH 154) is required for students earning an Eberly College B.S. degree. Individual programs may have different Mathematics requirements. Please see specific departments for requirements.
4. Science. Students must complete a minimum of twenty-one hours of science coursework in each of three disciplines. There are six disciplines: biology, chemistry, computer science, geology/geography, math/statistics, and physics. See list below for applicable courses in these disciplines. Courses used to fulfill this requirement may be used simultaneously to satisfy GEF and or major requirements. See table below for courses applicable to satisfy the B.S. "Science" requirements.
5. Courses used to fulfill the Eberly B.S. requirements may be used simultaneously to satisfy GEF and or major requirements.
6. Grade Point Average. A cumulative GPA of 2.0 is required for graduation. All departments and degree programs in the College require at least a 2.0 cumulative grade point average overall and in the major for admission and graduation; some departments or programs require a higher grade point average (overall or in the discipline) for admission or graduation. See specific departments for requirements.
7. Individual department requirements may be more directive than the College's core B.S. requirements, so long as those requirements are met.

Students who would like for transfer credits to be applied to the College B.S. requirements need to seek approval from the Director of Undergraduate Studies.

Major Subject Requirements are listed separately in the catalog by department or degree program.

B.S. MATHEMATICS AND SCIENCE REQUIREMENT

MATHEMATICS REQUIREMENT:

4-8

Select one option for a minimum of 4 credits:

MATH 150	Applied Calculus
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus
MATH 155	Calculus 1

SCIENCE REQUIREMENT:

21

Students must complete 6-8 credits in the three areas of their choice for a minimum of 21 credits

Area I- Biology *

8

BIOL 115 & BIOL 117	Principles of Biology and Introductory Physiology
------------------------	--

Area II-Chemistry

8/10

Select one of the following pairs:

CHEM 111 & CHEM 112	Survey of Chemistry 1 and Survey of Chemistry 2
CHEM 115 & CHEM 116	Fundamentals of Chemistry and Fundamentals of Chemistry
CHEM 117 & CHEM 118	Principles of Chemistry 1 and Principles of Chemistry 2

Area III- Computer Science

8

CS 110 & CS 111	Introduction to Computer Science and Introduction to Data Structures	
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Area IV- Geology/Geography 6/7

Select one of the following pairs:

GEOL 101 & GEOL 102	Planet Earth and Planet Earth Laboratory	
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AND select one of the following:

GEOL 103 & GEOL 104	Earth Through Time and Earth Through Time Laboratory	
------------------------	---	--

GEOL 203	Physical Oceanography	
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GEOL 230	Fossils and Evolution	
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Area V- Math/Statistics 6/8

Select one pair:

MATH 156 or MATH 251 or STAT 211 or STAT 215	Calculus 2 Multivariable Calculus Elementary Statistical Inference Introduction to Probability and Statistics	
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STAT 211 or STAT 312 or STAT 331 or STAT 421	Elementary Statistical Inference Intermediate Statistical Methods Sampling Methods Statistical Analysis System (SAS)	
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Area VI- Physics 8

Select one of the following pairs:

PHYS 101 & PHYS 102	Introductory Physics and Introductory Physics	
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PHYS 111 & PHYS 112	General Physics and General Physics	
------------------------	--	--

* Students who complete BIOL 101-104 may substitute this sequence for BIOL 115 & 116. Under this option, students must satisfactorily complete five courses to meet the Area I-Biology requirement for the Bachelor of Science degree: BIOL 101-104 & BIOL 117.

Policies

- Admission to Arts and Sciences Degree Programs (p. 192)
- Minimum and Maximum Loads (p. 192)
- Credit by Examination Rules for Eberly College (p. 192)
- Probation and Suspension (p. 193)
- Graduation (p. 194)

Admission to Arts and Sciences Degree Programs

High school students and transfer students are admitted directly to some majors, while some programs require completion of a few basic courses; specific requirements are described in departmental sections that follow. For current students who wish to move to an Eberly degree program, the minimal College requirement for admission is a 2.0 overall average. Please see the Admission Tab for each major to see specific admission requirements.

Minimum and Maximum Load

Students should earn 15 credits a semester (or 30 credits a year) in order to stay on track in their 4-year graduation plan. A minimum of twelve hours in a semester is required for full-time status. No student enrolled in the College may enroll for more than twenty hours in a semester without permission from the Director for Undergraduate Studies. Typically, overload petitions are restricted to graduating seniors who take degree-pursuant courses, who have a completion rate above 90%, and have earned an overall GPA of 3.00.

Credit by Examination Rules for Eberly College

Credit by examination provides students the opportunity to receive credit in courses by demonstrating that they have acquired sufficient knowledge of a subject without formal enrollment in a course or study in the classroom. This opportunity is offered only to students enrolled full- or part-time at the University. The initiation of a credit-by-examination request does not entitle a student to special in-class instruction or tutoring by an instructor.

Students may petition to receive credit by examination for any course listed by a department in the College as a course for which credit by examination is appropriately awarded. Applications, course lists, and examination schedules are available each semester.

A student may apply to challenge a course for credit by examination if

- The student is at the time of examination registered in the University
- The student's official record does not show credit for the course (i.e., any grade of S, P, A, B, C, D, or I)
- The student is not officially enrolled in the course at the time of examination (a student who withdraws from a course after the end of the official registration period is officially enrolled in that course until the end of the semester, and not eligible to take the course by examination during that semester); and
- A grade of F, FNA, FSA, IF, or UF has not been recorded on the student's record for the course within two calendar years of the date of the examination. A student may challenge the same course by examination only two times

Credit only (not a grade) will be awarded for the successful completion of the examination with a grade of C or higher. Because a comprehensive examination is used to establish credit, it is the policy of the College that a student should demonstrate at least an average (C) knowledge of course content to receive any credit. The criteria for earning a C are made known in advance to students who request the information from the department offering the course examination.

A non-refundable fee is charged for credit by examination and must be paid within the prescribed period prior to each examination period.

Probation and Suspension

ACADEMIC PROBATION

After final grades are complete for the fall and spring semesters, the Registrar notifies students who have a GPA of less than a 2.00 and places them on Academic Probation until their GPA reaches the minimum 2.00. Probationary students must remedy their deficiency during the following semester. Students who accumulate three semesters of Academic Probation and who do not remedy their GPA by the end of the third term of Academic Probation will receive an Academic Suspension. Please see the university policy on Academic Probation and Suspension (http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification/#probation_and_suspension) for more details.

Eberly students who are placed on Academic Probation sign a contract which outlines schedule, meeting, and GPA requirements. Please see the Eberly website for details.

NOTE: The plan of study and the probation contract will be used at the end of the semester if the student has to file an Academic Suspension and/or a Financial Aid appeal.

DISMISSAL FROM MAJOR

Eberly students must meet the benchmarks outlined in the Degree Progress tab; failure to do so may result in removal from the major. All Eberly majors require that students have a 2.00 overall grade point average, but a few programs require a higher GPA. At the discretion of the department and the Dean, students with a GPA of 1.9 may be retained within their major. Students who have a GPA below a 1.9 are placed in the General Arts and Sciences major until they bring their GPA to the desired 2.00. At that point, they can either go back to their original major, or switch to another major, either within or outside of the college. Students in the General Arts and Sciences major are advised in the Academic Affairs Office, where they can explore their major and career choices. This is a temporary placement, usually for one semester. While students are listed in the General Arts and Sciences program, they must remain in contact with their desired program adviser, who will place a note in DegreeWorks to attest the student's visit. The Director of Undergraduate Studies will remove the advising hold after students have also met with their desired program adviser.

ACADEMIC SUSPENSION

After final grades are posted in fall and spring, the Registrar notifies students who have a deficient GPA (please check the Catalog (http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification/#Suspension_Guid)).

ACADEMIC SUSPENSION APPEALS

Students can file an Academic Suspension appeal by submitting a Suspension Appeal form, along with supporting documentation, to the Director of Undergraduate Studies. Please refer to the College website (<http://eberly.wvu.edu/students/current-students/probation-and-suspension-policy/>) for important deadline information. The appeals are heard by a committee of faculty.

READMISSION AFTER SUSPENSION

Students who have been suspended need to reapply to the university. When they come back to WVU, they are placed on Academic Probation until their GPA reaches a 2.00. Students seeking readmission should consult the Eberly Office of Academic Affairs website, under "Student seeking Readmission."

Graduation

GRADUATION AND DIPLOMA APPLICATION

The semester of graduation, seniors will receive an email from the Registrar's Office and the Undergraduate Studies Office to remind them to fill out a graduation application online through their MIX account. The application is usually available the second week of any given semester for graduation at the end of that term, and remains open for about 6 weeks.

IMPORTANT NOTES:

- No candidate can graduate without completing an application for graduation and diploma.
- If a student's curriculum is incorrect in DegreeWorks, they should first submit a graduation application and then immediately contact their adviser to fill out the proper curriculum change forms.
- After submitting their application online, students will receive an email confirmation. Subsequently, they will receive a conditional approval email, or a denial notification. The conditional approval does not guarantee graduation.
- If students do not graduate on the date for which they initially applied, they must re-apply at the beginning of the semester when they will be completing their requirements.

COMMENCEMENT CEREMONY

In addition, students who wish to participate in the Commencement Ceremony (May or December) should register on line through the University Graduation (<http://graduation.wvu.edu/>) website the semester of graduation. Participation in the Commencement Ceremony does not mean that a student will graduate and be eligible to receive a diploma.

Students may petition the Director of Undergraduate Studies to participate in the Commencement Ceremony prior to completion of their degree requirements if they are registered for their last six credit hours the following semester. For example, a student who will graduate in August and is registered for the last six credits during the summer term may petition the Director of Undergraduate Studies to participate in the May ceremony.

Eberly College of Arts and Sciences Minors

- Africa and the Middle East (http://catalog.wvu.edu/undergraduate/minors/africa_and_the_middle_east/)
- Africana Studies Program (http://catalog.wvu.edu/undergraduate/minors/africana_studies/)
- American Politics & Policy (http://catalog.wvu.edu/undergraduate/minors/american_politics__policy/)
- Anthropology (<http://catalog.wvu.edu/undergraduate/minors/anthropology/>)
- Arabic Studies (<http://catalog.wvu.edu/undergraduate/minors/arabicstudies/>)
- Asia (<http://catalog.wvu.edu/undergraduate/minors/asia/>)
- Astronomy (<http://catalog.wvu.edu/undergraduate/minors/astronomy/>)
- Biology (<http://catalog.wvu.edu/undergraduate/minors/biology/>)
- Chinese Studies (http://catalog.wvu.edu/undergraduate/minors/chinese_studies/)
- Communication Studies (http://catalog.wvu.edu/undergraduate/minors/communication_studies/)
- Creative Writing (http://catalog.wvu.edu/undergraduate/minors/creative_writing/)
- Criminology (<http://catalog.wvu.edu/undergraduate/minors/criminology/>)
- Development Studies (http://catalog.wvu.edu/undergraduate/minors/development_studies/)
- English (<http://catalog.wvu.edu/undergraduate/minors/english/>)
- Europe (<http://catalog.wvu.edu/undergraduate/minors/europe/>)
- Foreign Literature in Translation (http://catalog.wvu.edu/undergraduate/minors/foreign_literature_in_translation/)
- Forensic and Investigative Science (<http://catalog.wvu.edu/undergraduate/minors/forensicinvestigativesci/>)
- French (<http://catalog.wvu.edu/undergraduate/minors/french/>)
- Geography (<http://catalog.wvu.edu/undergraduate/minors/geography/>)
- Geography: Environmental Change (<http://catalog.wvu.edu/undergraduate/minors/environ/>)
- Geography: Geographic Information Science (GIS) (<http://catalog.wvu.edu/undergraduate/minors/gis/>)
- Geography: Globalization (<http://catalog.wvu.edu/undergraduate/minors/global/>)
- Geology (<http://catalog.wvu.edu/undergraduate/minors/geology/>)
- German (<http://catalog.wvu.edu/undergraduate/minors/german/>)
- Gerontology (<http://catalog.wvu.edu/undergraduate/minors/gerontology/>)
- History (<http://catalog.wvu.edu/undergraduate/minors/history/>)
- International & Comparative Politics (http://catalog.wvu.edu/undergraduate/minors/international__comparative_politics/)
- Italian Studies (http://catalog.wvu.edu/undergraduate/minors/italian_studies/)
- Japanese Studies (http://catalog.wvu.edu/undergraduate/minors/japanese_studies/)

- Latin American Studies (http://catalog.wvu.edu/undergraduate/minors/latin_american_studies/)
- Law & Legal Studies (http://catalog.wvu.edu/undergraduate/minors/law__legal_studies/)
- Leadership Studies (http://catalog.wvu.edu/undergraduate/minors/leadership_studies/)
- LGBTQ Studies (<http://catalog.wvu.edu/undergraduate/minors/lgbtqstudies/>)
- Linguistics (<http://catalog.wvu.edu/undergraduate/minors/linguistics/>)
- Mathematics (<http://catalog.wvu.edu/undergraduate/minors/mathematics/>)
- Medical Humanities and Health Studies (<http://catalog.wvu.edu/undergraduate/minors/medicalhumanitiesandhealthstudies/>)
- Medieval & Renaissance Studies (<http://catalog.wvu.edu/undergraduate/minors/medievalandrenaissancestudies/>)
- Native American Studies (http://catalog.wvu.edu/undergraduate/minors/native_american_studies/)
- Philosophy (<http://catalog.wvu.edu/undergraduate/minors/philosophy/>)
- Physics (<http://catalog.wvu.edu/undergraduate/minors/physics/>)
- Political Science (General) (http://catalog.wvu.edu/undergraduate/minors/political_sciencegeneral/)
- Political Theory (http://catalog.wvu.edu/undergraduate/minors/political_theory/)
- Professional Writing (http://catalog.wvu.edu/undergraduate/minors/professional_writing_and_editing/)
- Psychology (<http://catalog.wvu.edu/undergraduate/minors/psychology/>)
- Religious Studies (http://catalog.wvu.edu/undergraduate/minors/religious_studies/)
- Russian Studies (http://catalog.wvu.edu/undergraduate/minors/russian_studies/)
- Slavic and East European Studies (http://catalog.wvu.edu/undergraduate/minors/slavic__east_european_studies/)
- Sociology (<http://catalog.wvu.edu/undergraduate/minors/sociology/>)
- Spanish (<http://catalog.wvu.edu/undergraduate/minors/spanish/>)
- Statistics (<http://catalog.wvu.edu/undergraduate/minors/statistics/>)
- Teaching English as a Second Language (http://catalog.wvu.edu/undergraduate/minors/teaching_english_as_a_secone_language/)
- The Americas (http://catalog.wvu.edu/undergraduate/minors/the_americas/)
- Women and Gender Studies (http://catalog.wvu.edu/undergraduate/minors/women_and_gender_studies/)

Accreditation

Chemistry within the Eberly College of Arts and Sciences has specialized accreditation through the American Chemical Society.

Forensic Biology, Forensic Chemistry and Forensic Examiner within the Eberly College of Arts and Sciences have specialized accreditation through the Forensic Science Education Programs Accreditation Commission of the American Academy of Forensic Science.

Social Work within the Eberly College of Arts and Sciences has specialized accreditation through the Council on Social Work Education.

Africana Studies

The Africana Studies program offers a multidisciplinary minor, which seeks to analyze the African world experience from the point of view of African people and those of African descent. The broad educational purpose of the program is to engender among all students an intellectual appreciation and understanding of the history and cultures of people of African descent throughout the world.

FACULTY

COORDINATOR

- Devin Smart - Ph.D. (University of Illinois at Urbana-Champaign)

AFFILIATED FACULTY

- Sandra Dixon, World Languages - Ph.D. (Brown University)
Spanish, Portuguese, Brazilian Literature
- Cheryl Johnson-Lyons, Sociology - J.D. (West Virginia University)
Race, Racism and Law
- Melissa Latimer, Sociology - Ph.D. (University of Kentucky)
Race Relations
- Robert M. Maxon, History - Ph.D. (Syracuse)
East Africa
- Brent McCusker, Geography - Ph.D. (Michigan State University)
Land use change in Africa

- Paul Scea, Music - M.A. (University of Iowa)
Jazz Studies
- Jamie Shinn, Geography - Ph.D. (Pennsylvania State University)
- Janice S. Spleth, World Languages - Ph.D. (Rice University)
Francophone African Literature
- Michael Vercelli, Music - Ph.D. (University of Arizona)
World Music
- Rachel Woldoff, Sociology - Ph.D. (Ohio State University)
Race Relations in Cities and Urban Life

GRADUATE ASSISTANTS

- Muoki Mbunga, History - M.A. (Syracuse University)
- Waliu Ismaila, History - M.A. (University of Ibadan)

Minor Code - U055

Students must earn a minimum grade of C in all the courses applied to the minor.

Core Courses:

6

ASP 220	Introduction to Africana Studies
ASP 420	Seminar Africana Studies

Electives:

9

Select three of the following in two different areas (two 300-Level or above):

ENGL 139	Contemporary African Literature
ENGL 154	African American Literature
ENGL 254	African American Literature
FLIT 238	African Women Writers
FLIT 239	Francophone Literature in Translation
FLIT 266	Latin American Literature
GEOG 243	Geography of Africa
GEOG 293	Special Topics
GEOG 443	African Environment and Development
HIST 427	East Africa to 1895
HIST 428	East Africa Since 1895
HIST 320	Pre-Colonial Africa
HIST 321	Colonial Africa and Independence
HIST 433	West Africa to 1885
HIST 434	West Africa from 1885
MUSC 475	History of Jazz
MUSC 477	Music of Africa
MUSC 492	Directed Study
POLS 335	Civil Rights, Policy, and Politics
POLS 358	Politics of Africa
SOCA 235	Race and Ethnic Relations
SOCA 405	Class, Status, and Power
SOCA 444	Neighborhoods and Crime
SOCA 470	Cities and Urban Life

Total Hours

15

Anthropology, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

Anthropology is a deeply comparative and participatory discipline that prepares students for meaningful life and work in our diverse and ever more interconnected world. The curriculum fosters an awareness of the structure and diversity of human societies, past and present, and offers a broad range of perspectives on the experiences and meanings of being human. Students are exposed to the methods of inquiry and to the special knowledge and insights of anthropology. Courses in the department also are intended to facilitate the application of anthropological principles to a wide range of contemporary social problems.

Anthropology graduates may pursue careers in nonprofit, public, or private sector fields. Majors are well-equipped for graduate training in the social sciences in pursuit of academic or applied research careers. For more information about this program, please visit the departmental website (<https://soca.wvu.edu/students/undergraduate-students/b-a-in-anthropology/>).

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>) here. Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

CHAIR

- Jeralynn S. Cossman - Ph.D. (Florida State University) Sociology
Demography, Health, Inequalities

ASSOCIATE PROFESSORS

- Corey Colyer - Ph.D. (Syracuse University) Sociology
People processing systems, Agencies of social control
- Lisa M. Dilks - Ph.D. (University of South Carolina) Sociology
Social psychology, Group processes, Law and society, Quantitative Methods
- Amy Hirshman - Ph.D. (Michigan State University) Anthropology
Mesoamerican archaeology, Social complexity, Ceramics
- Jason Manning - Ph.D. (University of Virginia) Sociology
Conflict and social control, Violence, Sociology of knowledge
- Daniel Renfrew - Ph.D. (Binghamton University) Anthropology
Environmental and political anthropology, Social movements, Latin American cultures
- 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

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

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

TEACHING INSTRUCTORS

- Daniel Brewster - M.A. (West Virginia University) Communication Studies
- Douglas Sahady - M.A. (California University of Pennsylvania) Social Science
- Genesis Snyder - M.A. (Western Michigan University) Anthropology

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

- First Time Freshmen are admitted directly into the major.
- Students transferring from another major will be admitted after completion of SOCA 105 with a grade of C- or higher and an overall GPA of 2.0.
- Students transferring from another institution will be admitted after completion of SOCA 105 with a grade of C- or higher and an overall GPA of 2.0.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Anthropology (<https://admissions.wvu.edu/academics/majors/anthropology/>) major.

Click here to view the Suggested Plan of Study (p. 200)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Departmental Requirements for the B.A. in Anthropology

All Anthropology majors must complete a common set of required courses and choose major electives based on their scholarly and career interests.

- **Capstone Requirement:** The General Education Foundation requires the successful completion of a Capstone course. Anthropology majors must complete SOCA 488 for 3 credits.
- **Writing Requirement:** Anthropology Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two SpeakWrite Certified Courses TM: SOCA 488, and either SOCA 259 or SOCA 359.
- **Calculation of GPA:** A minimum GPA of 2.0 is required across all SOCA courses counted toward meeting major requirements. A grade of C- is required in SOCA 101, SOCA 105, SOCA 259, SOCA 359. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Experiential Learning:** Students interested in archaeological careers or graduate studies are encouraged to take Archaeological Field School (SOCA 357) through WVU or a transfer equivalent. Students interested in applied cultural anthropology careers or graduate studies are encouraged to consult with faculty about transient opportunities for Ethnographic Research Methods (SOCA 356). In addition, students are encouraged to do Independent Study (SOCA 495), additional fieldwork, or an internship (SOCA 491) in their junior or senior year, combining experiential work with previously acquired skills in a project appropriate to their career goals. SOCA 490, SOCA 491, and SOCA 495 can be taken for variable credit and will count as general elective credits towards graduation, but they cannot be applied to major requirements.
- **Benchmark Expectations:** For details, go to the Anthropology admissions tab (p. 426).

Curriculum Requirements

UNIVERSITY REQUIREMENTS	31
SOCA 191 First-Year Seminar	
GEF Requirements: may vary depending on overlap	
COLLEGE REQUIREMENTS	12
Fine Arts Requirement	
Foreign Language	
Global Studies and Diversity Requirement	
DEPARTMENTAL REQUIREMENTS	
Common Core Requirements	12

SOCA 101	Introduction to Sociology	
SOCA 105	Introduction to Anthropology	
SOCA 259	The Craft of Anthropology	
SOCA 359	Anthropological Thought	
Subfield Requirements		6
Select two of the following:		
SOCA 252	Biological Anthropology	
SOCA 254	Cultural Anthropology	
SOCA 258	Introduction to Archaeology	
Subfield Enrichment Requirement		3
Select one of the following:		
STAT 111	Understanding Statistics	
STAT 211	Elementary Statistical Inference	
ENGL 221	The English Language	
LING 101	Introduction to Language	
LING 311	Introduction to Structural Linguistics	
Upper-level Anthropology Requirements		12
Select four of the following:		
SOCA 350	Latin American Culture	
SOCA 349	Human Osteology	
SOCA 352	Historical Archaeology	
SOCA 354	Mesoamerican Archaeology	
SOCA 355	Cultural Resource Management	
SOCA 356	Ethnographic Field Methods	
SOCA 357	Archaeological Field School	
SOCA 358	Anthropology of Health and Illness	
SOCA 450	Archaeology of Ancient States	
SOCA 451	Material Culture	
SOCA 457	Social Movements	
SOCA 458	Environmental Anthropology	
Capstone Experience		3
SOCA 488	The Capstone Experience	
General Electives		41
Number of electives may vary depending on overlap and AP credits		
Total Hours		120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
SOCA 191		1 ENGL 101 (GEF 1)	3
GEF 5		3 GEF 2	3
Foreign Language 101		3 ECAS Fine Arts Requirement (GEF 6)	3
SOCA 105 (ECAS Glob. Stu. & Div. Req.; GEF 7)		3 Foreign Language 102	3
STAT Requirement (GEF 3)		3 SOCA 101 (GEF 4)	3
General Elective		2	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 GEF 8*	3
GEF 2		3 Foreign Language 204	3
GEF 8*		3 SOCA 259	3
Foreign Language 203		3 Subfield Requirement Course 2	3

Subfield Requirement Course 1		3 General Elective	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
GEF 8*		3 SOCA 359	3
Subfield Enrichment Course		3 Upper-level Anthropology Course 2	3
Upper-level Anthropology Course 1		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
Upper-level Anthropology Course 3		3 SOCA 488	3
General Elective		3 Upper-level Anthropology Course 4	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

* Students completing a minor, a double major or a dual degree already fulfill F 8.

Degree Progress

Students are expected to meet the benchmarks set below.

- Complete SOCA 101 and SOCA 105 with grades of C- or higher by the end of the second semester in the program;
- Complete SOCA 259 and two additional 200-level anthropology courses by the end of the fourth semester in the program;
- Complete SOCA 359, one 300 or 400-level anthropology course and either STAT 111, STAT 211, ENGL 221, LING 101, or LING 311 by the end of the sixth semester in the program.
- Maintain a GPA of 2.0 overall and a minimum GPA of 2.0 in all SOCA courses counting toward major requirements.
- All majors must meet with their adviser every semester.

Students who do not meet these benchmarks may be removed from their major.

Major Learning Outcomes

ANTHROPOLOGY

Students graduating with a BA in Anthropology will be able to:

1. Describe anthropology's core theoretical perspectives, its distinctive history, and its unique breadth and range as a discipline.
2. Interpret past and present human life-ways holistically and comparatively.
3. Discuss the importance of knowledge and understanding of a culturally and biologically diverse world.
4. Differentiate between the multiple methods employed by anthropologists across its subfields.
5. Apply ethical principles to the conduct of anthropological research and the applications of its findings.
6. Critically analyze anthropological questions and issues by retrieving and synthesizing appropriate information and evidence and identifying implications for research and practice/policy.
7. Demonstrate effective, clear and persuasive communication skills according to disciplinary conventions.

Biochemistry, B.S.

Degree Offered

- Bachelor of Science

Students earning a B.S. in Biochemistry are not eligible to earn a B.S. or B.A. in Chemistry or Biology, a B.S. in Animal & Nutritional Sciences, or a minor in Biology.

Nature of the Program

The biochemistry curriculum prepares students for careers requiring a strong background in basic principles of the physical and life sciences. The program is a collaborative effort between the Divisions of Animal and Nutritional Sciences and Plant and Soil Sciences in the Davis College of Agriculture, Natural Resources and Design, and the Departments of Biology and Chemistry in the Eberly College of Arts and Sciences.

Students completing a biochemistry major are prepared for professional employment in the expanding fields of agricultural and environmental sciences, chemical industry, health-related industries and biotechnology-based industries. The curriculum provides students with the interdisciplinary background in biochemistry, biology, chemistry, mathematics, physics and molecular biology necessary as preparation for professional schools of human and veterinary medicine, dentistry, optometry, and pharmacy. It also provides strong preparation for graduate study in fields such as animal and plant agriculture, biochemistry, biology, molecular biology, genetics, biotechnology, chemistry, food science, nutrition and physiology. The curriculum is accredited by the American Society of Biochemistry and Molecular Biology. The degree requirements for a American Chemical Society certified degree can be met within the framework of the program.

Minors

All students have the possibility of earning one or more minors; list of all available minors and their requirements (p. 50). Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

ANIMAL & NUTRITIONAL SCIENCES DIVISION DIRECTOR

- Peter V. Schaeffer - PhD (University of Southern California)
Professor of Regional science, Applied microeconomics

BIOLOGY CHAIR

- Richard B. Thomas - Ph.D. (Clemson University)
Professor of Physiological plant ecology, Forest ecology, Global climate change

CHEMISTRY CHAIR

- Gregory Dudley - PhD (Massachusetts Institute of Technology)
Eberly Family Distinguished Professor and Department Chair, Natural product synthesis

PLANT AND SOIL SCIENCES DIRECTOR

- Sven Verlinden - PhD (Purdue University)
Associate Professor of Horticulture, Post Harvest Physiology, Molecular Biology

PROFESSORS

- Ashok P. Bidwai - Ph.D. (University of Utah)
Molecular genetic analysis of protein kinase, CK2 in Drosophila
- Kenneth P. Blemings - Ph.D. (University of Wisconsin)
Interim Dean of the Davis College, Protein and amino acid metabolism
- Mirjana Bulatovic-Danilovich - PhD (University of Ljubljana, Slovenia)
Extension Specialist, Consumer Horticulture, Master Gardener Program Coordinator
- Rakesh Chandran - PhD (Virginia Tech)
Weed management in horticultural systems, IPM, Innovative strategies for weed control
- Jonathan R. Cumming - Ph.D. (Cornell University)
Environmental plant physiology, Ecophysiology of root-mycorrhizal-soil interactions, Urban ecology
- Robert A. Dailey - Ph.D. (University of Wisconsin)
Reproductive Physiology
- Kevin C. Daly - Ph.D. (University of Arizona)
Sensory neurobiology
- Stephen DiFazio - Ph.D. (Oregon State University)

Plant genomics, Molecular ecology, Plant population genetics, Biotechnology risk assessment

- Cindy Fitch - Ph.D. (Case Western Reserve University)
Associate Dean of Programming & Research, WVU Extension
- Terry Gullion - Ph.D. (William and Mary)
Physical chemistry, Solid State NMR, Biological Materials, Polymers
- Lisa Holland - Ph.D. (University North Carolina-Chapel Hill)
Micro-separations, High-throughput drug screening
- Jason Hubbard - PhD (University of Idaho-Moscow)
Fresh water supply regimes, Biogeochemical cycling, Ecohydrology
- Jacek Jaczynski - Ph.D. (Oregon State University)
Food Science and Technology
- P. Brett Kenney - Ph.D. (Kansas State University)
Animal Science and Meat Science
- Fred L. King - Ph.D. (University of Virginia)
Analytical chemistry, Mass spectrometry, Trace elements, Gas-phase chemistry
- Hillar Klandorf - Ph.D. (British Council for National Academic Awards)
Physiology
- Kristen E. Matak - Ph.D. (Virginia Polytechnic Institute and State University)
Human Nutrition and Foods
- Louis M. McDonald - PhD (University of Kentucky)
Soil Science, Soil Chemistry
- Joseph S. Moritz - Ph.D. (Kansas State University)
Effect of feed form on animal performance
- Daniel Panaccione - PhD (Purdue University)
Plant Pathology, Mycology, Mycotoxins, Molecular Biology
- Yong-Lak Park - PhD (Iowa State University)
Entomology, Geospatial Ecology of Insects, Integrated Pest Management, Spatial Interaction between Insect and Plant Diseases
- William Peterjohn - PhD
Ecosystem ecology
- Michelle Richards-Babb - PhD (Lehigh University)
Director of the Office of Undergraduate Research, Chemical education
- Rita V.M. Rio - Ph.D. (Yale University)
Symbioses
- Kenneth Showalter - Ph.D. (University of Colorado)
Bennett Distinguished Professor, physical chemistry, Chemical kinetics, Multi-stability and oscillating chemical systems
- Jeffrey Skousen - PhD (Texas A&M University)
Soil Science, Land Reclamation, Soil and Water Conservation, Watershed Restoration
- Bjorn Soderberg - Ph.D. (Royal Institute of Technology, Sweden)
Organic synthesis using transition metals
- Robert L. Taylor - PhD (Mississippi State University)
Poultry Science, Immunology
- James A. Thompson - PhD (University of Minnesota)
Soil Science, Pedology, Land Use
- Janet C. L. Tou - Ph.D. (University of Toronto)
Human nutrition and foods
- Kung Wang - Ph.D. (Purdue University)
Eberly Distinguished Professor of Chemistry
- Matthew E. Wilson - Ph.D. (Iowa State University)
Reproductive Physiology
- Jianbo Yao - Ph.D. (McGill University)
Molecular Biology - Genetics

SERVICE PROFESSORS

- Donna Ford-Werntz - Ph.D. (Washington University/Missouri Botanical Garden)
Plant systematics: Portulacaceae, West Virginia flora

TEACHING PROFESSORS

- Margaret A. Minch - DVM (Ohio State University)
Veterinary Medicine

ASSOCIATE PROFESSORS

- Kimberly M. Barnes - Ph.D. (University of Nebraska)
Coordinator of the Intercollegiate Biochemistry Program
- Vagner Benedito - PhD (Wageningen University, The Netherlands)
Genetics and developmental biology, Plant genomics, Functional genetics and plant physiology
- Clifton P. Bishop - Ph.D. (University of Virginia)
Molecular genetics, Developmental biology, Forensic biology
- Scott Bowdridge - Ph.D. (Virginia Tech)
Veterinary immunology
- Andrew Dacks - Ph.D. (University of Arizona)
Neurobiology
- Sarah M. Farris - Ph.D. (University of Illinois at Urbana-Champaign)
Evolution and development of the insect brain, Neuroanatomy
- Eugene E. Felton - Ph.D. (University of Missouri)
Ruminant nutrition
- Jennifer Gallagher - Ph.D. (Yale University)
Systems biology, genetics
- Fabien Goulay - Ph.D. (University of Rennes, France)
Physical chemistry, Laser spectroscopy
- Thomas Griggs - PhD (Texas Tech University)
Agronomy
- Jennifer Hawkins - Ph.D.
Plant comparative genomics, Molecular evolution
- Jessica Hoover - PhD (University of Washington)
Organometallics chemistry, Catalysis
- James B. Kotcon - PhD (University of Wisconsin)
Plant Pathology, Agroecology, Nematology, Organic farming practices
- K. Marie Krause - Ph.D. (University of Wisconsin)
Dairy Science Nutrition
- Justin Legleiter - Ph.D. (Carnegie-Mellon University)
Biophysical Chemistry, Atomic Force Microscopy
- Blake Mertz - Ph.D. (Iowa State University)
Computational biophysics and chemistry
- Melissa Olfert - Ph.D., R.D. (Loma Linda University)
Health and wellness
- Eugenia M. Pena-Yewtukhiw - PhD (University of Kentucky)
Soil Science
- Brian Popp - Ph.D. (University of Wisconsin - Madison)
Organic and organometallic chemistry, catalysis
- Stephen Valentine - Ph.D. (Indiana University)
Mass spectrometric analysis of biomolecules
- Nicole Waterland - PhD (Ohio State University)
Horticulture, Flour Senescence

RESEARCH ASSOCIATE PROFESSORS

- Domingo J. Mata Padrino - Ph.D. (Central University of Venezuela)
Grazing management, organic farming

TEACHING ASSOCIATE PROFESSORS

- Erin Battin - PhD (Clemson University)
Bio-inorganic chemistry
- Nettie Freshour - M.S., R.D. (West Virginia University)
Sports nutrition

- Dana Huebert-Lima - PhD (University of Wisconsin-Madison)
Biology, Epigenetics
- Youyoun Moon - PhD (Ohio State University)
Horticulture
- John Navaratnam - Ph.D. (West Virginia University)
Wetland ecology
- Joshua Osbourn - Ph.D. (University of Pittsburgh)
Organic chemistry
- Betsy B. Ratcliff - Ph.D. (Binghamton University)
Innovative Teaching Methods
- Crystal Smith - Ed.D. (West Virginia University)
Equine studies
- Jennifer Stueckle - Ph.D. (West Virginia University)
Aquatic toxicology
- Mark Tinsley - Ph.D. (Leeds University, England)
Nonlinear dynamics, chemical oscillators, moving precipitation patterns
- Mingming Xu - Ph.D. (Ohio University)
General Chemistry
- Stephanie T. Young - PhD (West Virginia University)
Associate Chair for UG Studies in Biology, Molecular and Forensic Biology

ASSISTANT PROFESSORS

- Craig Barrett - Ph.D.
Plant Evolutionary Biology
- Sadie Bergeron - Ph.D.
Developmental Neuroscience
- Edward Brzostek - Ph.D.
Forest Ecology and Ecosystem Modeling
- Brian Dolinar - Ph.D. (University of Wisconsin - Madison)
Synthetic inorganic chemistry, magnetochemistry, physical inorganic chemistry, computational chemistry
- Tim Driscoll - Ph.D. (Virginia Tech)
Microbial metagenomics
- Daniel L. Frank - PhD (Virginia Tech)
Extension specialist, horticulture
- Zachary Freedman - PhD (Rutgers University)
Environmental Microbiology
- Michael Gutensohn - PhD (University of Cologne, Germany)
Plant biochemistry and genetics, Metabolic engineering, Plant-insect interactions
- Eric Horstick - Ph.D. (University of Michigan)
Developmental genetics, neuroscience, behavioral genetics
- Matthew Kasson - PhD (Pennsylvania State University)
Forest pathology, fungal-insect interactions, fungal phylogenetics
- Teiya Kijimoto - PhD (Tokyo Institute of Technology)
Evolutionary developmental biology of morphological diversification
- Peng Li - Ph.D. (Texas Tech University)
Micro-nanosystems
- Gary Marsat - Ph.D.
Neuroscience
- Carsten Milsmann - Ph.D. (Max-Planck Institute for Bioinorganic Chemistry)
Bioinorganic organometallic chemistry
- Ember Morrissey - PhD (Virginia Commonwealth University)
Environmental Microbiology
- Kevin Shaffer - Ph.D. (West Virginia University)
Extension Livestock Production Specialist
- Cangliang Shen - Ph.D. (Colorado State University)
Food Systems and Human Health

- Melissa Ventura-Marra - Ph.D., R.D. (Florida International University)
Healthy aging and nutritional prevention of chronic disease

SERVICE ASSISTANT PROFESSORS

- Zach Fowler - Ph.D.
Arboretum Director

TEACHING ASSISTANT PROFESSORS

- Kevin Barry - Ph.D. (University of Maryland)
Conservation Ecology
- David Davis - PhD (Virginia Tech)
Landscape, turf, specialty crops
- Melissa Ely - Ph.D. (West Virginia University)
General Chemistry
- Kelli George - Ph.D. (Florida State University)
Human nutrition and foods
- Amaris Guardiola - Ph.D. (Duke University)
- Bremansu Osa-Andrews - Ph.D. (South Dakota State University)
Protein biochemistry

SENIOR LECTURERS

- Sue Raylman - Ph.D.
Animal behavior
- Mark Schraf - M.S. (West Virginia University)
Analytical chemistry
- Elizabeth Thomas - M.S. (Clemson University)
Invertebrate zoology

LECTURER

- Sydha Salihu - PhD
Plant physiology

PROFESSORS EMERITI

- Barton Baker
- John Balasko
- Alan Biggs
- Gary Bissonnette
- William Bryan
- Harry O. Finklea
- Mannon Gallegly
- E. Keith Inskeep
- Charles Jaffe
- Paul Lewis
- William MacDonald
- Joseph Morton
- Robert S. Nakon
- John H. Penn
- Jeffrey L. Petersen
- Alan Sextone
- Ronald B. Smart

Admissions

- First Time Freshman with a Math ACT score of 22 or a Math SAT score of 540 are admitted directly to the Biochemistry major.
- Students transferring from another major within WVU are admitted into the major if they meet the above criteria, or have completed CHEM 115, CHEM 115L, BIOL 115, and BIOL 116 with a C- or better in each, and have earned a minimum overall GPA of 2.0.

- Students transferring from another institution are admitted into the major if they meet the above criteria, or have completed CHEM 115, CHEM 115L, BIOL 115, and BIOL 116 with a C- or better in each, and have earned a minimum overall GPA of 2.0.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Biochemistry (<https://admissions.wvu.edu/academics/majors/biochemistry/>) major.

Click the appropriate link below to view the corresponding Biochemistry Track Requirements and Suggested Plans of Study.

- American Chemical Society (ACS) (p. 210)
- American Society of Biochemistry and Molecular Biology (ASBMB) (p. 211)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

CURRICULUM REQUIREMENTS

- **Writing Requirement;** Biochemistry Bachelor of Science students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and at least two additional **SpeakWrite Certified Courses™** from: BIOL 115, BIOL 117, BIOL 219, BIOL 411, CHEM 403.

UNIVERSITY REQUIREMENTS

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ANRD 191	First-Year Seminar
GEF Requirements: number of credits will vary depending on overlap	

PROGRAM REQUIREMENTS

1- STEM Foundations

15

MATH 155 or MATH 153 & MATH 154	Calculus 1 (Minimum grade of C-) Calculus 1a with Precalculus and Calculus 1b with Precalculus
MATH 156	Calculus 2 (Minimum grade of C-)
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory (Minimum grade of C-)
STAT 211	Elementary Statistical Inference

2- Biochemistry Major Requirements

Core Requirement

5

AGBI 199	Orientation to Biochemistry
AGBI 410	Introductory Biochemistry (Minimum grade of C-)
AGBI 412	Introduction to Biochemistry Wet Laboratory (Minimum grade of C-)

Biology Requirement

11

BIOL 117 & BIOL 118	Introductory Physiology and Introductory Physiology Laboratory (Minimum grade of C-)
BIOL 219 & BIOL 220	The Living Cell and The Living Cell Laboratory (Minimum grade of C-)
BIOL 310	Advanced Cellular/Molecular Biology

Chemistry Requirement**28**

Select one set (Minimum grade of C-):

CHEM 115 & 115L & CHEM 116 & CHEM 116L & CHEM 215 & CHEM 215L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory and Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory and Introductory Analytical Chemistry and Introductory Analytical Chemistry Laboratory (Minimum grade of C-)
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or:

CHEM 117 & 117L & CHEM 118 & CHEM 118L	Principles of Chemistry 1 and Principles of Chemistry 1 - Laboratory and Principles of Chemistry 2 and Principles of Chemistry 2 - Laboratory (Minimum grade of C-)
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and all of the following:

CHEM 233	Organic Chemistry (Minimum grade of C-)
CHEM 234	Organic Chemistry (Minimum grade of C-)
CHEM 235	Organic Chemistry Laboratory (Minimum grade of C-)
CHEM 236	Organic Chemistry Laboratory (Minimum grade of C-)
CHEM 341	Physical Chemistry: Brief Course
CHEM 342	Experimental Physical Chemistry
CHEM 462	Biochemistry 2
CHEM 464	Biochemistry 2 Laboratory

A track is required.**31**

Number of credits may vary depending on courses selected

Biochemistry Electives*

AEM 341	General Microbiology
AEM 401	Environmental Microbiology
AEM 420	Soil Microbiology
AEM 445	Food Microbiology
AGBI 386	Undergraduate Research Experience 1
AGBI 403	Applied Biochemistry Literature
AGBI 486	Undergraduate Research Experience 2
AGBI 496	Senior Thesis
AGBI 497	Research
AGBI 498	Honors
ANPH 301	Introduction to Animal Physiology
ANPH 400	Growth and Lactation Physiology
ANPH 405	Animal Physiology Laboratory
ANPH 424	Physiology of Reproduction
A&VS 402	Values and Ethics
A&VS 451	Current Literature in Animal Science
A&VS 496	Senior Thesis
A&VS 497	Research
BIOL 302	Biometry
BIOL 312	Introduction to Virology
BIOL 313	Molecular Basis of Cellular Growth
BIOL 324	Molecular Genetics
BIOL 325	Molecular Genetics Laboratory
BIOL 335	Cell Physiology

BIOL 348	Neuroscience 1
BIOL 349	Neuroscience 2
BIOL 350	Plant Physiology
BIOL 386	Undergraduate Research
BIOL 410	Cell and Molecular Biology Methods
BIOL 411	Introduction to Recombinant DNA
BIOL 413	Molecular Endocrinology
BIOL 414	Molecular Endocrinology-Laboratory
BIOL 415	Epigenetics
BIOL 420	Genomics
BIOL 421	Experimental Biochemistry
BIOL 423	Biochemistry of Nucleic Acids and Proteins
BIOL 424	Protein Structure and Function
BIOL 425	Developmental Genetics
BIOL 426	Molecular Biology of Cancer
BIOL 432	Forensic Biology
BIOL 436	General Animal Physiology
BIOL 440	Comparative Anatomy
BIOL 441	Vertebrate Microanatomy
BIOL 453	Molecular Basis of Disease
BIOL 454	Immunology
BIOL 455	Evolution of Infectious Diseases
BIOL 479	Principles of Systems Neuroscience
BIOL 486	Honors Investigation and Thesis
BIOL 496	Senior Thesis
BIOL 497	Research
CHEM 310	Instrumental Analysis
CHEM 312	Environmental Chemistry
CHEM 339	Organic Syntheses
CHEM 422	Intermediate Inorganic Chemistry
CHEM 460	Forensic Chemistry
CHEM 496	Senior Thesis
CHEM 497	Research
ENTO 404	Principles of Entomology
ENTO 412	Pest Management
FDST 445	Food Microbiology
FDST 449	Food Microbiology Lab
GEN 371	Principles of Genetics
GEN 440	Genetic Engineering Technologies
GEN 450	Applied Developmental Genetics
HN&F 460	Advanced Nutrition
HN&F 473	Medical Nutrition Therapy 1
HN&F 474	Medical Nutrition Therapy 2
HORT 330	Plant Propagation
PLSC 460	Plant Biochemistry
PLSC 497	Research
PPTH 401	General Plant Pathology
VETS 302	Animal Pathology
VETS 401	Veterinary Anatomy
VETS 403	Veterinary Anatomy Laboratory
VETS 405	Parasitology

Capstone Requirement

ASBMB Track, select one of the following options:

AGBI 386 & AGBI 486	Undergraduate Research Experience 1 and Undergraduate Research Experience 2
AGBI 403	Applied Biochemistry Literature

ACS Track, complete both of the following:

CHEM 401 & CHEM 403	Chemical Literature and Undergraduate Seminar
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General Electives **11**

Number of electives may vary depending on course options selected

Total Hours 120

* Qualified Seniors interested in taking 500-level courses as part of their electives should contact their adviser.

AMERICAN CHEMICAL SOCIETY (ACS) TRACK

CHEM 310	Instrumental Analysis	3
CHEM 401	Chemical Literature (Minimum grade of C-)	1
CHEM 403	Undergraduate Seminar	1
CHEM 422	Intermediate Inorganic Chemistry	3
CHEM 497	Research	3
PHYS 111	General Physics (Minimum grade of C-)	4
PHYS 112	General Physics (Minimum grade of C-)	4
Biochemistry Electives (See list above)		12
Total Hours		31

SUGGESTED PLAN OF STUDY FOR THE AMERICAN CHEMICAL SOCIETY (ACS) TRACK**First Year**

Fall	Hours	Spring	Hours
ANRD 191		1 AGBI 199	1
ENGL 101 (GEF 1)		3 BIOL 117 & BIOL 118 (GEF 8)	4
BIOL 115 & BIOL 116 (GEF 2)		4 CHEM 116 & 116L (GEF 8)*	4
CHEM 115 & 115L (GEF 8)*		4 MATH 156	4
MATH 155 (GEF 3)		4 GEF 4	3
		16	16

Second Year

Fall	Hours	Spring	Hours
BIOL 219 & BIOL 220		4 CHEM 234 & CHEM 236	4
CHEM 233 & CHEM 235		4 STAT 211	3
PHYS 111		4 PHYS 112	4
ENGL 102		3 Biochemistry Elective 1 GEF 5	3
		15	17

Third Year

Fall	Hours	Spring	Hours
AGBI 410 & AGBI 412		4 CHEM 341 & CHEM 342	4
CHEM 215 & 215L		4 CHEM 462 & CHEM 464	4
BIOL 310		3 General Elective	3

GEF 6		3 GEF 7	3
		14	14
Fourth Year			
Fall	Hours	Spring	Hours
CHEM 422		3 CHEM 310	3
CHEM 497		3 CHEM 401	1
Biochemistry Elective 2		3 CHEM 403 (Capstone)	1
General Elective		3 Biochemistry Elective 3	3
General Elective		2 Biochemistry Elective 4	3
		General Elective	3
		14	14

Total credit hours: 120

* CHEM 117/117L and 118/118L may be substituted for CHEM 115/115L, 116/116L, and 215/215L.

AMERICAN SOCIETY OF BIOCHEMISTRY AND MOLECULAR BIOLOGY (ASBMB) TRACK

BIOL 313 or BIOL 410	Molecular Basis of Cellular Growth Cell and Molecular Biology Methods	3
BIOL 423	Biochemistry of Nucleic Acids and Proteins	3
Choose one of the following:		3
AGBI 386 & AGBI 486	Undergraduate Research Experience 1 and Undergraduate Research Experience 2	
AGBI 403	Applied Biochemistry Literature	
PHYS 101 or PHYS 111	Introductory Physics 1 General Physics	4
PHYS 102 or PHYS 112	Introductory Physics 2 General Physics	4
Biochemistry Electives (see list above)		14
Total Hours		31

SUGGESTED PLAN OF STUDY FOR THE AMERICAN SOCIETY OF BIOCHEMISTRY AND MOLECULAR BIOLOGY (ASBMB) TRACK

First Year

Fall	Hours	Spring	Hours
ANRD 191		1 BIOL 117 & BIOL 118 (GEF 8)	4
ENGL 101 (GEF 1)		3 CHEM 116 & 116L (GEF 8)*	4
BIOL 115 & BIOL 116 (GEF 2)		4 MATH 156	4
CHEM 115 & 115L (GEF 8)*		4 AGBI 199	1
MATH 155 (GEF 3)		4 GEF 4	3
		16	16

Second Year

Fall	Hours	Spring	Hours
BIOL 219 & BIOL 220		4 CHEM 234 & CHEM 236	4
CHEM 233 & CHEM 235		4 STAT 211	3
PHYS 101 or 111		4 PHYS 102 or 112	4
ENGL 102		3 Biochemistry Elective 1	3

		GEF 5	3
		15	17
Third Year			
Fall	Hours	Spring	Hours
AGBI 410 & AGBI 412		4 BIOL 313 or 410	3
CHEM 215 & 215L*		4 CHEM 341 & CHEM 342	4
BIOL 310		3 CHEM 462 & CHEM 464	4
GEF 6		3 GEF 7	3
		14	14
Fourth Year			
Fall	Hours	Spring	Hours
BIOL 423		3 Biochemistry Elective 4	4
Biochemistry Elective 2		4 Capstone	3
Biochemistry Elective 3		3 General Elective	3
General Elective		3 General Elective	3
General Elective		2	
		15	13
Total credit hours: 120			

* CHEM 117/117L and 118/118L may be substituted for CHEM 115/115L, 116/116L, and 215/215L.

Degree Progress

- By the end of their third semester in the major students are expected to have completed BIOL 115, 116, 117, 118 and CHEM 115, 115L OR CHEM 115, 115L, 116, 116L, and BIOL 115, 116 with a minimum grade of C- in each course and an overall GPA of 2.0.
- Students must maintain a GPA of at least 2.0 in the major and overall.
- All majors must attend an advising session with their Biochemistry advisor each semester.

Students who do not meet those benchmarks may be removed from the major.

Major Learning Outcomes

BIOCHEMISTRY

Graduates will demonstrate a working knowledge in the following core concepts:

1. Energy is required by and transformed in biological systems.
2. Macromolecular structure determines function and regulation.
3. Information storage and flow are dynamic and interactive.
4. Discovery requires objective measurement, quantitative analysis, and clear communications.
5. The pervasive role evolution and homeostasis play in shaping the form and function of all biological molecules and organisms.

Biology

Degrees Offered

- Bachelor of Arts
- Bachelor of Science

Areas of Emphasis Offered

- Cellular and Molecular Biology
- Neuroscience
- Genomics
- Ecology and Environmental Biology

Nature of the Program

The Department of Biology offers two degree programs: the bachelor of science and the bachelor of arts in biology. These two programs are structured to meet the foundational needs of all students who are interested in a career in the broad area of the life sciences. The two programs are similar during the first two years. They differ primarily in their language requirements and in their Biology requirements. A pre-medical track is available in either degree program. Please consult with your academic advisor about track options.

The undergraduate programs in biology provide excellent preparation for students planning to apply to graduate programs in the biological sciences or to professional schools and programs including medical, osteopathic, dental, physical or occupational therapy, optometry, pharmacy, veterinary medicine, physician assistant, and chiropractic. A degree in biology prepares students for a wide range of careers in the biological sciences including medicine, biotechnology, genetics, forensics, ecology, environmental biology, and other biologically-related technical fields in government and private industry. With appropriate electives, a student with a degree in biology may also choose to enter the fields of law, journalism, education, business, health care administration, pharmaceutical sales, or work for a variety of federal agencies.

After completing an initial four-semester core sequence in the biological sciences, students in the biology B.A. program may choose to specialize in courses from four major areas of biology: cellular and molecular biology, organismal biology, ecology and evolution, or integrative biology. Those students pursuing the B.S. degree in biology are required to take at least one course from each of the major areas of biology to ensure an advanced, broad-based knowledge of biology.

Regardless of the degree program chosen, students will experience a wide variety of classroom environments from large lecture sections to small group discussions and intensive laboratory-oriented courses. Laboratory courses include topics such as comparative anatomy, molecular genetics, recombinant DNA technology, plant ecology, and plant physiology as well as many other laboratory experiences across the biological disciplines.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Minors

All students have the possibility of earning one or more minors; follow link for a list of all available minors and their requirements. (p. 50) Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

CHAIR

- Richard B. Thomas - Ph.D. (Clemson University)

ASSOCIATE CHAIR

- Jennifer Hawkins - Ph.D. (University of Iowa)
Associate Chair of Graduate Studies
- John Navaratnam - Ph.D. (West Virginia University)
Associate Chair for Undergraduate Advising, Recruitment, and Retention
- Stephanie T. Young - Ph.D. (West Virginia University)
Associate Chair for Undergraduate Studies

PROFESSORS

- Ashok P. Bidwai - Ph.D. (University of Utah)
Molecular genetic analysis of protein kinase, CK2 in *Drosophila*
- Jonathan R. Cumming - Ph.D. (Cornell University)
Environmental plant physiology, Ecophysiology of root-mycorrhizal-soil interactions, Urban ecology
- Kevin C. Daly - Ph.D. (University of Arizona)
Sensory neurobiology, Neural coding, Brain-behavior interactions, Comparative psycho-biology
- Steven DiFazio - Ph.D. (Oregon State University)
Plant genomics, Molecular ecology, Plant population genetics, Biotechnology risk assessment
- Donna Ford-Werntz - Ph.D. (Washington University/Missouri Botanical Garden)

Plant systematics: Portulacaceae, West Virginia flora.

- William T. Peterjohn - Ph.D. (Duke University)
Ecosystem ecology: Effects of global change on ecosystem dynamics, Nitrogen cycling in natural ecosystems.
- Rita V.M. Rio - Ph.D. (Yale University)
Symbioses
- Richard B. Thomas - Ph.D. (Clemson University)
Chair. Physiological plant ecology, Forest ecology, Global climate change

ASSOCIATE PROFESSORS

- Clifton P. Bishop - Ph.D. (University of Virginia)
Molecular genetics, Developmental biology, Forensic biology
- Andrew Dacks - Ph.D. (University of Arizona)
Neurobiology
- Sarah M. Farris - Ph.D. (University of Illinois at Urbana-Champaign)
Evolution and development of the insect brain, Neuroanatomy
- Jennifer Gallagher - Ph.D. (Yale University)
Functional genomics of yeast
- Jennifer Hawkins - Ph.D. (University of Iowa)
Plant comparative genomics, Molecular evolution.
- Dana Huebert Lima - Ph.D. (University of Wisconsin)
Cellular and Molecular Biology, Epigenetics, Science Communication
- John Navaratnam - Ph.D. (West Virginia University)
Wetland ecology
- Jennifer Stueckle - Ph.D. (West Virginia University)
Aquatic toxicology
- Stephanie T. Young - Ph.D. (West Virginia University)
Molecular and Forensic biology

ASSISTANT PROFESSORS

- Craig Barrett - Ph.D. (Ohio State University)
Plant evolutionary biology
- Kevin Barry - Ph.D. (University of Maryland)
Conservation ecology
- Sadie Bergeron - Ph.D. (University of Massachusetts - Amherst)
Developmental Neurobiology
- Edward Brzostek - Ph.D. (Boston University)
Forest ecology, ecosystem modeling
- Timothy Driscoll - Ph.D. (Virginia Tech)
Bioinformatics, microbial metagenomics
- Zachariah Fowler - Ph.D. (West Virginia University)
Forest ecology
- Amaris Guardiola - Ph.D. (Duke University)
- Eric Horstick - Ph.D. (University of Michigan)
Neurobiology, development, behavior, neural asymmetry
- Gary Marsat - Ph.D. (McGill University)
Neurobiology

SENIOR LECTURERS

- Susan Raylman - Ph.D. (North Carolina State University)
Animal behavior
- Beth Thomas - M.S. (Clemson University)
Invertebrate zoology

LECTURER

- Sydha Salihu - Ph.D. (Virginia Tech)

PROFESSORS EMERITI

- Roy B. Clarkson
- Dorothy C. Dunning
- Jorge Flores
- Philip E. Keeting
- Gerald E. Lang
- Kevin Lee
- Joseph A. Marshall
- James B. McGraw
- Leah A. Williams

Admissions

- First Time Freshmen with a Math ACT of 19 or a MATH SAT of 510 or above are admitted directly into the Biology major.
- Students moving from another WVU major must have an overall GPA of a 2.0 and meet the following requirements prior to being admitted into either the B.S. or the B.A. program: completion BIOL 115, BIOL 116, BIOL 117, BIOL 118, CHEM 115, and CHEM 115L with a minimum grade of C-.
- Students transferring from another institution must have an overall GPA of a 2.0 and meet the following requirements prior to being admitted into either the B.S. or the B.A. program: completion BIOL 115, BIOL 116, BIOL 117, BIOL 118, CHEM 115, and CHEM 115L with a minimum grade of C-.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science and Bachelor of Arts in Biology (<https://admissions.wvu.edu/academics/majors/biology/>) major.

Degree Progress

Students remain in the Biology major provided they meet the benchmark expectations listed below.

- **B.A. Biology:** By the end of their third semester into the major, students intending to graduate with a B.A. in Biology are expected to have completed BIOL 115, BIOL 116, BIOL 117, BIOL 118, CHEM 115, and CHEM 115L with a minimum grade of C- in each course and a 2.0 GPA overall. In addition, students must meet with their Biology adviser every semester. Students who do not meet their benchmarks will be removed from their major.
- **B.S. Biology:** By the end of their third semester into the major, students intending to graduate with a B.S. in Biology are expected to have completed BIOL 115, BIOL 116, BIOL 117, BIOL 118, CHEM 115, and CHEM 115L with a minimum grade of C- in each course and a 2.0 GPA overall. In addition, students must meet with their Biology adviser every semester. Students who do not meet their benchmarks will be removed from their major.
- **Readmission after being removed from the Biology major:** students must meet the benchmarks listed below.
 - Completed BIOL 219 and BIOL 220 with a minimum grade of D- in each course.
 - Have an overall GPA of 2.0.
 - Have a Biology GPA of 2.0.

Major Learning Outcomes

BIOLOGY

Upon successful completion of the B.A. or B.S. degree, **Biology** majors will demonstrate competency in these areas:

1. Students will demonstrate competency in five content areas (listed below) at three biological levels - cellular/molecular, organismal/physiological, ecological and populations)
 - Information flow
 - Transformations of energy and matter
 - Structure-function relationships
 - Evolution
 - Systems and interactions
2. Students will be able to apply science process skills, including: reading the primary literature, developing a testable hypothesis, designing and experiment, collecting and analyzing data statistically.
3. Students will be able to communicate effectively with both fellow scientists and non-scientists in both written and oral forms.
4. Students will be able to synthesize knowledge and skills from across the curriculum and apply them to societal issues and problems.

Biology B.A.

Click here to view the Suggested Plan of Study (p. 218)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences (p. 187) pages.

Departmental Requirements for the B.A. in Biology

Students intending to graduate with a B.A. in Biology must earn a minimum of 32 hours in biology or approved courses in the biological sciences, with a minimum of 120 hours total required for graduation (see Eberly B.A. pages when reaching 42 credits in Biology). Students may not earn both a B.A. and a B.S. in Biology.

- Capstone Requirement:** The university requires the successful completion of a Biology capstone course (BIOL 320 or BIOL 321). The three semester, BIOL 486, may be counted as the Biology Capstone Experience in place of BIOL 320 or BIOL 321. Two hours of BIOL 486 will be counted as part of the core requirements (replacing BIOL 320 or BIOL 321) and up to 4 hours may count toward upper-level electives.
- Writing and Communication Skills Requirement:** The Biology Bachelor of Arts is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- Calculation of the GPA in the Biology major:** Students are required to maintain at least a minimum cumulative 2.0 GPA in all courses required of the Biology major including: BIOL 115, BIOL 116, BIOL 117, BIOL 118, BIOL 219, BIOL 220, BIOL 221, BIOL 320 or BIOL 321, BIOL 327, CHEM 231, CHEM 231L, all upper-division courses counted as electives towards the major, and courses counted towards the capstone. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat. In addition, a minimum grade of C- must be attained in BIOL 115, BIOL 116, BIOL 117, and BIOL 118.
- Area of Emphasis (AOE):** Students interested in completing an area of emphasis must complete the requirements as outlined on in the Area of Emphasis section. Courses used to complete an AoE may also be used to complete elective requirements, as described below.
- Electives and Lab requirement:** Upper-division electives may include any 300- or 400-level BIOL courses (except: BIOL 318, BIOL 320, BIOL 321, BIOL 327, BIOL 490, BIOL 491, BIOL 494 and above). Lecture and lab courses can be found in the course catalog. Special topics courses, BIOL 493, can be used as electives. No more than two of the following non-BIOL courses may be counted as a BIOL elective: AEM 341, AGBI 410, BIOC 339, BIOC 531, GEOL 331, PHYS 225, PSYC 426, WMAN 446. Students must take a minimum of 14 credits of upper-division biology electives; at least one of the selected courses must have a laboratory.

• **Research option:** With permission of the department, students may enroll in BIOL 386 or BIOL 486. Four hours of BIOL 386 and BIOL 486 may be used towards the 14 hours of Biology upper-division electives. One semester of BIOL 386 or BIOL 486 may be used to satisfy the lab requirement.

• **Benchmark Expectations:** For details, go to the biology admissions tab (p. 215).

Curriculum Requirements

UNIVERSITY REQUIREMENTS 19

BIOL 191 First-Year Seminar

GEF Requirements: credits may vary depending on overlap

ECAS B.A. Requirements 12

Fine Arts Requirement

Foreign Language

Global Studies and Diversity Requirement

DEPARTMENTAL REQUIREMENTS

1 - STEM Foundations:

Chemistry Foundations 8

Select one of the following:

CHEM 115 Fundamentals of Chemistry
& 115L and Fundamentals of Chemistry 1 - Laboratory (CHEM 115 must be taken before BIOL 219.)

and

CHEM 116 Fundamentals of Chemistry
& 116L and Fundamentals of Chemistry 2 - Laboratory

or

CHEM 117 Principles of Chemistry 1
& 117L and Principles of Chemistry 1 - Laboratory

and

CHEM 118 Principles of Chemistry 2
& 118L and Principles of Chemistry 2 - Laboratory

Mathematics and Statistic Foundations 6

Select one of the following:

MATH 150 Applied Calculus

or

MATH 153 Calculus 1a with Precalculus
& MATH 154 and Calculus 1b with Precalculus

or

MATH 155 Calculus 1

and take the following:

STAT 211 Elementary Statistical Inference
or STAT 215 Introduction to Probability and Statistics

Physics Foundations 8

Select one of the following pairs:

PHYS 101 Introductory Physics 1
& PHYS 102 and Introductory Physics 2

PHYS 111 General Physics
& PHYS 112 and General Physics

PHYS 111 General Physics
& PHYS 102 and Introductory Physics 2

2 - Biology Major Requirements:

Core Biology Courses (must be taken in the following sequence) 16

BIOL 115 Principles of Biology
& BIOL 116 and Principles of Biology Laboratory

BIOL 117 Introductory Physiology
& BIOL 118 and Introductory Physiology Laboratory

BIOL 219 & BIOL 220	The Living Cell and The Living Cell Laboratory
BIOL 221	Ecology and Evolution
BIOL 327	Professional Development

Chemistry Requirement **4**

Select one of the following:

CHEM 231 & 231L	Organic Chemistry: Brief Course and Organic Chemistry: Brief Course - Laboratory
--------------------	---

or

CHEM 233 & CHEM 235	Organic Chemistry and Organic Chemistry Laboratory
------------------------	---

and

CHEM 234 & CHEM 236	Organic Chemistry and Organic Chemistry Laboratory
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Biology Electives **16**

The 16 hours of upper-division courses can include any 300- or 400-level BIOL course except: BIOL 318, BIOL 327, BIOL 490, BIOL 491, BIOL 494, and above; they must include one class with a lab. **

Capstone Experience **3**

Choose from one of the following:

BIOL 320	The Total Science Experience: Genomics
BIOL 321	Total Science Experience Lab

or three semesters of the following :

BIOL 486	Honors Investigation and Thesis (9 hours)
----------	---

GENERAL ELECTIVES **28**

Number of electives may vary depending on GEF overlap and options chosen.

Total Hours 120

* No more than one of the following classes maybe counted as a BIOL elective: AEM 341, AEM 401, AGBI 410, BIOC 339, BIOC 531, GEOL 331, PHYS 225.

** Please see an adviser to identify lab classes.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
BIOL 191		1 ENGL 101 (GEF 1)	3
Foreign Language 101		3 Foreign Language 102	3
BIOL 115 & BIOL 116 (GEF 2)		4 BIOL 117 & BIOL 118 (GEF 8)	4
CHEM 115 & 115L (GEF 8)		4 CHEM 116 & 116L (GEF 8)	4
MATH 150 (GEF 3)		3 General Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 GEF 4	3
Foreign Language 203		3 Foreign Language 204	3
BIOL 219 & BIOL 220		4 BIOL 221	3
CHEM 231 & 231L		4 BIOL 327	1
General Elective		1 BIOL Elective General Elective	3 2
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 5		3 ECAS Fine Arts Requirement (GEF 6)	3
BIOL Elective		3 Biology Capstone	3
PHYS 101		4 PHYS 102	4
Statistics Requirement		3 General Elective	3
General Elective		2 General Elective	2
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ECAS Global Studies and Diversity Requirement (GEF 7)		3 BIOL Elective*	3
BIOL Elective*		4 BIOL Elective*	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		2 General Elective	3
		15	15

Total credit hours: 120

* At least one upper division lab course must be taken (386 or 486 can substitute)

B.A. Biology: Pre-Medical Track

The following information is included for advising purposes only and is not an approved curriculum. Completing the stipulations suggested below will not result in an additional designation on any official record.

- **Independent Research:** Students with aspirations to attend top-rank medical schools should include at least three hours of independent research (BIOL 386 or BIOL 486) in their program of study if they are to be competitive. The three semester, BIOL 486, may be counted as the Biology Capstone in place of BIOL 320 or BIOL 321. Four hours of BIOL 386 and BIOL 486 may be used to satisfy upper division electives. One semester of BIOL 386 or BIOL 486 will satisfy the lab course.
- **MCAT:** Students who will take the MCAT in 2015 or later should take PSYC 101, SOCA 101, SOCA 105 and one further course in Psychology and Sociology in order to be prepared for the new social sciences section of the MCAT - consult with your adviser for more detailed information.

Note: The list of electives and recommendations outlined below are recommended for students interested in attending medical school. However, admission requirements will vary from one medical school to another, so a review of specific requirements for each school of interest is recommended. B.A. Biology students should select their biology electives from the list below. "Foundation electives" and "Biochemistry Elective" are strongly recommended for a competitive medical school application.

Foundation Electives		10
BIOL 310	Advanced Cellular/Molecular Biology	
BIOL 436	General Animal Physiology	
BIOL 440	Comparative Anatomy	
Biochemistry Elective		3
Select one of the following:		
AGBI 410	Introductory Biochemistry	
BIOC 339	Introduction to Biochemistry	
Biology Electives		8
Select two of the following:		
BIOL 302	Biometry	
BIOL 312	Introduction to Virology	
BIOL 313	Molecular Basis of Cellular Growth	
BIOL 316	Developmental Biology	
BIOL 324	Molecular Genetics	
BIOL 335	Cell Physiology	
BIOL 336	Vertebrate Embryology	
BIOL 338	Behavioral Ecology	

BIOL 348	Neuroscience 1
BIOL 386	Undergraduate Research
BIOL 410	Cell and Molecular Biology Methods
BIOL 411	Introduction to Recombinant DNA
BIOL 413	Molecular Endocrinology
BIOL 415	Epigenetics
BIOL 425	Developmental Genetics
BIOL 426	Molecular Biology of Cancer
BIOL 438	Animal Behavior
BIOL 441	Vertebrate Microanatomy
BIOL 453	Molecular Basis of Disease
BIOL 454	Immunology
BIOL 455	Evolution of Infectious Diseases
BIOL 456	Microbial Symbiosis
BIOL 461	Principles of Evolution
BIOL 464	Population and Quantitative Genetics
BIOL 486	Honors Investigation and Thesis
AEM 341	General Microbiology
AEM 401	Environmental Microbiology
PSYC 426	Physiological Psychology

Total Hours

21

Areas of Emphasis Offered:

- Cellular and Molecular Biology (p. 220)
- Genomics (p. 222)
- Neuroscience (p. 225)
- Ecology and Environmental Biology (p. 227)

Bachelor of Arts or Sciences in Biology: Cellular and Molecular Biology Area of Emphasis

A biology degree with an emphasis in cellular and molecular biology provides the student with all the preparation necessary for the health professions, pharmacy and pharmacology, and graduate school in cellular or molecular biology, virology, genetics, immunology and a variety of related fields. Biology majors pursuing the area of emphasis in Cellular and Molecular Biology take two introductory courses to learn about the processes within cells and the mechanisms for communication between cells. They then take a further concentration of courses in Biology that are related to cellular and molecular biology.

Cellular and Molecular Biology Area of Emphasis Requirements:

Students wishing to complete a Cellular and Molecular Biology Area of Emphasis must take the following selection of courses as part of their required Biology electives, either for the B.A. or the B.S.

CURRICULUM REQUIREMENTS

BIOL 310	Advanced Cellular/Molecular Biology	3
BIOL 324	Molecular Genetics	3
Select two of the following		6
BIOL 312	Introduction to Virology	
BIOL 313	Molecular Basis of Cellular Growth	
BIOL 316	Developmental Biology	
BIOL 335	Cell Physiology	
BIOL 348	Neuroscience 1	
BIOL 409	Biochemical Basis of Therapeutics	
BIOL 410	Cell and Molecular Biology Methods	
BIOL 411	Introduction to Recombinant DNA	
BIOL 413	Molecular Endocrinology	

BIOL 415	Epigenetics
BIOL 418	Medical Genetics
BIOL 420	Genomics
BIOL 423	Biochemistry of Nucleic Acids and Proteins
BIOL 424	Protein Structure and Function
BIOL 425	Developmental Genetics
BIOL 426	Molecular Biology of Cancer
BIOL 430	Bioinformatics
BIOL 432	Forensic Biology
BIOL 436	General Animal Physiology
BIOL 453	Molecular Basis of Disease
BIOL 454	Immunology
BIOL 455	Evolution of Infectious Diseases
BIOL 456	Microbial Symbiosis
BIOL 464	Population and Quantitative Genetics

Total Hours

12

SUGGESTED PLAN OF STUDY FOR THE B.A. IN BIOLOGY WITH AN AREA OF EMPHASIS IN CELLULAR AND MOLECULAR BIOLOGY

First Year

Fall	Hours	Spring	Hours
BIOL 191		1 ENGL 101	3
BIOL 115 & BIOL 116		4 BIOL 117 & BIOL 118	4
CHEM 115 & 115L		4 CHEM 116 & 116L	4
MATH 150		3 Language 102	3
Language 101		3 General Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
BIOL 219 & BIOL 220		4 GEF 4	3
CHEM 233		3 Language 204	3
CHEM 235		1 BIOL 221	3
ENGL 102		3 BIOL 327	1
Language 203		3 CHEM 234	3
General Elective		1 CHEM 236 General Elective	1 1
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 5		3 GEF 6	3
BIOL 310		3 Biology Capstone	2
PHYS 101		4 PHYS 102	4
STAT 211		3 BIOL 324	3
General Elective		2 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
GEF 7		3 CMB AoE elective 2	3
CMB AoE Elective 1 (with lab)		4 Biology elective	3

General Elective	3 General Elective	3
General Elective	3 General Elective	3
General Elective	2 General Elective	3
	15	15

Total credit hours: 120

SUGGESTED PLAN OF STUDY FOR THE B.S. IN BIOLOGY WITH AN AREA OF EMPHASIS IN CELLULAR AND MOLECULAR BIOLOGY

First Year

Fall	Hours	Spring	Hours
BIOL 191		1 ENGL 101	3
GEF 4		3 BIOL 117 & BIOL 118	4
BIOL 115 & BIOL 116		4 CHEM 116 & 116L	4
CHEM 115 & 115L		4 General Elective	3
MATH 155		4	
	16		14

Second Year

Fall	Hours	Spring	Hours
ENGL 102		3 BIOL 221	3
BIOL 219 & BIOL 220		4 BIOL 327	1
CHEM 233		3 CHEM 234	3
CHEM 235		1 CHEM 236	1
PHYS 101		4 PHYS 102 STAT 211	4 3
	15		15

Third Year

Fall	Hours	Spring	Hours
GEF 5		3 BIOL 324 (Group II)	3
GEF 6		3 General elective	3
GEF 7		3 General elective	3
BIOL 310 (Group I elective)		3 Biology elective, Lab 1	4
Biology elective, Group III, AoE elective 1		3 Biology capstone	2
	15		15

Fourth Year

Fall	Hours	Spring	Hours
Biology elective, Lab 2		4 Biology elective, group IV, AoE elective 2	3
General elective		3 General elective	3
General elective		2 General elective	3
General elective		3 General elective	3
General elective		3 General elective	3
	15		15

Total credit hours: 120

Bachelor of Arts or Science in Biology: Genomics Area of Emphasis

A biology degree with an emphasis in Genomics provides the student with all the preparation necessary for graduate school in genomics or bioinformatics, or medical school and careers in the health fields. Biology majors pursuing the area of emphasis in Genomics take two introductory courses to learn about basic concepts and tools in genomics and the practice and application of bioinformatics and then take a further concentration of courses in Biology that are related to Genomics.

Genomics Area of Emphasis Requirements:

Students wishing to complete a Genomics Area of Emphasis must take the following selection of courses as part of their required Biology electives, either for the B.A. or the B.S.

CURRICULUM REQUIREMENTS

BIOL 420	Genomics (Fulfills group I or III)	3
BIOL 430	Bioinformatics (Fulfills group IV)	3
Select 2 of the following		6
BIOL 324 & BIOL 325	Molecular Genetics and Molecular Genetics Laboratory	
BIOL 415	Epigenetics	
BIOL 418	Medical Genetics	
BIOL 423	Biochemistry of Nucleic Acids and Proteins	
BIOL 455	Evolution of Infectious Diseases	
BIOL 456	Microbial Symbiosis	
BIOL 461	Principles of Evolution	
BIOL 464	Population and Quantitative Genetics	
Total Hours		12

SUGGESTED PLAN OF STUDY FOR THE B.A. IN BIOLOGY WITH AN AREA OF EMPHASIS IN GENOMICS

First Year

Fall	Hours	Spring	Hours
BIOL 191		1 ENGL 101 (GEF 1)	3
Foreign Language 101		3 Foreign Language 102	3
BIOL 115 & BIOL 116 (GEF 2)		4 BIOL 117 & BIOL 118 (GEF 8)	4
MATH 150 (GEF 3)		3 CHEM 116 & 116L (GEF 8)	4
CHEM 115 & 115L (GEF 8)		4 General Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 GEF 4	3
BIOL 219 & BIOL 220		4 Foreign Language 204	3
CHEM 233 & CHEM 235		4 BIOL 221	3
Foreign Language 203		3 BIOL 327	1
General Elective		1 CHEM 234 & CHEM 236 General Elective	4
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 5		3 GEF 6 (ECAS Fine Arts Requirement)	3
BIOL 420		3 PHYS 102	4
PHYS 101		4 BIOL 430	3
Statistics Requirement		3 Biology Capstone	2
General Elective		2 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ECAS Global Studies and Diversity Requirement (GEF 7)		3 BIOL Elective Genomics	3
BIOL Elective Genomics		4 BIOL Elective	1
General Elective		3 General Elective	2
General Elective		3 General Elective	3
General Elective		2 General Elective	3
		General Elective	3
		15	15

Total credit hours: 120

SUGGESTED PLAN OF STUDY FOR THE B.S. IN BIOLOGY WITH AN AREA OF EMPHASIS IN GENOMICS**First Year**

Fall	Hours	Spring	Hours
BIOL 191		1 ENGL 101 (GEF 1)	3
GEF 4		3 BIOL 117 & BIOL 118 (GEF 8; B.S. First Area 2)	4
BIOL 115 & BIOL 116 (GEF 2; B.S. First Area 1)		4 CHEM 116 & 116L (GEF 8; B.S. Second Area 2)	4
CHEM 115 & 115L (GEF 8; B.S. Second Area 1)		4 STAT 211	3
MATH 155 (GEF 3)		4	
		16	14

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 BIOL 221	3
BIOL 219 & BIOL 220		4 BIOL 327	1
CHEM 233 & CHEM 235		4 CHEM 234 & CHEM 236	4
PHYS 101 (B.S. Third Area 1)		4 PHYS 102 (B.S. Third Area 2)	4
		General Elective	3
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 5		3 BIOL Elective Lab 1	4
GEF 6		3 BIOL 430 (Elective Group IV)	3
ECAS Global Studies and Diversity Requirement (GEF 7)		3 Biology capstone	2
BIOL 420 (Elective Group I or II)		3 General Elective	3
BIOL Elective Group II		3 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
BIOL Elective Lab 2 (Genomics)		4 BIOL Elective Group (Remaining Group; Genomics)	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		2 General Elective	3
		15	15

Total credit hours: 120

Bachelor of Arts or Science in Biology: Neuroscience Area of Emphasis

A biology degree with an emphasis in Neuroscience provides the student with all the preparation necessary for graduate school in Neuroscience or medical school and the medical school entrance exam - the MCAT. Biology majors pursuing the area of emphasis in Neuroscience take two introductory courses to learn about basic features of neurons and the organization of the brain and then take a further concentration of courses in biology that are related to Neuroscience.

Neuroscience Area of Emphasis Requirements

Students wishing to complete a Neuroscience Area of Emphasis must take the following selection of courses as part of their required Biology electives, either for the B.A. or the B.S.

CURRICULUM REQUIREMENTS

BIOL 348	Neuroscience 1 (Fulfills group I elective.)	3
BIOL 349	Neuroscience 2 (Fulfills group II elective.)	3
Select 2 of the following:		6
BIOL 339	Animal Communication	
BIOL 439	Neuroethology	
BIOL 474	Neurogenetics and Behavior	
BIOL 475	Neurobiological Diseases	
BIOL 476	Computational Neuroscience	
BIOL 477	Central Nervous System Evolution and Development	
BIOL 478	Sensory Neural Systems and Behavior	
BIOL 479	Principles of Systems Neuroscience	
Total Hours		12

SUGGESTED PLAN OF STUDY THE BIOLOGY B.A. WITH THE NEUROSCIENCE AREA OF EMPHASIS

First Year

Fall	Hours	Spring	Hours
BIOL 191		1 ENGL 101 (GEF 1)	3
Foreign Language 101		3 Foreign Language 102	3
BIOL 115 & BIOL 116 (GEF 2)		4 BIOL 117 & BIOL 118 (GEF 8)	4
MATH 150 (GEF 3)		3 CHEM 116 & 116L (GEF 8)	4
CHEM 115 & 115L (GEF 8)		4 General Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 GEF 4	3
Foreign Language 203		3 Foreign Language 204	3
BIOL 219 & BIOL 220		4 BIOL 221	3
CHEM 233 & CHEM 235		4 BIOL 327	1
General Elective		1 CHEM 234 & CHEM 236 General Elective	4
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 5		3 GEF 6 (ECAS Fine Arts Requirement)	3
BIOL 348		3 BIOL Capstone	2

PHYS 101	4 BIOL 349	3
Statistics Requirement	3 PHYS 102	4
General Elective	2 General Elective	3
<hr/>		
		15
		15

Fourth Year

Fall	Hours	Spring	Hours
ECAS Global Studies and Diversity Requirement (GEF 7)		3 BIOL Elective Neuroscience	3
BIOL Elective Neuroscience		4 BIOL Elective	1
General Elective		3 General Elective	2
General Elective		3 General Elective	3
General Elective		2 General Elective	3
		General Elective	3
<hr/>			
		15	15

Total credit hours: 120

SUGGESTED PLAN OF STUDY THE BIOLOGY B.S. WITH THE NEUROSCIENCE AREA OF EMPHASIS**First Year**

Fall	Hours	Spring	Hours
BIOL 191		1 ENGL 101 (GEF 1)	3
GEF 4		3 BIOL 117 & BIOL 118 (GEF 8; B.S. First Area 2)	4
BIOL 115 & BIOL 116 (GEF 2; B.S. First Area 1)		4 CHEM 116 & 116L (GEF 8; B.S. Second Area 2)	4
CHEM 115 & 115L (GEF 8; B.S. Second Area 1)		4 STAT 211	3
MATH 155 (GEF 3)		4	
<hr/>			
		16	14

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 BIOL 221	3
BIOL 219 & BIOL 220		4 BIOL 327	1
CHEM 233 & CHEM 235		4 CHEM 234 & CHEM 236	4
PHYS 101 (B.S. Third Area 1)		4 PHYS 102 (B.S. Third Area 2)	4
		General Elective	3
<hr/>			
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 5		3 BIOL Capstone	2
GEF 6		3 BIOL Elective Lab 1	4
ECAS Global Studies and Diversity Requirement(GEF 7)		3 BIOL 349 (Elective Group II)	3
BIOL 348 (Elective Group I)		3 General Elective	3
BIOL Elective Group III (Neuroscience)		3 General Elective	3
<hr/>			
		15	15

Fourth Year

Fall	Hours	Spring	Hours
BIOL Elective Lab 2		4 BIOL Elective Group IV (Neuroscience)	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3

General Elective	2 General Elective	3
	15	15

Total credit hours: 120

Bachelor of Arts or Science in Biology: Ecology and Environmental Biology Area of Emphasis

Ecology and Environmental Biology Area of Emphasis

CURRICULUM REQUIREMENTS

Core Courses 6

BIOL 302	Biometry (fulfills the group IV elective)
BIOL 461	Principles of Evolution (fulfills the group III elective)

Ecology Electives 6

Select 2 of the following:

BIOL 338	Behavioral Ecology
BIOL 361	Plant Ecology (fulfills the laboratory requirement)
BIOL 363	Plant Geography (fulfills the group II elective)
BIOL 365	Conservation Biology
BIOL 456	Microbial Symbiosis (fulfills the group I elective)
BIOL 457	Ecology of Parasites
BIOL 463	Global Ecology
WMAN 446	Freshwater Ecology

Total Hours 12

SUGGESTED PLAN OF STUDY FOR THE B.A. IN BIOLOGY WITH AN AREA OF EMPHASIS IN ECOLOGY/ENVIRONMENTAL BIOLOGY

First Year

Fall	Hours	Spring	Hours
BIOL 191		1 ENGL 101 (GEF 1)	3
Foreign Language 101		3 Foreign Language 102	3
BIOL 115 & BIOL 116 (GEF 2)		4 BIOL 117 & BIOL 118 (GEF 8)	4
CHEM 115 & 115L (GEF 8)		4 CHEM 116 & 116L (GEF 8)	4
MATH 150 (GEF 3)		3 General Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 Foreign Language 204	3
Foreign Language 203		3 BIOL 221	3
BIOL 219 & BIOL 220		4 BIOL 327	1
CHEM 233		3 CHEM 234	3
CHEM 235		1 CHEM 236	1
General Elective		1 STAT 211	3
		General Elective	1
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 4		3 ECAS Fine Arts Requirement (GEF 6)	3
GEF 5		3 BIOL 461	3
BIOL 302		3 Biology Capstone	2

PHYS 101	4 PHYS 102	4
General Elective	2 General Elective	3
<hr/>		
		15
		15

Fourth Year

Fall	Hours	Spring	Hours
ECAS Global Studies and Diversity Requirement (GEF 7)		3 BIOL elective with Laboratory	4
Ecology AoE Elective 1		3 Ecology AoE Elective 2	3
General Elective		3 General elective	2
General Elective		3 General Elective	3
General Elective		3 General Elective	3
<hr/>			
		15	15

Total credit hours: 120

SUGGESTED PLAN OF STUDY FOR THE B.S. IN BIOLOGY WITH AN AREA OF EMPHASIS IN ECOLOGY/ENVIRONMENTAL BIOLOGY**First Year**

Fall	Hours	Spring	Hours
BIOL 191		1 ENGL 101 (GEF 1)	3
GEF 4		3 BIOL 117 & BIOL 118 (B.S. First Area Course 2; GEF 8)	4
BIOL 115 & BIOL 116 (B.S. First Area Course 1; GEF 2)		4 CHEM 116 & 116L (B.S. Second Area Course 2; GEF 8)	4
CHEM 115 & 115L (B.S. Second Area Course 1; GEF 8)		4 STAT 211	3
MATH 155 (GEF 3)		4	
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		16	14

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 BIOL 221	3
BIOL 219 & BIOL 220		4 BIOL 327	1
CHEM 233		3 CHEM 234	3
CHEM 235		1 CHEM 236	1
PHYS 101 (BS Third Area Course 1)		4 PHYS 102 (BS Third Area Course 1) General Elective	4 3
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		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 5		3 BIOL 461 (Group III elective)	3
GEF 6		3 Biology Capstone	2
ECAS Global Studies and Diversity Requirement (GEF 7)		3 General Elective	4
BIOL 302 (Group IV elective)		3 General Elective	3
General Elective		3 General Elective	3
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		15	15

Fourth Year

Fall	Hours	Spring	Hours
Ecology AoE Elective Course 1		3 Ecology AoE Elective Course 2	3
Biology Elective with lab (Group I)*		4 BIOL Elective with Lab (Group II)*	4
General Elective		2 General Elective	3
General Elective		3 General Elective	3

General Elective	3 General Elective	2
	15	15

Total credit hours: 120

* Maybe fulfilled by a course selected in Area of Emphasis.

Biology B.S.

[Click here to view the Suggested Plan of Study \(p. 233\)](#)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.S. requirements, STEM Foundations requirements, major requirements, and electives with a minimum of 120 hours. For complete details on these requirements, visit the B.S. Degrees tab on the Eberly College of Arts and Sciences (p. 190) page.

Departmental Requirements for the B.S. in Biology

Students intending to graduate with a B.S. in Biology must earn a minimum of 38 hours of coursework in biology or approved courses in the biological sciences, with a minimum of 120 hours total required for graduation. Students may not earn both a B.A. and a B.S. in Biology.

- **Capstone Requirement:** The university requires the successful completion of a Biology capstone course (BIOL 320 or BIOL 321). The three semester, BIOL 486, may be counted as the Biology Capstone Experience in place of BIOL 320 or BIOL 321. Two hours of BIOL 486 will be counted as part of the core requirements (replacing BIOL 320 or BIOL 321) and up to 6 hours may count as upper-level electives.
- **Writing and Communication Skills Requirement:** The Biology Bachelor of Science is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Calculation of the Grade Point Average (GPA) in the Biology major:** Students are required to maintain at least a minimum cumulative 2.0 GPA in all courses required of the Biology major including: BIOL 115, BIOL 116, BIOL 117, BIOL 118, BIOL 219, BIOL 220, BIOL 221, BIOL 320 or BIOL 321, BIOL 327, CHEM 233, CHEM 234, CHEM 235, CHEM 236, all upper-division courses counted as electives, and courses counted towards the capstone. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat. In addition, a minimum grade of C- must be attained in BIOL 115, BIOL 116, BIOL 117, and BIOL 118.
- **Area of Emphasis (AOE):** Students interested in completing an area of emphasis must complete the requirements as outlined in the Area of Emphasis section. Courses used to complete an AoE may also be used to satisfy elective requirements, as described below.
- **Electives and Lab Requirement:** Students must complete 20 hours of upper-division biology elective credits, with a least one course in each biology sub-discipline (1- Cell and Molecular, 2- Organismal, 3- Evolution and Ecology, 4- Integrative). Courses listed in more than one group may

only be used to satisfy one group requirement. At least two of the selected classes must have a laboratory (lab courses are indicated with an asterisk in the curriculum table below). A maximum of three of the non-biology courses (AEM 341, AEM 401, AGBI 410, BIOC 339, BIOC 531, GEOL 331, PHYS 225, PSYC 426, WMAN 446) may be used to fulfill the twenty-hour elective requirement. Special topics courses (BIOL 493) can be used to satisfy electives and may satisfy group-electives if appropriate. Additional elective courses may include any 300- or 400-level BIOL courses (except: BIOL 318, BIOL 320, BIOL 321, BIOL 327, BIOL 490, BIOL 491, BIOL 494 and above).

- **Research Option:** With permission of the department, students may enroll in BIOL 386 or BIOL 486. Six hours of BIOL 386 and BIOL 486 may be used towards the 20 hours of Biology upper division electives. One semester of BIOL 386 or BIOL 486 may be used to satisfy one of the lab requirements.
- **Benchmark Expectations:** For details, go to the biology admissions tab (p. 215).

Curriculum Requirements

UNIVERSITY REQUIREMENTS

19

BIOL 191	First-Year Seminar
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GEF Requirements: credits may vary depending on overlap

ECAS B.S. Requirements

3

Global Studies and Diversity Requirement

Math Requirement:

MATH 150	Applied Calculus
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OR

MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus
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OR

MATH 155	Calculus 1
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Science Requirement

See above (may overlap with GEF and major requirements)

DEPARTMENTAL REQUIREMENTS

1- STEM Foundations:

Chemistry Foundations

8

Select one of the following:

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (CHEM 115 must be taken before BIOL 219.)
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and

CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory
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or

CHEM 117 & 117L	Principles of Chemistry 1 and Principles of Chemistry 1 - Laboratory
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and

CHEM 118 & 118L	Principles of Chemistry 2 and Principles of Chemistry 2 - Laboratory
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Statistics Foundations

3

STAT 211 or STAT 215	Elementary Statistical Inference Introduction to Probability and Statistics
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Physics Foundations

8

Select one of the following:

PHYS 101 & PHYS 102	Introductory Physics 1 and Introductory Physics 2
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PHYS 111 & PHYS 112	General Physics and General Physics
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PHYS 111 & PHYS 102	General Physics and Introductory Physics 2
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2 - Biology Major Requirements:

16

These courses must be taken in sequence:

BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory
BIOL 117 & BIOL 118	Introductory Physiology and Introductory Physiology Laboratory
BIOL 219 & BIOL 220	The Living Cell and The Living Cell Laboratory
BIOL 221	Ecology and Evolution
BIOL 327	Professional Development

Chemistry Requirement: 8

Take all of the following:

CHEM 233 & CHEM 235	Organic Chemistry and Organic Chemistry Laboratory
CHEM 234 & CHEM 236	Organic Chemistry and Organic Chemistry Laboratory

Biology Electives: ** 20

Select at least one from each of the following four groups,
and please select two lab courses (marked with a single asterisk):

1- Cell and Molecular Biology

BIOL 310	Advanced Cellular/Molecular Biology
BIOL 311	Advanced Cellular/Molecular Biology-Laboratory (*)
BIOL 312	Introduction to Virology
BIOL 313	Molecular Basis of Cellular Growth
BIOL 316	Developmental Biology
BIOL 317	Developmental Biology Laboratory (*)
BIOL 324	Molecular Genetics
BIOL 325	Molecular Genetics Laboratory (*)
BIOL 335	Cell Physiology
BIOL 348	Neuroscience 1
BIOL 350	Plant Physiology (*)
BIOL 409	Biochemical Basis of Therapeutics
BIOL 410	Cell and Molecular Biology Methods
BIOL 411	Introduction to Recombinant DNA (*)
BIOL 413	Molecular Endocrinology
BIOL 414	Molecular Endocrinology-Laboratory (*)
BIOL 415	Epigenetics
BIOL 418	Medical Genetics
BIOL 420	Genomics
BIOL 421	Experimental Biochemistry (*)
BIOL 423	Biochemistry of Nucleic Acids and Proteins
BIOL 424	Protein Structure and Function
BIOL 425	Developmental Genetics
BIOL 426	Molecular Biology of Cancer
BIOL 432	Forensic Biology
BIOL 434	Forensic Biology Laboratory (*)
BIOL 441	Vertebrate Microanatomy (*)
BIOL 453	Molecular Basis of Disease
BIOL 454	Immunology
BIOL 455	Evolution of Infectious Diseases
BIOL 456	Microbial Symbiosis
BIOL 474	Neurogenetics and Behavior
BIOL 475	Neurobiological Diseases

2- Organismal Biology

BIOL 316	Developmental Biology
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BIOL 317	Developmental Biology Laboratory (*)
BIOL 324	Molecular Genetics
BIOL 325	Molecular Genetics Laboratory (*)
BIOL 336	Vertebrate Embryology (*)
BIOL 338	Behavioral Ecology
BIOL 340	Invertebrate Zoology
BIOL 341	Ichthyology (*)
BIOL 349	Neuroscience 2
BIOL 350	Plant Physiology (*)
BIOL 351	Plant Diversity (*)
BIOL 352	Plant Anatomy and Development (*)
BIOL 353	Flora of West Virginia (*)
BIOL 363	Plant Geography
BIOL 413	Molecular Endocrinology
BIOL 414	Molecular Endocrinology-Laboratory (*)
BIOL 418	Medical Genetics
BIOL 425	Developmental Genetics
BIOL 433	Herpetology
BIOL 436	General Animal Physiology
BIOL 438	Animal Behavior
BIOL 439	Neuroethology
BIOL 440	Comparative Anatomy (*)
BIOL 441	Vertebrate Microanatomy (*)
BIOL 450	Plant Systematics (*)
BIOL 456	Microbial Symbiosis
BIOL 474	Neurogenetics and Behavior
BIOL 475	Neurobiological Diseases
BIOL 478	Sensory Neural Systems and Behavior
BIOL 479	Principles of Systems Neuroscience
AEM 341	General Microbiology (*)
PSYC 426	Physiological Psychology
3- Evolution and Ecology	
BIOL 301	History of Biology
BIOL 338	Behavioral Ecology
BIOL 339	Animal Communication
BIOL 351	Plant Diversity (*)
BIOL 361	Plant Ecology (*)
BIOL 363	Plant Geography
BIOL 365	Conservation Biology
BIOL 420	Genomics
BIOL 448	Plant-Microbial Interactions
BIOL 455	Evolution of Infectious Diseases
BIOL 456	Microbial Symbiosis
BIOL 457	Ecology of Parasites
BIOL 461	Principles of Evolution
BIOL 462	Ecosystem Models
BIOL 463	Global Ecology
BIOL 464	Population and Quantitative Genetics
BIOL 477	Central Nervous System Evolution and Development
AEM 401	Environmental Microbiology (*)
GEOL 331	Paleontology (*)
WMAN 446	Freshwater Ecology

4- Integrative Biology

BIOL 302	Biometry
BIOL 315	Communicating Natural Science
BIOL 339	Animal Communication
BIOL 430	Bioinformatics
BIOL 456	Microbial Symbiosis
BIOL 464	Population and Quantitative Genetics
BIOL 474	Neurogenetics and Behavior
BIOL 476	Computational Neuroscience
AGBI 410	Introductory Biochemistry
BIOC 339	Introduction to Biochemistry

Capstone Requirement **3**

Select one of the following options:

BIOL 320 The Total Science Experience: Genomics

BIOL 321 Total Science Experience Lab

or 2 semesters of the following:

BIOL 486 Honors Investigation and Thesis (9 hours) ***

AND 1 semester of the following:

BIOL 386 Undergraduate Research

Or 3 semesters of the following:

BIOL 486 Honors Investigation and Thesis

GENERAL ELECTIVES **32**

Number of electives will vary based on GEF and B.S. Requirements.

Total Hours 120

* Indicates a lab course

** BIOL 493: Special Topics may also be used to satisfy Biology electives. Please see Biology adviser to determine elective group designation. Permission of the department must be obtained to enroll in BIOL 386, 486, 490, and 491. Only four credit hours of 386/486 may be used towards the fourteen hour elective requirement. BIOL 490 and BIOL 491 do not satisfy the required fourteen hours of electives in biology. These can serve as general electives.

Seniors with a minimum of a 3.00 GPA may take 500-level courses in biology with departmental and college approval.

Suggested Plan of Study**First Year**

Fall	Hours	Spring	Hours
BIOL 191		1 ENGL 101 (GEF 1)	3
GEF 4		3 BIOL 117 & BIOL 118 (GEF 8; B.S. First Area 2)	4
BIOL 115 & BIOL 116 (GEF 2; B.S. First Area 1)		4 CHEM 116 & 116L (GEF 8; B.S. Second Area 2)	4
CHEM 115 & 115L (GEF 8; B.S. Second Area 1)		4 General Elective	3
MATH 150 or 155		3	
		15	14

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 BIOL 221	3
BIOL 219 & BIOL 220		4 BIOL 327	1
CHEM 233 & CHEM 235		4 CHEM 234 & CHEM 236	4
PHYS 101 (B.S. Third Area 1)		4 PHYS 102 (B.S. Third Area 2)	4

		STAT Requirement		3
		15		15
Third Year				
Fall	Hours	Spring		Hours
GEF 5		3 BIOL Capstone		3
GEF 6		3 BIOL Elective Lab 1**		4
ECAS Global Studies and Diversity Requirement (GEF 7)		3 BIOL Elective Group III		3
BIOL Elective Group I***		3 General Elective		3
BIOL Elective Group II		3 General Elective		2
		15		15
Fourth Year				
Fall	Hours	Spring		Hours
BIOL Elective Lab 2**		4 BIOL Elective Group IV***		3
General Elective		3 General Elective		3
General Elective		3 General Elective		3
General Elective		3 General Elective		3
General Elective		3 General Elective		3
		16		15

Total credit hours: 120

* BIOL 321 / BIOL 320 (capstone) may be replaced with three semesters of BIOL 486 (research).

** At least two upper division lab courses must be taken, one of which can be 386 or 486.

*** At least one 300-level or above course must be taken in each biology sub-discipline (1-4).

B.S. Biology: Pre-Medical track

The following information is included for advising purposes only and is not an approved curriculum. Completing the stipulations suggested below will not result in an additional designation on any official record.

- **Independent Research:** Students with aspirations to attend top-rank medical schools should include at least three hours of independent research (BIOL 386 or BIOL 486) in their program of study if they are to be competitive. The three semester, BIOL 486, may be counted as the Biology Capstone in place of BIOL 320 or BIOL 321. Six hours of BIOL 386 and BIOL 486 may be used to satisfy upper division electives. One semester of BIOL 386 or will satisfy one lab course.
- **MCAT and Medical School admission requirements:** Students who will take the MCAT in 2015 or later should take PSYC 101, SOCA 101, SOCA 105 and one further course in Psychology and Sociology in order to be prepared for the new social sciences section of the MCAT - consult with your adviser for more detailed information. The course of study outlined below is recommended for students interested in attending medical school. However, admission requirements will vary from one medical school to another, so a review of specific requirements for each school of interest is recommended.

Note: The list of electives and recommendations outlined below are recommended for students interested in attending medical school. However, admission requirements will vary from one medical school to another, so a review of specific requirements for each school of interest is recommended. B.S. Biology students should select their biology electives from the list below. "General Requirements" and "Biochemistry Requirements" are strongly recommended for a competitive medical school application. Students interested in Graduate School and Research are strongly encouraged to take MATH 156. Please consult your adviser.

General Requirements		10
BIOL 310	Advanced Cellular/Molecular Biology	
BIOL 436	General Animal Physiology	
BIOL 440	Comparative Anatomy	
Biochemistry Requirement		3
Select one of the following:		
AGBI 410	Introductory Biochemistry	
BIOC 339	Introduction to Biochemistry	
Ecology and Evolution Requirement		3
Select one of the following:		
BIOL 338	Behavioral Ecology	

BIOL 461	Principles of Evolution
BIOL 464	Population and Quantitative Genetics
Laboratory Requirement	
Select one of the following:	
BIOL 336	Vertebrate Embryology
BIOL 441	Vertebrate Microanatomy
AEM 341	General Microbiology
AEM 401	Environmental Microbiology
Electives	
Select remaining hours from the following:	
BIOL 302	Biometry
BIOL 312	Introduction to Virology
BIOL 313	Molecular Basis of Cellular Growth
BIOL 316	Developmental Biology
BIOL 324	Molecular Genetics
BIOL 325	Molecular Genetics Laboratory
BIOL 335	Cell Physiology
BIOL 348	Neuroscience 1
BIOL 386	Undergraduate Research
BIOL 410	Cell and Molecular Biology Methods
BIOL 411	Introduction to Recombinant DNA
BIOL 413	Molecular Endocrinology
BIOL 415	Epigenetics
BIOL 425	Developmental Genetics
BIOL 426	Molecular Biology of Cancer
BIOL 438	Animal Behavior
BIOL 453	Molecular Basis of Disease
BIOL 454	Immunology
BIOL 455	Evolution of Infectious Diseases
BIOL 456	Microbial Symbiosis
PHYS 225	Medical Imaging Physics
PSYC 426	Physiological Psychology

Total Hours

23

Areas of Emphasis Offered:

- Cellular and Molecular Biology (p. 235)
- Genomics (p. 238)
- Neuroscience (p. 240)
- Ecology and Environmental Biology (p. 242)

Bachelor of Arts or Sciences in Biology: Cellular and Molecular Biology Area of Emphasis

A biology degree with an emphasis in cellular and molecular biology provides the student with all the preparation necessary for the health professions, pharmacy and pharmacology, and graduate school in cellular or molecular biology, virology, genetics, immunology and a variety of related fields.

Biology majors pursuing the area of emphasis in Cellular and Molecular Biology take two introductory courses to learn about the processes within cells and the mechanisms for communication between cells. They then take a further concentration of courses in Biology that are related to cellular and molecular biology.

Cellular and Molecular Biology Area of Emphasis Requirements:

Students wishing to complete a Cellular and Molecular Biology Area of Emphasis must take the following selection of courses as part of their required Biology electives, either for the B.A. or the B.S.

CURRICULUM REQUIREMENTS

BIOL 310	Advanced Cellular/Molecular Biology	3
BIOL 324	Molecular Genetics	3
Select two of the following		6
BIOL 312	Introduction to Virology	
BIOL 313	Molecular Basis of Cellular Growth	
BIOL 316	Developmental Biology	
BIOL 335	Cell Physiology	
BIOL 348	Neuroscience 1	
BIOL 409	Biochemical Basis of Therapeutics	
BIOL 410	Cell and Molecular Biology Methods	
BIOL 411	Introduction to Recombinant DNA	
BIOL 413	Molecular Endocrinology	
BIOL 415	Epigenetics	
BIOL 418	Medical Genetics	
BIOL 420	Genomics	
BIOL 423	Biochemistry of Nucleic Acids and Proteins	
BIOL 424	Protein Structure and Function	
BIOL 425	Developmental Genetics	
BIOL 426	Molecular Biology of Cancer	
BIOL 430	Bioinformatics	
BIOL 432	Forensic Biology	
BIOL 436	General Animal Physiology	
BIOL 453	Molecular Basis of Disease	
BIOL 454	Immunology	
BIOL 455	Evolution of Infectious Diseases	
BIOL 456	Microbial Symbiosis	
BIOL 464	Population and Quantitative Genetics	
Total Hours		12

SUGGESTED PLAN OF STUDY FOR THE B.A. IN BIOLOGY WITH AN AREA OF EMPHASIS IN CELLULAR AND MOLECULAR BIOLOGY**First Year**

Fall	Hours	Spring	Hours
BIOL 191		1 ENGL 101	3
BIOL 115 & BIOL 116		4 BIOL 117 & BIOL 118	4
CHEM 115 & 115L		4 CHEM 116 & 116L	4
MATH 150		3 Language 102	3
Language 101		3 General Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
BIOL 219 & BIOL 220		4 GEF 4	3
CHEM 233		3 Language 204	3
CHEM 235		1 BIOL 221	3
ENGL 102		3 BIOL 327	1
Language 203		3 CHEM 234	3
General Elective		1 CHEM 236	1

		General Elective		1
		15		15
Third Year				
Fall	Hours	Spring	Hours	
GEF 5		3 GEF 6		3
BIOL 310		3 Biology Capstone		2
PHYS 101		4 PHYS 102		4
STAT 211		3 BIOL 324		3
General Elective		2 General Elective		3
		15		15
Fourth Year				
Fall	Hours	Spring	Hours	
GEF 7		3 CMB AoE elective 2		3
CMB AoE Elective 1 (with lab)		4 Biology elective		3
General Elective		3 General Elective		3
General Elective		3 General Elective		3
General Elective		2 General Elective		3
		15		15

Total credit hours: 120

SUGGESTED PLAN OF STUDY FOR THE B.S. IN BIOLOGY WITH AN AREA OF EMPHASIS IN CELLULAR AND MOLECULAR BIOLOGY

First Year				
Fall	Hours	Spring	Hours	
BIOL 191		1 ENGL 101		3
GEF 4		3 BIOL 117 & BIOL 118		4
BIOL 115 & BIOL 116		4 CHEM 116 & 116L		4
CHEM 115 & 115L		4 General Elective		3
MATH 155		4		
		16		14
Second Year				
Fall	Hours	Spring	Hours	
ENGL 102		3 BIOL 221		3
BIOL 219 & BIOL 220		4 BIOL 327		1
CHEM 233		3 CHEM 234		3
CHEM 235		1 CHEM 236		1
PHYS 101		4 PHYS 102 STAT 211		4 3
		15		15
Third Year				
Fall	Hours	Spring	Hours	
GEF 5		3 BIOL 324 (Group II)		3
GEF 6		3 General elective		3
GEF 7		3 General elective		3
BIOL 310 (Group I elective)		3 Biology elective, Lab 1		4
Biology elective, Group III, AoE elective 1		3 Biology capstone		2
		15		15

Fourth Year

Fall	Hours	Spring	Hours
Biology elective, Lab 2		4 Biology elective, group IV, AoE elective 2	3
General elective		3 General elective	3
General elective		2 General elective	3
General elective		3 General elective	3
General elective		3 General elective	3
		15	15

Total credit hours: 120

Bachelor of Arts or Science in Biology: Genomics Area of Emphasis

A biology degree with an emphasis in Genomics provides the student with all the preparation necessary for graduate school in genomics or bioinformatics, or medical school and careers in the health fields. Biology majors pursuing the area of emphasis in Genomics take two introductory courses to learn about basic concepts and tools in genomics and the practice and application of bioinformatics and then take a further concentration of courses in Biology that are related to Genomics.

Genomics Area of Emphasis Requirements:

Students wishing to complete a Genomics Area of Emphasis must take the following selection of courses as part of their required Biology electives, either for the B.A. or the B.S.

CURRICULUM REQUIREMENTS

BIOL 420	Genomics (Fulfills group I or III)	3
BIOL 430	Bioinformatics (Fulfills group IV)	3
Select 2 of the following		6
BIOL 324 & BIOL 325	Molecular Genetics and Molecular Genetics Laboratory	
BIOL 415	Epigenetics	
BIOL 418	Medical Genetics	
BIOL 423	Biochemistry of Nucleic Acids and Proteins	
BIOL 455	Evolution of Infectious Diseases	
BIOL 456	Microbial Symbiosis	
BIOL 461	Principles of Evolution	
BIOL 464	Population and Quantitative Genetics	
Total Hours		12

SUGGESTED PLAN OF STUDY FOR THE B.A. IN BIOLOGY WITH AN AREA OF EMPHASIS IN GENOMICS**First Year**

Fall	Hours	Spring	Hours
BIOL 191		1 ENGL 101 (GEF 1)	3
Foreign Language 101		3 Foreign Language 102	3
BIOL 115 & BIOL 116 (GEF 2)		4 BIOL 117 & BIOL 118 (GEF 8)	4
MATH 150 (GEF 3)		3 CHEM 116 & 116L (GEF 8)	4
CHEM 115 & 115L (GEF 8)		4 General Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 GEF 4	3
BIOL 219 & BIOL 220		4 Foreign Language 204	3

CHEM 233 & CHEM 235	4	BIOL 221	3
Foreign Language 203	3	BIOL 327	1
General Elective	1	CHEM 234 & CHEM 236	4
		General Elective	1
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 5		3 GEF 6 (ECAS Fine Arts Requirement)	3
BIOL 420		3 PHYS 102	4
PHYS 101		4 BIOL 430	3
Statistics Requirement		3 Biology Capstone	2
General Elective		2 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ECAS Global Studies and Diversity Requirement (GEF 7)		3 BIOL Elective Genomics	3
BIOL Elective Genomics		4 BIOL Elective	1
General Elective		3 General Elective	2
General Elective		3 General Elective	3
General Elective		2 General Elective	3
		General Elective	3
		15	15

Total credit hours: 120

SUGGESTED PLAN OF STUDY FOR THE B.S. IN BIOLOGY WITH AN AREA OF EMPHASIS IN GENOMICS**First Year**

Fall	Hours	Spring	Hours
BIOL 191		1 ENGL 101 (GEF 1)	3
GEF 4		3 BIOL 117 & BIOL 118 (GEF 8; B.S. First Area 2)	4
BIOL 115 & BIOL 116 (GEF 2; B.S. First Area 1)		4 CHEM 116 & 116L (GEF 8; B.S. Second Area 2)	4
CHEM 115 & 115L (GEF 8; B.S. Second Area 1)		4 STAT 211	3
MATH 155 (GEF 3)		4	
		16	14

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 BIOL 221	3
BIOL 219 & BIOL 220		4 BIOL 327	1
CHEM 233 & CHEM 235		4 CHEM 234 & CHEM 236	4
PHYS 101 (B.S. Third Area 1)		4 PHYS 102 (B.S. Third Area 2)	4
		General Elective	3
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 5		3 BIOL Elective Lab 1	4
GEF 6		3 BIOL 430 (Elective Group IV)	3

ECAS Global Studies and Diversity Requirement (GEF 7)	3 Biology capstone	2
BIOL 420 (Elective Group I or II)	3 General Elective	3
BIOL Elective Group II	3 General Elective	3
	15	15

Fourth Year

Fall	Hours	Spring	Hours
BIOL Elective Lab 2 (Genomics)		4 BIOL Elective Group (Remaining Group; Genomics)	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		2 General Elective	3
		15	15

Total credit hours: 120

Bachelor of Arts or Science in Biology: Neuroscience Area of Emphasis

A biology degree with an emphasis in Neuroscience provides the student with all the preparation necessary for graduate school in Neuroscience or medical school and the medical school entrance exam - the MCAT. Biology majors pursuing the area of emphasis in Neuroscience take two introductory courses to learn about basic features of neurons and the organization of the brain and then take a further concentration of courses in biology that are related to Neuroscience.

Neuroscience Area of Emphasis Requirements

Students wishing to complete a Neuroscience Area of Emphasis must take the following selection of courses as part of their required Biology electives, either for the B.A. or the B.S.

CURRICULUM REQUIREMENTS

BIOL 348	Neuroscience 1 (Fulfills group I elective.)	3
BIOL 349	Neuroscience 2 (Fulfills group II elective.)	3
Select 2 of the following:		6
BIOL 339	Animal Communication	
BIOL 439	Neuroethology	
BIOL 474	Neurogenetics and Behavior	
BIOL 475	Neurobiological Diseases	
BIOL 476	Computational Neuroscience	
BIOL 477	Central Nervous System Evolution and Development	
BIOL 478	Sensory Neural Systems and Behavior	
BIOL 479	Principles of Systems Neuroscience	

Total Hours 12

SUGGESTED PLAN OF STUDY THE BIOLOGY B.A. WITH THE NEUROSCIENCE AREA OF EMPHASIS**First Year**

Fall	Hours	Spring	Hours
BIOL 191		1 ENGL 101 (GEF 1)	3
Foreign Language 101		3 Foreign Language 102	3
BIOL 115 & BIOL 116 (GEF 2)		4 BIOL 117 & BIOL 118 (GEF 8)	4
MATH 150 (GEF 3)		3 CHEM 116 & 116L (GEF 8)	4
CHEM 115 & 115L (GEF 8)		4 General Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 GEF 4	3
Foreign Language 203		3 Foreign Language 204	3
BIOL 219 & BIOL 220		4 BIOL 221	3
CHEM 233 & CHEM 235		4 BIOL 327	1
General Elective		1 CHEM 234 & CHEM 236 General Elective	4 1
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 5		3 GEF 6 (ECAS Fine Arts Requirement)	3
BIOL 348		3 BIOL Capstone	2
PHYS 101		4 BIOL 349	3
Statistics Requirement		3 PHYS 102	4
General Elective		2 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ECAS Global Studies and Diversity Requirement (GEF 7)		3 BIOL Elective Neuroscience	3
BIOL Elective Neuroscience		4 BIOL Elective	1
General Elective		3 General Elective	2
General Elective		3 General Elective	3
General Elective		2 General Elective General Elective	3 3
		15	15

Total credit hours: 120

SUGGESTED PLAN OF STUDY THE BIOLOGY B.S. WITH THE NEUROSCIENCE AREA OF EMPHASIS**First Year**

Fall	Hours	Spring	Hours
BIOL 191		1 ENGL 101 (GEF 1)	3
GEF 4		3 BIOL 117 & BIOL 118 (GEF 8; B.S. First Area 2)	4
BIOL 115 & BIOL 116 (GEF 2; B.S. First Area 1)		4 CHEM 116 & 116L (GEF 8; B.S. Second Area 2)	4
CHEM 115 & 115L (GEF 8; B.S. Second Area 1)		4 STAT 211	3
MATH 155 (GEF 3)		4	
		16	14

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 BIOL 221	3
BIOL 219 & BIOL 220		4 BIOL 327	1
CHEM 233 & CHEM 235		4 CHEM 234 & CHEM 236	4
PHYS 101 (B.S. Third Area 1)		4 PHYS 102 (B.S. Third Area 2)	4

		General Elective	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
GEF 5		3 BIOL Capstone	2
GEF 6		3 BIOL Elective Lab 1	4
ECAS Global Studies and Diversity Requirement(GEF 7)		3 BIOL 349 (Elective Group II)	3
BIOL 348 (Elective Group I)		3 General Elective	3
BIOL Elective Group III (Neuroscience)		3 General Elective	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
BIOL Elective Lab 2		4 BIOL Elective Group IV (Neuroscience)	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		2 General Elective	3
		15	15

Total credit hours: 120

Bachelor of Arts or Science in Biology: Ecology and Environmental Biology Area of Emphasis

Ecology and Environmental Biology Area of Emphasis

CURRICULUM REQUIREMENTS

Core Courses		6
BIOL 302	Biometry (fulfills the group IV elective)	
BIOL 461	Principles of Evolution (fulfills the group III elective)	
Ecology Electives		6
Select 2 of the following:		
BIOL 338	Behavioral Ecology	
BIOL 361	Plant Ecology (fulfills the laboratory requirement)	
BIOL 363	Plant Geography (fulfills the group II elective)	
BIOL 365	Conservation Biology	
BIOL 456	Microbial Symbiosis (fulfills the group I elective)	
BIOL 457	Ecology of Parasites	
BIOL 463	Global Ecology	
WMAN 446	Freshwater Ecology	
Total Hours		12

SUGGESTED PLAN OF STUDY FOR THE B.A. IN BIOLOGY WITH AN AREA OF EMPHASIS IN ECOLOGY/ENVIRONMENTAL BIOLOGY

First Year			
Fall	Hours	Spring	Hours
BIOL 191		1 ENGL 101 (GEF 1)	3
Foreign Language 101		3 Foreign Language 102	3
BIOL 115		4 BIOL 117	4
& BIOL 116 (GEF 2)		& BIOL 118 (GEF 8)	
CHEM 115		4 CHEM 116	4
& 115L (GEF 8)		& 116L (GEF 8)	
MATH 150 (GEF 3)		3 General Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 Foreign Language 204	3
Foreign Language 203		3 BIOL 221	3
BIOL 219 & BIOL 220		4 BIOL 327	1
CHEM 233		3 CHEM 234	3
CHEM 235		1 CHEM 236	1
General Elective		1 STAT 211	3
		General Elective	1
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 4		3 ECAS Fine Arts Requirement (GEF 6)	3
GEF 5		3 BIOL 461	3
BIOL 302		3 Biology Capstone	2
PHYS 101		4 PHYS 102	4
General Elective		2 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ECAS Global Studies and Diversity Requirement (GEF 7)		3 BIOL elective with Laboratory	4
Ecology AoE Elective 1		3 Ecology AoE Elective 2	3
General Elective		3 General elective	2
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

SUGGESTED PLAN OF STUDY FOR THE B.S. IN BIOLOGY WITH AN AREA OF EMPHASIS IN ECOLOGY/ENVIRONMENTAL BIOLOGY**First Year**

Fall	Hours	Spring	Hours
BIOL 191		1 ENGL 101 (GEF 1)	3
GEF 4		3 BIOL 117 & BIOL 118 (B.S. First Area Course 2; GEF 8)	4
BIOL 115 & BIOL 116 (B.S. First Area Course 1; GEF 2)		4 CHEM 116 & 116L (B.S. Second Area Course 2; GEF 8)	4
CHEM 115 & 115L (B.S. Second Area Course 1; GEF 8)		4 STAT 211	3
MATH 155 (GEF 3)		4	
		16	14

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 BIOL 221	3
BIOL 219 & BIOL 220		4 BIOL 327	1
CHEM 233		3 CHEM 234	3
CHEM 235		1 CHEM 236	1
PHYS 101 (BS Third Area Course 1)		4 PHYS 102 (BS Third Area Course 1)	4
		General Elective	3
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 5		3 BIOL 461 (Group III elective)	3
GEF 6		3 Biology Capstone	2
ECAS Global Studies and Diversity Requirement (GEF 7)		3 General Elective	4
BIOL 302 (Group IV elective)		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
Ecology AoE Elective Course 1		3 Ecology AoE Elective Course 2	3
Biology Elective with lab (Group I)*		4 BIOL Elective with Lab (Group II)*	4
General Elective		2 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	2
		15	15

Total credit hours: 120

* Maybe fulfilled by a course selected in Area of Emphasis.

WVUteach

Biology 9-Adult

Teaching changes lives. It is a rewarding profession that makes a difference. WVUteach is an innovative program uniting in-depth science and mathematics education with teacher preparation. Science and Mathematics teachers are some of the most sought after high school teachers.

WVUteach is designed to give undergraduate students the opportunity to explore the profession of teaching in STEM fields (science, technology, engineering, and math) in a hands-on way. In their very first semester in the program, students will have the opportunity to develop and teach a lesson in a local classroom. WVUteach allows students to complete a rigorous degree in any STEM field and earn a secondary teaching certification in tandem with the 4-year degree in mathematics or science. Students earn one degree, with an additional career option. WVUteach is designed to give the essential tools to forge change in the next generation.

In WVUteach, students take the same courses as students in non-teaching options, with slight variations. They are able to compete with students in the non-teaching option for the same jobs and graduate programs in their field. Students thinking about graduate school should always speak to the Graduate Advisor for the program to determine the coursework expected for applicants.

For more information on licensure requirements, please visit our webpage (<http://WVUteach.wvu.edu>) and schedule an appointment with a WVUteach advisor.

Students seeking Biology 9-Adult teaching certification complete the Biology B.A. or B.S. major requirements and the following (27 hours). The WVUteach curriculum can be completed within the 120 hours required for graduation with a B.A. or B.S. in Biology:

WVUTEACH: BIOLOGY 9-ADULT

ARSC 120	Inquiry Approaches to Teaching	1
ARSC 220	Inquiry-Based Lesson Design	1
UTCH 221	Knowing and Learning in Mathematics and Science (GEF 4)	3
UTCH 222	Classroom Interactions in Math and Science	3
UTCH 420	Project-Based Instruction in Mathematics and Science	3
UTCH 430	Apprentice Teaching in Math and Science	10
MATH 318	Perspectives on Mathematics and Science (GEF 5)	3
BIOL 376	Research Methods	3
Total Hours		27

ADDITIONAL COURSEWORK FOR NON-BIOLOGY MAJORS

Select one of the following:

4-8

BIOL 101
& BIOL 103
& BIOL 102
& BIOL 104

General Biology
and General Biology Laboratory
and General Biology
and General Biology Laboratory

or

BIOL 115
& BIOL 116

Principles of Biology
and Principles of Biology Laboratory

BIOL 117
& BIOL 118

Introductory Physiology
and Introductory Physiology Laboratory

BIOL 219
& BIOL 220

The Living Cell
and The Living Cell Laboratory

BIOL 221

Ecology and Evolution

Biology B.S. Electives

9-12

Select 3 hours from Cell and Molecular Biology *

Select 3 hours from Organismal Biology **

Select 3 hours from Evolution and Ecology ***

Additional Coursework

24

Geology

Select one of the following sequences:

GEOL 101
& GEOL 102

Planet Earth
and Planet Earth Laboratory

GEOL 103
& GEOL 104

Earth Through Time
and Earth Through Time Laboratory

Physics

Select one of the following sequences:

PHYS 101
& PHYS 102

Introductory Physics
and Introductory Physics

PHYS 111
& PHYS 112

General Physics
and General Physics

PHYS 112
or PHYS 105

General Physics
Conceptual Physics

Mathematics

MATH 150
or MATH 155

Applied Calculus
Calculus 1

* Please see Biology B.S. (http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/biology/biology_bs/) page for more information regarding these requirements.

** The following courses may fulfill this requirement: EXPH 386, EXPH 387, PALM 301, ANPH 301, ANPH 424, WMAN 330, or WMAN 426. These are not included in the **Organismal Biology** requirement in the Biology B.S. (http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/biology/biology_bs/) program.

*** The following courses may fulfill this requirement: BIOL 301, BIOL 338, BIOL 351, BIOL 361, BIOL 363, BIOL 420, BIOL 455, BIOL 461, BIOL 463, BIOL 464, BIOL 477, AEM 401, GEOL 331, WMAN 313, WMAN 314, WMAN 425, WMAN 446, OR WMAN 449. These are not included in the **Evolution and Ecology Biology** requirement in the Biology B.S. (http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/biology/biology_bs/) program.

Bennett Department of Chemistry

Degrees Offered

- Bachelor of Arts
- Bachelor of Science

Nature of the Program

The Bennett Department of Chemistry offers the bachelor of science with a major in chemistry and the bachelor of arts with a major in chemistry. These programs are configured to meet the needs of all students who have an interest in the broad field of chemistry.

The Department of Chemistry is located in Clark Hall, a state-of-the-art teaching facility for chemistry. Clark Hall offers many new instruments, numerous safety features, excellent ventilation and ample hoods, and complete accessibility for the physically handicapped. The department also has modern research facilities in the adjacent Chemistry Research Laboratory building where advanced undergraduates may participate in research projects.

The bachelor of science with a major in chemistry is approved by the American Chemical Society. This program is for students who desire to qualify for professional positions in industrial and governmental laboratories as well as those who plan to do graduate work in chemistry or allied areas in preparation for research careers in industry or academia.

The bachelor of arts with a major in chemistry is for students who pursue careers requiring a good background in the basic principles of chemistry. Areas such as medicine, dentistry, or other health-related sciences; secondary school teaching; chemical laboratory technical work; law; or business may be pursued with a proper choice of electives.

The two programs are similar during the first two years. Students in the B.S. program should complete the calculus requirement as soon as possible as a prerequisite for both the physics and physical chemistry sequences. The two degree programs differ primarily in the chemistry requirements. The B.S. program requires more upper-level chemistry courses than the B.A. program.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Chemistry Scholarships

In addition to financial aid offered by the University, the department maintains seven scholarships specifically for chemistry majors. The John A. Moore Trust Scholarships, the Charles L. Lazzell Scholarship, the Carpenter Family Scholarship, the Robert L. and Patricia Miller Stultz Chemistry Scholarship, the Herbert and Hannah Seigel Chemistry Scholarship, the Willard W. Hodge Scholarship, the Morrissey-Ropp Chemistry Scholarships, the William R. and Phylis T. Moore Organic Chemistry Scholarship, the Joseph T. Green Memorial Scholarship, and the Bud and Patty Blizzard Scholarships are awarded to students in either the B.S. or B.A. programs with records of outstanding achievement and demonstrated financial need. Several of these scholarships are restricted to West Virginia residents. Scholarship recipients are expected to remain as chemistry majors and to maintain a 3.0 average in their degree programs in order to be eligible for continued support.

Minors

All students have the possibility of earning one or more minors; follow the link for a list of all available minors and their requirements (p. 50). Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

CHAIR

- Gregory Dudley - Ph.D. (M.I.T.)
Synthetic organic chemistry

PROFESSORS

- Terry Gullion - Ph.D. (College of William & 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
- Glen Jackson - Ph.D. (West Virginia University)
Mass spectrometry, Forensic science
- Fred L. King - Ph.D. (University of Virginia)
Analytical chemistry, Mass spectrometry, Trace elements, Gas-phase chemistry
- Kenneth Showalter - Ph.D. (University of Colorado)

Bennett Distinguished Professor, Physical chemistry, Chemical kinetics, Multi-stability and oscillating systems

- Bjorn Soderberg - Ph.D. (Royal Institute of Technology, Sweden)
Organic synthesis using transition metals
- Kung Wang - Ph.D. (Purdue University)
Eberly Distinguished Professor of Chemistry, Organic chemistry, stereoselective synthesis

ASSOCIATE PROFESSORS

- Erin Battin - Ph.D. (Clemson University)
Bioinorganic Chemistry
- Fabien Goulay - Ph.D. (Université de Rennes)
Physical chemistry, Laser spectroscopy
- Justin Legleiter - Ph.D. (Carnegie Mellon University)
Biophysical chemistry, Atomic force microscopy
- Joshua Osbourn - Ph.D. (University of Pittsburgh)
Organic chemistry
- Betsy Ratcliff - Ph.D. (University of Binghamton - SUNY)
Physical chemistry
- Michelle Richards-Babb - Ph.D. (Lehigh University)
Chemical education
- Stephen Valentine - Ph.D. (Indiana University)
Mass spectrometric analysis of biomolecules
- Mingming Xu - Ph.D. (Ohio University)
Analytical chemistry

ASSISTANT PROFESSORS

- Melissa Gayton Ely - Ph.D. (West Virginia University)
Analytical chemistry
- Jessica Hoover - Ph.D. (University of Washington)
Organometallic chemistry, Catalysis
- Peng Li - Ph.D. (Texas Technical University)
Analytical chemistry, microfluidic devices
- Blake Mertz - Ph.D. (Iowa State University)
Computational biophysics and chemistry
- Carsten Milsmann - Ph.D. (University of Bochum)
Transition metal catalysis, organometallic chemistry
- Brian Popp - Ph.D. (University of Wisconsin - Madison)
Organic and organometallic chemistry, Catalysis
- Mark Tinsley - Ph.D., Leeds University, England
Nonlinear dynamics, chemical oscillators, moving precipitation patterns.

PART-TIME INSTRUCTOR

- Jennifer Robertson-Honecker - Ph.D. (West Virginia University)
Analytical chemistry, Science education

LECTURER

- Mark Schraf - M.S. (West Virginia University)
Analytical chemistry

PROFESSORS EMERITI

- Harry Finklea - Ph.D. (California Institute of Technology)
Analytical/Physical Chemistry, Electron transfer kinetics, Solid oxide fuel cells, Gas phase sensors
- Robert S. Nakon - Ph.D. (Texas A&M University)
Inorganic chemistry
- John Penn - Ph.D. (University of Wisconsin - Madison)
Chemical education, On-line instruction methods in organic chemistry
- Jeffrey Petersen - Ph.D. (University of Wisconsin-Madison)
Physical inorganic chemistry, electrophilic transition metal complexes, X-ray crystallography

- Ronald Smart - Ph.D. (University of Michigan)
Electrochemistry, environmental chemistry
- Anthony Winston - Ph.D. (Duke University)
Polymer chemistry

Admissions

- First Time Freshmen with a Math ACT score of 22, or a MATH SAT score of 540, or who place in College Algebra without support are admitted directly to the Chemistry majors.
- Students transferring from another major within WVU are admitted into the major if they have completed CHEM 115/116 or 117/118 with C- or better in each and have earned a minimum overall GPA of 2.0.
- Students transferring from another institution are admitted into the major if they have completed CHEM 115/116 or 117/118 with C- or better in each and have earned a minimum overall GPA of 2.0.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science and Bachelor of Arts in Chemistry (<https://admissions.wvu.edu/academics/majors/chemistry/>) major.

Degree Progress

- By the end of the second semester in the major, completion of CHEM 115/116 or 117/118 with C- or better in each.
- By the end of the second year in the major, completion of Organic Chem with C- or better and a 2.0 in the major.
- All majors must meet with a Chemistry adviser each semester.

Students who do not meet their benchmark expectations may be removed from the major.

Major Learning Outcomes

CHEMISTRY

1. Will have sufficient knowledge of the fundamental chemical principles and an understanding of the methods of chemistry to be able to formulate solutions to problems of chemical relevance.
2. Will have acquired sufficient training to perform accurate and precise quantitative analyses, to utilize modern instrumental methods of analysis, to analyze and report the results of chemical experimentation, to work safely with chemicals, and to work effectively both as an individual and in a small group.
3. Will understand how to retrieve information from the chemical literature and be able to organize and communicate chemical information effectively in written reports and oral presentations.
4. Will possess the basic laboratory skills and chemical knowledge to qualify for entry level industrial or government laboratory positions or to be able to apply and gain admission to competitive graduate and professional schools.

Chemistry B.A.

Click here to view the Suggested Plan of Study (p. 250)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences (p. 187) page. Students may not earn both a B.A. and a B.S. in Chemistry.

Departmental Requirements for the B.A. in Chemistry

- **Capstone Requirement:** The university requires the successful completion of a Capstone. Chemistry majors must take CHEM 401 and CHEM 403. WVU Teach students may substitute CHEM 376 for CHEM 401 and CHEM 403
- **Writing and Communication Skills:** Chemistry Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two additional **SpeakWrite Certified Courses™**: CHEM 401 or CHEM 403, and a 2nd course selected from ENGL 304 or ENGL 305. WVU Teach Students may substitute CHEM 376 in place of CHEM 401 or CHEM 403
- **Calculation of GPA in the major:** A grade of C- or better in all chemistry courses below 300-level is required and all courses that serve as a prerequisite for major-required courses. This includes (but is not limited to) the following courses: PHYS 101 and PHYS 102 (or PHYS 111 and PHYS 112); MATH 155 (or MATH 153 and MATH 154) and MATH 156. In addition, a 2.0 grade point average must be maintained in all Chemistry 300-level and above courses, excluding Chemistry 490-497 courses.
- **Course Requirement:** Students in the B.A. program may use AGBI 410 to meet part of the seven-hour chemistry elective requirement; however, at least three hours must be selected from chemistry courses numbered 310 or higher. Students in the B.A. program may take CHEM 346, CHEM 347, and CHEM 348 in lieu of CHEM 341 and CHEM 342 and three hours of chemistry electives. CHEM 349 may be taken as two hours of chemistry elective.
- **Benchmarks expectations:** For details, go to the chemistry admissions tab (p. 248).

Curriculum Requirements

A minimum GPA of 2.0 is required in all CHEM courses

UNIVERSITY REQUIREMENTS	19
CHEM 191	First-Year Seminar
GEF: number of credits may vary based on overlap	
ECAS B.A. Requirements	12
Foreign Languages	
Fine Arts Requirement	
Global Studies and Diversity Requirement	
DEPARTMENTAL REQUIREMENTS	
1 - STEM Foundations:	16
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus
or:	
MATH 155	Calculus 1
and:	
MATH 156	Calculus 2
Select one pair:	
PHYS 101 & PHYS 102	Introductory Physics 1 and Introductory Physics 2
PHYS 111 & PHYS 112	General Physics and General Physics
2 - Core Chemistry Courses:	24
Select one of the following options	
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory

CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	
CHEM 215 & 215L	Introductory Analytical Chemistry and Introductory Analytical Chemistry Laboratory	
OR:		
CHEM 117 & 117L	Principles of Chemistry 1 and Principles of Chemistry 1 - Laboratory	
CHEM 118 & 118L	Principles of Chemistry 2 and Principles of Chemistry 2 - Laboratory	
Take all courses:		
CHEM 233	Organic Chemistry	
CHEM 234	Organic Chemistry	
CHEM 235	Organic Chemistry Laboratory	
CHEM 236	Organic Chemistry Laboratory	
CHEM 341	Physical Chemistry: Brief Course	
CHEM 342	Experimental Physical Chemistry	
Chemistry Electives: *		14
Select from the following:		
CHEM 310	Instrumental Analysis	
CHEM 312	Environmental Chemistry	
CHEM 313	Instrumental Analysis Laboratory	
CHEM 335	Methods of Structure Determination	
CHEM 339	Organic Syntheses	
CHEM 422	Intermediate Inorganic Chemistry	
CHEM 423	Inorganic Synthesis Laboratory	
CHEM 460	Forensic Chemistry	
CHEM 463	Forensic Chemistry Lab	
CHEM 496	Senior Thesis	
CHEM 497	Research	
CHEM 498	Honors	
AGBI 410	Introductory Biochemistry	
Capstone Experience		2
CHEM 401	Chemical Literature	
CHEM 403	Undergraduate Seminar	
GENERAL ELECTIVES:		33
Number of elective courses may vary depending on overlap.		
Total Hours		120

FOOTNOTES

* Only six hours of CHEM 497 may be counted toward the fourteen-hour elective requirement.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
CHEM 191		1 ENGL 101 (GEF 1)	3
Foreign Language 101		3 Foreign Language 102	3
ECAS Global Studies and Diversity Requirement (GEF 7)		3 CHEM 116 & 116L (GEF 8) *	4
CHEM 115 & 115L (GEF 2) *		4 MATH 156 (GEF 8)	4
MATH 155 (GEF 3)		4 General Elective	1

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 GEF 4	3
Foreign Language 203		3 Foreign Language 204	3
CHEM 233 & CHEM 235		4 CHEM 234 & CHEM 236	4
PHYS 101 (GEF 8)		4 PHYS 102	4
General Elective		1 General Elective	1
		<hr/>	
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 5		3 ECAS Fine Arts Requirement (GEF 6)	3
CHEM 215 & 215L		4 CHEM 341 & CHEM 342	4
General Elective		3 Chemistry Elective 1	3
General Elective		3 General Elective	3
General Elective		2 General Elective	2
		<hr/>	
		15	15

Fourth Year

Fall	Hours	Spring	Hours
Chemistry Elective 2		4 CHEM 401 (Capstone)	1
Chemistry Elective 3		3 CHEM 403 (Capstone)	1
General Elective		3 Chemistry Elective 4	4
General Elective		3 General Elective	3
General Elective		2 General Elective	3
		General Elective	3
		<hr/>	
		15	15

Total credit hours: 120

* If a student qualifies to take CHEM 117, CHEM 117L and CHEM 118, CHEM 118L, these courses can be used in lieu of CHEM 115, CHEM 115L, CHEM 116, CHEM 116L and CHEM 215, CHEM 215L. The student will need to take an additional 2 credit hours of Electives to reach the required minimum of 120 credit hours for graduation.

Chemistry B.S.

Click here to view the Suggested Plan of Study (p. 253)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

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

Students must complete WVU General Education Foundations requirements, College B.S. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.S. Degrees tab on the Eberly College of Arts and Sciences (p. 190) page. Students may not earn both a B.A. and a B.S. in Chemistry.

Departmental Requirements for the B.S. in Chemistry

- **Capstone Requirement:** The university requires the successful completion of a Capstone course, which for the B.S. Chemistry degree involves CHEM 401 and CHEM 403. WVU Teach students may substitute CHEM 376 for CHEM 401 and CHEM 403.
- **Writing Requirement:** Chemistry Bachelor of Science fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two additional SpeakWrite Certified CoursesTM: CHEM 349, and either CHEM 401 or CHEM 403. WVU Teach students may substitute CHEM 376 for CHEM 401 or CHEM 403.
- **Calculation of GPA in the major:** A grade of C- or better in all chemistry courses below 300-level is required and all courses that serve as prerequisites for other major-required courses. This includes (but is not limited to) the following courses: PHYS 111 and PHYS 112; MATH 155 (or MATH 153 and MATH 154), MATH 156, and MATH 251. In addition, a 2.0 average must be maintained in all Chemistry 300-level or above courses, excluding 490–497 courses.
- **Benchmarks expectations:** For details, go to the chemistry admissions tab (p. 248).

Curriculum Requirements

UNIVERSITY REQUIREMENTS

19

CHEM 191	First-Year Seminar
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GEF: Number of courses may vary depending on overlap

COLLEGE REQUIREMENT

4

Global Studies and Diversity Requirement

MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus
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OR

MATH 155	Calculus 1
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Science Requirements - see Eberly page (may overlap with GEF and major)

DEPARTMENTAL REQUIREMENTS

1 - STEM Foundations:

12

MATH 156	Calculus 2
PHYS 111 & PHYS 112	General Physics and General Physics

2 - Chemistry Major Requirements:

Core Chemistry courses:

45

Select one of the following options:

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory
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CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory
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CHEM 215 & 215L	Introductory Analytical Chemistry and Introductory Analytical Chemistry Laboratory
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OR

CHEM 117 & 117L	Principles of Chemistry 1 and Principles of Chemistry 1 - Laboratory
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CHEM 118 & 118L	Principles of Chemistry 2 and Principles of Chemistry 2 - Laboratory
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Take all courses:

CHEM 233	Organic Chemistry	
CHEM 234	Organic Chemistry	
CHEM 235	Organic Chemistry Laboratory	
CHEM 236	Organic Chemistry Laboratory	
CHEM 310	Instrumental Analysis	
CHEM 313	Instrumental Analysis Laboratory	
CHEM 335	Methods of Structure Determination	
CHEM 346	Physical Chemistry	
CHEM 347	Physical Chemistry Laboratory	
CHEM 348	Physical Chemistry	
CHEM 349	Physical Chemistry Laboratory	
CHEM 422	Intermediate Inorganic Chemistry	
CHEM 423	Inorganic Synthesis Laboratory	
AGBI 410	Introductory Biochemistry	
3 - Non-Chemistry Requirement:		4
MATH 251	Multivariable Calculus	
Chemistry Electives *		6
Select 2 classes:		
CHEM 312	Environmental Chemistry	
CHEM 339	Organic Syntheses	
CHEM 440	Quantum Chemistry	
CHEM 460	Forensic Chemistry	
CHEM 462	Biochemistry 2	
CHEM 463	Forensic Chemistry Lab	
CHEM 464	Biochemistry 2 Laboratory	
CHEM 496	Senior Thesis	
CHEM 497	Research	
CHEM 498	Honors	
Capstone Experience		2
CHEM 401	Chemical Literature	
CHEM 403	Undergraduate Seminar	
General Electives		28
Number of Electives may vary depending on overlap		
Total Hours		120

FOOTNOTES

* Only three hours of CHEM 497 may be counted toward the six-hour requirement.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
CHEM 191		1 ENGL 101 (GEF 1)	3
GEF 4		3 CHEM 116 & 116L (GEF 8; B.S. First Area 2)*	4
ECAS Global Studies and Diversity Requirement (GEF 7)		3 MATH 156 (GEF 8; B.S. Second Area 1)	4
CHEM 115 & 115L (GEF 2; B.S. First Area 1)*		4 General Elective	3
MATH 155 (GEF 3)		4 General Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
CHEM 215 & 215L*		4 ENGL 102 (GEF 1)	3
CHEM 233 & CHEM 235		4 GEF 5	3
MATH 251 (B.S. Second Area 2)		4 CHEM 234 & CHEM 236	4
PHYS 111 (GEF 8; B.S. Third Area 1)		4 PHYS 112 (B.S. Third Area 2)	4
		16	14

Third Year

Fall	Hours	Spring	Hours
GEF 6		3 CHEM 310	3
AGBI 410		3 CHEM 348 & CHEM 347	4
CHEM 335		4 General Elective	3
CHEM 346		3 General Elective	4
General Elective		3	
		16	14

Fourth Year

Fall	Hours	Spring	Hours
CHEM 349		2 CHEM 401	1
CHEM 313		1 CHEM 403 (Capstone)	1
CHEM 422		3 CHEM 423	2
Chemistry Elective 1		3 Chemistry Elective 2	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		General Elective	2
		15	15

Total credit hours: 120

* If a student qualifies to take CHEM 117, CHEM 117L and CHEM 118, CHEM 118L, these courses can be used in lieu of CHEM 115, CHEM 115L, CHEM 116, CHEM 116L, and CHEM 215, CHEM 215L. The student will need to take an additional 2 credit hours of Electives to reach the required minimum of 120 credit hours for graduation.

WVUteach

Chemistry 9-Adult

Teaching changes lives. It is a rewarding profession that makes a difference. WVUteach is an innovative program uniting in-depth science and mathematics education with teacher preparation. Science and Mathematics teachers are some of the most sought after high school teachers.

WVUteach is designed to give undergraduate students the opportunity to explore the profession of teaching in STEM fields (science, technology, engineering, and math) in a hands-on way. In their very first semester in the program, students will have the opportunity to develop and teach a lesson in a local classroom. WVUteach allows students to complete a rigorous degree in any STEM field and earn a secondary teaching certification in tandem with the 4-year degree in mathematics or science. Students earn one degree, with an additional career option. WVUteach is designed to give the essential tools to forge change in the next generation.

In WVUteach, students take the same courses as students in non-teaching options, with slight variations. They are able to compete with students in the non-teaching option for the same jobs and graduate programs in their field. Students thinking about graduate school should always speak to the Graduate Advisor for the program to determine the coursework expected for applicants.

For more information on licensure requirements, please visit our webpage (<http://WVUteach.wvu.edu>) and schedule an appointment with a WVUteach advisor.

Students seeking Chemistry 9-Adult teaching certification complete the Chemistry B.A. or B.S. major requirements and the following courses (27 hours). The WVUteach curriculum can be completed within the 120 hours required for graduation with a B.A. or B.S. in Chemistry:

WVUTEACH: CHEMISTRY 9-ADULT

ARSC 120	Inquiry Approaches to Teaching	1
ARSC 220	Inquiry-Based Lesson Design	1
UTCH 221	Knowing and Learning in Mathematics and Science (GEF 4)	3
UTCH 222	Classroom Interactions in Math and Science	3
UTCH 420	Project-Based Instruction in Mathematics and Science	3
UTCH 430	Apprentice Teaching in Math and Science	10
MATH 318	Perspectives on Mathematics and Science (GEF 5)	3
CHEM 376	Research Methods	3
Total Hours		27

ADDITIONAL COURSEWORK FOR NON-CHEMISTRY MAJORS

Select one of the following sequences: 4-5

CHEM 115
& 115L
& CHEM 116
& CHEM 116L
& CHEM 215
& CHEM 215L

Fundamentals of Chemistry
and Fundamentals of Chemistry 1 - Laboratory
and Fundamentals of Chemistry
and Fundamentals of Chemistry 2 - Laboratory
and Introductory Analytical Chemistry
and Introductory Analytical Chemistry Laboratory

CHEM 117
& 117L
& CHEM 118
& CHEM 118L

Principles of Chemistry 1
and Principles of Chemistry 1 - Laboratory
and Principles of Chemistry 2
and Principles of Chemistry 2 - Laboratory

Select one of the following: 3-4

CHEM 231
& 231L

Organic Chemistry: Brief Course
and Organic Chemistry: Brief Course - Laboratory

Or

CHEM 233
& CHEM 235

Organic Chemistry
and Organic Chemistry Laboratory

Select one of the following sequences:

CHEM 341
& CHEM 342

Physical Chemistry: Brief Course
and Experimental Physical Chemistry

CHEM 346
& CHEM 347

Physical Chemistry
and Physical Chemistry Laboratory

CHE 320
& CHE 450

Chemical Engineering Thermodynamics
and Unit Operations Laboratory 1

MAE 320
& MAE 322

Thermodynamics
and Thermal and Fluids Laboratory

PHYS 461
& PHYS 341

Thermodynamics and Statistical Mechanics
and Advanced Laboratory

Additional Coursework 24

Physics

Select one of the following sequences:

PHYS 101
& PHYS 102

Introductory Physics
and Introductory Physics

PHYS 111
& PHYS 112

General Physics
and General Physics

PHYS 112
& PHYS 105

General Physics
and Conceptual Physics

Biology

Select one of the following sequences:

BIOL 101
& BIOL 103

General Biology
and General Biology Laboratory

BIOL 115
& BIOL 116

Principles of Biology
and Principles of Biology Laboratory

Geology**Select one of the following sequences:**

GEOL 101 & GEOL 102	Planet Earth and Planet Earth Laboratory
GEOL 103 & GEOL 104	Earth Through Time and Earth Through Time Laboratory

Mathematics

MATH 155 & MATH 156	Calculus 1 and Calculus 2
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Communication Studies, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The Department of Communication Studies offers a curriculum to meet the needs of liberal arts and pre-professional students oriented toward communication-related careers such as marketing, sales, recruiting, management, and market research, among many others. The undergraduate curriculum focuses on the application of theory and research in human communication to a variety of personal, social, and organizational settings.

Majors must select one of five areas of emphasis (health, integrated, interpersonal, social media and communication technology, or organizational communication). All majors complete COMM 491, an internship, and COMM 403, the capstone course. These two courses allow students to integrate academic content with real-world experience. For more information about this program, please go to <http://communicationstudies.wvu.edu>.

SELECTING AN AREA OF EMPHASIS:

Each Area of Emphasis will allow students to hone different skills.

- **Health Communication**

- Design and evaluate effective health messages to be communicated interpersonally, organizationally, and culturally.
- Explore contemporary issues in the U.S. health care system and develop the skills necessary for navigating diverse populations.
- Prepare for careers in health care management, advocacy, and campaigns.

- **Integrated Communication**

- Create and deliver messages for diverse audiences across communication contexts and relational partners.
- Customize coursework across the health, interpersonal, social media and technology, and strategic and organizational communication areas of emphasis.
- Prepare for careers across a variety of for-profit and nonprofit organizations.

- **Interpersonal Communication**

- Develop and demonstrate the ability to relate to others across personal and professional relationships, including romantic relationships, friendships, family, small groups, and workplace colleagues.
- Explore the behaviors and events that affect the development, maintenance, and termination of these relationships.
- Prepare for careers in community relations, public service, and nonprofit management.

- **Social Media & Communication Technology**

- Construct and deliver appropriate, effective, and ethical messages necessary for meeting the communication goals associated with social media and technology.
- Analyze the role that social media and technology plays in shaping people's perceptions, behaviors, and social interactions.
- Prepare for careers in media planning, social media coordination, and marketing.

- **Organizational Communication**

- Create and implement messages designed to strategically navigate workplace interactions with superiors, subordinates, peers, and stakeholders.
- Acquire ways to recruit, retain, and socialize organizational employees as well as develop leadership, decision-making, and problem-solving skills.
- Prepare for careers in management, human resources, and training and development.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Minors

All students have the possibility of earning one or more minors; follow the link for a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>). Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

CHAIR

- Scott A. Myers - Ph.D. (Kent State University)

PROFESSORS

- Alan K. Goodboy - Ph.D. (West Virginia University)
Instructional, Interpersonal, Quantitative Methods & Statistics
- Scott A. Myers - Ph.D. (Kent State University)
Instructional, Family, Organizational
- Matthew M. Martin - Ph.D. (Kent State University)
Instructional, Interpersonal, Personality & Communication

ASSOCIATE PROFESSORS

- Elizabeth L. Cohen - Ph.D. (Georgia State University)
Mass Communication/Media Studies, Computer-Mediated, Health
- Megan R. Dillow - Ph.D. (Pennsylvania State University)
Interpersonal, Health
- Brian R. Patterson - Ph.D. (University of Oklahoma)
Interpersonal, Computer-Mediated
- Christine E. Rittenour - Ph.D. (University of Nebraska)
Family, Intergroup, Communication & Aging

ASSISTANT PROFESSORS

- Katie K. Kang - Ph.D. (Rutgers University)
Organizational, Group
- Liesel Sharabi - Ph.D. (University of Illinois)
Interpersonal, Computer-Mediated
- Daniel Totzkay - Ph.D. (Michigan State University)
Health, Mass

TEACHING ASSISTANT PROFESSORS

- John G. Cole - M.A. (West Virginia University)
Instructional, Organizational, Computer Technology
- Carrie D. Kennedy-Lightsey - Ph.D. (West Virginia University)
Communication Theory, Student Internships, Interpersonal

TEACHING INSTRUCTORS

- Nikki Loy - M.S.J. (West Virginia University)
Group, Public Speaking, Social Media
- Ryan V. Thompson - M.A. (Texas Tech University)
Professional Life Skills, Business & Professional Communication, Public Speaking, Interpersonal

PROFESSORS EMERITA

- Melanie Booth-Butterfield - Ph.D. (University of Missouri)
- Virginia P. Richmond - Ph.D. (University of Nebraska)

ASSOCIATE PROFESSORS EMERITA

- Enid J. Portnoy - Ed.D. (West Virginia University)
- John Shibley - Ph.D. (Ohio State University)

Admissions

- First-Time Freshmen are admitted directly into the major.
- Students transferring from within WVU must have a minimum overall GPA of 2.0 and a 2.0 in Communication Studies courses or have taken at least one COMM course with a minimum grade of C-.
- Students transferring from another institution must have a minimum overall GPA of 2.0 and a 2.0 in Communication Studies courses or have taken at least one COMM course with a minimum grade of C-.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Communication Studies (<https://admissions.wvu.edu/academics/majors/communication-studies/>) major.

Click here to view the Suggested Plan of Study (p. 259)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences (p. 187) page.

Departmental Requirements for the B.A. in Communication Studies

Completion of the major requires students to earn a minimum of 36 credit hours in Communication Studies courses. All students wishing to obtain a degree in Communication Studies must comply with the following:

- **Capstone Requirement:** The university requires the successful completion of a Capstone course: COMM 403.
- **Writing and Communication Requirement:** The Communication Studies Bachelor of Arts is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Calculation of the GPA in the Major:** Obtain a minimum GPA of 2.0 for all required COMM courses used to meet major requirements. Courses in Communication Studies that a student wishes to count toward the major must be completed with a grade of C- or better. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.

- **Area of Emphasis:** Students must complete COMM 201 with a grade of C- or better and COMM 203 with a grade of C- or better and select one of five areas of emphasis in Communication Studies in consultation with their adviser (i.e., Health Communication, Integrated Communication, Interpersonal Communication, Social Media and Communication Technology, or Organizational Communication).
- **Benchmark Expectations:** For details, go to the Communication Studies admissions tab (p. 258).

Curriculum Requirements

UNIVERSITY REQUIREMENTS	31
COMM 191 First-Year Seminar	
GEF: number of courses may vary depending on overlap	
ECAS B.A. Requirements	12
Foreign Language	
Fine Arts Requirement	
Global Studies and Diversity Requirement	
DEPARTMENTAL REQUIREMENTS	
Core Courses *	16
COMM 201 Communication Research Methods	
COMM 203 Communication Theory	
COMM 491 Professional Field Experience	
CS 101 Intro to Computer Applications	
Select one of the following:	
STAT 111 Understanding Statistics	
STAT 201 Applied Statistical Modeling	
STAT 211 Elementary Statistical Inference	
ECON 225 Elementary Business and Economics Statistics	
Area of Emphasis	18
Communication Studies Electives	6
Select two classes in Communication Studies. At least one must be at the 300 or 400 level excluding COMM 490	
Capstone experience	3
COMM 403 Capstone Seminar	
General Electives	34
Number of electives will vary depending on overlap and AP credit	
Total Hours	120

* COMM 491 must be taken for a minimum of 3 credits.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
COMM 191		1 ENGL 101 (GEF 1)	3
GEF 4		3 GEF 5	3
CS 101 (GEF 2)		4 ECAS Fine Arts Requirement (GEF 6)	3
Foreign Language 101		3 Stat Requirement (GEF 3)	3
General Elective		4 Foreign Language 102	3
		15	15

Second Year

Fall	Hours	Spring	Hours
GEF 2		3 ENGL 102 (GEF 1)	3
ECAS Global Studies and Diversity Requirement (GEF 7)		3 GEF 8*	3
Foreign Language 203		3 Foreign Language 204	3
COMM 203		3 COMM 201	3
General Elective		3 General Elective	3
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 8*		3 COMM Elective 1	3
GEF 8*		3 COMM 491	3
Area of Emphasis Course 1		3 Area of Emphasis Course 3	3
Area of Emphasis Course 2		3 Area of Emphasis Course 4	3
General Elective		3 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
COMM Elective 2 (@300-level or above)		3 COMM 403 (Capstone)	3
Area of Emphasis Course 5		3 Area of Emphasis Course 6	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

* Courses taken to satisfy the F8 requirement may overlap with major courses. Students who complete a minor, a second major or a dual degree already meet F8.

HEALTH COMMUNICATION AREA OF EMPHASIS REQUIREMENTS**Core courses in Health Communication****12**

COMM 307	Life-Span Communication
COMM 309	Health Communication
COMM 404	Persuasion
COMM 409	Advanced Health Communication

Health Communication Electives**6**

Select two of the following:

COMM 300	Interpersonal Communication Theory
COMM 303	Business and Professional Communication
COMM 304	Human Communication and Rational Decisions
COMM 306	Organizational Communication
COMM 317	Communication and Aging
COMM 401	Advanced Communication Research Methods
COMM 424	Communication Ethics

Total Hours

18**INTEGRATED COMMUNICATION AREA OF EMPHASIS REQUIREMENTS**

Select 6 classes from the following:

18

COMM 300	Interpersonal Communication Theory
COMM 303	Business and Professional Communication
COMM 304	Human Communication and Rational Decisions
COMM 305	Appreciation of the Motion Picture
COMM 306	Organizational Communication
COMM 307	Life-Span Communication
COMM 308	Nonverbal Communication
COMM 309	Health Communication
COMM 315	American Diversity in Film
COMM 317	Communication and Aging
COMM 322	Dark Side of Communication
COMM 335	Social Media in the Workplace

COMM 342	Interpersonal Relationships & Technology
COMM 401	Advanced Communication Research Methods
COMM 404	Persuasion
COMM 405	Effects of Mediated Communication
COMM 406	Advanced Organizational Communication
COMM 408	Advanced Nonverbal Communication
COMM 409	Advanced Health Communication
COMM 410	Family Communication
COMM 424	Communication Ethics
COMM 425	Computer Mediated Communications
COMM 426	Organizational Culture
COMM 435	Advanced Social Media

Total Hours 18

INTERPERSONAL COMMUNICATION AREA OF EMPHASIS REQUIREMENTS

Core Courses 12

COMM 202	Interpersonal Communication
COMM 300	Interpersonal Communication Theory
COMM 322	Dark Side of Communication
COMM 410	Family Communication

Electives 6

Select two of the following classes:

COMM 307	Life-Span Communication
COMM 317	Communication and Aging
COMM 342	Interpersonal Relationships & Technology
COMM 401	Advanced Communication Research Methods
COMM 404	Persuasion
COMM 408	Advanced Nonverbal Communication
COMM 424	Communication Ethics

Total Hours 18

SOCIAL MEDIA AND COMMUNICATION TECHNOLOGY AREA OF EMPHASIS REQUIREMENTS

Core Courses 12

COMM 335	Social Media in the Workplace
COMM 405	Effects of Mediated Communication
COMM 425	Computer Mediated Communications
COMM 435	Advanced Social Media

Electives 6

Select two of the following:

COMM 303	Business and Professional Communication
COMM 304	Human Communication and Rational Decisions
COMM 306	Organizational Communication
COMM 342	Interpersonal Relationships & Technology
COMM 401	Advanced Communication Research Methods
COMM 404	Persuasion
COMM 424	Communication Ethics

Total Hours 18

STRATEGIC AND ORGANIZATIONAL COMMUNICATION AREA OF EMPHASIS REQUIREMENTS

Core Courses 12

COMM 306	Organizational Communication
----------	------------------------------

COMM 404	Persuasion
COMM 406	Advanced Organizational Communication
COMM 426	Organizational Culture
Electives	
Select two of the following classes:	
COMM 303	Business and Professional Communication
COMM 304	Human Communication and Rational Decisions
COMM 335	Social Media in the Workplace
COMM 401	Advanced Communication Research Methods
COMM 424	Communication Ethics
COMM 425	Computer Mediated Communications
COMM 435	Advanced Social Media
Total Hours	18

Degree Progress

- At the end of the fourth semester in the major, students should have completed COMM 201 and COMM 203 with a minimum grade of C- in each.
- After completion of COMM 201 and 203, students must declare an AoE within two semesters or be removed from the major, as they are required to complete an AoE to graduate from the Communication Studies major.
- All majors must meet with a COMM adviser each semester.

Students who do not meet these expectations may be removed from their major.

Major Learning Outcomes

COMMUNICATION STUDIES

Upon successful completion of the B.A. degree, **Communication Studies** majors will be able to:

1. Identify and explain the primary communication theories, perspectives, principles, and concepts associated with their area of emphasis;
2. Analyze and critique messages using communication theories, perspectives, principles, and concepts;
3. Interpret, design, and conduct original communication-based research;
4. Create and deliver effective communication messages across oral, written, and mediated channels appropriate to the audience, purpose, and context.
5. Develop the ability to accomplish communicative goals using communication theories, perspectives, principles, and concepts needed for functional personal, social, and professional relationships.

Criminology, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The criminology major focuses on the social roots and implications of criminal behavior and the operation of the criminal justice system. Students learn to apply the theoretical and methodological tools of sociology to make sense of crime and social control in modern society, while selecting from a variety of substantive course topics. These include but are not limited to: juvenile delinquency, street crime and gangs, corporate and white collar crime, hate crime, terrorism, drug use and abuse, media and crime, the culture of police work, and punishment and social control.

The sociological approach to crime distinguishes criminology from the related field of criminal justice, which emphasizes the procedural activities of criminal justice agencies. Criminology treats crime as the product of complex social forces, seeking to understand why laws are made in the first place, how and why these laws are violated, and how society responds when laws are broken. This holistic societal perspective prepares graduates to pursue a broad range of careers such as policing, security, corrections, law, social services, and business. The major also prepares students for graduate studies in the social sciences in pursuit of academic or applied research careers or for professional training in law, public administration, social work, and related fields. For more information about this program, please visit the departmental website (<https://soca.wvu.edu/students/undergraduate-students/b-a-in-criminology/>).

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Minors

All students have the possibility of earning one or more minors; please consult the list of all available minors and their requirements (p. 50). Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds.

Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship.

For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

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
- Lisa M. Dilks - Ph.D. (University of South Carolina) Sociology
Social psychology, Group processes, Law and society, Quantitative methods
- Amy Hirshman - Ph.D. (Michigan State University) Anthropology
Mesoamerican archaeology, Social complexity, Ceramics
- Jason Manning - Ph.D. (University of Virginia) Sociology
Conflict and social control, Violence, Sociology of knowledge
- Daniel Renfrew - Ph.D. (Binghamton University) Anthropology
Environmental and political anthropology, Social movements, Latin American cultures
- 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

TEACHING INSTRUCTORS

- Daniel Brewster - M.A. (West Virginia University) Communication Studies
- Douglas Sahady - M.A. (California University of Pennsylvania) Social Science
- Genesis Snyder - M.A. (Western Michigan University) Anthropology

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

- First Time Freshmen are admitted directly into the major.
- Students coming from another major within WVU need an overall GPA of a 2.0 and have completed the following courses with a grade of a C- or better before being admitted to the major: SOCA 101 and SOCA 105. It is recommended that students have also completed the pre-requisite or are qualified to take STAT 211.
- Students transferring from another institution need an overall GPA of a 2.0 and have completed the following courses with a grade of a C- or better before being admitted to the major: SOCA 101 and SOCA 105. It is recommended that students have also completed the pre-requisite or are qualified to take STAT 211.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Criminology (<https://admissions.wvu.edu/academics/majors/criminology/>) major.

Click here to view the Suggested Plan of Study (p. 267)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences (p. 187) page.

Departmental Requirements for the B.A. in Criminology

All Criminology majors are required to take a common set of core courses and choose major electives based on their scholarly and career interests.

- **Capstone Requirement:** The university requires completion of a Capstone course. Criminology majors must complete SOCA 488 successfully.
- **Writing and Communication Requirement:** Criminology Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two **SpeakWrite Certified Courses™**: SOCA 488, and a 2nd course selected from HIST 203, HIST 207, HIST 221, HIST 241, HIST 242, HIST 259, HIST 264, PSYC 241, SOCA 318, SOCA 323, SOCA 350, SOCA 352, SOCA 354, SOCA 360, SOCA 450, SOCA 457, SOCA 458, WGST 150, WGST 225.
- **Calculation of the GPA in the major:** A minimum GPA of 2.0 is required across all SOCA courses counted toward meeting major requirements. A minimum grade of C- is required in SOCA 191, SOCA 101, SOCA 105. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for the D/F repeat.
- **Experiential Learning:** Students are encouraged to pursue a Professional Field Experience (SOCA 491) or independent Study (SOCA 495) in their junior or senior year, combining experiential work with previously acquired skills in a project appropriate to their career goals. These courses may be taken for variable credit and will count towards graduation credits, but not major requirements.
- **Benchmark Expectations:** For details, go to the Criminology admissions tab (p. 264).

Curriculum Requirements

UNIVERSITY REQUIREMENTS		30
GEF Requirements: credits may vary depending on overlap with major		
ECAS B.A. Requirements		12
Foreign Language		
Fine Arts Requirement		
Global Studies and Diversity Requirement		
DEPARTMENTAL REQUIREMENTS		
Orientation Requirement		1
SOCA 191 or SOCA 361	First-Year Seminar Practicing Sociology and Anthropology	
Common Core Requirements		19

SOCA 101	Introduction to Sociology (MinGrade of C-)	
SOCA 105	Introduction to Anthropology (MinGrade of C-)	
SOCA 232	Criminology	
SOCA 234	The Criminal Justice System	
SOCA 301	Sociological Theory	
SOCA 311	Social Research Methods	
Statistics Requirement		3
STAT 211	Elementary Statistical Inference	
Upper-level Criminology Requirements		12
Select four of the following:		
SOCA 302	Deviant Behavior	
SOCA 303	Juvenile Delinquency	
SOCA 318	Hate Crime	
SOCA 319	Police Culture and Socialization	
SOCA 321	Punishment and Social Control	
SOCA 324	Gender and Crime	
SOCA 331	Sociology of Law	
SOCA 334	Corporate and White Collar Crime	
SOCA 345	Terrorism	
SOCA 346	Victimology	
SOCA 407	Constructing Social Problems	
SOCA 415	Mass Media, Crime and Deviance	
SOCA 431	Cybercrime	
SOCA 432	Drugs, Crime, and Society	
SOCA 433	Inside Out Prison Exchange	
SOCA 435	Criminal Justice Process	
SOCA 444	Neighborhoods and Crime	
SOCA 461	Issues in Crime and Justice	
SOCA 470	Cities and Urban Life	
SOCA 464	Rural Criminology	
SOCA 478	Violence Against Women	
SOCA 494	Seminar	
Sociology or Anthropology Elective Courses		3
Select one of the following:		
SOCA 207	Social Problems in Contemporary America	
SOCA 221	Families and Society	
SOCA 223	Death and Dying	
SOCA 225	Inequality and the Media	
SOCA 226	Sexuality and Society	
SOCA 235	Race and Ethnic Relations	
SOCA 252	Biological Anthropology	
SOCA 254	Cultural Anthropology	
SOCA 258	Introduction to Archaeology	
SOCA 302	Deviant Behavior	
SOCA 304	Complex Organizations	
SOCA 318	Hate Crime	
SOCA 320	Social Psychology	
SOCA 323	Sociology of Rural Life	
SOCA 331	Sociology of Law	
SOCA 333	Sociology of Work and Work Places	
SOCA 337	Sociology of American Business	
SOCA 350	Latin American Culture	

SOCA 352	Historical Archaeology	
SOCA 354	Mesoamerican Archaeology	
SOCA 355	Cultural Resource Management	
SOCA 357	Archaeological Field School	
SOCA 358	Anthropology of Health and Illness	
SOCA 360	Women and Men in Society	
SOCA 405	Class, Status, and Power	
SOCA 450	Archaeology of Ancient States	
SOCA 451	Material Culture	
SOCA 457	Social Movements	
SOCA 458	Environmental Anthropology	
SOCA 463	Economy and Society	
Capstone Experience		3
SOCA 488	The Capstone Experience	
General Electives		37
Number of electives may vary depending on overlap		
Total Hours		120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
SOCA 191		1 ENGL 101 (GEF 1)	3
GEF 3		3 GEF 2	3
ECAS Fine Arts Requirement (GEF 6)		3 GEF 5	3
Foreign Language 101		3 Foreign Language 102	3
SOCA 101 (GEF 4)		3 SOCA 105 (ECAS Global Studies and Diversity Requirement; GEF 7)	3
General Elective		1 General Elective	1
		14	16

Second Year

Fall	Hours	Spring	Hours
GEF 2		3 ENGL 102 (GEF 1)	3
GEF 8*		3 GEF 8*	3
Foreign Language 203		3 Foreign Language 204	3
SOCA 232		3 SOCA 234	3
Statistics Requirement		3 General Elective	3
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 8*		3 SOCA 311	3
SOCA 301		3 Upper-level Criminology Course	3
Upper-level Criminology Course		3 Sociology or Anthropology Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
Upper-level Criminology Course		3 SOCA 488 (Capstone)	3
Upper-level Criminology Course		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3

General Elective	3 General Elective	3
	15	15

Total credit hours: 120

* Students who complete a minor, a double major or a dual degree already fulfill F 8.

Degree Progress

Students are expected to meet the benchmarks set below.

- Complete SOCA 101 and SOCA 105 with grades of C- or higher by the end of the second semester in the program.
- Complete all 200-level SOCA coursework and STAT 211 by the end of the fourth semester in the program.
- Complete SOCA 301, SOCA 301 and two additional 300-level courses by the end of of the sixth semester in the program.
- Maintain a GPA of 2.0 overall and a minimum GPA of 2.0 in all SOCA courses counting toward major requirements.
- All majors must meet with their adviser every semester.

Students who do not meet these benchmarks may be removed from their major.

Major Learning Outcomes

CRIMINOLOGY

Students graduating with a BA in **Criminology** will have the ability to:

1. Describe the sociological approach to crime and social control and how it is similar to and different from other approaches.
2. Describe the history and core components of the American criminal justice system (police, corrections, and courts), and provide examples of ways that society shapes and is shaped by these institutions.
3. Discuss how criminological theories and research contribute to our understanding of crime, victimization, and the criminal justice system and to contemporary public policy.
4. Apply ethical principles to the conduct of criminological research and the applications of its findings.
5. Critically analyze contemporary issues in crime and justice by retrieving and synthesizing appropriate information and evidence and identifying implications for research and practice/policy.
6. Demonstrate effective, clear and persuasive communication skills according to disciplinary conventions

Economics, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The Department of Economics offers two majors in economics: one through the College of Business and Economics and the other through the Eberly College of Arts and Sciences. The College of Business and Economics grants a bachelor of science in economics and the Eberly College of Arts and Sciences grants a bachelor of arts with a major in economics.

The program leading to the B.A. degree is designed for students who wish to combine fundamental training in economics with a liberal arts education. In addition to the general education and related requirements, students have in excess of forty credit hours of unrestricted electives.

Economics students are taught to identify the costs and the benefits of a decision, which are often not obvious. The economist has the skill to identify the real consequences of a decision. That skill is valued highly in many aspects of business and government. Economics is a useful major for anyone interested in a career in banking, business, foreign service, law, public policy, and any other field in which the ability to make or analyze decisions is important. The demand for people with degrees in economics, both at the graduate and undergraduate levels, is high. In recent years firms such as Amazon and Microsoft have hired a number of economists to improve pricing, strategy, and evidence-based decision-making within the company.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Minors

All students have the possibility of earning one or more minors; for more information, please consult the list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>). Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

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 Macro Theory, Monetary Economics

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 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
- Clifford Hawley
- Ming-jeng Hwang
- Patrick Mann
- Tom Witt
- William Reece

Admissions

- First-Time Freshmen are admitted directly to the Economics major.
- Students admitted from other majors within WVU must have a minimum GPA of a 2.0.
- Students admitted from other institution must have a minimum GPA of a 2.0.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Economics (<https://admissions.wvu.edu/academics/majors/economics-b-a/>) major.

Click here to view the Suggested Plan of Study (p. 271)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences (p. 187) page.

Departmental Requirements for the B.A. in Economics

Students must earn a minimum of 24 semester hours of upper-division coursework in economics. Additional recommended courses can be determined in consultation with an economics adviser. More calculus and linear algebra are typically recommended for students.

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Economics majors are required to take ECON 482 in order to satisfy the Capstone requirement.

- **Writing and Communication Skills requirement:** Economics Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103) and two **SpeakWrite Certified Courses™**: BCOR 299, and a 2nd course selected from: ASP 420, COMM 202, COMM 303, COMM 335, COMM 404, COMM 435, ENGL 214, ENGL 304, ENGL 305, GEOG 300, HIST 250, HIST 259, HIST 325, HIST 439, HIST 451, HIST 454, HIST 473, PHIL 321, PHIL 323, PHIL 346, POLS 230, POLS 240, POLS 250, PSYC 241.
- **Calculation of the GPA in the Major:** Economics majors must maintain a grade point average of 2.0 for all economics courses and earn a grade of C- or better in ECON 301 and ECON 302. If a course is repeated, all attempts are included in the calculation of the GPA, unless the course is eligible for the D/F repeat policy.
- **Residence Requirement:** Economics majors may take a maximum of nine of their thirty-three credit hours of economics courses out of residence. Transfer students must take a minimum of fifteen credit hours of upper-division economics courses in residence.

General Education Foundations Requirements

UNIVERSITY REQUIREMENTS	25
GEF: number may vary depending on overlap	
COLLEGE REQUIREMENT	12
Foreign Language	
Fine Arts Requirement	
Global Studies & Diversity Requirement	
DEPARTMENTAL REQUIREMENTS	
Mathematics Requirement:	3
Select one:	
MATH 150 Applied Calculus	
MATH 153 & MATH 154 Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 155 Calculus 1	
Core Economics Courses	15
ECON 201 Principles of Microeconomics	
ECON 202 Principles of Macroeconomics	
ECON 225 Elementary Business and Economics Statistics	
ECON 301 Intermediate Micro-Economic Theory	
ECON 302 Intermediate Macro-Economic Theory	
Economics Electives	15
Select 15 hours of Economics at the 300 or 400 level	
Capstone Requirement	3
ECON 482 Applied Economic Research	
GENERAL ELECTIVES	47
Number of electives may vary depending on overlap	
Total Hours	120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ECON 191		1 ENGL 101 (GEF 1)	3
Foreign Language 101		3 GEF 2	3
GEF 2		3 Foreign Language 102	3
MATH 150 (GEF 3)		3 ECON 225 (GEF 8)	3
General Elective		2 General Elective	3
General Elective		3	
	15		15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 ECAS Fine Arts Requirement (GEF 6)	3
GEF 5		3 ECAS Global Studies & Diversity Requirement (GEF 7)	3

Foreign Language 203		3 Foreign Language 204	3
ECON 201 (GEF 8)		3 ECON 202 (GEF 8)	3
GEF 4		3 General Elective	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
ECON 301		3 ECON 302	3
ECON Elective 1		3 ECON Elective 2	3
General Elective		3 ECON Elective 3	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
ECON Elective 4		3 General Elective	3
ECON Elective 5		3 ECON 482	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

Degree Progress

By the end of the 3rd semester in the major, students should have successfully completed:

- ECON 201 and ECON 202 with a minimum 2.5 GPA across those two courses
- MATH 126

By the end of the 4th semester in the major, students should have successfully completed:

- Calculus
- ENGL 101 and ENGL 102.

All majors must meet with ECON department adviser each semester. All students will have a plan of study and will receive, at minimum, a yearly letter of evaluation. Students who do not meet their benchmarks may be removed from their major.

Major Learning Outcomes

ECONOMICS

Upon successful completion of the B.A. degree, **Economics** majors will demonstrate:

1. Ability to use supply and demand to analyze how world events affect market equilibrium prices and quantities.
2. Understanding of the theory of the firm and its implications for prices and production under different market structures.
3. Understanding of the role of prices and profits and losses in coordinating economic activity.
4. Ability to evaluate the efficiency of competitive market outcomes relative to alternative arrangements.
5. Ability to explain how GDP, the unemployment rate, inflation, interest rates, and economic growth are measured, to distinguish between real and nominal variables, and to explain the significance of these measures.
6. Understanding of and ability to analyze the determinants of long-run variations in national economic growth rates, wealth, and income.
7. Understanding of and ability to analyze the determinants of short-run fluctuations of economic variables over the business cycle.
8. Understanding of the goals and tools of monetary and fiscal policy.

English, B.A.

Degree Offered

- Bachelor of Arts
- BA in English/Secondary Education (<http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/englishseced/>)

Nature of the Program

Tailor your degree in English to your interests by focusing on literature and cultural studies, creative writing, English secondary education, or professional writing. Explore the power of language to open doors, shape worlds, and realize dreams. How will you contribute to the world?

Focusing on **Literature and Cultural Studies** allows you to immerse yourself in the books, films, and other texts that define our global culture. Cultivate critical thinking, communication, and research skills to fill your tool box for a lifetime of learning and engagement while preparing for a variety of professional schools and career paths.

An emphasis on **Creative Writing** lets you study the craft of writing fiction, poetry, or creative nonfiction with accomplished authors. Take workshops on writing for children, writing and photography, and writing about place. Meet the many authors invited to read on campus and help produce *Calliope*, WVU's undergraduate literary journal.

With an emphasis on **Professional Writing and Editing** you will learn to translate complex information into clear prose for diverse audiences and analyze how information flows through organizational structures. Apply these skills in a capstone internship with a local business, non-profit, or government agency to see your writing come alive.

Can you name a teacher who made a difference in your life or a book that changed how you think? With a Bachelor of Arts in **English/Secondary Education** you can bring those experiences to others. You'll complete all the requirements for teacher certification in WV and gain valuable classroom experience. Please see the English/Secondary Education (<http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/englishseced/>) listing for more information.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements. English is a SpeakWrite (<https://speakwrite.wvu.edu/>) certified program.

3+3 Program

The Department of English participates in the 3+3 Program with the WVU College of Law, which is an opportunity for qualified undergraduate students to earn their bachelor's degree and law degree in six years instead of seven years. Students accepted into the 3+3 program begin taking classes at WVU Law in what would be their senior year of college. Students participating in this program must meet certain eligibility criteria and progress benchmarks. For questions regarding your eligibility, please contact your department advisor.

Minors

All students have the possibility of earning one or more minors; follow the link for a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>). Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

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 engage in an evolving conversation about what the humanities contributes to living and thinking sustainably in a world of dwindling resources.

Victorian Poetry is a critical journal of Victorian literature, edited by the Department of English. Established at WVU in 1963, this internationally known journal has subscribers in 27 countries.

FACULTY

CHAIR

- Brian Ballentine - Ph.D. (Case Western Reserve University)

ASSISTANT CHAIR

- Christine Hoffmann - Ph.D. (University of Arkansas)
Assistant Professor

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
- Mark Brazaitis - M.F.A. (Bowling Green 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, History of sexuality and reading
- 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 eighteenth century literature
- 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)
Linguistics
- John Lamb - Ph.D. (New York University)
Victorian literature, 19th-century historiography
- Kathleen O'Hearn Ryan - Ph.D. (University of Massachusetts)
20th century American literature
- Mary Ann Samyn - M.F.A. (University of Virginia)
Creative writing: Poetry
- Natalie Singh-Corcoran - Ph.D. (University of Arizona)
Writing Center theory and practice, writing program administration, writing assessment
- Timothy Sweet - Ph.D. (University of Minnesota)
Eberly Family Distinguished Professor of American Literature. American studies, Literature and environment, Native American literature

ASSOCIATE PROFESSORS

- Gwen Bergner - Ph.D. (Princeton University)
African-American and postcolonial literatures, race, and gender theories
- Anna Shannon Elfenbein - Ph.D. (University of Nebraska)
American literature, Women's studies, Southern literature, African-American fiction, Popular culture
- Rosemary Hathaway - Ph.D. (Ohio State University)
Folklore, 20th-century American literature, English education
- Adam Komisaruk - Ph.D. (University of California Los Angeles)
British Romanticism, 18th-century British literature
- David Stewart - Ph.D. (Oxford University)
Associate Vice President for International Outreach. British romanticism, Literary theory
- Thomas Sura - Ph.D. (Purdue University)
Composition and Rhetoric, Writing pedagogy
- Glenn Taylor - M.F.A. (Texas State University)
Creative Writing: Fiction, Appalachian literature

- Lisa Weihman - Ph.D. (New York University)
Modern British and Irish literature and culture

ASSISTANT PROFESSORS

- Erin Brock-Carlson - Ph.D. (Purdue University)
Professional Writing and Editing
- Rose Casey - Ph.D. (Cornell University)
Modern British Literature
- Christine Hoffmann - Ph.D. (University of Arkansas)
Early Modern British Studies
- Jowhor Ile - M.F.A. (Boston University)
Fiction
- Jenny Johnson - M.F.A. (Warren Wilson College)
Poetry
- Christa Parravani - M.F.A. (Rutgers University)
Creative Writing: Non-fiction
- Johanna Winant - Ph.D. (University of Chicago)
Modern American poetry and poetics

TEACHING ASSISTANT PROFESSORS

- Amy Alvarez - M.F.A. (University of Southern Maine)
Poetry
- Nancy Caronia - Ph.D. (University of Rhode Island)
Anglophone and American literatures, Ethnic Studies
- 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

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

- First-Time Freshmen are admitted directly into the major.
- Students transferring from another major at WVU must have a 2.0 GPA in all ENGL classes taken and a 2.0 overall GPA.
- Students transferring from another institution must have a 2.0 GPA in all ENGL classes taken and a 2.0 overall GPA.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in English (<https://admissions.wvu.edu/academics/majors/english/>) major.

Click here to view the Suggested Plan of Study (p. 278)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences (p. 187) page.

Departmental Requirements for the B.A. in English

An English major requires a minimum of thirty-six hours in literature, language, and writing, with a minimum of 21 credits at the 300 level or above. English majors with an area of emphasis may find some courses overlap with major requirements.

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. English majors choose, depending on focus, ENGL 418, ENGL 491A or ENGL 496 to meet this requirement. Students should consult with an adviser regarding the Capstone course.
- **Writing and Communication Requirement:** The English Bachelor of Arts is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Calculation of GPA in the major:** A minimum GPA of 2.0 is required in all English courses. Students must earn a grade of C- or better in all courses that are counted toward the major plus ENGL 101 and ENGL 102, or ENGL 103. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Area of Emphasis:** in addition to the major requirements, students may select a concentration in Creative Writing (15 credits) or Professional Writing and Editing (15 credits). Please see below for course and grade requirements for each emphasis. For English majors who obtain an Area of Emphasis, a maximum of sixty hours in English, exclusive of ENGL 199, ENGL 101 and ENGL 102, or ENGL 103, ENGL 491 may be included within the 120 hours (minimum) required for graduation.
- **Benchmark Expectations:** For details, go to the English admissions tab (p. 275).

Curriculum Requirements

UNIVERSITY REQUIREMENTS

34

ENGL 191 First-Year Seminar
GEF Requirements: credits may vary because of overlap

ECAS B.A. REQUIREMENTS

12

Foreign Language
Fine Arts Requirement
Global Studies & Diversity Requirement

DEPARTMENTAL REQUIREMENTS

Foundation Course		3
ENGL 200	Foundations of Literary Study	
Historical Breadth Courses		6
Select two of the following:		
ENGL 241	American Literature 1	
ENGL 242	American Literature 2	
ENGL 261	British Literature 1	
ENGL 262	British Literature 2	
English Language course		3
ENGL 221	The English Language	
Gender/Multicultural/Transnational courses		6
Select two of the following, at least one of which must be at the 300-level:		
ENGL 226	Non-Western World Literature	
ENGL 252	Appalachian Fiction	
ENGL 254	African American Literature	
ENGL 255	Multiethnic Literature	
ENGL 285	Images of Women in Literature	
ENGL 288	Sexual Diversity in Literature and Film	
ENGL 352	Topics in Appalachian Studies	
ENGL 355	Topics in Multiethnic Literature	
ENGL 356	Topics in Native American Literature	
ENGL 374	Postcolonial Literature	
ENGL 385	American Women Writers	
ENGL 386	British Women Writers	
ENGL 387	Topics in Women's Literature	
ENGL 388	Topics in Gay/Lesbian Studies	
Study of Major Author courses		3
Select one of the following:		
ENGL 337	Study of a Major Author	
ENGL 361	Chaucer	
ENGL 363	Shakespeare 2	
ENGL 365	Milton	
Methods courses		3
Select one of the following:		
ENGL 301	Writing Theory and Practice	
ENGL 309	Approaches to Teaching Composition	
ENGL 318	Topics in Creative Writing	
ENGL 338	Environmental Criticism	
ENGL 382	Contemporary Literary Theory	
ENGL 383	Introduction to Cultural Studies	
ENGL 384	Introduction to American Studies	
English Electives		9
Upper-Division English Electives 300- or 400-Level (9 Credits)		
Capstone Experience		3
Select one of the following		
ENGL 418	Creative Writing Seminar	
ENGL 491A	Professional Field Experience	
ENGL 496	Senior Thesis	
GENERAL ELECTIVES		38
(Number of electives may vary depending on overlap.)		

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 191		1 ENGL 102 (GEF 1)	3
ENGL 101 (GEF 1)		3 GEF 2	3
GEF 2		3 GEF 4	3
Foreign Language 101		3 Foreign Language 102	3
ENGL 200		3 ENGL Historical Breadth 1 (GEF 6; ECAS Fine Arts Requirement)	3
General Elective		2	
		15	15

Second Year

Fall	Hours	Spring	Hours
GEF 3		3 ECAS Global Studies & Diversity Requirement (GEF 7)	3
GEF 5		3 GEF 8*	3
Foreign Language 203		3 Foreign Language 204	3
ENGL Historical Breadth 2		3 ENGL Gender/Multicultural/Transnational 1	3
ENGL 221		3 General Elective	3
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 8*		3 GEF 8*	3
ENGL Gender/Mlt Cult./Transnat. 2		3 ENGL Major Author	3
ENGL Elective 1		3 ENGL Elective 2	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ENGL Methods Course		3 ENGL Capstone	3
ENGL Elective 3		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

* Students completing a minor, a double major or a dual degree fulfill the GEF 8 requirement.

CREATIVE WRITING AREA OF EMPHASIS REQUIREMENTS

Minimum grade of C- or higher is required.

Select one course in each group:

Group 1:		3
ENGL 212	Creative Writing: Fiction	
ENGL 213	Creative Writing: Poetry	
ENGL 214	Creative Writing: Non-Fiction	
Group 2:		3
ENGL 312	Creative Writing Workshop: Fiction	
ENGL 313	Creative Writing Workshop: Poetry	
ENGL 314	Creative Writing Workshop: Non-Fiction	
Group 3:		3
ENGL 318	Topics in Creative Writing	

Group 4:		3
ENGL 418	Creative Writing Seminar †	
Group 5:		3
ENGL 212	Creative Writing: Fiction	
ENGL 213	Creative Writing: Poetry	
ENGL 214	Creative Writing: Non-Fiction	
ENGL 312	Creative Writing Workshop: Fiction	
ENGL 313	Creative Writing Workshop: Poetry	
ENGL 314	Creative Writing Workshop: Non-Fiction	
Total Hours		15

PROFESSIONAL WRITING AND EDITING (PWE) AREA OF EMPHASIS REQUIREMENTS

English majors may obtain a concentration in PWE by completing fifteen hours of coursework, with grade point average of 3.0 or higher, as follows:

ENGL 301	Writing Theory and Practice	3
ENGL 302	Editing	3
ENGL 303	Multimedia Writing	3
or ENGL 306	Topics in Humanities Computing	
ENGL 304	Business and Professional Writing	3
or ENGL 305	Technical Writing	
ENGL 491A	Professional Field Experience *	3
Total Hours		15

3+3 Program Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 191		1 ENGL 102 (GEF 1)	3
ENGL 199		1 Foreign Language 102	3
GEF 2B		4 ENGL Historical Breadth 1 (ECAS Fine Arts Req.; GEF 6)	3
ENGL 101 (GEF 1)		3 GEF 3	3
ENGL 200		3 GEF 4	3
Foreign Language 101		3	
		15	15

Second Year

Fall	Hours	Spring	Hours
GEF 5		3 ECAS Global St. and Div Requirement (GEF 7)	3
Foreign Language 203		3 Foreign Language 204	3
ENGL Historical Breadth 2		3 ENGL GMT 2	3
ENGL Language Course		3 ENGL Major Author Course	3
ENGL GMT 1		3 ENGL Elective 1	3
		15	15

Third Year

Fall	Hours	Spring	Hours
ENGL Methods Course		3 ENGL Elective 3	3
ENGL Elective 2		3 ENGL Capstone	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
LAW 641		1 LAW 683	1

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	
<hr/>		
	17	13

Total credit hours: 120

Degree Progress

- At the end of their second semester in the program, students will have completed ENGL 101, 102, 191, 199, and 200.
- After three semesters students will have completed 9 additional credits of ENGL courses above ENGL 200.
- After four semesters in the program, students will have completed 12 additional credits in ENGL.
- All majors must meet with an English department adviser each semester.

Students who do not meet these benchmarks may be removed from their major.

Major Learning Outcomes

ENGLISH

Upon successful completion of the B.A. degree, **English** majors will be able to:

1. Locate and interpret texts within diverse literary, cultural, and historical contexts.
 - Identify genre conventions and analyze their effects;
 - Identify and analyze effects of complexity or ambiguity in texts, culture, and discourse;
 - Situate texts in social, economic, political, and literary histories;
 - Connect texts to other literary or cultural texts.
2. Demonstrate a general knowledge of the social and structural aspects of the English language.
 - Analyze diachronic and synchronic language variation;
 - Articulate the role of social forces on language variation;
 - Apply linguistic concepts to solve language problems;
 - Analyze natural language, predominantly English.
3. Demonstrate a range of contextually effective writing and communication strategies.

Literature and Cultural Studies:

- Demonstrate awareness of academic discourse and research on a literary topic;
- Apply research, analysis, argumentative development, and critical thinking skills;
- Create and revise communications with the appropriate tone, style, and sentence structure found in academic writing, including incorporation of research;
- Demonstrate command of academic written English and conventions of documenting research.

Creative Writing concentration:

- Situate work within the historical and literary development of the appropriate genre;
- Create and revise a thoughtful, sophisticated work of art that is the product of a careful process of invention and revision;
- Demonstrate a personal and coherent artistic style;
- Demonstrate a sophisticated awareness of and engagement with (or clear challenge of) conventions of the genre.

Professional Writing and Editing concentration:

- Demonstrate an awareness of, and response to, the particular rhetorical needs of audience and purpose;
- Demonstrate an awareness of genre and argument, including appropriate information and persuasive techniques. In addition, the portfolio demonstrates a critical engagement with the process of writing and with the intern's learning process;
- Demonstrate an awareness of professional tone, style, and sentence structure;
- Understand and apply layout, visual design, audience cues, and information structure; adheres to the written conventions of professional writing.

English/Secondary Education, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

Students who want to become secondary English teachers (grades 5-Adult) complete a series of Secondary Education courses, requirements for General Education Foundations (GEF) components that are related to the area of specialization, and courses specific to the area of specialization: English, Grade 5-Adult.

The program boasts a clear set of research-based program goals and carefully sequenced learning experiences. Students will learn to integrate what one teaches with how it is taught and will receive more than 1,000 hours of experience in public school classrooms. The program functions in close collaboration with exemplary local public schools and has selective and rigorous standards for admission and retention of students as well as rigorous performance requirements that are relevant to effective teaching practice.

Admissions

- First-Time Freshmen are admitted directly into the major.
- Students transferring from another major at WVU must have a 2.75 overall GPA.
- Students transferring from another institution must have a 2.75 overall GPA.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in English/Secondary Education (<https://admissions.wvu.edu/academics/majors/english-secondary-education/>) major.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 credit hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences page.

Departmental Requirements for the B.A. in English Secondary Education

Students wishing to graduate with a degree in English Secondary Education must complete a total of 96 credit hours in their major. Students must abide by the following rules:

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Students majoring in English Secondary Education will complete ENGL 496 Senior Thesis for their Capstone experience.

- **Writing and Communication Skills:** The English Secondary Education program is a **SpeakWrite Affiliated Program**, committed to fostering and assessing student's written, verbal, visual, and mediated communication skills. The English Secondary Education major requires its Bachelor of Arts program graduates to complete at minimum the following SpeakWrite certified courses: ENGL 101 and ENGL 102 (or ENGL 103), ENGL 200, ENGL 241 ,ENGL 242 ENGL 261, ENGL 263, ENGL 496.
- **Calculation of the GPA in the major:** Students must earn a minimum grade C- in all C&I, EDUC, ENGL, and SPED courses applied toward degree requirements, and minimum cumulative grade point average of 2.75. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **WV State Certification Requirements:**
 - Successful completion of PRAXIS I Core Academic Skills for Educators (CASE) is required for admission to the teacher education program: PRAXIS Core Reading #5712, PRAXIS Core Writing #5722 and PRAXIS Core Math #5732. (NOTE: PRAXIS Core test scores are not required of students who have either earned a Master's degree, or scored a 26 or higher on the ACT, or took the SAT prior to March 2016 and received a combined Math and Critical Reading score of 1170 or higher, or took the SAT after March 2016, and earned a combined Math and Evidence-Based Reading and Writing score of 1240 or higher.)
 - PRAXIS II #5038 English Language Arts (NOTE: Successful completion of this assessment is required prior to student teaching; scores must be received prior to obtaining a student teaching permit.)
 - edTPA Teacher Performance Assessment – a three-part performance exam during student teaching. (NOTE: Successful completion of this assessment is required for program completion.)
 - Teacher candidates complete field experience hours in middle and high schools while completing professional education coursework. During the final year of the program, teacher candidates are placed in an appropriate school to complete their clinical student teaching experience. The College of Education and Human Services coordinates the placement and supervision of teacher candidates as they engage in these professional experiences.
- **Benchmark Expectations:** Please check admissions tab.

UNIVERSITY REQUIREMENTS:	25
ENGL 191 First-Year Seminar	
GEF Requirements: credits may vary because of overlap	
ECAS B.A. REQUIREMENTS:	12
Fine Arts Requirement	
Foreign Language	
Global and Diversity Requirement	
ENGLISH CONTENT REQUIREMENTS:	
Foundation Course:	3
ENGL 200 Foundations of Literary Study	
English Language Course	3
ENGL 221 The English Language	
Historical Breadth Courses:	9
ENGL 241 American Literature 1	
ENGL 242 American Literature 2	
ENGL 261 British Literature 1	
Gender/Multicultural/Transnational Course:	6
ENGL 226 Non-Western World Literature	
and select one of the following:	
ENGL 355 Topics in Multiethnic Literature	
ENGL 356 Topics in Native American Literature	
ENGL 374 Postcolonial Literature	
ENGL 385 American Women Writers	
ENGL 386 British Women Writers	
ENGL 387 Topics in Women's Literature	
Study of Major Author course:	3
ENGL 263 Shakespeare 1	
or ENGL 363 Shakespeare 2	
Methods Course:	3

ENGL 309	Approaches to Teaching Composition	
English Electives:		12
ENGL 405	Young Adult Literature	
Any ENGL at the 200-level or above		
Select any ENGL class at the 300 level or above		
Select one ENGL Writing Elective from the list below:		
ENGL 301	Writing Theory and Practice	
ENGL 302	Editing	
ENGL 303	Multimedia Writing	
ENGL 304	Business and Professional Writing	
ENGL 305	Technical Writing	
ENGL 306	Topics in Humanities Computing	
ENGL 312	Creative Writing Workshop: Fiction	
ENGL 313	Creative Writing Workshop: Poetry	
ENGL 314	Creative Writing Workshop: Non-Fiction	
ENGL 318	Topics in Creative Writing	
UNDERGRADUE PROFESSIONAL EDUCATION COURSEWORK		38
C&I 490	Teaching Practicum	
C&I 494	Seminar	
C&I 324	Teaching Language Arts: Secondary School	
C&I 424	Approaches to Teaching Language	
C&I 425	Approaches to Teaching Reading in ELA	
C&I 489	Identity and Cultural Diversity in the Classroom	
C&I 491	Professional Field Experience	
EDP 301	Learning in PreK-Adult Educational Settings	
EDUC 200	Professional Inquiry in Education	
EDUC 311	Practicum 1/Technology Application	
EDUC 312	Practicum 2/Technology Application	
SPED 304	Special Education in Contemporary Society	
SPED 461	Differentiated Secondary Instruction	
Capstone Experience:		3
ENGL 496	Senior Thesis	
General Electives		3
Number of General Elective may vary, depending on course selection, AP and transferred credits		
Total Hours		120

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
F2A		3 F3	3
F5		3 Foreign Language 102	3
ECAS Global and Diversity Requirement (F7)		3 ENGL 102 (F1)	3
ENGL 101 (F1)		3 ENGL 200	3
ENGL 191		1 F4	3
Foreign Language 101		3	
		16	15

Second Year

Fall	Hours	Spring	Hours
F2A		3 Foreign Language 204	3
Foreign Language 203		3 EDUC 200	3
ENGL 221		3 ENGL 242 (F8 Course 1)	3
ENGL 241 (ECAS Fine Arts Req. & F6)		3 ENGL 263 (F8 Course 2)	3

ENGL 200+ Elective		3 ENGL 226	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
C&I 424		3 C&I 324	3
EDP 301		3 C&I 489	3
ENGL 261 (F8 Course 3)		3 EDUC 312	1
ENGL 309		3 C&I 425	3
SPED 304		3 ENGL 405	3
EDUC 311		1 SPED 461	3
		16	16
Fourth Year			
Fall	Hours	Spring	Hours
C&I 491		11 ENGL 496	3
C&I 494		1 ENGL at the 300 level (Literature of minority, regional or underrepresented groups)	3
		ENGL at the 300 Level or above	3
		ENGL at the 300 Level or above (Writing Elective)	3
		ENGL at the 300 level or above	3
		12	15

Total credit hours: 120

Major Learning Outcomes

ENGLISH/SECONDARY EDUCATION

Upon successful completion of the B.A. degree, **English** majors will be able to:

1. Interpret texts within diverse literary, cultural, and historical contexts.
2. Demonstrate a general knowledge of the social and structural aspects of the English language.
3. Demonstrate a range of contextually effective writing strategies.

The learning goals for the WVU Secondary Teacher Education 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.

Environmental Geoscience, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The B.A. in environmental geoscience is a joint program in the Department of Geology and Geography for students interested in geological and geographical approaches to environmental issues. Emphasis is placed on the physical, human, and spatial aspects of earth and its environment. The broad and interdisciplinary nature of the degree program is designed to produce geoscientists who can identify environmental problems, apply a variety of approaches to their remediation, and be conversant among the wide range of disciplines for which the environment is of special concern.

The course requirements for the degree reflect the diversity of environmental problems that we face today from the atmosphere (air pollution), to the hydrosphere (water pollution), to the lithosphere (ground pollution), and how these problems affect our quality of life. The courses required for the degree also reflect the increased demands placed upon modern environmental scientists that include being able to recognize and understand the sources and impacts of various pollutants within the physical environment, being able to compile and analyze environmental data, understanding the regulatory aspects of environmental protection, and being able to effectively communicate issues of importance with other environmental scientists and with the general public.

Graduates of this program will find employment in a wide array of fields including the assessment and remediation of environmental problems, land-use planning, geographic information systems, involvement in the legislative process by which laws are formulated to protect the environment, the application of such laws as part of a federal or state regulatory agency, or as a member of the journalistic community using the various methods of mass communication to increase the public awareness of situations that adversely affect the environment.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Minors

All students have the possibility of earning one or more minors; please check the list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>). Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

CHAIR

- Brent McCusker - Ph.D. (Michigan State University)
Land Use Change, Africa, Policy Making

PROFESSORS

- Timothy Carr - Ph.D.
Sedimentary & Petroleum Geology
- Joseph J. Donovan - Ph.D.
Hydrogeology
- Trevor M. Harris - Ph.D. (University of Hull)
Eberly Professor, Geographic Information science
- Amy E. Hessel - Ph.D. (University of Arizona)
Biogeography, Forest ecosystems
- Timothy A. Warner - Ph.D. (Purdue University)
Remote Sensing

ASSOCIATE PROFESSORS

- Kathy Benison - Ph.D. (University of Kansas)
Sedimentology and low-temperature geochemistry
- Dengliang Gao - Ph.D. (Duke University)
Geophysics
- Joe Lebold - Ph.D. (WVU)
Paleoecology, Paleontology, Regional Geology
- Brenden McNeil - Ph.D. (Syracuse)
Ecology, Remote Sensing
- Shikha Sharma - Ph.D. (Wyoming)
Isotopes
- Jaime Toro - Ph.D.
Structural Geology, Tectonics
- Dorothy J. Vesper - Ph.D. (Pennsylvania State University)
Aqueous geochemistry, Hydrogeology

- Amy Weislogel - Ph.D. (Stanford)
Sedimentology, stratigraphy and sedimentary petrology
- Bradley Wilson - Ph.D. (Rutgers)
Human Environment, Food

ASSISTANT PROFESSORS

- Martina Caretta - Ph.D. (Stockholm)
Human Environment, Water, Gender
- Kenneth Brown - Ph.D. (Miami Ohio)
Igneous petrology
- Jonathan Hall - Ph.D. (Ohio State)
Conservation Ecology, Biogeography
- Eungul Lee - Ph.D. (University of Colorado)
Climate, Physical Geography
- Aaron Maxwell - Ph.D. (WVU)
GIScience
- Jamie Shinn - Ph.D. (Pennsylvania State)
Human Environment

PROFESSORS EMERITI

- Robert Behling - Ph.D.
- Thomas Kammer - Ph.D. (Indiana)
Paleontology
- Kenneth C. Martis - Ph.D. (University of Michigan)
Political Geography
- Henry Rauch - Ph.D.
- John Renton - Ph.D.
- Richard Smosna - Ph.D. (University of Illinois)
Oceanography & Carbonate Rocks
- Thomas Wilson - Ph.D. (WVU)
Geophysics

CLINICAL ASSISTANT PROFESSOR

- Rick Landenberger - Ph.D.
Remote Sensing the Environment

Admissions

- First-Time Freshmen are admitted directly into the Environmental Geoscience major.
- Students admitted from other majors within WVU must be in good standing (2.00 overall GPA).
- Students transferring from another institution must be in good academic standing (2.00 overall GPA).

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Environmental Geoscience (<https://admissions.wvu.edu/academics/majors/environmental-geoscience/>) major.

Click here to view the Suggested Plan of Study (p. 290)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences (p. 187) page.

Departmental Requirements for the B.A. in Environmental Geoscience

All students wishing to obtain a degree in Environmental Geoscience must comply with the following:

- **Capstone Requirement:** The General Education Foundations requires the successful completion of a Capstone course. For Environmental Geosciences majors capstone is completed by GEOL 400 and its co-requisite Research-intensive Geology and Geography course.
- **Writing and Communication Requirement:** Environmental Geoscience Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two additional **SpeakWrite Certified Courses™** that are major requirements: GEOG 205 and GEOG 307.
- **Calculation of the GPA in the Major:** Students must have a 2.0 overall GPA in all courses applied to major requirements. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Credit Limit:** No more than 50 credits of Geology (GEOL) and Geography (GEOG) combined can be used for the B.A. if the student has earned 120 credits overall. If a student has more than 50 credits, then those extra credits must be matched by an equal amount of non-GEOL and non-GEOG courses, and more than 120 credits will be required for graduation. For example, if a student has 52 credits in GEOL and GEOG, the student will need 122 credits to graduate (52 G&G, 68 non-G&G). 191 and 491 courses are excluded from the 50-credit count.
- **Benchmarks Expectations:** For details, go to the Environmental Geoscience admissions tab (p. 286).

Curriculum Requirements

UNIVERSITY REQUIREMENTS	16
GEOL 191	First-Year Seminar
GEF: Number of courses may vary depending on overlap	
ECAS B.A. Requirements	12
Foreign Language	
Global Studies & Diversity Requirement	
Fine Arts Requirement	
DEPARTMENTAL REQUIREMENTS	7
Math and Science Requirement:	
Chemistry Requirement:	
CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 - Laboratory
or CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory
Math Requirement:	
MATH 124	Algebra with Applications
or MATH 126	College Algebra
or MATH 128	Plane Trigonometry
or MATH 129	Pre-Calculus Mathematics

or MATH 150	Applied Calculus
or MATH 153	Calculus 1a with Precalculus
or MATH 155	Calculus 1

Core Courses:**26**

Complete all of the following:

GEOL 101 & GEOL 102	Planet Earth and Planet Earth Laboratory
GEOL 103 & GEOL 104	Earth Through Time and Earth Through Time Laboratory
GEOG 106 & GEOG 107	Physical Geography Laboratory and Physical Geography
GEOL 200	Geology for Environmental Scientists
GEOG 205	Climate and Sustainability
GEOG 307	Biogeography: Theory and Method
GEOG 350	Geographic Information Systems and Science

Elective Geology and Geography Courses**9**

Select three (3) courses from the following list:

GEOG 300	Geographical Data Analysis
GEOG 317	Climatological Analysis
GEOG 321 or GEOL 321	Geomorphology Geomorphology
GEOG 333	Human Geography in Practice
GEOG 407	Environmental Field Geography
GEOG 411	Rural and Regional Development
GEOG 415	Global Environmental Change
GEOG 443	African Environment and Development
GEOG 452	Geographic Information Science: Applications
GEOG 453	Geographic Information Science: Design and Implementation
GEOG 454	Environmental Geographic Information Systems
GEOG 455 or GEOL 455	Introduction to Remote Sensing Introduction to Remote Sensing
GEOG 456	Remote Sensing Applications
GEOG 457	Open-Source Spatial Analytics
GEOG 461	Web GIS
GEOG 462	Digital Cartography
GEOL 300	Geology of West Virginia
GEOL 302	Geology of the National Parks
GEOL 331	Paleontology
GEOL 351	Geomathematics
GEOL 365	Environmental Geology
GEOL 376	Research Methods
GEOL 388	Introduction to Geochemistry
GEOL 411	Deep Time Earth Systems
GEOL 460	Physical Volcanology
GEOL 463	Physical Hydrogeology
GEOL 466	Cave and Karst Geology
GEOL 472	Energy Geology
GEOL 484	Minerals and the Environment
GEOL 486	Environmental Isotopes
GEOL 488	Environmental Geochemistry

Electives Non-Geology/Geography**12**

Select four (4) courses from the following list:

AGRN 410	Soil Fertility
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AGRN 417	Soil Genesis and Classification
ARE 382	Agricultural and Natural Resources Law
ART 380	Art and Environment
BIOL 302	Biometry
BIOL 353	Flora of West Virginia
BIOL 361	Plant Ecology
BIOL 363	Plant Geography
BIOL 463	Global Ecology
ENVP 325	Principles of Water Resources
ENVP 355	Environmental Sampling and Analysis
ENVP 401	Environmental Microbiology
ENVP 412	Pest Management
ENVP 415	Hazardous Waste Training
ENVP 420	Soil Microbiology
ENVP 425	Environmental Soil Management
ENVP 451	Principles of Weed Science
ENVP 455	Reclamation of Disturbed Soils
ENVP 460	Environmental Impact Assessment
FHYD 444	Watershed Management
FHYD 454	Field Watershed Hydrology
FMAN 433	Forest Management
MATH 318	Perspectives on Mathematics and Science
PHIL 310	Philosophy of Science
POLS 338	Environmental Policy
RESM 445	Spatial Hydrology and Watershed Analysis
RESM 480	Environmental Regulation
WMAN 313	Wildlife Ecosystem Ecology
WMAN 314	Marine Ecology
WMAN 421	Renewable Resources Policy and Governance
WMAN 446	Freshwater Ecology
UTCH 420	Project-Based Instruction in Mathematics and Science

Capstone**4**

Students must complete GEOL 400 and its co-requisite Research-intensive Geology and Geography course

GEOL 400	Environmental Practicum
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Research-Intensive Geology and Geography Courses:

GEOG 317	Climatological Analysis
GEOG 443	African Environment and Development
GEOG 454	Environmental Geographic Information Systems
GEOG 455	Introduction to Remote Sensing
or GEOL 455	Introduction to Remote Sensing
GEOG 457	Open-Source Spatial Analytics
GEOG 461	Web GIS
GEOL 331	Paleontology
GEOL 365	Environmental Geology
GEOL 376	Research Methods
GEOL 411	Deep Time Earth Systems
GEOL 463	Physical Hydrogeology
GEOL 472	Energy Geology
GEOL 486	Environmental Isotopes

GENERAL ELECTIVES**34**

Number of electives may vary depending on overlap

Total Hours 120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 Foreign Language 102	3
Foreign Language 101		3 CHEM Requirement (GEF 8)	4
MATH Requirement (GEF 3)		3 GEOG 107 & GEOG 106 (GEF 8)	4
GEOL 101 & GEOL 102 (GEF 2)		4 GEOL 103 & GEOL 104 (GEF 8)	4
GEOL 191 or GEOG 191		1	
General Elective		1	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102		3 ECAS Fine Arts Requirement (GEF 6)	3
Foreign Language 203		3 Foreign Language 204	3
GEOL 200		4 GEOG 350	4
GEOG 205 (GEF 4)		3 GEOL/GEOG Elective 1	3
General Elective		2 General Elective	2
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 5		3 Non-GEOL/GEOG Elective 1	3
ECAS Global Studies and Diversity Requirement (GEF 7)		3 Non-GEOL/GEOG Elective 2	3
GEOG 307		3 Non-GEOL/GEOG Elective 3	3
GEOL/GEOG Elective 2		3 Non-GEOL/GEOG Elective 4	3
GEOL/GEOG Elective 3		3 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
GEOL 400 (Capstone)		1 General Electives	15
Research-Intensive GEOL/GEOG course		3	
General Electives		11	
		15	15

Total credit hours: 120

Degree Progress

By end of their 4th semester in the major, students should have successfully completed

- 8 hours of introductory GEOL sequences;
- GEOL 200; GEOG 106-107; MATH 128;
- CHEM 111 or CHEM 115.
- All majors must meet with a G&G department adviser each semester.

Students who do not meet these benchmarks may be removed from their major.

Major Learning Outcomes

ENVIRONMENTAL GEOSCIENCE

Upon successful completion of the B.A. degree, **Environmental Geoscience** majors will be able to:

1. Identify the presence of conditions that create natural environmental problems/hazards.
2. Identify the activities of humans that create environmental problems/hazards.
3. Detail the potential economic and social costs of remediation of natural and anthropogenic environmental problems.
4. Critically access reports, news articles, news reports, and debates and analyze the arguments so they can come to form an opinion on what is being debated.
5. Recognize that sources of information on environmental issues may be biased and that additional opinions must be sought in order to set forth conclusions which have merit.
6. Communicate clearly and effectively in writing and the spoken word about environmental issues to audiences of diverse backgrounds and formal education levels.
7. Demonstrate an understanding of content terminology required to communicate information regarding natural and manmade environmental problems/hazards.

Forensic and Investigative Science

Degrees Offered

- Bachelor of Science in Forensic Biology
- Bachelor of Science in Forensic Chemistry
- Bachelor of Science in Forensic Examiner

Nature of the Program

The Department of Forensic and Investigative Science (FIS) offers a Bachelor of Science degree in three major areas: Forensic Biology, Forensic Chemistry, and Forensic Examiner. All of these majors provide students with a strong background in the fundamental science and applied practice associated with forensic science. The Program is accredited by the Forensic Education Programs Accreditation Commission (<http://fepac-edu.org/>) (FEPAC).

Because of the unique nature of the profession of forensic science, students are forewarned that a record of criminal, unethical, or other socially unacceptable behavior (such as illicit drug use or alcohol offenses) could negatively affect their ability to pass a background check, which may in turn make it difficult or impossible to complete the degree. Department guidelines are available from departmental advisers.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Minors

All students have the possibility of earning one or more minors; click the following link for a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>). Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

CHAIR

- Casper Venter - MSc (North West University)
Seized Drugs, Latent Fingerprint Development and Comparison

PROFESSORS

- Glen Jackson - PhD (West Virginia University)
Ming Hsieh Distinguished Professor, Forensic Chemistry, Mass Spectrometry
- Keith Morris - PhD (University of Port Elizabeth)
Ming Hsieh Distinguished Professor, Impression Evidence, Evidence Interpretation

ASSOCIATE PROFESSORS

- Jacqueline Speir - PhD (Rochester Institute of Technology)
Forensic Informatics, Microscopy

ASSISTANT PROFESSORS

- Luis Arroyo - PhD (Florida International University)
Toxicology, Environmental Forensics
- Robin Bowen - PhD (West Virginia University)
Minor Coordinator, Ethics, Bloodstain Pattern Analysis
- Roger Jefferys - M.Sci (West Virginia University)
Criminalistics
- Rachel Mohr - PhD (Texas A&M University)
Undergraduate Coordinator, Forensic Entomology
- Tina Moroosse - MS (Marshall University)
Graduate Studies Coordinator, Forensic Biology, Quality Assurance
- Robert O'Brien - MS (St. Joseph College)
Internship Coordinator, Crime Scene Investigation
- Tatiana Trejos - PhD (Florida International University)
Trace Evidence, Elemental Analysis

Admissions

Admissions requirements are the same for the Forensic Biology, Forensic Chemistry, and Forensic Examiner Majors.

- First time students who have a minimum Math ACT of 22 or SAT of 540 or higher are admitted directly into the major. Directly admitted students will be advised by FIS advisors and are eligible to participate in the Living Learning Community and other departmentally-sponsored first-year programs.
- Students who wish to transfer from another WVU major must have completed CHEM 115 or higher with a C-.
- Students wishing to transfer from outside of WVU must must have completed CHEM 115 or higher with a C-.

Students who do not meet these requirements will be advised by the Center for Learning, Advising, and Student Success.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in the following majors.

- Forensic Biology (<https://admissions.wvu.edu/academics/majors/forensic-biology/>)
- Forensic Chemistry (<https://admissions.wvu.edu/academics/majors/forensic-chemistry/>)
- Forensic Examiner (<https://admissions.wvu.edu/academics/majors/forensic-examiner/>)

Degree Progress

- By the start of the third regular semester (Fall or Spring) in the major, students must be enrolled in or have successfully completed CHEM 116 and CHEM 116L with a C-.
- During their first four semesters, students are expected to complete their foundational biology, chemistry, math, and physics courses. These fundamentals must be completed prior to taking upper-level FIS courses. Many of these courses will satisfy the GEF 1, 2, 3, 4, and 8 requirements, as well as the College B.S. requirements. Students interested in the forensic chemistry major are strongly encouraged to take the CHEM 117 (<http://catalog.wvu.edu/search/?P=CHEM%20117>) /CHEM 118 (<http://catalog.wvu.edu/search/?P=CHEM%20118>) and PHYS 111 (<http://catalog.wvu.edu/search/?P=PHYS%20111>)/PHYS 112 (<http://catalog.wvu.edu/search/?P=PHYS%20112>) series if they qualify.
- To begin taking upper-level FIS courses, typically in the fifth semester/fall of the junior year, students must have completed the courses listed below with a grade of C- or better. If students are deficient in a single course requirement but can complete it in the fall semester, they may be permitted to enroll in upper-division FIS courses, based on availability of seats. Additionally, all students must complete their foundational courses by the end of their sixth regular semester.
- Beyond the fifth regular semester, all students must maintain an overall GPA of at least 2.5 in their FIS coursework.
- All majors must meet with a FIS adviser each semester.

Students who do not meet major benchmarks may be removed from the major.

BIOL 117	Introductory Physiology	3
BIOL 118	Introductory Physiology Laboratory	1
CHEM 234	Organic Chemistry	3
CHEM 236	Organic Chemistry Laboratory	1

PHYS 102 or PHYS 112	Introductory Physics General Physics	4
MATH 155	Calculus 1	4
STAT 215 or STAT 312	Introduction to Probability and Statistics Intermediate Statistical Methods	3

Forensic Biology, B.S.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.S. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.S. Degrees tab on the Eberly College of Arts and Sciences (p. 190) pages.

Departmental Requirements for the B.S. in Forensic Biology

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Forensic Biology majors must complete FIS 406.
- **Writing and Communication Skills Requirement:** The Forensic Biology Bachelor of Science is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Calculation of the GPA in the Major:** To graduate with the Forensic Biology major, students must achieve a minimum overall GPA of 2.5 in all FIS courses with no grade lower than a C- in any FIS course, or in any course listed in the "STEM Foundations" or "Forensic and Investigative Science Major Requirements" areas below. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Internship Requirement:** All students are required to successfully complete the FIS 386 Forensic Identification Internship internship course for at least 3 hours of credit.

Curriculum Requirements

UNIVERSITY REQUIREMENTS

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FIS 191	First-Year Seminar
GEF: Number of credits will vary depending on overlap	

COLLEGE REQUIREMENTS

Global Studies & Diversity Requirement
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Mathematics Requirement 4

MATH 155	Calculus 1
or MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus

Science Requirement:

Please see the Eberly College of Arts and Sciences' Bachelor of Science (B.S.) tab.

DEPARTMENTAL REQUIREMENTS**1- STEM Foundations** 24

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory
or CHEM 117 & 117L	Principles of Chemistry 1 and Principles of Chemistry 1 - Laboratory
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory
or CHEM 118 & 118L	Principles of Chemistry 2 and Principles of Chemistry 2 - Laboratory
CHEM 233 & CHEM 235	Organic Chemistry and Organic Chemistry Laboratory
CHEM 234 & CHEM 236	Organic Chemistry and Organic Chemistry Laboratory
PHYS 101	Introductory Physics 1
or PHYS 111	General Physics
PHYS 102	Introductory Physics 2
or PHYS 112	General Physics

2- Forensic Biology Major Requirements**Quantitative Coursework:** 6

Select one of the following pairs:

MATH 156 & STAT 215	Calculus 2 and Introduction to Probability and Statistics
STAT 211 & STAT 312	Elementary Statistical Inference and Intermediate Statistical Methods

Biology & Biochemistry Coursework: 26

AGBI 410	Introductory Biochemistry
or BIOC 339	Introduction to Biochemistry
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory
BIOL 117 & BIOL 118	Introductory Physiology and Introductory Physiology Laboratory
BIOL 219 & BIOL 220	The Living Cell and The Living Cell Laboratory
BIOL 310	Advanced Cellular/Molecular Biology
BIOL 324 & BIOL 325	Molecular Genetics and Molecular Genetics Laboratory
or GEN 371	Principles of Genetics
BIOL 432 & BIOL 434	Forensic Biology and Forensic Biology Laboratory

Forensic Science Core: 21

FIS 201	Introduction to Forensic Identification
FIS 202	Crime Scene Investigation Overview
FIS 305	Biological Evidence for Forensic Examiners
FIS 314	Introduction to Microscopy
FIS 385	Professional Internship Preparation
FIS 386	Forensic Identification Internship
FIS 404	Law and Evidence

FIS 480	Forensic Quality Assurance	
Forensic Biology Electives: *		6
FIS 301	Science/Technology of Fingerprint Identification **	
FIS 320	Science and Culture of Illicit Drugs	
FIS 330	Principles of Forensic Photography	
FIS 393	Special Topics	
FIS 407	Gravesite Forensics	
FIS 485	Professional Ethics in Forensic Science	
FIS 490	Teaching Practicum	
FIS 491	Professional Field Experience	
FIS 492	Directed Study	
FIS 495	Independent Study	
FIS 497	Research	
FIS 498	Honors	
Capstone Experience		3
FIS 406	Court Testimony	
General Electives:		11
Number of Electives may vary depending on course selection.		
Total Hours		120

* A maximum of 3 credits combined may come from FIS 490, 491, 492, 495, or 497. FIS 498C may not be used to fulfill this requirement

** FIS 301 is typically reserved for Forensic Examiner majors. If there is a seat available, it will be open to Forensic Biology majors as an option.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
FIS 191		1 ENGL 101 (GEF 1)	3
BIOL 115 & BIOL 116 (B.S. First Area 1; GEF 2)		4 BIOL 117 & BIOL 118 (GEF 8; B.S. First Area 2)	4
CHEM 115 & 115L (GEF 8; B.S. Second Area 1)		4 CHEM 116 & 116L (GEF 8; B.S. Second Area 2)	4
FIS 201		3 MATH 156 (Math & Stats Elective 1)	4
MATH 155 (B.S. Math Requirement, GEF 3)		4	
		16	15

Second Year

Fall	Hours	Spring	Hours
BIOL 219 & BIOL 220		4 ENGL 102 (GEF 1)	3
CHEM 233 & CHEM 235		4 CHEM 234 & CHEM 236	4
PHYS 101 (B.S. Third Area 1)		4 PHYS 102 (B.S. Third Area 2)	4
STAT 215 (Math and Stat Requirement 2)		3 FIS 202	3
		General Elective	1
		15	15

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
GEF 4		3 BIOL 432 & BIOL 434		4 FIS 386	3-6

FIS 305	3 BIOL 324 & BIOL 325	4
BIOL 310	3 GEF 5	3
FIS 314	3 General Elective	3
FIS 385	1	
FIS 480	2	

	15	14	3
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Fourth Year

Fall	Hours	Spring	Hours
FIS 404		3 AGBI 410 or BIOC 339	3
FIS 406 (Capstone)		3 Forensic Biology Elective 2	3
Forensic Biology Elective 1		3 GEF 7	3
GEF 6		3 General Elective	3
General Elective		3	
	15		12

Total credit hours: 120

Major Learning Outcomes**FORENSIC BIOLOGY**

Upon graduation from the Forensic Biology major, students will be able to:

1. Apply scientific methodology and evaluate techniques in the collection, processing, analysis, and evaluation of forensic evidence.
2. Assess and defend data generated during forensic investigations
3. Present scientific data in written, verbal, and visual formats.
4. Demonstrate the professionalism and high ethical standards demanded by the justice system and the forensic science community.

Forensic Chemistry, B.S.**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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

DEPARTMENTAL REQUIREMENTS FOR THE B.S. IN FORENSIC CHEMISTRY

Students must complete WVU General Education Foundations requirements, College B.S. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.S. Degrees tab on the Eberly College of Arts and Sciences (<http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/#bachelorofsciencetext>) pages.

Departmental Requirements for the B.S. in Forensic Chemistry

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Forensic Chemistry majors must complete FIS 406 (<http://catalog.wvu.edu/search/?P=FIS%20406>).
- **Writing and Communication Skills Requirement:** The Forensic Chemistry Bachelor of Science is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Calculation of the GPA in the Major:** To graduate with the Forensic Chemistry major, students must achieve a minimum overall GPA of 2.5 in all FIS courses with no grade lower than a C- in any FIS course, or in any course listed in the "STEM Foundations" or "Forensic and Investigative Science Major Requirements" areas below. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Internship Requirement:** All students are required to successfully complete the FIS 386 Forensic Identification Internship internship course for a minimum of 3 hours of credit.
- **Benchmark Expectations:** For details, go to the Forensic and Investigative Science (<http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/forensicandinvestigativescience/#admissionstext>) admissions tab.

Curriculum Requirements

UNIVERSITY REQUIREMENTS

19

FIS 191 First-Year Seminar
GEF: Number of credits will vary depending on overlap

COLLEGE REQUIREMENTS

4

Global Studies & Diversity Requirement

MATH 155 Calculus 1
or MATH 153 Calculus 1a with Precalculus
& MATH 154 and Calculus 1b with Precalculus

DEPARTMENTAL REQUIREMENTS:

1- STEM Foundations:

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BIOL 115 Principles of Biology
& BIOL 116 and Principles of Biology Laboratory

BIOL 117 Introductory Physiology
& BIOL 118 and Introductory Physiology Laboratory

MATH 156 Calculus 2

STAT 215 Introduction to Probability and Statistics

PHYS 101 Introductory Physics 1
& PHYS 102 and Introductory Physics 2
or PHYS 111 General Physics
& PHYS 112 and General Physics

2- Forensic Chemistry Major Requirements

Chemistry

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CHEM 115 Fundamentals of Chemistry
& 115L and Fundamentals of Chemistry 1 - Laboratory
or CHEM 117 Principles of Chemistry 1
& CHEM 118 and Principles of Chemistry 2

CHEM 116 Fundamentals of Chemistry
& 116L and Fundamentals of Chemistry 2 - Laboratory

CHEM 215 Introductory Analytical Chemistry
& 215L and Introductory Analytical Chemistry Laboratory

CHEM 233 Organic Chemistry
& CHEM 235 and Organic Chemistry Laboratory

CHEM 234 & CHEM 236	Organic Chemistry and Organic Chemistry Laboratory	
CHEM 341 & CHEM 342 or CHEM 348 & CHEM 349	Physical Chemistry: Brief Course and Experimental Physical Chemistry Physical Chemistry and Physical Chemistry Laboratory	
Forensic and Investigative Science		26
FIS 201	Introduction to Forensic Identification	
FIS 202	Crime Scene Investigation Overview	
FIS 314	Introduction to Microscopy	
FIS 340	Forensic Chemical Analysis	
FIS 341	Forensic Chemical Analysis Laboratory	
FIS 385	Professional Internship Preparation	
FIS 386	Forensic Identification Internship	
FIS 404	Law and Evidence	
FIS 460	Analysis of Seized Drugs	
FIS 461	Analysis of Seized Drugs Laboratory	
FIS 480	Forensic Quality Assurance	
Forensic Chemistry Electives: Select two of the following sequences:		8
FIS 414 & FIS 416	Trace Evidence Examination and Trace Evidence Examination Laboratory	
FIS 451 & FIS 452	Arson and Explosives Analysis and Arson and Explosives Analysis Lab	
FIS 470 & FIS 471	Analytical Forensic Toxicology and Analytical Forensic Toxicology Laboratory	
Capstone Experience		3
FIS 406	Court Testimony	
General Electives		13
Number of General Elective may vary depending on overlap		
Total Hours		120

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
FIS 191		1 ENGL 101 (GEF 1)	3
BIOL 115 & BIOL 116 (GEF 2; B.S. First Area 1)		4 BIOL 117 & BIOL 118 (B.S. First Area 2; GEF 8)	4
CHEM 115 & 115L (B.S. Second Area 1; GEF 8)		4 CHEM 116 & 116L (B.S. Second Area 2; GEF 8)	4
FIS 201		3 MATH 156	4
MATH 155 (B.S. Math Requirement; GEF 3)		4	
		16	15

Second Year

Fall	Hours	Spring	Hours
GEF 4		3 ENGL 102 (GEF 1)	3
CHEM 233 & CHEM 235		4 CHEM 234 & CHEM 236	4
PHYS 101 or 111		4 FIS 202	3
STAT 215		3 PHYS 102 or 112	4

General Elective		1 General Elective		1	
		15		15	
Third Year					
Fall	Hours	Spring	Hours	Summer	Hours
CHEM 215 & 215L		4 GEF 5		3 FIS 386	3
FIS 314		3 CHEM 341 & CHEM 342		4	
FIS 340 & FIS 341		4 FIS 460		3	
FIS 385		1 FIS 461		1	
FIS 480		2 General Elective		2	
		14		13	3
Fourth Year					
Fall	Hours	Spring	Hours		
GEF 6		3 GEF 7		3	
FIS 404		3 Forensic Chemistry Elective 2		4	
FIS 406		3 General Elective		4	
Forensic Chemistry Elective 1		4 General Elective		4	
General Elective		1			
		14		15	

Total credit hours: 120

Major Learning Outcomes

FORENSIC CHEMISTRY

Upon graduation from the Forensic Chemistry major, students will be able to:

1. Apply scientific methodology and evaluate techniques in the collection, processing, analysis, and evaluation of forensic evidence.
2. Assess and defend data generated during forensic investigations
3. Present scientific data in written, verbal, and visual formats.
4. Demonstrate the professionalism and high ethical standards demanded by the justice system and the forensic science community.

Forensic Examiner, B.S.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

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

Students must complete WVU General Education Foundations requirements, College B.S. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.S. Degrees tab on the Eberly College of Arts and Sciences pages.

Departmental Requirements for the B.S. in Forensic Examiner

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Forensic Examiner majors must complete FIS 406.
- **Writing and Communication Skills Requirement:** The Forensic Examiner Bachelor of Science is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Calculation of the GPA in the Major:** To graduate with the Forensic Examiner major, students must achieve a minimum overall GPA of 2.5 in all FIS courses with no grade lower than a C- in any FIS course, or in any course listed in the "STEM Foundations" or "Forensic and Investigative Science Major Requirements" areas below. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Internship Requirement:** All students are required to successfully complete the FIS 386 Forensic Identification Internship for at least 3 hours of credit.

Curriculum Requirements

University Requirements

19

FIS 191	First-Year Seminar
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GEF: Number of credits will vary depending on overlap

College Requirements

4

Global Studies & Diversity Requirement

Mathematics Requirement

MATH 155	Calculus 1
or MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus

Science Requirement

Please see the Eberly College of Arts and Sciences' Bachelor of Science (B.S.) tab.

DEPARTMENTAL REQUIREMENTS

1-STEM Foundations

Chemistry Requirement

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CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory
or CHEM 117 & 117L	Principles of Chemistry 1 and Principles of Chemistry 1 - Laboratory

CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory
or CHEM 118 & 118L	Principles of Chemistry 2 and Principles of Chemistry 2 - Laboratory

CHEM 233 & CHEM 235	Organic Chemistry and Organic Chemistry Laboratory
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CHEM 234 & CHEM 236	Organic Chemistry and Organic Chemistry Laboratory
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Physics Requirement

8

Select one pair:

PHYS 101 & PHYS 102	Introductory Physics 1 and Introductory Physics 2
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PHYS 111 & PHYS 112	General Physics and General Physics	
2- Forensic Examiner Major Requirements		
Math and Statistics Requirement		6
Select one of the following pairs:		
MATH 156 & STAT 215	Calculus 2 and Introduction to Probability and Statistics	
STAT 211 & STAT 312	Elementary Statistical Inference and Intermediate Statistical Methods	
Biology Requirement		8
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	
BIOL 117 & BIOL 118	Introductory Physiology and Introductory Physiology Laboratory	
Advanced Science Requirement		8
Select one of the following pairs		
BIOL 219 & BIOL 220	The Living Cell and The Living Cell Laboratory	
CHEM 215 & 215L	Introductory Analytical Chemistry and Introductory Analytical Chemistry Laboratory	
Complete a minimum of 4 credits from the following list.		
AGBI 410 or BIOC 339	Introductory Biochemistry Introduction to Biochemistry	
AGBI 412	Introduction to Biochemistry Wet Laboratory *	
BIOL 310	Advanced Cellular/Molecular Biology	
BIOL 311	Advanced Cellular/Molecular Biology-Laboratory	
BIOL 324	Molecular Genetics	
BIOL 325	Molecular Genetics Laboratory	
CHEM 341	Physical Chemistry: Brief Course	
BIOL 432	Forensic Biology	
CHEM 342	Experimental Physical Chemistry	
FIS 340	Forensic Chemical Analysis	
FIS 341	Forensic Chemical Analysis Laboratory	
Forensic Examiner Requirement		31
FIS 201	Introduction to Forensic Identification	
FIS 301	Science/Technology of Fingerprint Identification	
FIS 302	Crime Scene Investigation 1	
FIS 303	Crime Scene Investigation 1 Laboratory	
FIS 314	Introduction to Microscopy	
FIS 335	Forensic Photography	
FIS 385	Professional Internship Preparation	
FIS 386	Forensic Identification Internship	
FIS 402	Crime Scene Investigation 2	
FIS 404	Law and Evidence	
FIS 405	Latent Fingerprint	
FIS 480	Forensic Quality Assurance	
Forensic Examiner Electives: *		6
FIS 305	Biological Evidence for Forensic Examiners	
FIS 320	Science and Culture of Illicit Drugs	
FIS 393	Special Topics	
FIS 407	Gravesite Forensics	
FIS 409	Blood Stain Pattern Analysis	
FIS 414	Trace Evidence Examination	

FIS 416	Trace Evidence Examination Laboratory
FIS 435	Advanced Forensic Photography
FIS 490	Teaching Practicum
FIS 485	Professional Ethics in Forensic Science
FIS 491	Professional Field Experience
FIS 492	Directed Study
FIS 495	Independent Study
FIS 497	Research

Capstone Experience **3**

FIS 406	Court Testimony
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GENERAL ELECTIVES **11**

Number of electives may vary depending on course selection.

Total Hours 120

* A maximum of 3 credits combined can come from FIS 490, 491, 492, 495, or 497. FIS 498C may not be used to fulfill this requirement

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
FIS 191		1 ENGL 101 (GEF 1)	3
BIOL 115 & BIOL 116 (GEF 2; B.S. First Area 1)		4 BIOL 117 & BIOL 118 (GEF 8; B.S. First Area 2)	4
CHEM 115 & 115L (GEF 8; B.S. Second Area 1)		4 CHEM 116 & 116L (GEF 8, B.S. Second Area 2)	4
FIS 201		3 MATH 156 (Math & Stats Elective 1)	4
MATH 155 (GEF 3, B.S. Math Requirement)		4	
		16	15

Second Year

Fall	Hours	Spring	Hours
CHEM 233 & CHEM 235		4 ENGL 102 (GEF 1)	3
BIOL 219 or CHEM 215 (Advanced Sci Elective 1)		3 CHEM 234 & CHEM 236	4
BIOL 220 or CHEM 215L		1 PHYS 102 (B.S. Third Area 2)	4
PHYS 101 (B.S. Third Area 1)		4 GEF 4	3
STAT 215 (Math & Stats Elective 2)		3 General Elective	1
		15	15

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
GEF 5		3 FIS 302 & FIS 303		4 FIS 386	3-6
FIS 301		3 FIS 314		3	
FIS 335		3 FIS 405		3	
FIS 385		1 GEF 6		3	
Advanced Sci Elective #2		4 General Elective		1	

General Elective	1			
	15		14	3
Fourth Year				
Fall	Hours	Spring	Hours	
FIS 402		3 FIS 406 (Capstone)		3
FIS 404		3 Forensic Science Elective #2		3
FIS 480		2 GEF 7 (ECAS Global Studies Requirement)		3
Forensic Science Elective #1		3 General Elective		3
General Elective	3			
General Elective	1			
	15		12	

Total credit hours: 120

* Enrollment in AGBI 412 is strictly limited, with FIS students able to enroll only after all Biochemistry majors have enrolled. Spaces in this course are not guaranteed.

Major Learning Outcomes

FORENSIC EXAMINER

Upon graduation from the Forensic Examiner major, students will be able to:

1. Apply scientific methodology and evaluate techniques in the collection, processing, analysis, and evaluation of forensic evidence.
2. Assess and defend data generated during forensic investigations.
3. Present scientific data in written, verbal, and visual formats.
4. Demonstrate the professionalism and high ethical standards demanded by the justice system and the forensic science community.

Geography, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

Geography teaches you how the world works. Geographers use spatial concepts and tools to examine problems that face communities around the world, such as protecting vulnerable landscapes and species, the local and global effects of climate change, and the connections between people across the globe.

Our students study aspects of the natural sciences, social sciences, and humanities while developing skills in spatial investigation and problem-solving that are valuable assets in a variety of careers. Geography graduates are qualified for many careers in both the private and public sectors. In industry, geographers are hired as geographic information system analysts, business location researchers, environmental impact consultants, market analysts, and cartographers. In government, geographers work as local urban planners, regional and state economic development specialists, environmental and resource development analysts, land-use planners, international development agency advisors, teachers and trainers, researchers, cartographers, as well as geographic information system analysts. Some graduates may also use their training to pursue careers as environmental or community activists in non-profit organizations. Finally, many geography students go on to graduate school to obtain further training, most commonly in geography or planning but also in fields as diverse as law, information science, and environmental studies.

Geography students receive specialized training in one of the program's three areas of emphasis:

- Geographic Information Science (GISc)
- Globalization and Development
- Global Environmental Change

An individualized program of study is also available combining elements of the three options.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Internship

An internship is a field-based academic option that uses the workplace as an extended classroom/laboratory. As part of the internship, students usually spend summer months or a semester working at a public agency, private business, or non-profit organization where they are supervised by experts in such areas as GIS, planning, the physical environment, international affairs, or economic development. The professional learning experience is recommended for majors in geography with at least forty-five total credit hours and twelve credit hours in geography. See the geography internship advisor for additional information.

Honors Program

Qualified students in geography are encouraged to participate in the University's honors program. Geography honors students in their senior year are encouraged to take Honors Thesis.

Minors

All students have the possibility of earning one or more minors; follow the link for a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>). Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

CHAIR

- Brent McCusker - Ph.D. (Michigan State University)

ASSOCIATE CHAIR FOR GEOGRAPHY

- Karen Culcasi - Ph.D. (Syracuse)

PROFESSORS

- Amy Hessler - Ph.D. (Arizona)
Biogeography, Forest Ecosystems, Climate Variability
- Randy Jackson - Ph.D. (Illinois)
Director Regional Research Institute, Economic geography
- Brent McCusker - Ph.D. (Michigan State)
Land Use Change, Africa, Policy Making

ASSOCIATE PROFESSORS

- Jamison Conley - Ph.D. (Pennsylvania State University)
Spatial Analysis, Geocomputation, Health Geography
- Karen Culcasi - Ph.D. (Syracuse)
Geopolitics, Identity, Middle East
- Brenden McNeil - Ph.D. (Syracuse)
GIScience, Environmental modeling, Forest Ecosystem Services
- Bradley Wilson - Ph.D. (Rutgers)
Social Movements, Local/Global Food Systems, Food Justice

ASSISTANT PROFESSORS

- Martina Angela Caretta - Ph.D. (Stockholm University)
Feminist Geography, Human Dimensions of Water, Participatory Methodologies
- Cynthia Gorman - Ph.D. (Rutgers)
Gender, Migration, Human Rights, Refugee Communities
- Jonathan Hall - Ph.D. (Ohio State)
Biogeography, Conservation Ecology, Culture/Environment Interactions
- Insu Hong - (Arizona State University)
Geographic Information Science, Spatial Optimization, Health Care Access

- Aaron Maxwell - Ph.D. (West Virginia University)
Geospatial Instruction, Remote Sensing, Image Analysis, Spatial Modeling
- Maria Alejandra Perez - Ph.D. (Michigan)
Human Geography, Science & Society, Speleology, Latin America
- Jamie Shinn - Ph.D. (Pennsylvania State University)
Political Ecology, Social Vulnerability, Climate Change Adaptation, Sub-Saharan Africa

PROFESSORS EMERITI

- Greg Elmes - Ph.D. (Penn State)
- Trevor Harris - Ph.D. (University of Hull)
- Steve Kite - Ph.D. (University of Wisconsin)
- Ken Martis - Ph.D. (Michigan)
- Timothy Warner - Ph.D. (Purdue University)

ASSOCIATE PROFESSORS EMERITI

- Robert Hanham - Ph.D. (Ohio State)

CLINICAL ASSISTANT PROFESSORS

- Megan Govindan - MA (WVU)
Community development
- Mehmet Oztan - Ph.D. (Michigan State)
Seed preservation, sustainable farming

CLINICAL ASSOCIATE PROFESSOR

- Rick Landenberger - Ph.D. (WVU)
Forest Ecology, land management

Admissions

- First-Time Freshmen are admitted directly into the Geography major.
- Students transferring from within WVU to the Geography major must have a minimum overall GPA of 2.0.
- Students transferring from another institution must have a minimum GPA of a 2.0.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Geography (<https://admissions.wvu.edu/academics/majors/geography/>) major.

Click here to view the Suggested Plan of Study (p. 307)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences (p. 187) page.

Departmental Requirements for the B.A. in Geography

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. For Geography majors, GEOG 496 completes this requirement.
- **Writing and Communication Requirement:** Geography Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two additional **SpeakWrite Certified Courses™**: GEOG 496 and a 2nd course selected from GEOG 243, GEOG 300, GEOG 307, GEOG 317, GEOG 393, GEOG 412, GEOG 415, GEOG 443, GEOG 452, GEOG 454, GEOG 455, GEOG 462.
- **Calculation of Major GPA:** Students must have a 2.0 in all GEOG courses.
- **Concentration:** Students must select one of two options
 - 12 hours of Geography electives, in consultation with an adviser
 - Complete an area of emphasis (Geography Information Science; Global Environmental Change; Globalization and Development).
- **Benchmark expectations:** For details, go to the Geography admissions tab (p. 305).

Curriculum Requirements

University Requirements	25
GEOG 191	First-Year Seminar
GEF requirements: number of credits may vary upon overlap with major	
Writing Course	
ECAS B.A. Requirements	12
Fine Arts Requirement	
Foreign Language	
Global Studies & Diversity Requirement	
DEPARTMENTAL REQUIREMENTS	
Foundation Courses	11
GEOG 102	World Regions
or GEOG 108	Human Geography
GEOG 107	Physical Geography
& GEOG 106	and Physical Geography Laboratory
GEOG 150	Digital Earth
& GEOG 149	and Digital Earth Lab
Thematic/Regional Requirement	3
Select any 200-level GEOG course	
Methods	3
Select one of the following:	
GEOG 300	Geographical Data Analysis
GEOG 333	Human Geography in Practice
GEOG 350	Geographic Information Systems and Science
GEOG 455	Introduction to Remote Sensing
GEOG 462	Digital Cartography
Concentration:	12
Select one option:	
4 GEOG courses at the 300- or 400-level	
or:	
An Area of Emphasis	
Capstone Course	3

GEOG 496

Senior Thesis

General Electives	51
Number of electives may vary depending on GEF overlap and concentration	
Total Hours	120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
GEOG 191		1 ENGL 101 (GEF 1)	3
GEF 3		3 Foreign Language 102	3
Foreign Language 101		3 ECAS Global Studies & Diversity Requirement; GEF 7	3
GEOG 150 & GEOG 149 (GEF 2)		4 GEOG 108 (GEF 8)	3
GEOG 107 & GEOG 106 (GEF 8)		4 General Elective	3
	15		15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 ECAS Fine Arts Requirement (GEF 6)	3
GEF 4		3 GEF 8*	3
GEF 5		3 Foreign Language 204	3
Foreign Language 203		3 GEOG Concentration 1	3
GEOG Methods		3 General Elective	3
	15		15

Third Year

Fall	Hours	Spring	Hours
GEOG Thematic Course		3 GEOG Concentration 3	3
GEOG Concentration 2		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
	15		15

Fourth Year

Fall	Hours	Spring	Hours
GEOG 496 (Capstone)		3 GEOG Concentration 4	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
	15		15

Total credit hours: 120

* Student completing a minor, a double major or a dual degree already meet F8.

Areas of Emphasis

GEOGRAPHIC INFORMATION SCIENCE (GIS) AREA OF EMPHASIS REQUIREMENTS

A minimum GPA of 2.0 is required in all emphasis courses

Required Courses:	7
GEOG 350	Geographic Information Systems and Science
GEOG 455	Introduction to Remote Sensing
Electives	6
Select two courses	

GEOG 300	Geographical Data Analysis
GEOG 452	Geographic Information Science: Applications
GEOG 453	Geographic Information Science: Design and Implementation
GEOG 454	Environmental Geographic Information Systems
GEOG 462	Digital Cartography
GEOG 463	Crime Geography

Total Hours 13

GLOBAL ENVIRONMENTAL CHANGE AREA OF EMPHASIS REQUIREMENTS

A minimum GPA of 2.0 is required in all emphasis courses

Required Course 3

GEOG 207 Climate and Environment

Elective Courses : 9

GEOG 300 Geographical Data Analysis

GEOG 307 Biogeography: Theory and Method

GEOG 321 Geomorphology

GEOG 407 Environmental Field Geography

GEOG 411 Rural and Regional Development

GEOG 415 Global Environmental Change

GEOG 454 Environmental Geographic Information Systems

GEOG 455 Introduction to Remote Sensing

GEOG 491 Professional Field Experience

Total Hours 12

GLOBALIZATION AND DEVELOPMENT AREA OF EMPHASIS REQUIREMENTS

A minimum GPA of 2.0 is required in all emphasis courses

200-Level Coursework: 3

GEOG 209 Economic Geography

GEOG 210 Urban Geography

GEOG 241 Geography of Europe

GEOG 243 Geography of Africa

GEOG 244 Geography of the Middle East

Upper-Division Electives: 9

GEOG 302 Political Geography

GEOG 411 Rural and Regional Development

GEOG 412 Geography of Gender

GEOG 425 Urban and Regional Planning

GEOG 443 African Environment and Development

Total Hours 12

Degree Progress

- Geography majors are expected to maintain 2.0 GPA overall and in geography courses.
- All majors must meet with Geography adviser each semester.

Students who do not meet these benchmarks may be removed from their major.

Major Learning Outcomes

GEOGRAPHY

Upon successful completion of the B.A. degree, **Geography** majors will be able to use key geographic concepts to critically analyze diverse topics and processes. Specifically, geography graduates will be able to:

1. Define the range of issues and topics relevant to geographic inquiry and analysis.
2. Apply qualitative and quantitative geographic analytical methods.
3. Collect, organize, summarize, and synthesize geographic information.
4. Demonstrate an understanding of the geographic nature and complexity of human environment relationships, environmental systems, and the patterns of human activities.
5. Apply geospatial technologies, and critically explain their role in modern society.
6. Connect everyday issues to geographic concepts, and situate these issues within the local to global continuum of scales.
7. Present geographic ideas and concepts effectively in oral, written, cartographic and other visual forms.

Geology, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

The bachelor of science degree in Geology is designed for students interested in geology positions in the private or public sectors or in academia. Qualified students are encouraged to seek a graduate degree; however B.S. geologists who have developed solid technical and communication skills have excellent employment prospects in the energy industry, in environmental and geotechnical firms or in government.

Instructional facilities and equipment include laboratories for mineralogy, petrology, geochemistry, sedimentology, paleontology, hydrogeology, geophysics, geomorphology, structural geology, and excellent computer facilities. We stress field studies in upper-level classes, capped by a six-credit field course examining folded and faulted sedimentary rocks, as well as igneous and metamorphic rocks, in South Dakota, Wyoming, and Montana. Students are encouraged to pursue internships to broaden their learning experience and to enhance employment prospects.

Minors

All students have the possibility of earning one or more minors; a list of all available minors and their requirements is available at <http://catalog.wvu.edu/undergraduate/minors/>. Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

CHAIR

- Brent McCusker - Ph.D. (Michigan State University)
Land Use Change, Africa, Policy Making

ASSOCIATE CHAIR IN GEOLOGY

- Jaime Toro - PhD (Stanford University)
Structural Geology and Tectonics

PROFESSORS

- Kathleen Benison - Ph.D. (The University of Kansas)
Sedimentary Geology - Planetary Geology
- Timothy Carr - Ph.D. (University of Wisconsin-Madison)
Sedimentary, Petroleum Geology
- Dengliang Gao - Ph.D. (Duke University)
Exploration Geophysics, Petroleum and Structural Geology
- Jaime Toro - PhD (Stanford University)
Structure and Tectonics
- Dorothy Vesper - Ph.D. (Pennsylvania State University)
Aqueous Geochemistry, Hydrogeology

- Timothy A. Warner - Ph.D. (Purdue University)
Remote Sensing

ASSOCIATE PROFESSORS

- Joseph Lebold - PhD (WVU)
Paleoecology, Paleontology, Regional Geology
- Shikha Sharma - Ph.D. (Lucknow University)
Isotope Geochemistry
- Amy Weislogel - PhD (Stanford University)
Sedimentology

ASSISTANT PROFESSORS

- Christopher Russoniello - Ph.D. (University of Delaware)
Coastal Groundwater, Surface Water/Groundwater Interactions, Climate
- Graham Andrews - PhD (Univ. of Leicester)
Volcanology
- James Lamsdell - PhD (Univ. of Kansas)
Paleontology

PROFESSORS EMERITI

- Bob Behling - PhD
Geomorphology
- Alan C. Donaldson - Ph.D. (Pennsylvania State University)
Stratigraphy, Sedimentology
- Joe Donovan - Ph.D. (Penn State)
Hydrogeology, Holocene Paleoclimate
- Tom Kammer - PhD
Paleontology
- Steven Kite - Ph.D. (University of Wisconsin)
Geomorphology, Stream restoration
- Henry Rauch - PhD
Hydrogeology
- Robert C. Shumaker - Ph.D. (Cornell University)
Structural Geology, Petroleum Geology
- Richard Smosna - Ph.D. (University of Illinois)
Stratigraphy, Sedimentology
- Tom Wilson - PhD
Geophysics

Admissions

- First-Time Freshmen are admitted directly into the Geology major.
- Students transferring from another major within WVU must have a 2.0 overall GPA.
- Students transferring from another institution must have a 2.0 overall GPA and a 2.0 in any GEOL coursework.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Geology (<https://admissions.wvu.edu/academics/majors/geology/>) major.

Click here to view the Suggested Plan of Study (p. 313)

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

ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.S. requirements, STEM Foundations requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.S. Degrees tab on the Eberly College of Arts and Sciences (p. 190) page.

Departmental Requirements for the B.S. in Geology

Students who wish to graduate with a degree in Geology must successfully complete a total of forty-two hours of geology courses (excluding GEOL 203 and GEOL 351).

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Geology majors must complete GEOL 404 to fulfill this requirement.
- **Writing and Communication Requirement:** Geology Bachelor of Science students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two additional **SpeakWrite Certified Courses™**: GEOL 404, and a 2nd course selected from GEOL 311 or GEOL 341. In addition, students must complete an applied writing course selected from GEOL 411, ENGL 304, or ENGL 305.
- **Calculation of the GPA in the Major:** An average of at least 2.0 must be attained in all GEOL courses, excluding GEOL 351. A minimum grade of C- is required in GEOL 101, GEOL 102, GEOL 103, and GEOL 286. A minimum GPA of 2.0 is required for all 300- and 400-level GEOL courses. If a course is repeated, all attempts will be included in calculation of the GPA unless the course is eligible for D/F repeat.
- **Benchmark Expectations:** For details, go the Geology admissions tab (p. 310).

We also offer the opportunity to pursue a dual degree in Geology and Mining Engineering.

Curriculum Requirements

UNIVERSITY REQUIREMENTS	19
GEOL 191	First-Year Seminar
GEF Requirements	
ECAS B.S. Requirements	3
Global Studies & Diversity Requirement	
Math Requirement	
Select one of the following:	
MATH 150	Applied Calculus
OR	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus
OR	
MATH 155	Calculus 1
Science Requirement: Please see the Eberly College of Arts and Sciences' Bachelor of Science (B.S.) tab.	
DEPARTMENTAL REQUIREMENTS	
1- STEM Foundations:	22

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory
STAT 211 or CS 101	Elementary Statistical Inference Intro to Computer Applications
GEOL 351 or MATH 156	Geomathematics Calculus 2
Select one of the following pairs:	
PHYS 101 & PHYS 102	Introductory Physics 1 and Introductory Physics 2
OR	
PHYS 111 & PHYS 112	General Physics and General Physics

2- Geology Major Requirements: 25

GEOL 101 & GEOL 102	Planet Earth and Planet Earth Laboratory
GEOL 103 & GEOL 104	Earth Through Time and Earth Through Time Laboratory
GEOL 286	Introduction to Minerals & Rocks
GEOL 311	Stratigraphy and Sedimentation
GEOL 341	Structural Geology
GEOG 350	Geographic Information Systems and Science
GEOL 489	Junior-Senior Seminar

Geology Advanced Requirements 15

Select five courses from the following two lists. At least two courses must be from the Rocks and Energy list, and two courses from the Surficial Processes and Water list. One additional course must be completed from either list.

Rocks and Energy:

GEOL 300	Geology of West Virginia
GEOL 302	Geology of the National Parks
GEOL 331	Paleontology
GEOL 373	Introduction to Petroleum Geology
GEOL 386	Igneous and Metamorphic Petrology
GEOL 411	Deep Time Earth Systems
GEOL 419	Advanced Petroleum Geology
GEOL 454	Environmental and Exploration of Geophysics 1
GEOL 460	Physical Volcanology
GEOL 472	Energy Geology
GEOL 479	Log Analysis-Reading the Rocks

Surficial Processes and Water:

ENVP 455	Reclamation of Disturbed Soils
GEOL 321 or GEOG 321	Geomorphology Geomorphology
GEOL 365	Environmental Geology
GEOL 388	Introduction to Geochemistry
GEOL 455	Introduction to Remote Sensing
GEOL 462	Introductory Hydrogeology
GEOL 463	Physical Hydrogeology
GEOL 466	Cave and Karst Geology
GEOL 484	Minerals and the Environment
GEOL 486	Environmental Isotopes
GEOL 488	Environmental Geochemistry
RESM 480	Environmental Regulation

Geology Capstone Requirement 6

GEOL 404 Geology Field Camp

GENERAL ELECTIVES 30

Number of general electives varies depending on overlap between GEF, College and Geology major requirements

Total Hours 120

Suggested Plan of Study**First Year**

Fall	Hours	Spring	Hours
GEOL 191		1 ENGL 101 (F1)	3
CHEM 115 & 115L (F8 Course 1; B.S. Second Area 1)		4 CHEM 116 & 116L (F8 Course 2; B.S. Second Area 2)	4
GEOL 101 & GEOL 102 (F2 B; B.S. First Area 1)		4 GEOL 103 & GEOL 104 (F8 Course 3; B.S. First Area 2)	4
MATH 150 or 155 (F3) General Elective		3 General Elective 3 General Elective	3 1
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (F1) F 4		3 F 5 3 GEOL Physics Requirement 2 (B.S. Third Area 2)	3 4
GEOL Physics Requirement 1 (B.S. Third Area 1)		4 GEOL 286	4
STAT 211 or CS 101		3 GEOL Rocks and Energy Requirement 1 General Elective	3 2
		13	16

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
F 6 ECAS Global Studies & Diversity Requirement (F 7)		3 GEOL 311 3 GEOL 351		4 GEOL 404	6
GEOL 341 GEOG 350		4 GEOL 489 4 GEOL Surficial Processes & Water Req. 1 General Elective		1 3 3	
		14		14	6

Fourth Year

Fall	Hours	Spring	Hours
GEOL Rocks & Energy Requirement 2		3 GEOL Rocks & Energy OR Surficial Processes & Water Requirement	3
GEOL Surficial Processes & Water Requirement 2		3 General Elective	3
General Elective General Elective		3 General Elective 3 General Elective	3 3

General Elective	3	
	15	12

Total credit hours: 120

Dual Degree Curriculum for Mining Engineering and Geology

This curriculum allows students to simultaneously pursue a BS.Min.E. degree in mining engineering and a B.S. in geology. The dual degree program requires satisfactory completion of 154 credits and fulfilling all the requirements for both degrees.

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 dual B.S.Min.E. and B.S.Geology program that completes both degree requirements in five years is as follows.

To be eligible to receive a bachelor's degree in the Statler College, a student is required to complete satisfactorily the number of semester hours of work as specified in the program curriculum. Students must achieve a minimum grade point average of 2.25 for all courses taken at WVU, a major grade point average of 2.25 or better in courses completed within the student's major, and a minimum overall grade point average of 2.25.

Required Courses

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2)	4
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory (GEF 8)	4
ECON 201	Principles of Microeconomics (GEF 4)	3
ENGR 101	Engineering Problem Solving 1	2
ENGR 102	Engineering Problem-Solving 2	3
ENGR 191	First-Year Seminar	1
GEOL 101	Planet Earth	3
GEOL 102	Planet Earth Laboratory	1
GEOL 103	Earth Through Time	3
GEOL 104	Earth Through Time Laboratory	1
GEOL 286	Introduction to Minerals & Rocks	4
GEOL 311	Stratigraphy and Sedimentation	4
GEOL 331 or GEOL 454	Paleontology Environmental and Exploration of Geophysics 1	3
GEOL 341	Structural Geology	4
GEOL 404	Geology Field Camp	6
GEOL 495 or MINE 495	Independent Study Independent Study	1
Geology Elective (Choose 3 courses)		9
GEOL 300	Geology of West Virginia	
GEOL 321	Geomorphology	
GEOL 365	Environmental Geology	
GEOL 373	Introduction to Petroleum Geology	
GEOL 386	Igneous and Metamorphic Petrology	
GEOL 454	Environmental and Exploration of Geophysics 1	
GEOL 455	Introduction to Remote Sensing	
GEOL 463	Physical Hydrogeology	
GEOG 350	Geographic Information Systems and Science	
MAE 241	Statics	3
MAE 242	Dynamics	3
MAE 243	Mechanics of Materials	3
MAE 320	Thermodynamics	3
MAE 331	Fluid Mechanics	3
Select one of the following (GEF 3):		4
MATH 155	Calculus 1	

or MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 156	Calculus 2 (GEF 8)	4
MATH 251	Multivariable Calculus	4
MATH 261	Elementary Differential Equations	4
MINE 201	Mine Surveying	3
MINE 205	Underground Mining Systems	3
MINE 206	Surface Mining Systems	4
MINE 261	Engineering Computer Aided Design	2
MINE 306	Mineral Property Evaluation	3
MINE 331	Mine Ventilation	3
MINE 382	Mine Power Systems	3
MINE 411	Rock Mechanics/Ground Control	4
MINE 427	Coal Preparation	4
MINE 461	Applied Mineral Computer Methods	3
MINE 471	Mine and Safety Management	3
MINE 480	Multidisciplinary Team Project	1
MINE 483	Mine Design-Exploration Mapping	2
MINE 484	Mine Design-Report Capstone (Fulfills Writing and Communications Skills Requirement)	4
PHYS 111	General Physics (GEF 8)	4
PHYS 112	General Physics	4
STAT 215	Introduction to Probability and Statistics	3
GEF Electives 1, 5, 6, 7		15
Total Hours		155

DUAL MINE AND GEOL SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
MATH 155 (GEF 3)		4 MATH 156 (GEF 8)	4
ENGR 101		2 ENGR 102	3
ENGR 191		1 PHYS 111 (GEF 8)	4
CHEM 115 & 115L (GEF 2)		4 ENGL 102 (GEF 1)	3
ENGL 101 (GEF 1)		3 GEOL 103 & GEOL 104	4
GEOL 101 & GEOL 102		4	
		18	18

Second Year

Fall	Hours	Spring	Hours
MAE 241		3 CHEM 116 & 116L (GEF 8)	4
GEOL 285		3 MAE 331	3
MATH 251		4 MINE 206	4
MINE 201		3 Geology Elective	3
MINE 205		3 PHYS 112	4
MINE 261		2	
		18	18

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
GEOL 341		4 GEOL 286		4 GEOL 404***	6
MAE 320		3 GEOL 311		4	
MATH 261		4 MAE 243		3	

MINE 461		3 MINE 331		3
STAT 215		3 MINE 427		4
		MINE 480		1
		17		19
Fourth Year				
Fall	Hours	Spring	Hours	
GEF 5		3 GEF 6		3
ECON 201 (GEF 4)		3 GEF 7		3
GEOL 331		3 Geology Elective		3
MINE 382		3 MAE 242		3
MINE 306		3 MINE 483		2
Geology Elective		3		
		18		14
Fifth Year				
Fall	Hours			
MINE 411		4		
MINE 471		3		
MINE 484		4		
GEOL 495 or MINE 495		1		
		12		

Total credit hours: 158

*** GEOL 404 Geology Field Camp is GEOL capstone course.

Notes: Discipline substitutions:

- GEOL 311 and other GEOL upper-division elective courses fulfill the requirements for MinE technical elective and eng/sci technical elective.
- GEOL requirement for GEOL 341 is substituted for MINE requirement for GEOL 342.
- MINE requirement of AGRN 455 is fulfilled through GEOL 321.
- MINE 205 and MINE 206 fulfill the requirement of GEOL upper-division technical electives.
- MINE 484 and GEOL 311 fulfill the requirement of writing course.
- ECON 201 and GEOL 101 fulfill two of the GEF requirements in the mining curriculum.

Degree Progress

- By the 4th semester in the major students will have a mid-semester review and should be progressing through calculus, chemistry, physics, and GEOL 286 with an adviser-approved plan and maintain a 2.0 GPA in Geology.
- All majors must meet with a G&G department adviser each semester.

Students who do not meet these benchmarks may be removed from their major.

Major Learning Outcomes

GEOLOGY

Upon successful completion of the B.S. degree, **Geology** majors will be able to:

1. Show competence in the identification of minerals, rocks, and fossils using various field and lab techniques.
2. Demonstrate the application of geological principles in solving problems needed for entry-level employment in Earth Science-related professions or for admission to graduate school.
3. Demonstrate competence in the use of quantitative methods for geological problem solving.
4. Demonstrate understanding of the Earth as a complex system of interacting rock, water, air, and life in the context of Deep Time.
5. Understand the origin of energy, mineral, and hydrological resources and the impact of their use on Earth environments and human life.
6. Characterize and determine the history of a geological site using the appropriate methods.
7. Generate 2D and 3D representations of geologic data collected by the student in the field and the laboratory.
8. Communicate geological knowledge through effective written and oral presentation skills.

History, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The Department of History offers courses focusing on a variety of world regions and time periods. Degree requirements insure that majors obtain an acquaintance with the history of several such regions and periods and develop skills in research and writing. Majors and non-majors may qualify for membership in Phi Alpha Theta, the national history honorary.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Minors

All students have the possibility of earning one or more minors; follow the link for a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>). Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

Career Prospects

The bachelor of arts with a major in history is designed to prepare students for careers in teaching, business, and government, and for graduate work in history, law, and related social sciences and humanities.

3+3 Program

The Department of History participates in the 3+3 Program with WVU's College of Law, which is an opportunity for qualified undergraduate students to earn their bachelor's degree and law degree in six years instead of seven years. Students accepted into the 3+3 program begin taking classes at WVU Law in what would be their fourth year of college. Students participating in this program must meet certain eligibility criteria and progress benchmarks. For questions regarding your eligibility, please contact your department advisor.

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, Italy

PROFESSORS

- Katherine Aaslestad - Ph.D. (University of Illinois)
Modern Europe, Germany, cultural
- Robert E. Blobaum - Ph.D. (University of Nebraska)
Eberly Family Distinguished Professor, modern Central and Eastern Europe
- William I. Brustein - Ph.D. (University of Washington)
European fascism, European political and religious extremism, comparative anti-Semitism
- Elizabeth Fones-Wolf - Ph.D. (University of Massachusetts)
20th-century U.S., social and economic
- Kenneth Fones-Wolf - Ph.D. (Temple University): Stuart and Joyce Robbins Distinguished Chair in History
U.S. labor, Appalachia, immigration, religion
- Robert M. Maxon - Ph.D. (Syracuse University)
East Africa, colonial Kenya

- Jason Phillips - Ph.D. (Rice University)
Civil war and reconstruction, southern history, 19th-century U.S.
- Matthew A. Vester - Ph.D. (University of California)
Early modern Europe, Italy

ASSOCIATE PROFESSORS

- 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, modern Latin America
- Kate Staples - Ph.D. (University of Minnesota)
Medieval, gender, England, material culture
- Michele Stephens - Ph.D. (University of Oklahoma)
Latin American, indigenous peoples, race and gender
- Mark Tauger - Ph.D. (UCLA)
20th-century Russia/USSR, historiography, world/comparative

ASSISTANT PROFESSORS

- Max Flomen - Ph.D. (UCLA)
Early American History, Native American History
- William Hal Gorby - Ph.D. (WVU)
West Virginia, Appalachia, Immigration
- Jennifer Thornton - Ph.D. (University of California, Riverside)
Public History

EMERITUS FACULTY

- William S. Arnett
Associate Professor
- Jack Hammersmith
Professor
- Barbara J. Howe
Associate Professor
- Elizabeth K. Hudson
Associate Professor
- Emory L. Kemp
Professor
- Ronald L. Lewis
Professor, Stuart and Joyce Robbins Chair
- Mary Lou Lustig
Professor
- Stephen C. McCluskey
Professor
- A. Michal McMahon
Associate Professor
- John C. Super
Professor

Admissions

- First-Time Freshmen are admitted directly into the major.
- Students transferring from another major at WVU are directly admitted to the history major if they are in good academic standing (2.00 overall GPA).
- Students transferring from another institution are directly admitted to the history major if they are in good academic standing (2.00 overall GPA).

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in History (<https://admissions.wvu.edu/academics/majors/history/>) major.

Click here to view the Suggested Plan of Study (p. 322)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences (p. 187) page.

Departmental Requirements for the B.A. in History

Students wishing to graduate with a degree in History must complete a total of thirty-three to thirty-six hours of history courses (for the B.A. 42 credit rule, please see B.A. link above). Students must abide by the following rules:

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Students majoring in History will complete HIST 484 to satisfy this requirement.
- **Writing and Communication Requirement:** The History Bachelor of Arts is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Calculation of the GPA in the Major:** Students must earn a minimum GPA of 2.2 with no grade lower than a C- in all courses applied to major requirements. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Secondary Concentration:** Students must complete a minor outside of History or a second major.
- **Benchmark Expectations:** For details, go to the History admissions tab (p. 319).

Curriculum Requirements

UNIVERSITY REQUIREMENTS	26
HIST 191 First-Year Seminar GEF Requirements: hours may vary	
ECAS B.A. Requirements	12

Fine Arts Requirement

Foreign Language

Global Studies & Diversity Requirement

DEPARTMENTAL REQUIREMENTS**Introductory History Courses****12**

HIST 302 Practicing History

Select three courses:

HIST 101 European History: Antiquity to 1600

HIST 102 European History since 1600

HIST 104 Latin America: Past and Present

HIST 105 The Middle East

HIST 106 East Asia: An Introduction

HIST 152 Growth of the American Nation to 1865

HIST 153 Making of Modern America: 1865 to the Present

HIST 179 World History to 1500

HIST 180 World History Since 1500

History Concentration**18**

Select two of the following regions and then select nine hours from each of the chosen categories, with at least nine hours at the 300 or 400 level

United States

HIST 210 Modern Military History

HIST 250 West Virginia

HIST 256 History of the American Revolution: 1763-1790

HIST 257 Antebellum America: 1781-1861

HIST 259 The United States: 1865-1918

HIST 261 Recent America: The United States since 1918

HIST 264 American Indian History

HIST 276 Twentieth Century American Foreign Relations

HIST 301 The Great Depression

HIST 353 1920s America

HIST 358 United States Cultural History: 1819-1893

HIST 360 America in the 1960's

HIST 365 The Vietnam War

HIST 375 Hollywood and History

HIST 409 Field Methods in Historic Preservation

HIST 412 Introduction to Public History

HIST 441 Seventeenth Century Colonial America

HIST 442 The French and Indian War, 1754-1763

HIST 445 History of American Women

HIST 451 African-American History-1900

HIST 452 African-American Since 1900

HIST 453 Civil War and Reconstruction

HIST 454 The Coming of the United States Civil War

HIST 456 The Gilded Age in US History

HIST 457 The United States from McKinley to the New Deal, 1896 to 1933

HIST 459 United States History: New Deal to Great Society

HIST 460 World War II in America

HIST 463 American Foreign Relations to 1941

HIST 464 American Foreign Relations 1941 to Present

HIST 468 The Old South

HIST 469 The New South

HIST 470 United States Civil Rights Movement

HIST 473	Appalachian Regional History
HIST 477	Working Class America
HIST 478	American Immigration History
HIST 489	Introduction to Historic Preservation
Europe	
HIST 201	History of Ancient Times: Stone Age to the Fall of Rome
HIST 203	Introduction to Medieval Europe
HIST 204	Renaissance and Reformation
HIST 205	Absolutism & Enlightenment
HIST 207	Revolutionary Europe
HIST 209	Twentieth Century Europe
HIST 210	Modern Military History
HIST 211	The Mediterranean 1200-1800
HIST 217	History of Russia to 1917
HIST 218	History of Russia: 1900-Present
HIST 221	History of Modern Germany
HIST 220	The Holocaust (The Holocaust)
HIST 277	Revolutions in Science and Technology
HIST 300	Greece and Rome
HIST 304	History of Sacred Places
HIST 313	France from 1450 to 1750
HIST 314	France Since 1815
HIST 317	German Central Europe, 1648-1900
HIST 318	Twentieth Century German Central Europe
HIST 330	History of Italy, 1200-1800
HIST 331	History of Italy since 1800
HIST 346	Women, Gender, and Kinship in Premodern Europe
HIST 402	Greece: From Troy to Alexander
HIST 403	Rome: From Romulus to Zenobia
HIST 414	The Great War, 1914-1918
HIST 415	Early Modern Law & Society
HIST 416	The French Wars of Religion
HIST 417	World War II in Europe
HIST 418	Eastern Europe Since 1945
HIST 419	Revolutionary Russia: 1900-1953
HIST 420	USSR and After: 1953 to Present
HIST 421	Hitler and the Third Reich
HIST 422	Twentieth-Century Germany from Weimar to Bonn
HIST 423	History of Fascism
HIST 424	Britain 1455-1603
HIST 430	Living and Dying in Medieval Europe
HIST 432	Eighteenth Century Britain: 1715-1832
Africa, Asia, and Latin America	
HIST 201	History of Ancient Times: Stone Age to the Fall of Rome
HIST 225	Gandhi and Beyond: Modern History of South Asia
HIST 241	Latin America: Culture, Conquest, Colonization
HIST 242	Latin America: Reform and Revolution
HIST 281	Peasants to Agribusiness: History and Problems of Modern Agriculture
HIST 300	Greece and Rome
HIST 304	History of Sacred Places
HIST 319	Myth and Culture in Pre-colonial Africa
HIST 320	Pre-Colonial Africa

HIST 321	Colonial Africa and Independence	
HIST 325	Modern China	
HIST 326	Modern Japan	
HIST 350	The Aztec, Maya, and Inca	
HIST 365	The Vietnam War	
HIST 370	Latin America and the World	
HIST 402	Greece: From Troy to Alexander	
HIST 403	Rome: From Romulus to Zenobia	
HIST 427	East Africa to 1895	
HIST 428	East Africa Since 1895	
HIST 433	West Africa to 1885	
HIST 434	West Africa from 1885	
HIST 435	History of Chinese Thought	
HIST 437	Africa in World History	
HIST 439	History of Modern Mexico	
HIST 440	Mexican Law from Montezuma to El Chapo	
Non-Western History Requirement		3
Select one of the following, may overlap with another course taken		
At least one course in the African/ Asian/ Latin American list above		
or:		
HIST 179	World History to 1500	
or:		
HIST 180	World History Since 1500	
Capstone Experience		3
HIST 484	Historical Research-Capstone	
Secondary Concentration/ Minor (fulfills the F8 requirement)		15
Students must complete a minor, double major, or dual degree		
General Electives		31
Number of electives may vary depending on overlap		
Total Hours		120

Suggested Plan of Study

The plan below illustrates a plan of study with a minor.

First Year

Fall	Hours	Spring	Hours
HIST 191		1 ENGL 101 (GEF 1)	3
GEF 2		4 GEF 3	3
HIST 302		3 GEF 4	3
HIST Intro Course 1		3 HIST Intro Course 2	3
Foreign Language 101		3 Foreign Language 102	3
General Elective		1	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 ECAS Fine Arts Requirement (GEF 6)	3
GEF 5		3 Foreign Language 204	3
Foreign Language 203		3 HIST Concentration Area 1	3
ECAS Goba Studies & Diversity Requirement (GEF 7)		3 Minor Course 1	3
HIST Intro Course 3		3 General Elective	3
		15	15

Third Year

Fall	Hours	Spring	Hours
HIST Concentration Area 1		3 HIST Concentration Area 2	3
HIST Concentration Area 1		3 HIST Concentration Area 2	3
Minor Course 2		3 Minor Course 3	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
HIST Concentration Area 2		3 HIST 484 (Capstone and Writing)	3
HIST Non-Western		3 Minor Course 5	3
Minor Course 4		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

Suggested 3+3 Program Plan of Study**First Year**

Fall	Hours	Spring	Hours
HIST 191		1 ENGL 101 (GEF 1)	3
HIST 302		3 Foreign Language 102	3
Foreign Language 101		3 HIST Intro Course 1 (GEF 5)	3
General Elective		2 HIST Intro Course 2	3
GEF 2		3 GEF 3	3
GEF 4		3	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 ECAS Fine Arts Requirement (GEF 6)	3
Foreign Language 203		3 Foreign Language 204	3
HIST Intro Course 3 (GEF 7) (Non-western and ECAS Gl. St. and Div. Req.)		3 HIST Concentration Area 1	3
Minor Course 1		3 HIST Concentration Course Area 1	3
GEF 2		3 Minor Course	3
		15	15

Third Year

Fall	Hours	Spring	Hours
HIST Concentration Area 1		3 HIST 484 (Capstone)	3
HIST Concentration Area 2		3 HIST Concentration Area 2	3
Minor Course 3		3 HIST Concentration Area 3	3
Minor Course 4		3 Minor Course 5	3
General Elective		3 General Elective	3
		15	15

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

Total credit hours: 122

Degree Progress

- Students must maintain a 2.0 GPA overall and a minimum of a 2.00 GPA in History every semester (with a 2.2 in HIST required for graduation).
- All majors must meet with their History adviser every semester.

Students who do not meet these benchmarks may be removed from their major.

Major Learning Outcomes

HISTORY

Upon successful completion of the B.A. degree, **History** majors will be able to:

1. Demonstrate general knowledge of the facts, concepts, and approaches of history.
2. Critically analyze and assess primary sources.
3. Critically analyze and assess secondary sources.
4. Conduct original historical research and report results in writing.
5. Produce historical essays that are coherent, grammatically correct, and use proper historical documentation.
6. Demonstrate ability to successfully present work in an oral presentation.

Interdisciplinary Studies, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The Eberly College Programs for Multi- and Interdisciplinary Studies (MDS) offer two degree options, the Bachelor of Multidisciplinary Studies degree (B.MdS.) and the Bachelor of Arts in Interdisciplinary Studies (B.A.). Both the Multidisciplinary Studies and Interdisciplinary Studies degree programs are comprised of three related minors. The program does not limit students to courses of study in a particular college or school, but rather stresses the importance of breadth of knowledge and cross-disciplinary communication. The MDS and IDS degrees emphasize flexibility and problem solving. Students will learn to use specialized knowledge from individual disciplines to analyze problems from divergent perspectives. Students will also apply multidisciplinary and interdisciplinary techniques to communicate the strengths of their self-chosen course of study.

MDS and IDS students choose three minor areas and must demonstrate how these fields of study work together toward his/her educational and/or career goals. For example, a student may choose the areas of business administration, sport and exercise psychology, and professional writing and editing, with the goal of a career in sports and special events or marketing/coordinating. MDS and IDS students participate in a capstone during their final semester, incorporating their three disciplines into a senior project, presentation, and paper.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (p. 50) here. Please note that students may not earn a minor in their major field. MDS students may add a fourth minor to complement their three core minors.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

MDS Graduates

The breadth of study available to Multi- and Interdisciplinary students empowers them to be successful in any field they choose. MDS and IDS degree holders are flourishing in business, teaching, entrepreneurial endeavors, health professions, and public and health administration. They are

earning advanced degrees in social work, business administration, and law. The flexibility of the IDS and MDS degrees ensure that students are prepared for success in today's rapidly changing workforce.

FACULTY

ASSOCIATE PROFESSOR

- Renee K. Nicholson - M.F.A. (West Virginia University) Certificate of Professional Achievement in Narrative Medicine (Columbia University) Creative Writing and Narrative Medicine

INSTRUCTOR

- Andrea Soccorsi - M.A. (West Virginia University) English Language and Literature

Admissions

- First Time Freshmen with a 3.0 high school GPA and a 22 composite ACT score or an 1100 composite SAT score are admitted directly into the major.
- Students transferring from another major need to have a minimum institutional GPA of 3.0.
- Students transferring from another institution need to have a minimum GPA of 3.0

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Interdisciplinary Studies (<https://admissions.wvu.edu/academics/majors/interdisciplinary-studies/>) major.

Click here to view the Suggested Plan of Study (p. 326)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete the WVU General Education Foundations requirements, College B.A. requirements, programmatic requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences (<http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/#bachelorofartstext>) page.

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Students in the MDS program must complete MDS 489 (<http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/multidisciplinarystudiesdegreeprogram/>) with a grade of C- or better during their final year.
- **Writing and Communication Skills Requirement:** The Interdisciplinary Studies Program is a **SpeakWrite Affiliated Program**, committed to fostering and assessing students' written, verbal, visual, and mediated communication skills. The Interdisciplinary Studies major requires its Bachelor

of Arts program graduates to complete ENGL 101 and ENGL 102 (or ENGL 103), and a minimum of four additional **SpeakWrite Certified Courses™** as a part of their programs of study. *All Interdisciplinary Studies majors are required to take MDS 199, MDS 289, MDS 389, and MDS 489. These are each SpeakWrite Certified courses.*

- **Calculation of the GPA in the Major:** Students must obtain a cumulative grade point average of at least 2.0, with grade of C- or better in all courses counted toward the minors.
- **Course Requirements:** Minor courses may not be used to satisfy the General Education Foundations requirements. Each minor must consist of at least fifteen unique credits. Students must complete at least sixty credit hours of coursework at the 200 level or above. Students are required to complete MDS 199, MDS 289, MDS 389, and MDS 489 with a minimum grade of C-. At the latest, MDS 199 must be completed the semester before taking MDS 489.
- **Benchmark Expectations:** For details, go to the Multidisciplinary Studies admission tab (p. 359).

Curriculum Requirements

University Requirements		37
MDS 191	First Year Seminar	
GEF (credit hours may vary based on selected options)		
ECAS B.A. Requirements		12
Foreign Language		
Fine Arts Requirement		
Global Studies & Diversity Requirement		
Program Requirements		
MDS Requirements		11
MDS 199	Orientation to MDS	
MDS 289	Foundations of Interdisciplinary Studies	
MDS 389	Interdisciplinary Research Methods	
Minor One		15
Minor Two		15
Minor Three		15
Capstone Requirement		
MDS 489	Capstone	
General Electives		15
Number of electives may vary depending on options selected and AP credits		
Total Hours		120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
MDS 191		1 ENGL 101 (GEF 1)	3
GEF 2		3 GEF 2	3
GEF 3		3 GEF 5	3
GEF 4		3 GEF 6 (ECAS Fine Arts Requirement)	3
Foreign Language 101		3 Foreign Language 102	3
MDS 199		2	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 GEF 8*	3
Foreign Language 203		3 GEF 8*	3
MDS 289		3 Foreign Language 204	3
Minor I-1		3 Minor II-1	3
General Elective		3 Minor III-1	3
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 8*		3 Minor I-3	3
ECAS Global Studies & Diversity Requirement (GEF 7)		3 Minor II-3	3
Minor I-2		3 Minor III-2	3
Minor II-2		3 Minor III-3	3
MDS 389		3 General Elective @ 200-level	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
Minor I-4		3 MDS 489	3
Minor I-5		3 Minor II-5	3
Minor II-4		3 Minor III-5	3
Minor III-4		3 General Elective @ 200-level	3
General Elective @ 200-level		3 General Elective @ 200-level	3
		15	15

Total credit hours: 120

* Students earning a fourth minor, a second major or a dual degree already fulfill F 8.

Degree Progress

- Students in the IDS program must maintain a 2.0 GPA.
- MDS 199 must be completed by the 2nd semester in the program.
- Students should make progress toward their plan of study, reviewed each semester.
- All majors must meet with an IDS program adviser each semester.

Students who do not meet these benchmarks may be removed from their major.

Major Learning Outcomes**INTERDISCIPLINARY STUDIES**

1. Integrate disciplinary perspectives and apply interdisciplinary research methods to contemporary political, social, scientific, and humanitarian questions.
2. Apply core theories of the three primary component disciplines of their degree to construct informed analyses and frame creative propositions.
3. Analyze sources from an interdisciplinary perspective.
4. Use critical thinking skills to formulate and defend positions by developing, supporting and presenting information clearly in written, verbal, visual, and mediated forms.
5. Communicate clearly in written and oral form the value of an interdisciplinary approach to problem solving as an alternative or supplement to discipline-based academic research.
6. Successfully apply for graduate school or post baccalaureate degree job placement.

International Studies, B.A.**Degree Offered**

- Bachelor of Arts

Nature of the Program

The international studies major is composed of internationally oriented courses drawn from several disciplinary and interdisciplinary study areas. Students take courses from departments such as economics, geography, history, political science, sociology/anthropology, and world languages.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Minors

All students have the possibility of earning one or more minors; a list of all available minors and their requirements is available at <http://catalog.wvu.edu/undergraduate/minors/>. Please note that students may not earn a minor in their major field.

Study Abroad, Internships, and Other Experiential Education Opportunities

Students are strongly encouraged to take advantage of opportunities for professional internships and study abroad, which may be undertaken for academic credit (often fulfilling specific course requirements for the major) with the approval of students' designated international studies advisers. Through internships, students gain first-hand knowledge of organizations engaged in international social, economic, and governmental affairs.

To experience another society and in many cases to improve their foreign language capabilities, students may also study abroad for a summer, one semester, or an entire academic year. Interested students should consult their international studies adviser. Additional experiential education opportunities available to international studies majors include academic simulation programs and global service-learning.

Second Majors, Minors, and Other Coursework

Students are encouraged to work closely with their international studies advisor and faculty in the program to select relevant courses, second majors, and/or minors that will complement their work in international studies and lead to meaningful career options.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

DIRECTOR

- Clarissa Estep - Ph.D. (West Virginia University)
Department of Political Science

PROFESSORS

- Joe D. Hagan - Ph.D (University of Kentucky)
Barnette Professor in Political Science
- Amy Thompson - Michigan State University
Department of World Languages, Literatures, and Linguistics

ASSOCIATE PROFESSORS

- Boris Barkanov - University of California, Berkeley
Department of Political Science
- R. Scott Crichlow - Ph.D. (Louisiana State University)
Chair, Department of Political Science
- Karen Culcasi - Ph.D. (Syracuse University)
Department of Geology and Geography
- Christina Fattore - Ph.D. (Florida State University)
Department of Political Science
- David M. Hauser - Ph.D. (University of Pittsburgh)
Department of Political Science
- Daniel Renfrew - Ph.D. (Binghamton University, State University of New York)
Department of Sociology and Anthropology

ASSISTANT PROFESSORS

- William Hal Gorby - Ph.D. (West Virginia University)
Department of History
- Mason W. Mosley - Ph.D. (Vanderbilt University)
Department of Political Science

Admissions

- Freshmen are admitted directly into the major.
- Students admitted from another WVU major must have an overall GPA of a 2.0.
- Students admitted from another institution must have an overall GPA of a 2.0.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in International Studies (<https://admissions.wvu.edu/academics/majors/international-studies/>) major.

Click here to view the Suggested Plan of Study (p. 332)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences (p. 187) page.

Departmental Requirements for the B.A. in International Studies

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. For International Studies majors, INTS 488 will fulfill this requirement.
- **Writing and Communication Requirement:** International Studies Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and any two additional **SpeakWrite Certified Courses™** selected from: CHIN 301, CHIN 303, COMM 309, FCLT 206, FCLT 306, FCLT 310, FCLT 380, FCLT 381, FLIT 217, FLIT 238, FLIT 239, FLIT 257, FLIT 266, FRCH 301, FRCH 302, FRCH 303, FRCH 304, GEOG 243, GEOG 302, GEOG 415, GEOG 443, GEOG 455, GER 301, GER 302, GER 303, GER 304, HIST 180, HIST 209, HIST 221, HIST 225, HIST 242, HIST 276, HIST 318, HIST 325, HIST 418, HIST 439, HIST 464, INTS 488 (3 credit hour), ITAL 301, ITAL 303, ITAL 304, JAPN 301, POLS 230, POLS 240, POLS 250, POLS 300, POLS 355, POLS 491A, RELG 230, RELG 231, RELG 301, RUSS 301, RUSS 303, RUSS 342, RUSS 451, SOCA 350, SOCA 458, SPAN 311, SPAN 312.
- **Calculation of the GPA in the Major:** Students must obtain a cumulative and international studies grade point average of 2.0. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Area of Emphasis:** Students must declare an area of emphasis. Fifteen credits within the Area of Emphasis must be completed at the 300 level or above.
- **Regional Focus:** Students must select a regional focus.
- **Benchmark Expectations:** For details, go to the International Studies admissions tab (p. 329).

Curriculum Requirements

UNIVERSITY REQUIREMENTS	31
INTS 191 First-Year Seminar	
GEF: number of classes will vary depending on overlap	
ECAS B.A. Requirements	12
Foreign Language	
Fine Arts Requirement	
Global Studies & Diversity Requirement	
DEPARTMENTAL REQUIREMENTS	
Core Courses	13
INTS 288 Professional Development: Success After International Studies	
POLS 260 Introduction to International Relations	
ECON 200 Survey of Economics	
or ECON 201 Principles of Microeconomics	
POLS 300 Empirical Political Analysis	
or INTS 300 Social Inquiry in International Studies	
or GEOG 333 Human Geography in Practice	
Select one of the following courses:	
GEOG 102 World Regions	
HIST 180 World History Since 1500	
HN&F 126 Society and Food	
POLS 103 Global Political Issues	
POLS 250 Introduction to Comparative Politics	
RELG 102 Introduction to World Religions	
SOCA 105 Introduction to Anthropology	
Area of Emphasis	18
Select an area of emphasis (18 credits)	
Regional Focus	9
Select a regional focus (9 hours) from Africa/Middle East, Asia, Europe, or The Americas	
AFRICA/MIDDLE EAST (Select one class from 3 of the 4 following categories)	
Language	
ARBC 303 Arabic Conversation 1	
or ARBC 304 Arabic Conversation 2	
or FRCH 303 Structure and Communication	
or FRCH 304 Advanced Readings	
History	
HIST 105 The Middle East	
or HIST 321 Colonial Africa and Independence	
or HIST 428 East Africa Since 1895	
or HIST 434 West Africa from 1885	
Politics	
POLS 356 Politics of the Middle East	
or POLS 358 Politics of Africa	
Culture	
FLIT 238 African Women Writers	
or FLIT 239 Francophone Literature in Translation	
or FLIT 315 Modern Arabic Literature	
or FLIT 316 Arab Women Writers	
or FRCH 301 Language Through Civilization	
or FRCH 302 Language Through Culture	
or GEOG 243 Geography of Africa	
or GEOG 244 Geography of the Middle East	

or GEOG 443 African Environment and Development
 or RELG 232 History and Practice of Islam

ASIA (Select one class from 3 of the 4 following categories)

Language

CHIN 301 Third Year Chinese 1
 or JAPN 301 Conversation and Composition 1

History

HIST 106 East Asia: An Introduction
 or HIST 225 Gandhi and Beyond: Modern History of South Asia
 or HIST 325 Modern China
 or HIST 326 Modern Japan
 or HIST 435 History of Chinese Thought

Politics

POLS 350 Government of Japan
 or POLS 354 Government of China
 or POLS 369 Far East International Affairs

Culture

CHIN 303 Readings in Modern Chinese 1
 or FCLT 206 Introduction to Japanese Culture
 or FCLT 210 Chinese Civilization and Culture
 or FCLT 306 Japanese Culture and Cinema
 or FCLT 310 Chinese Cinema
 or FLIT 217 Chinese Literature in Translation 2
 or RELG 230 Religions of India
 or RELG 231 Religions of China and Japan
 or RELG 301 Studies in Asian Scriptures

EUROPE (Select one class from 3 of the 4 following categories)

Language

FRCH 303 Structure and Communication
 or FRCH 304 Advanced Readings
 or ITAL 303 Composition and Conversation
 or ITAL 304 Advanced Conversation
 or GER 301 Language and Society
 or GER 302 Conversations in Context 2: Germany Today
 or RUSS 301 Conversation and Composition 1
 or RUSS 303 Advanced Structure and Reading 1
 or SPAN 311 Readings in Spanish
 or SPAN 312 Writing in the Hispanic World

History

HIST 209 Twentieth Century Europe
 or HIST 218 History of Russia: 1900-Present
 or HIST 221 History of Modern Germany
 or HIST 314 France Since 1815
 or HIST 318 Twentieth Century German Central Europe
 or HIST 331 History of Italy since 1800
 or HIST 418 Eastern Europe Since 1945
 or HIST 420 USSR and After: 1953 to Present
 or HIST 422 Twentieth-Century Germany from Weimar to Bonn

Politics

POLS 351 Russian and Post-Soviet Politics
 or POLS 352 Politics of the European Union
 or POLS 353 Western Democratic Governments

or POLS 452	European Union Law/Legal Systems	
or POLS 453	European Union Law/Institutions	
or INTS 360	The European Union and Contemporary European Affairs	
Culture		
FCLT 340	Italian Cinema 1945 to Present	
or FCLT 380	Holocaust: Eastern Europe Film and Literature	
or FCLT 381	Contemporary Polish Cinema	
or FLIT 229	German Literature Since World War II	
or FLIT 236	French Literature in Translation 2	
or FLIT 237	French Women Writers	
or FLIT 257	Russian Literature Translation 2	
or FRCH 301	Language Through Civilization	
or FRCH 302	Language Through Culture	
or GEOG 241	Geography of Europe	
or GER 303	Youth Culture in German-Speaking Countries	
or GER 304	Culture and Science in German-speaking Countries	
or ITAL 301	Language Through Culture	
or INTS 361	European Identity and French-German Cooperation along the Rhine	
or RUSS 342	Survey of Russian Literature	
or RUSS 451	Russian Culture	
THE AMERICAS (Select one class from 3 of the 4 following categories)		
Language		
SPAN 311	Readings in Spanish	
or SPAN 312	Writing in the Hispanic World	
History		
HIST 104	Latin America: Past and Present	
or HIST 242	Latin America: Reform and Revolution	
or HIST 370	Latin America and the World	
or HIST 439	History of Modern Mexico	
Politics		
POLS 355	Governments of Latin America	
Culture		
FCLT 260	Cultures of Mexico	
or FCLT 360	Latin American Cinema	
or FLIT 266	Latin American Literature	
or FLIT 285	Brazilian Literature Translation	
or FLIT 361	Latin American Literature and Violence	
or GEOG 245	Geography of Latin America	
or SOCA 350	Latin American Culture	
Capstone Experience		3
INTS 488	Capstone International Studies	
Exit Interview		
GENERAL ELECTIVES		34
Number of elective courses may vary depending on overlap.		
Total Hours		120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
INTS 191		1 ENGL 101 (GEF 1)	3
GEF 2		3 GEF 2	3
Foreign Language 101		3 GEF 3	3

Core Elective 1	3 GEF 5	3
General Elective	1 Foreign Language 102	3
General Elective	3	
General Elective	1	
<hr/>		
	15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 AoE Course 1	3
INTS 288		1 Foreign Language 204	3
ECAS Fine Arts Requirement (GEF 6)		3 ECON 200 or 201 (GEF 4)	3
Foreign Language 203		3 GEF 8*	3
POLS 260 (ECAS Global Studies and Diversity Requirement and GEF 7)		3 General Elective	3
General Elective	2		
<hr/>			
	15		15

Third Year

Fall	Hours	Spring	Hours
GEF 8*		3 GEF 8*	3
AoE Course 2		3 AoE Course 3	3
Regional Course 1		3 AoE Course 4	3
POLS 300 or SOCA 311		3 Regional Course 2	3
General Elective		3 General Elective	3
<hr/>			
	15		15

Fourth Year

Fall	Hours	Spring	Hours
AoE Course 5		3 INTS 488	3
Regional Course 3		3 AoE Course 6	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
<hr/>			
	15		15

Total credit hours: 120

* Students completing a minor, a second major or a dual degree already meet F 8.

Areas of Emphasis

Majors are required to select an area of emphasis for specialized advanced study.

GLOBAL AFFAIRS

- Global Connections (p. 333)
- Security and Diplomacy (p. 334)

GLOBAL CONNECTIONS AREA OF EMPHASIS

AREA OF EMPHASIS: GLOBAL CONNECTIONS

18

Select six of the following courses from at least two disciplines. Fifteen credits must be earned at the 300 level or above:

ACCT 200	Survey of Accounting
BIOL 105	Environmental Biology
COMM 309	Health Communication
ECON 202	Principles of Macroeconomics
ECON 225	Elementary Business and Economics Statistics
ECON 451	International Economics
ECON 455	Economic Development

ENVP 155	Elements of Environmental Protection
GEOG 207	Climate and Environment
GEOG 209	Economic Geography
GEOG 302	Political Geography
GEOG 312	Migration and Human Rights
GEOG 411	Rural and Regional Development
GEOG 415	Global Environmental Change
HIST 276	Twentieth Century American Foreign Relations
HIST 464	American Foreign Relations 1941 to Present
POLS 230	Introduction to Policy Analysis
POLS 240	Introduction to Public Administration
POLS 338	Environmental Policy
POLS 360	International Political Economy
POLS 361	International Law and Institutions
POLS 362	Comparative Foreign Policy
POLS 363	International Law
POLS 364	American Foreign Relations
POLS 376	Contentious Politics
POLS 460	Gender and International Relations
PUBH 101	Introduction to Public and Community Health
PUBH 201	Global Perspectives of Public Health
PUBH 222	Epidemiology for Public Health
SOCA 417	Sociology of Globalization
SOCA 458	Environmental Anthropology
WGST 345	Women in International Development
WMAN 150	Principles of Conservation Ecology

Total Hours

18

SECURITY AND DIPLOMACY AREA OF EMPHASIS REQUIREMENTS

AREA OF EMPHASIS: SECURITY AND DIPLOMACY

18

Select six of the following courses from at least two disciplines:

GEOG 302	Political Geography
GEOG 312	Migration and Human Rights
GEOG 350	Geographic Information Systems and Science
GEOG 455	Introduction to Remote Sensing
GEOG 456	Remote Sensing Applications
HIST 463	American Foreign Relations to 1941
HIST 464	American Foreign Relations 1941 to Present
POLS 261	Introduction to National Security
POLS 301	Introduction to Intelligence Analysis
POLS 302	Intelligence Analysis Methods
POLS 359	Politics of Terrorism
POLS 360	International Political Economy
POLS 361	International Law and Institutions
POLS 362	Comparative Foreign Policy
POLS 363	International Law
POLS 364	American Foreign Relations
POLS 365	Foreign Policy Decision-Making
POLS 368	Politics of War and Peace
POLS 376	Contentious Politics
POLS 461	Transformation of War

POLS 462	Intelligence Failures
SOCA 345	Terrorism

Total Hours

18

Degree Progress

BENCHMARK EXPECTATIONS

By the third semester in the program, students should have:

- Completed or be registered for: POLS 260, ECON 200 or ECON 201, and one additional course from the core list.
- Made progress toward the world language requirement.

All majors must meet with an INTS adviser each semester (double majors should meet with both advisers).

Students who do not meet these requirements may be removed from their major.

Major Learning Outcomes

INTERNATIONAL STUDIES

Knowledge

- Students will apply theories and concepts drawn from appropriate disciplines such as political science, history, economics, geography, and sociology to international affairs.
- Students will display substantive knowledge of global and/or regional challenges through synthesis of the history, culture, society, geography, politics, and economy of a major world region.

Skills

- Students will demonstrate basic receptive and productive proficiency (four or more semesters) in a language appropriate for their chosen regional focus.
- Students will apply interdisciplinary social science research methods, including using library databases to find relevant literature, evaluating the strengths and weaknesses of academic arguments, and applying basic quantitative and qualitative methods to make solid, evidence-based decisions.

Attitudes

- Students will exhibit the intellectual and ethical responsibilities of active global citizenship.

Africa and the Middle East

Minor Code - U019

Courses must be taken in at least three disciplines/departments, and all FLIT, FCLT, and foreign language courses are considered to be in one discipline/department.

A minimum overall GPA of 2.0 in the minor.

Foundation Course

Select one of the following:

3

ECON 451	International Economics
ECON 454	Comparative Economic Systems
GEOG 302	Political Geography
GEOG 310	Global Issues
HIST 463	American Foreign Relations to 1941
HIST 464	American Foreign Relations 1941 to Present
POLS 250	Introduction to Comparative Politics
POLS 260	Introduction to International Relations
POLS 364	American Foreign Relations
POLS 368	Politics of War and Peace

Specialized Courses:

Select four of the following from at least three disciplines:

12

Group I

ECON 455 Economic Development

Group II

GEOG 243 Geography of Africa

GEOG 411 Rural and Regional Development

Group III

HIST 427 East Africa to 1895

HIST 428 East Africa Since 1895

HIST 320 Pre-Colonial Africa

HIST 321 Colonial Africa and Independence

HIST 433 West Africa to 1885

HIST 434 West Africa from 1885

Group IV

MUSC 477 Music of Africa

Group V

POLS 356 Politics of the Middle East

POLS 358 Politics of Africa

Group VI

RELG 232 History and Practice of Islam

Group VII

Group VIII

WGST 345 Women in International Development

Total Hours

15

The Americas

Minor Code - U020

Courses must be taken in at least three disciplines/departments, all FLIT, FCLT, and foreign language courses are considered to be in one discipline/department.

A minimum GPA of 2.0 is required in all minor courses

Foundation Course

Select one of the following:

3

ECON 451 International Economics

ECON 454 Comparative Economic Systems

GEOG 302 Political Geography

GEOG 310 Global Issues

HIST 463 American Foreign Relations to 1941

HIST 464 American Foreign Relations 1941 to Present

POLS 250 Introduction to Comparative Politics

POLS 260 Introduction to International Relations

POLS 364 American Foreign Relations

POLS 368 Politics of War and Peace

Specialized Courses:

Select four of the following (at least three must be from different disciplines/departments)

12

Group I

ECON 455 Economic Development

Group II

FLIT 285 Brazilian Literature Translation

SPAN 330 Latin American Culture

SPAN 332 Modern Spanish American Literature

SPAN 361 Commercial Spanish

SPAN 494 - Seminar (subject matter changes)

Group III	
GEOG 240	United States and Canada
GEOG 411	Rural and Regional Development
Group IV	
HIST 241	Latin America: Culture, Conquest, Colonization
HIST 242	Latin America: Reform and Revolution
Group V	
POLS 355	Governments of Latin America
Group VI	
SOCA 350	Latin American Culture
Group VII	
WGST 345	Women in International Development
Total Hours	
	15

Asia

Minor Code - U021

Courses must be taken in at least three disciplines/departments, all FLIT, FCLT, and foreign language courses are considered to be in one discipline/department.

Students must earn an overall GPA of 2.0 in the minor, with a grade of C- or better in all required courses.

Foundation Course:

Select one of the following: 3

ECON 451	International Economics
ECON 454	Comparative Economic Systems
GEOG 302	Political Geography
GEOG 310	Global Issues
HIST 463	American Foreign Relations to 1941
HIST 464	American Foreign Relations 1941 to Present
POLS 250	Introduction to Comparative Politics
POLS 260	Introduction to International Relations
POLS 364	American Foreign Relations
POLS 368	Politics of War and Peace

Specialized Courses:

Select four of the following (at least three must be from different disciplines/departments) 12

Group I	
ECON 455	Economic Development
Group II	
FLIT 216	Chinese Literature Translation 1
Group III	
GEOG 411	Rural and Regional Development
Group IV	
HIST 325	Modern China
HIST 326	Modern Japan
Group V	
POLS 350	Government of Japan
POLS 354	Government of China
POLS 369	Far East International Affairs
Group VI	
RELG 230	Religions of India
RELG 231	Religions of China and Japan
Group VII	

Europe

Minor Code - U022

Courses must be taken in at least three disciplines/departments, all FLIT, FCLT, and foreign language courses are considered to be in one discipline/department.

A minimum GPA of 2.0 is required in all minor courses

Foundation Course

Select one of the following:

3

ECON 451	International Economics
ECON 454	Comparative Economic Systems
GEOG 302	Political Geography
GEOG 310	Global Issues
HIST 463	American Foreign Relations to 1941
HIST 464	American Foreign Relations 1941 to Present
POLS 250	Introduction to Comparative Politics
POLS 260	Introduction to International Relations
POLS 364	American Foreign Relations
POLS 368	Politics of War and Peace

Specialized Courses

Select four of the following (at least three must be from different disciplines/departments)

12

Group I

FLIT 235	French Literature in Translation 1
FLIT 236	French Literature in Translation 2
FLIT 256	Russian Literature Translation 1
FLIT 257	Russian Literature Translation 2
FLIT 264	Spanish Literature in Translation
FRCH 421	Survey of Literature 1
FRCH 422	Survey of Literature 2
FRCH 432	Contemporary Culture
FRCH 461	Commercial French 1
GER 431	German Literature: Fables/Fairy Tales/Enlightenment -Romanticism
GER 432	German Literature: Since Romanticism
GER 361	German for Professional Purposes
GER 362	German for STEM
GER 440	German Cultural History: 350-1700
GER 441	German Cultural History Since 1945
RUSS 341	Survey of Russian Literature
RUSS 342	Survey of Russian Literature
SPAN 340	Culture of Spain
SPAN 342	Modern Literature of Spain
SPAN 361	Commercial Spanish

Group II

HIST 205	Absolutism & Enlightenment
HIST 207	Revolutionary Europe
HIST 209	Twentieth Century Europe
HIST 217	History of Russia to 1917
HIST 218	History of Russia: 1900-Present
HIST 221	History of Modern Germany
HIST 313	France from 1450 to 1750

HIST 314	France Since 1815
HIST 416	The French Wars of Religion
HIST 417	World War II in Europe
HIST 418	Eastern Europe Since 1945
HIST 419	Revolutionary Russia: 1900-1953
HIST 420	USSR and After: 1953 to Present
HIST 421	Hitler and the Third Reich
HIST 422	Twentieth-Century Germany from Weimar to Bonn
HIST 432	Eighteenth Century Britain: 1715-1832
Group III	
POLS 351	Russian and Post-Soviet Politics
POLS 352	Politics of the European Union
Group IV	
WGST 345	Women in International Development
Total Hours	

15

Development Studies

Minor Code - U023

Courses must be taken in at least three disciplines/departments, all FLIT, FCLT, and foreign language courses are considered to be in one discipline/department.

A minimum GPA of 2.0 is required in all minor courses

Foundation Course

Select one of the following:

3

ECON 451	International Economics
ECON 454	Comparative Economic Systems
GEOG 302	Political Geography
GEOG 310	Global Issues
HIST 463	American Foreign Relations to 1941
HIST 464	American Foreign Relations 1941 to Present
POLS 250	Introduction to Comparative Politics
POLS 260	Introduction to International Relations
POLS 364	American Foreign Relations
POLS 368	Politics of War and Peace

Specialized Courses:

Select four of the following (at least three must be from different disciplines/departments)

12

Group I	
ECON 455	Economic Development
Group II	
GEOG 243	Geography of Africa
GEOG 411	Rural and Regional Development
GEOG 412	Geography of Gender
Group III	
HIST 242	Latin America: Reform and Revolution
HIST 321	Colonial Africa and Independence
HIST 325	Modern China
HIST 428	East Africa Since 1895
HIST 433	West Africa to 1885
HIST 434	West Africa from 1885
Group IV	
POLS 354	Government of China
POLS 355	Governments of Latin America

POLS 356	Politics of the Middle East
POLS 358	Politics of Africa
Group V	
SOCA 350	Latin American Culture
Group VI	
WGST 345	Women in International Development
Total Hours	

Leadership Studies

Nature of the Program

The leadership studies minor complements a traditional academic major by exposing students to leadership history and theory as well as giving them practical experience through experiential learning.

Scholarships

The study of leadership is supported by several scholarships and awards. These funds support academic and extracurricular enrichment activities to enhance the student's study, practice, and understanding of "mobilizing others to bring about sustained positive change," which is one definition of leadership. The scholarships include:

- Milan Puskar Leadership Scholars Program
- Emma G. Noe Scholarship

For more information about the application process, please contact the Leadership Studies Office or check the website (<https://leadershipstudies.wvu.edu/>).

FACULTY

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)
- Christopher Plein - Ph.D. (University of Missouri)
Public Administration Program
- Andrea Soccorsi - M.A. (West Virginia University)
Multidisciplinary Studies Program

Leadership Studies Minor

Minor Code - U065

Students must earn a grade of C- or better in each of the three core courses and a minimum GPA of 2.0 across the nine elective hours.

Core Courses: (must be taken in sequence)

9

LDR 201	Principles of Leadership
LDR 301	Problems in Leadership
LDR 401	Leadership in Action

Upper Division Courses *

9

Select 9 hours from the following:	
BCOR 350	Principles of Marketing
BCOR 370	Managing Individuals & Teams
BCOR 380	Business Ethics
BUSA 330	Survey of Marketing
BUSA 320	Survey of Management

COMM 303	Business and Professional Communication
COMM 306	Organizational Communication
COMM 308	Nonverbal Communication
COMM 316	Intercultural Communication
COMM 406	Advanced Organizational Communication
ENTR 340	Survey of Entrepreneurship
HIST 321	Colonial Africa and Independence
HIST 325	Modern China
HIST 365	The Vietnam War
HIST 416	The French Wars of Religion
HIST 421	Hitler and the Third Reich
HIST 423	History of Fascism
HIST 424	Britain 1455-1603
HIST 433	West Africa to 1885
HIST 439	History of Modern Mexico
HIST 453	Civil War and Reconstruction
HIST 470	United States Civil Rights Movement
HONR 301	Advanced Peer Tutoring **
HONR 401	Peer Leadership Practicum **
HONR 402	Foundations of Peer Mentoring **
HONR 490	Teaching Practicum **
IENG 417	Total Quality Management
IENG 423	Designing Decision Support System
IENG 473	Team Facilitation
LDR 330	Leadership and Athletics
LDR 382	Readings in Leadership
LDR 393	Special Topics
LDR 435	Women and Leadership
LDR 445	Intersections in Leadership
LDR 495	Independent Study
MANG 330	Human Resource Management Fundamentals
MANG 480	Corporate Social Responsibility
MILS 301	Military Science
MILS 302	Military Science
MILS 401	Military Science
MILS 402	Military Science
PHIL 321	Ethical Theory
PHIL 325	Philosophy of Law
PHIL 346	History of Ethics
POLS 310	American Presidency
POLS 316	Public Opinion and Politics
POLS 321	West Virginia Government
POLS 337	Gender/Politics and Policy
POLS 365	Foreign Policy Decision-Making
SOCA 304	Complex Organizations
SOCA 337	Sociology of American Business
SOCA 457	Social Movements
USAF 371	Leadership Studies 1
USAF 372	Leadership Studies 2
USAF 481	National Security/Active Duty 1

- * All three electives may be LDR courses, or MILS or USAF courses. Otherwise the electives must be from at least two different fields. No more than three elective credit hours may be counted toward both a student's major and the LDR minor requirements.
- ** Only students who are mentors or tutors in the Honors College will be eligible for these courses.

Mathematics

Degrees Offered

- Bachelor of Arts
- Bachelor of Science

Nature of the Program

The Department of Mathematics provides a curriculum for:

- Students wishing to earn an undergraduate major or minor in mathematics
- Students enrolled in elementary and secondary teacher programs
- Students interested in the applications of mathematics to the fields of computer science, statistics, engineering, physical, natural and social science, and business and economics
- Non-science majors, to educate them in the ideals and objectives of mathematics

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Area of Emphasis

Students enrolled in the B.S. in Mathematics have the opportunity to earn an Area of Emphasis in six different areas. All majors take a core selection of Mathematics courses and choosing an optional Area of Emphasis guides the choice of additional courses toward various career pathways.

- Actuarial Science
- Computational Mathematics
- Mathematical Biology
- Mathematics Education
- Physical Applied Mathematics
- Pure Mathematics

Students may not earn both a Bachelor of Arts and a Bachelor of Science in Mathematics.

Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>) here. Please note that students may not earn a minor in their major field.

Mathematics Learning Center

The Mathematics Learning Center is a free walk-in tutoring center open 5-days a week. It is located at ARM 301B and the hours are posted on the door or on the Mathematics Department webpage. The MLC tutors help with all undergraduate Mathematics courses through Calculus. The MLC also employees students who are proficient in Mathematics. For more information about the center you can call (304)293-2011 or contact Dr. Nicole Infante at nicole.infante@mail.wvu.edu. (deshler@math.wvu.edu)

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

CHAIR

- Marjorie Darrah - Ph.D.
Algorithm Development, Educational Technologies, K-12 Outreach

PROFESSORS

- Krzysztof Ciesielski - Ph.D. (Warsaw University)
Analysis, Topology, Set theory, MRI imaging
- Marjorie Darrah - Ph.D. (West Virginia University)
Algorithm Development, Educational Technologies, K-12 Outreach
- Harvey Diamond - Ph.D. (Massachusetts Institute of Technology)
Approximation theory, Applied mathematics
- Harry Gingold - D.Sc. (Israel Institute of Technology)
Discrete Finite Difference systems of Equations, Factorization of Power Series, Foundation (Geometry), Mathematical Cryptography, Optimization, Compactification, Ordinary Differential Systems of Equations, Asymptotics, Approximations, Turning point theory, Celestial Mechanics
- John Goldwasser - Ph.D. (University of Wisconsin—Madison)
Combinatorics, Graph theory
- Harumi Hattori - Ph.D. (Rensselaer Polytechnic Institute)
Partial Differential Equations, Mathematical Finance, Conservation Laws and Shock Wave
- Jessica Deshler - Ph.D. (University of New Mexico)
Undergraduate Mathematics Education, Gender Equity in Mathematics, Calculus Student Learning, Graduate Student Professional Development, soTL in Mathematics
- Hong-Jian Lai - Ph.D. (Wayne State University)
Associate Chair. Graph theory, Matroid theory
- Dening Li - Ph.D. (Fudan University)
Partial differential equations, Shock Theory
- Rong Luo - Ph.D. (West Virginia University)
Graph Theory, Discrete Math
- David Miller - Ph.D. (Oklahoma State University)
Undergraduate Program Director, Undergraduate Math Education, Cognitive Science, STEM Education
- Robert Mnatsakanov - Ph.D. (Tbilisi State University)
Applied probability, Approximation of functions from moments, Risk models
- Laura Pyzdrowski - Ed.D. (West Virginia University)
Outreach Coordinator, Undergraduate Math Education, Cognitive Science, STEM Education, K-12 Outreach, Distance Learning, Instructional Technology
- Jerzy Wojciechowski - Ph.D. (University of Cambridge)
Combinatorics, Graph theory
- Cun-Quan Zhang - Ph.D. (Simon Fraser University)
Eberly Distinguished Professor of Mathematics, Graph theory, Combinatorics, Algorithms, Bioinformatics, Data Mining

ASSOCIATE PROFESSORS

- Nicole Engelke-Infante - Ph.D. (Arizona State University)
Undergraduate Math Education, Calculus Student Learning, and Proof Learning
- Adam Halasz - Ph.D. (State University of New York at Stony Brook)
Molecular systems biology, Monte Carlo methods, Mathematical physics
- Kevin Milans - Ph.D. (University of Illinois)
Combinatorics, Graph Theory, and Partially Ordered Sets
- Casian Pantea - Ph.D. (University of Wisconsin-Madison)
Mathematical biology, dynamical systems
- Vicki Sealey - Ph.D. (Arizona State University)
Calculus Coordinator, Undergraduate Math Education, Calculus Student Learning
- Charis Tsikkou - Ph.D. (Brown University)
Hyperbolic and Mixed Type Partial Differential Equations, Conservation Laws
- Adrian Tudorascu - Ph.D. (Carnegie Mellon University)
Partial Differential Equations, Optimal Transport

ASSISTANT PROFESSORS

- Olgur Celikbas - Ph.D. (University of Nebraska)
Commutative Algebra, Homological Algebra
- Ela Celikbas - Ph.D. (University of Nebraska)
Commutative Algebra, Representation Theory
- Qingtain Zhang - Ph.D. (Pennsylvania State University)
Analysis of PDE, Nonlinear Wave Equation, Free boundary problems in Fluid mechanics

TEACHING PROFESSOR

- Erin Goodykoontz - Ed.D. (West Virginia University)
Introductory Concepts of Mathematics

TEACHING ASSOCIATE PROFESSOR

- Lori Ogden - Ph.D. (West Virginia University)
Director of the Institute for Math Learning
- Fang Yang - Ph.D. (Middle Tennessee State University)
Actuarial Program Coordinator, Associate of the Society of Actuaries (ASA), Actuarial Science

TEACHING ASSISTANT PROFESSOR

- Renee LaRue - Ph.D. (West Virginia University)
Undergraduate Mathematics Education
- Matthew Schraeder - Ph.D. (West Virginia University)

TEACHING INSTRUCTORS

- Joelleen Bidwell
- Andrew Blankenship
- Krista Bresock
- Seth Cole
- Adam Goodykoontz
- Ryan Hansen
- Cody Hood
- Jennifer Kearns
- Clark Metz
- Douglas Squire
- Gabriel Tapia
- Sylvanus Waibogha
- Iwona Wojciechowska - Ph.D.

PROFESSORS EMERITI

- Ian Christie - Ph.D. (University of Dundee)
Numerical Methods
- Gary Ganser - Ph.D. (Rensselaer Polytechnic Institute)
Modeling, Data Analysis
- Henry W. Gould - M. A. (University of Virginia)
Number Theory, Combinatorics, Special Functions
- Caulton L. Irwin - Ph.D. (Emory University)
Associate director, N.R.C.C.E. Variational methods, Optimization, Applied mathematics
- Jack T. Goodykoontz Jr. - Ph.D. (University of Kentucky)
Topology
- Michael E. Mays - Ph.D. (Penn. State University)
Number Theory
- Sherman D. Riemenschneider - Ph.D. (Syracuse University)
Approximation Theory, Wavelets, Signal Processing

Admissions

- First Time Freshmen with a MATH ACT of 22 or a MATH SAT of 540 are admitted directly to the major.
- Students transferring from another WVU major must have completed MATH 154 or MATH 155 with C- or higher and have earned a 2.0 overall GPA.
- Students transferring from another institution must have completed MATH 154 or MATH 155 with C- or higher and have earned a 2.0 overall GPA.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science and Bachelor of Arts in Mathematics (<https://admissions.wvu.edu/academics/majors/mathematics/>) major.

Degree Progress

- By their 5th semester in the major, students should have completed calculus courses through MATH 261 and have completed or be enrolled in MATH 303.
- Normally, students must register for 9 hours of math each subsequent term.
- All majors must meet with a math department adviser each semester.

Students who fail to meet these benchmarks may be removed from their major.

Major Learning Outcomes

MATHEMATICS

Upon successful completion of the B.A. or B.S. degree, **Mathematics** majors will demonstrate the following competencies:

1. Students will communicate mathematics in both written and oral forms.
 - Students will construct valid proofs.
 - Students will demonstrate their ability to comprehend and to synthesize professional mathematical discourse (such as upper level textbooks, monographs, journal articles, unpublished faculty research, technical reports, etc.).
 - Students will prepare a clear and concise written project and orally present advanced mathematical concepts effectively and professionally.
2. Students will have a clear understanding of fundamental concepts and general understanding in a breadth of advanced topics in mathematics.
 - Students will demonstrate basic skills in specific mathematics topics (Algebra, Trigonometry, Calculus, Differential Equations, and Linear Algebra).
 - Students will demonstrate a breadth of knowledge of upper level mathematics topics.
 - Students will be exposed to the use of mathematics in various applications and professions.
3. Students will apply mathematical knowledge.
 - Students will demonstrate their ability to understand and construct mathematical models to solve problems.
 - Students will apply mathematics they have learned to new and different areas.

Mathematics B.A.

Click here to view the Suggested Plan of Study (p. 347)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences (p. 187) pages.

Departmental Requirements for the B.A. in Mathematics

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Mathematics majors must complete three or four hours of MATH 495.
- **Writing and Communication Skills Requirement:** Mathematics Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two additional **SpeakWrite Certified Courses™**: MATH 495, and one additional course from the following: CHIN 301, CHIN 303, COMM 202, ENGL 304, ENGL 305, FRCH 301, FRCH 303, FRCH 304, GER 222, GER 301, GER 302, GER 303, GER 304, HIST 203, HIST 204, HIST 207, HIST 221, HIST 241, HIST 242, HIST 250, HIST 264, HIST 259, ITAL 301, ITAL 302, ITAL 303, ITAL 304, JAPN 101, JAPN 301, PHIL 301, PHIL 302, PHIL 306, PHIL 310, PHYS 376, PSYC 202, SPAN 312, RELG 219, RELG 223, RELG 230, RELG 231, RUSS 301, RUSS 303, SPAN 311, SPAN 312.
- **Calculation of the GPA in the Major:** A minimum GPA of 2.00 across all classes applied to the major is required. If a class is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Benchmark Expectations:** For details, go to the Mathematics admissions tab (p. 345).

Curriculum Requirements

University Requirements

26

MATH 191 First-Year Seminar

GEF Requirements: hours may vary depending on overlap with major

ECAS B.A. Requirements

12

Fine Arts Requirement

Foreign Language

Global Studies & Diversity Requirement

Departmental Requirements

Basic Courses

4

Select one of the following:

MATH 153 Calculus 1a with Precalculus
& MATH 154 and Calculus 1b with Precalculus

MATH 155 Calculus 1

Foundation Courses

21

MATH 156 Calculus 2

MATH 251 Multivariable Calculus

MATH 261 Elementary Differential Equations

or MATH 378 Discrete Mathematics

MATH 303 Introduction to the Concepts of Mathematics

MATH 322 Introduction to Programming and Computational Mathematics

MATH 343 Introduction to Linear Algebra

or MATH 441 Applied Linear Algebra

Statistics Requirement

3

STAT 215 Introduction to Probability and Statistics

or STAT 461 Theory of Probability

Advanced Courses in Mathematics

Select two from the following:

6

MATH 341 Introduction to Algebraic Structures

MATH 381 Introduction to Analysis and Topology

MATH 451	Introduction to Real Analysis 1	
MATH 456	Complex Variables	
Mathematics Electives *		6
Select one option:		
2 Mathematics courses at 300-level and above		
or:		
1 Math course at 300-level and above, and 1 appropriate 300-level or above course in another discipline, with departmental approval. *		
Capstone Experience		4
MATH 495	Independent Study (Capstone)	
General Electives		38
Number of electives may vary based on GEF overlap		
Total Hours		120

* Except for MATH 490, and MATH 493. MATH 318 and MATH 376 may only be used as a Mathematics Elective for WVUteach students.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
MATH 155 (GEF 3)		4 MATH 156 (GEF 8)	4
MATH 191		1 ENGL 101 (GEF 1)	3
Foreign Language 101		3 Foreign Language 102	3
GEF 2		4 General Elective	2
GEF 4		3 General Elective	3
		15	15

Second Year

Fall	Hours	Spring	Hours
MATH 251		4 MATH 261	4
ENGL 102 (GEF 1)		3 MATH 303	3
Foreign Language 203		3 STAT 215 (GEF 8)	3
General Elective		3 Foreign Language 204	3
General Elective		2 General Elective	2
		15	15

Third Year

Fall	Hours	Spring	Hours
MATH 343		3 MATH 322	3
ECAS Global Studies & Diversity Requirement (GEF 7)		3 MATH 495 (Capstone)	1
GEF 5		3 Advanced MATH Course 1	3
General Elective		3 ECAS Fine Arts Requirement (GEF 6)	3
General Elective		3 General Elective	3
		General Elective	2
		15	15

Fourth Year

Fall	Hours	Spring	Hours
Advanced MATH Course 2		3 MATH 495 (Capstone)	1
MATH Elective 1		3 MATH Elective 2	3
MATH 495 (Capstone)		2 General Elective	3
GEF 8		3 General Elective	3
General Elective		3 General Elective	3
General Elective		1 General Elective	2
		15	15

Total credit hours: 120

Mathematics B.S.

Click here to view the Suggested Plan of Study (p. 349)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.S. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.S. Degrees tab on the Eberly College of Arts and Sciences (p. 190).

Departmental Requirements for the B.S. in Mathematics

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Mathematics majors must complete MATH 495.
- **Writing and Communication Skills Requirement:** Mathematics Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two additional **SpeakWrite Certified Courses™**: MATH 495, and one additional course from the following: COMM 202, ENGL 304, ENGL 305, HIST 203, HIST 204, HIST 207, HIST 221, HIST 241, HIST 242, HIST 250, HIST 264, HIST 259, PHIL 301, PHIL 302, PHIL 306, PHIL 310, PHYS 376 PSYC 202, RELG 219, RELG 223, RELG 230, RELG 231.
- **Calculation of the GPA in the Major:** A minimum GPA of 2.00 across all classes applied to the major is required. If a class is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Advanced Mathematics Coursework:** Students have the option of completing 18 credits of advanced Mathematics electives, or to complete one of six Areas of Emphasis for 18 credits (please consult the AoE tab). Courses applied to an AoE or to the advanced mathematics electives may not overlap with the courses taken for the Foundation or the Mathematical programming sections.

Curriculum Requirements

University Requirements		23
MATH 191	First-Year Seminar	
GEF Requirements (will vary with overlap)		
ECAS B.S. Requirements:		16
Global Studies & Diversity Requirement		
Mathematics Requirements		
Select one of the following:		
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 155	Calculus 1	

Science Requirement

Please see the Eberly College of Arts and Sciences' Bachelor of Science (B.S.) tab.

DEPARTMENTAL REQUIREMENTS**FOUNDATION COURSES:****21**

MATH 156	Calculus 2
MATH 251	Multivariable Calculus
MATH 261	Elementary Differential Equations
MATH 303	Introduction to the Concepts of Mathematics
MATH 343 or MATH 441	Introduction to Linear Algebra Applied Linear Algebra
STAT 215	Introduction to Probability and Statistics

MATHEMATICAL PROGRAMMING OR STATISTICS:**3**

MATH 322 or MATH 420	Introduction to Programming and Computational Mathematics Numerical Analysis 1
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ADVANCED MATHEMATICS COURSEWORK: ***18****Option 1: General Mathematics Electives**

MATH 451	Introduction to Real Analysis 1
MATH 341 or MATH 381 or MATH 456	Introduction to Algebraic Structures Introduction to Analysis and Topology Complex Variables

4 MATH courses at the 300-level or above **

Option 2: Area of Emphasis

Select one AoE from the list below:

Actuarial Science
Computational Mathematics
Mathematical Biology
Mathematics Education
Physical Applied Mathematics
Pure Mathematics

CAPSTONE EXPERIENCE:**4**

MATH 495	Independent Study
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GENERAL ELECTIVES:**35**

Number of electives may vary depending on course selection and AP credits

Total Hours

120

* Except MATH 490 and MATH 493.

** With permission from a departmental adviser, students may substitute another upper-division course from an other unit.

Suggested Plan of Study**First Year**

Fall	Hours	Spring	Hours
MATH 191		1 MATH 156 (GEF 8; B.S. Second Area 1)	4
MATH 155 (GEF 3)		4 ENGL 101 (GEF 1)	3
GEF 2 (B.S. First Area 1)		4 GEF 6	3
GEF 4		3 B.S. First Area 2 (GEF 8)	4
GEF 5		3 General Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
MATH 251 (B.S. Second Area 2)		4 MATH 261	4
STAT 215		3 MATH 303	3
ENGL 102 (GEF 1)		3 B.S. Third Area 2	4

B.S. Third Area 1 (GEF 8)		4 GEF 7	3
General Elective		1 General Elective	1
		15	15
Third Year			
Fall	Hours	Spring	Hours
MATH 343 or 441		3 MATH 322 or 420	3
Advanced Mathematics 1st course		3 MATH 495	1
Advanced Mathematics 2nd Course		3 Advanced Mathematics 3rd course	3
SpeakWrite Course		3 Advanced Mathematics 4th course	3
General Elective		3 General Elective	3
		General Elective	2
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
MATH 495		2 MATH 495	1
Advanced Mathematics 5th course		3 Advanced Mathematics 6th course	3
General Elective		4 General Elective	4
General Elective		3 General Elective	4
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

Areas of Emphasis Offered:

- Actuarial Science (p. 350)
- Computational Mathematical Science (p. 351)
- Mathematics Biology (p. 353)
- Mathematics Education (p. 354)
- Physical Applied Mathematics (p. 355)
- Pure Mathematics (p. 356)

Bachelor of Arts or Bachelor of Science in Mathematics: Actuarial Science Area of Emphasis

A mathematics degree with an emphasis in Actuarial Science provides the student with preparation necessary for becoming an actuary and passing the first two actuary exams. Coursework includes the study of compound interest models, valuation of financial instruments, forecasting and population trend analysis.

Actuarial Science Emphasis Requirements:

- **Capstone Requirement:** Students completing an Actuarial Science Area of Emphasis will focus their capstone on pricing models, premium analysis, and other aspects of financial mathematics.
- **Selecting Course:** If a course is selected as an option for the AoE, the same course may not be used to fulfill another MATH B.S. requirement.

CURRICULUM REQUIREMENTS

CORE COURSES:		15
MATH 363	Mathematical Foundations of Actuarial Science	
MATH 364	Mathematics of Compound Interest	
MATH 441	Applied Linear Algebra	
MATH 473	Actuarial Mathematics 1	
STAT 461	Theory of Probability	
ELECTIVES:		3
MATH 341	Introduction to Algebraic Structures	
MATH 378	Discrete Mathematics	
MATH 381	Introduction to Analysis and Topology	

MATH 451

Introduction to Real Analysis 1

Total Hours

18

SUGGESTED PLAN OF STUDY FOR THE BACHELOR OF SCIENCE IN MATHEMATICS WITH AN AREA OF EMPHASIS IN ACTUARIAL SCIENCE

First Year

Fall	Hours	Spring	Hours
MATH 191		1 MATH 156 (GEF 8; B.S. Second Area 1)	4
MATH 155 (GEF 3)		4 ENGL 101 (GEF 1)	3
GEF 2 (B.S. First Area 1)		4 GEF 6	3
GEF 4		3 B.S. First Area 2 (GEF 8)	4
GEF 5		3 General Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
MATH 251		4 ENGL 102 (GEF 1)	3
B.S. Third Area 1 (GEF 8)		3 MATH 261	4
STAT 215		3 MATH 303	3
ECAS International Requirement (GEF 7)		4 STAT 461	3
General Elective		1 General Elective	2
		15	15

Third Year

Fall	Hours	Spring	Hours
MATH 364		3 MATH 322	3
Advanced Pure Math Elective		3 MATH 363	3
B.S. Third Area 2		4 MATH 441	3
SpeakWrite Course		3 MATH 495	1
General Elective		2 General Elective	2
		General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
MATH 473		3 MATH 495	1
MATH 495		2 General Elective	3
General Elective		4 General Elective	3
General Elective		3 General Elective	4
General Elective		3 General Elective	4
		15	15

Total credit hours: 120

Bachelor of Science in Mathematics: Computational Mathematical Science Area of Emphasis

A mathematics degree with an emphasis in Computational Mathematical Science provides the student with necessary preparation for interdisciplinary positions in industry and graduate school in Applied Mathematics.

Computational Mathematical Science Emphasis Requirements:

- **Capstone Requirement:** Students completing a Computational Mathematical Science Area of Emphasis will focus their capstone on a topic that is connected or related to one of the upper-level proof courses.
- **Selecting Course:** If a course is selected as an option for the AoE, the same course may not be used to fulfill another MATH B.S. requirement.

CURRICULUM REQUIREMENTS**CORE COURSES:****6**

MATH 378	Discrete Mathematics
MATH 373	Introduction to Cryptography
or MATH 377	Operations Research

COMPUTATIONAL ELECTIVES:**12**

1-Select one course from the following list:

MATH 363	Mathematical Foundations of Actuarial Science
MATH 456	Complex Variables
MATH 460	Introduction to Dynamical Systems and Applications
MATH 464	Deterministic Mathematical Modeling
MATH 465	Partial Differential Equations

2- Select one pair of courses and one additional course from the following list

CS 320 & CS 420	Analysis of Algorithms and Design of Algorithms
MATH 420 & MATH 421	Numerical Analysis 1 and Numerical Analysis 2
STAT 312 or STAT 313	Intermediate Statistical Methods Introductory Design and Analysis
STAT 461 & STAT 462	Theory of Probability and Theory of Statistics

Total Hours

18

SUGGESTED PLAN OF STUDY FOR THE BACHELOR OF SCIENCE IN MATHEMATICS WITH AN AREA OF EMPHASIS IN COMPUTATIONAL MATHEMATICAL SCIENCE**First Year**

Fall	Hours	Spring	Hours
MATH 191		1 MATH 156 (GEF 8; B.S. Second Area 1)	4
MATH 155 (GEF 3)		4 B.S. First Area 2 (GEF 8)	4
GEF 2 (B.S. First Area 1)		4 ENGL 101 (GEF 1)	3
GEF 4		3 GEF 6	3
GEF 5		3 General Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
MATH 251 (B.S. Second Area 2)		4 MATH 261	4
STAT 215		3 MATH 303	3
ENGL 102 (GEF 1)		3 B.S. Second Area 2	4
B.S. Second Area 1 (GEF 8)		4 SpeakWrite Requirement	3
General Elective		1 General Elective	1
		15	15

Third Year

Fall	Hours	Spring	Hours
MATH 343		3 MATH 420	3
MATH 460		3 MATH 495	1
STAT 461		3 MATH 377 or 373	3
General Elective		3 General Elective	4
General Elective		3 General Elective	4
		15	15

Fourth Year

Fall	Hours	Spring	Hours
MATH 421		3 MATH 378	3

MATH 495	2 MATH 495	1
GEF 7	3 General Elective	4
General Elective	4 General Elective	4
General Elective	3 General Elective	3
		15
		15

Total credit hours: 120

Bachelor of Science in Mathematics: Mathematics Biology Area of Emphasis

A mathematics degree with an emphasis in Mathematics Biology provides the student with necessary preparation for both graduate school and industry positions with a focus on Biology and Mathematics interdisciplinary work.

Mathematics Biology Emphasis Requirements:

- **Capstone Requirement:** Students completing a Mathematics Biology Area of Emphasis will focus their capstone on a topic that is connected or related to one of the upper-level applied mathematics courses.
- **Selecting Course:** If a course is selected as an option for the AoE, the same course may not be used to fulfill another MATH B.S. requirement.

CURRICULUM REQUIREMENTS

CORE COURSES:

12

MATH 420	Numerical Analysis 1
MATH 460	Introduction to Dynamical Systems and Applications
MATH 470	Introduction to Mathematical and Computational Systems Biology
MATH 471	Mathematical Systems Biology 2: Stochastic Methods

ELECTIVES:

6

MATH 341	Introduction to Algebraic Structures
or MATH 378	Discrete Mathematics
or MATH 381	Introduction to Analysis and Topology
or MATH 451	Introduction to Real Analysis 1
MATH 465	Partial Differential Equations
or STAT 312	Intermediate Statistical Methods

Total Hours

18

SUGGESTED PLAN OF STUDY FOR THE BACHELOR OF SCIENCE IN MATHEMATICS WITH AN AREA OF EMPHASIS IN MATHEMATICS BIOLOGY

First Year

Fall	Hours	Spring	Hours
MATH 191		1 MATH 156 (GEF 8; B.S. Second Area 1)	4
MATH 155 (GEF 3)		4 ENGL 101 (GEF 1)	3
GEF 2 (B.S. First Area 1)		4 GEF 6	3
GEF 4		3 B.S. First Area 2 (GEF 8)	4
GEF 5		3 General Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
MATH 251 (B.S. Second Area 2)		4 MATH 261	4
STAT 215		3 STAT 312	3
ENGL 102 (GEF 1)		3 B.S. Third Area 2	4
B.S. Third Area 1 (GEF 8)		4 ECAS Writing Requirement	3
General Elective		1 General Elective	1
		15	15

Third Year

Fall	Hours	Spring	Hours
MATH 303		3 MATH 470	3

MATH 343 or 441	3 MATH 495	1
MATH 460	3 Advanced Mathematics Elective	3
GEF 7	3 General Elective	4
General Elective	3 General Elective	4
15		15

Fourth Year

Fall	Hours	Spring	Hours
MATH 471		3 MATH 420	3
MATH 495		2 MATH 495	1
General Elective		4 General Elective	4
General Elective		3 General Elective	4
General Elective		3 General Elective	3
15		15	

Total credit hours: 120

Bachelor of Science in Mathematics: Mathematics Education Area of Emphasis

A mathematics degree with an emphasis in Mathematics Education provides the student with necessary preparation to teach mathematics in middle and high school, or graduate school with an emphasis on teaching at the community college or higher education institution.

Mathematics Education Emphasis Requirements:

- **Capstone Requirement:** Students completing a Mathematics Education Area of Emphasis will focus their capstone on a topic that is connected or related to one of the upper-level applied mathematics courses.
- **Selecting Course:** If a course is selected as an option for the AoE, the same course may not be used to fulfill another MATH B.S. requirement.

CURRICULUM REQUIREMENTS

CORE COURSES: 9

MATH 218 or MATH 318	History of Mathematics Perspectives on Mathematics and Science
MATH 338	Geometry for Teachers
MATH 341	Introduction to Algebraic Structures

ELECTIVES: 9

MATH 322	Introduction to Programming and Computational Mathematics
MATH 376 or MATH 378	Foundations, Functions and Regression Models Discrete Mathematics
MATH 381 or MATH 451 or MATH 456	Introduction to Analysis and Topology Introduction to Real Analysis 1 Complex Variables

Total Hours 18

SUGGESTED PLAN OF STUDY FOR THE BACHELOR OF SCIENCE IN MATHEMATICS WITH AN AREA OF EMPHASIS IN MATHEMATICS EDUCATION

First Year

Fall	Hours	Spring	Hours
MATH 191		1 MATH 156 (GEF 8; B.S. Second Area 1)	4
MATH 155 (GEF 3)		4 MATH 218 (GEF 5)	3
GEF 2 (B.S. First Area 1)		4 ENGL 101 (GEF 1)	3
GEF 4		3 B.S. First Area 2 (GEF 8)	4
GEF 6		3 General Elective	1
15		15	

Second Year

Fall	Hours	Spring	Hours
MATH 251 (B.S. Second Area 2)		4 MATH 261	4

STAT 215	3 MATH 303	3
ENGL 102 (GEF 1)	3 MATH 338	3
B.S. Second Area 1 (GEF 8)	4 B.S. Second Area 2	4
General Elective	1 General Elective	1
<hr/>		
		15

Third Year

Fall	Hours	Spring	Hours
MATH 341		3 MATH 495 (Capstone)	1
ECAS Writing Requirement		3 MATH 343	3
GEF 7		3 Advanced Mathematics Course	3
General Elective		3 General Elective	4
General Elective		3 General Elective	4
<hr/>			
		15	15

Fourth Year

Fall	Hours	Spring	Hours
MATH 322		3 MATH 495	1
MATH 378		3 General Elective	4
MATH 495		2 General Elective	4
General Elective		4 General Elective	3
General Elective		3 General Elective	3
<hr/>			
		15	15

Total credit hours: 120

Bachelor of Science in Mathematics: Physical Applied Mathematics Area of Emphasis

A mathematics degree with an emphasis in Physical Applied Mathematics provides the student with necessary preparation for interdisciplinary positions in industry or preparation for graduate school in Applied Mathematics.

Physical Applied Mathematics Area Emphasis Requirements:

- **Capstone Requirement:** Students completing a Physical Applied Mathematics Area of Emphasis will focus their capstone on a topic that is connected or related to one of the upper-level applied mathematics courses.
- **Selecting Course:** If a course is selected as an option for the AoE, the same course may not be used to fulfill another MATH B.S. requirement.

CURRICULUM REQUIREMENTS**CORE COURSES:****15**

MATH 420	Numerical Analysis 1
MATH 460	Introduction to Dynamical Systems and Applications
MATH 456	Complex Variables
MATH 464	Deterministic Mathematical Modeling
MATH 465	Partial Differential Equations

ELECTIVE:**3**

Select one course from the list:

MATH 341	Introduction to Algebraic Structures
MATH 378	Discrete Mathematics
MATH 381	Introduction to Analysis and Topology
MATH 451	Introduction to Real Analysis 1

Total Hours

18

SUGGESTED PLAN OF STUDY FOR THE BACHELOR OF SCIENCE IN MATHEMATICS WITH AN AREA OF EMPHASIS IN PHYSICAL APPLIED MATHEMATICS

First Year

Fall	Hours	Spring	Hours
MATH 191		1 MATH 156 (GEF 8; B.S. Second Area 1)	4
MATH 155 (GEF 3)		4 B.S. First Area 2 (GEF 8)	4
GEF 2 (B.S. First Area 1)		4 ENGL 101 (GEF 1)	3
GEF 4		3 GEF 6	3
GEF 5		3 General Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
MATH 251 (B.S. Second Area 2)		4 MATH 261	4
STAT 215		3 MATH 343	3
ENGL 102 (GEF 1)		3 B.S. Second Area 2	4
B.S. Second Area 1 (GEF 8)		4 GEF 7	3
General Elective		1 General Elective	1
		15	15

Third Year

Fall	Hours	Spring	Hours
MATH 460		3 MATH 456	3
MATH 465		3 MATH 420	3
MATH 303		3 MATH 495	1
SpeakWrite Course		3 General Elective	4
General Elective		3 General Elective	4
		15	15

Fourth Year

Fall	Hours	Spring	Hours
MATH 464		3 MATH 495	1
MATH 495		2 General Elective	4
Advanced Mathematics Elective		3 General Elective	4
General Elective		4 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

Bachelor of Science in Mathematics: Pure Mathematics Area of Emphasis

A mathematics degree with an emphasis in Pure Mathematics provides the student with necessary preparation for graduate school in Mathematics for students that was to pursue a Masters or Doctoral degree in Mathematics. Coursework includes four or more upper-level proof classes in Real Analysis, Algebraic Structures, Topology, Discrete Mathematics, and Complex Variables.

Actuarial Science Emphasis Requirements:

- **Capstone Requirement:** Students completing a Pure Mathematics Area of Emphasis will focus their capstone on a topic that is connected or related to one of the upper-level proof courses.
- **Selecting Course:** If a course is selected as an option for the AoE, the same course may not be used to fulfill another MATH B.S. requirement.

CURRICULUM REQUIREMENTS

CORE COURSES:

12

MATH 341	Introduction to Algebraic Structures
MATH 381	Introduction to Analysis and Topology
MATH 451	Introduction to Real Analysis 1

MATH 456	Complex Variables	
ELECTIVES:		6
MATH 322	Introduction to Programming and Computational Mathematics	
or MATH 420	Numerical Analysis 1	
or STAT 312	Intermediate Statistical Methods	
or STAT 461	Theory of Probability	
MATH 378	Discrete Mathematics	
or MATH 442	Advanced Algebraic Structures	
or MATH 452	Introduction to Real Analysis 2	
Total Hours		18

SUGGESTED PLAN OF STUDY FOR THE BACHELOR OF SCIENCE IN MATHEMATICS WITH AN AREA OF EMPHASIS IN PURE MATHEMATICS

First Year

Fall	Hours	Spring	Hours
MATH 191		1 MATH 156 (GEF 8; B.S. Second Area 1)	4
MATH 155 (GEF 3)		4 ENGL 101 (GEF 1)	3
GEF 2 (B.S. First Area 1)		4 B.S. First Area 2 (GEF 8)	4
GEF 4		3 GEF 6	3
GEF 5		3 General Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
MATH 251 (B.S. Second Area 2)		4 MATH 261	4
STAT 215		3 MATH 303	3
ENGL 102 (GEF 1)		3 GEF 7	3
B.S. Third Area 1 (GEF 8)		4 B.S. Third Area 2	4
General Elective		1 General Elective	1
		15	15

Third Year

Fall	Hours	Spring	Hours
MATH 343		3 MATH 381	3
MATH 451		3 MATH 495	1
SpeakWrite Course		3 General Elective	4
General Elective		3 General Elective	4
General Elective		3 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
MATH 341		3 MATH 456	3
MATH 495		2 MATH 495	1
Additional Mathematics or Statistics Elective		3 Advanced Mathematics Electives Course	3
General Elective		4 General Elective	4
General Elective		3 General Elective	4
		15	15

Total credit hours: 120

WVUteach

Mathematics 5-Adult

Teaching changes lives. It is a rewarding profession that makes a difference. WVUteach is an innovative program uniting in-depth science and mathematics education with teacher preparation. Science and Mathematics teachers are some of the most sought after high school teachers.

WVUteach is designed to give undergraduate students the opportunity to explore the profession of teaching in STEM fields (science, technology, engineering, and math) in a hands-on way. In their very first semester in the program, students will have the opportunity to develop and teach a lesson in a local classroom. WVUteach allows students to complete a rigorous degree in any STEM field and earn a secondary teaching certification in tandem with the 4-year degree in mathematics or science. Students earn one degree, with an additional career option. WVUteach is designed to give the essential tools to forge change in the next generation.

In WVUteach, students take the same courses as students in non-teaching options, with slight variations. They are able to compete with students in the non-teaching option for the same jobs and graduate programs in their field. Students thinking about graduate school should always speak to the Graduate Advisor for the program to determine the coursework expected for applicants.

For more information on licensure requirements, please visit our webpage (<http://WVUteach.wvu.edu>) and schedule an appointment with a WVUteach advisor.

Students seeking Mathematics 5-Adult teaching certification complete the Mathematics B.A. or B.S. major requirements and the following courses (36 hours). The WVUteach curriculum can be completed within the 120 hours required for graduation with a B.A. or B.S. in Mathematics:

WVUTEACH: MATHEMATICS 5-ADULT

ARSC 120	Inquiry Approaches to Teaching	1
ARSC 220	Inquiry-Based Lesson Design	1
UTCH 221	Knowing and Learning in Mathematics and Science (GEF 4)	3
UTCH 222	Classroom Interactions in Math and Science	3
UTCH 420	Project-Based Instruction in Mathematics and Science	3
UTCH 430	Apprentice Teaching in Math and Science	10
MATH 318	Perspectives on Mathematics and Science (GEF 5) *	3
MATH 376	Foundations, Functions and Regression Models *	3
PHYS 376	Research Methods	3
C&I 434	Teaching Mathematics: Secondary School	3
MATH 338	Geometry for Teachers	3
Total Hours		36

* MATH 318 and MATH 376 count within the math major requirements.

ADDITIONAL COURSEWORK FOR NON-MATHEMATICS MAJORS

MATH 155	Calculus 1	4
MATH 156	Calculus 2	4
MATH 251	Multivariable Calculus	4
MATH 261	Elementary Differential Equations	4
STAT 215	Introduction to Probability and Statistics	3
MATH 303	Introduction to the Concepts of Mathematics	3
Select one of the following:		3
MATH 343	Introduction to Linear Algebra	
MATH 441	Applied Linear Algebra	
Select one of the following:		3
MATH 341	Introduction to Algebraic Structures	
MATH 378	Discrete Mathematics	
MATH 451	Introduction to Real Analysis 1	
MATH 456	Complex Variables	
Total Hours		28

Multidisciplinary Studies, B.MdS.

Degree Offered

- Bachelor of Multidisciplinary Studies (B.MdS.)

Nature of the Program

The Eberly College Programs for Multi- and Interdisciplinary Studies (MDS) offer two degree options, the Bachelor of Multidisciplinary Studies degree (B.MdS.) and the Bachelor of Arts in Interdisciplinary Studies (B.A.). Both the Multidisciplinary Studies and Interdisciplinary Studies degree programs are comprised of three related minors. The program does not limit students to courses of study in a particular college or school, but rather stresses the importance of breadth of knowledge and cross-disciplinary communication. The MDS and IDS degrees emphasize flexibility and problem solving. Students will learn to use specialized knowledge from individual disciplines to analyze problems from divergent perspectives. Students will also apply multidisciplinary and interdisciplinary techniques to communicate the strengths of their self-chosen course of study.

MDS and IDS students choose three minor areas and must demonstrate how these fields of study work together toward his/her educational and/or career goals. For example, a student may choose the areas of business administration, sport and exercise psychology, and professional writing and editing, with the goal of a career in sports and special events or marketing/coordinating. MDS and IDS students participate in a capstone during their final semester, incorporating their three disciplines into a senior project, presentation, and paper.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (p. 50) here. Please note that students may not earn a minor in their major field. MDS students may add a fourth minor to complement their three core minors.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

MDS Graduates

The breadth of study available to Multi- and Interdisciplinary students empowers them to be successful in any field they choose. MDS and IDS degree holders are flourishing in business, teaching, entrepreneurial endeavors, health professions, and public and health administration. They are earning advanced degrees in social work, business administration, and law. The flexibility of the IDS and MDS degrees ensure that students are prepared for success in today's rapidly changing workforce.

FACULTY

COORDINATOR

- Renee K. Nicholson - M.F.A. (West Virginia University) Certificate of Professional Achievement in Narrative Medicine (Columbia University)
Creative Writing and Narrative Medicine

ASSOCIATE PROFESSOR

- Carol Zwickel - Ph.D. (West Virginia University)
English Language and Literature

INSTRUCTORS

- Andrea Soccorsi - M.A. (West Virginia University)
English Language and Literature

Admissions

Admission to the Multidisciplinary Studies degree program (B.MdS.) is possible after completion of twenty-nine credit hours with a cumulative grade point average of at least 2.0. Students may not declare the Multidisciplinary Studies degree before completing twenty-nine credit hours without appealing to the program coordinator. Students may enroll in MDS 199 before they are admitted to the degree program.

Once students are admitted to the Multidisciplinary Studies program, they should declare their three minors.

The Interdisciplinary Studies degree program (B.A.) direct admits selected incoming freshmen based on high school GPA and the results of standardized tests. Students may also join the program if they have a GPA 3.0 or better at West Virginia University. Please contact a program advisor for details.

In MDS, advisors are assigned to students as they enter the program. MDS students typically keep the same adviser until they graduate from the program.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Multidisciplinary Studies major.

Click here to view the Suggested Plan of Study (p. 361)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students in the Bachelor of Multidisciplinary Studies (B.D.M.S) must complete the WVU General Education Foundations requirements, programmatic requirements, and electives to total a minimum of 120 hours.

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Students in the MDS program must complete MDS 489 (<http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/multidisciplinarystudiesdegreeprogram/>) with a grade of C- or better during their final year.
- **Writing and Communication Skills Requirement:** Multidisciplinary Studies students fulfill the requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two additional **SpeakWrite Certified Courses™**: MDS 199 and MDS 489.
- **Course Requirements:** Minor courses may not be used to satisfy the General Education Foundations requirements. Each minor must consist of at least fifteen unique credits. Students must complete at least sixty credit hours of coursework at the 200 level or above. At the latest, the required MDS orientation course, MDS 199 (<http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/multidisciplinarystudiesdegreeprogram/>), must be completed the semester before taking MDS 489 (<http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/multidisciplinarystudiesdegreeprogram/>).
- **Calculation of the GPA in the Major:** Students must obtain a cumulative grade point average of at least 2.0, with grade of C- or better in all courses counted toward the major.
- **Benchmark Expectations:** For details, go to the Multidisciplinary Studies admission tab (p. 359).

Curriculum Requirements

UNIVERSITY REQUIREMENTS	37
MDS 191 First-Year Seminar	
GEF (credit hour may vary based on selected options)	
PROGRAM REQUIREMENTS	2
MDS 199 Orientation to MDS	
Minor One	15
Minor Two	15
Minor Three	15
Capstone Experience	3
MDS 489 Capstone	
General Electives	33
Number of electives may vary depending on options selected and AP credits	
Total Hours	120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
MDS 191		1 ENGL 101 (GEF 1)	3
GEF 2		3 GEF 2	3
GEF 3		3 GEF 5	3
GEF 4		3 GEF 6	3
General Elective		3 General Elective	3
General Elective		2	
	15		15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 GEF 8*	3
ECAS International Requirement (GEF 7)		3 Minor II-1	3
MDS 199		2 Minor III-1	3
Minor I-1		3 General Elective	3
General Elective		4 General Elective	3
	15		15

Third Year

Fall	Hours	Spring	Hours
GEF 8*		3 GEF 8*	3
Minor I-2		3 Minor I-3	3
Minor II-2		3 Minor II-3	3
Minor III-2		3 Minor III-3	3
General Elective @ 200-level		3 General Elective @ 200-level	3
	15		15

Fourth Year

Fall	Hours	Spring	Hours
Minor I-4		3 MDS 489	3
Minor II-4		3 Minor I-5	3
Minor III-4		3 Minor II-5	3
General Elective @ 200-level		3 Minor III-5	3
General Elective @ 200-level		3 General Elective @ 200-level	3
	15		15

Total credit hours: 120

* Students earning a fourth minor, a second major or a dual degree already fulfill F 8.

Degree Progress

- Students in the MDS program must maintain a 2.0 GPA.
- MDS 199 must be completed by the 2nd semester in the program.
- Students should make progress toward their plan of study, reviewed each semester.
- All majors must meet with an MDS program adviser each semester.

Students who do not meet these benchmarks may be removed from their major.

Major Learning Outcomes

MULTIDISCIPLINARY STUDIES

1. Knowledge

- Broad-based knowledge of three discrete areas of study
- Understanding of synergistic advantage of multidisciplinary curriculum

2. Skills

- Ability to think critically in each of three disciplines
- Ability to partition and interpret information or events using the most appropriate discipline's toolset
- Ability to write a professional resume, conduct a job interview, and apply to graduate school.
- Ability to research and write a research paper

3. Attitudes

- Positive attitude towards civic action, nonprofit organizations, and community engagement

4. Integrative Learning

- Ability to explain Multidisciplinary Studies and its advantages to others
- Ability to apply academic knowledge to contemporary political, social, scientific, and humanitarian questions

Native American Studies

Nature of the Program

Native American Studies (NAS) is an interdisciplinary academic program in the Eberly College of Arts and Sciences. The NAS minor curriculum is designed to help students develop a greater respect for and understanding of diverse Native cultures by providing historical context and contemporary perspectives.

Students who complete the NAS minor enhance their ability to think in nontraditional, non-Western ways and interact more effectively with diverse populations. NAS students learn about some of the many cultures, languages, histories, and traditions of indigenous Americans, as well as the challenges and successes of Native nations in the 21st century. Experiential and hands-on learning, travel and immersion-style courses, as well as lectures and dialogue with highly-regarded Native American leaders, authors, scholars, activists, and artists, are at the heart of the NAS curriculum.

Admissions

Any student admitted to an undergraduate degree program at WVU may complete a minor in Native American Studies. An "area of emphasis" in NAS is available to Regents Bachelor of Arts majors. Students who choose the NAS minor come from a variety of academic majors as far-ranging as business, engineering, art, English, history, anthropology, and health sciences, to name a few. Our graduates find practical ways to apply their NAS education, working in fields such as cultural resource management, education, law, health care, and government.

FACULTY

COORDINATOR

- Bonnie M. Brown - M.A. (University of Texas at Austin)

TEACHING INSTRUCTOR

- Bonnie M. Brown - M.A. (University of Texas at Austin)
Interests: Contemporary Native American Issues; Native Women in Leadership; Tribal Sovereignty

Native American Studies Minor

Minor Code - U038

Students wishing to earn a Native American Studies minor must complete requirements as listed below, with a grade of C or better in each course. Please visit <http://nas.wvu.edu> for more details.

Core Courses:		9
NAS 200	Introduction: Native American Studies	
ENGL 156	Literature of Native America	
HIST 264	American Indian History	
Upper-Division Electives:		9
Select 3 courses:		
NAS 491	Professional Field Experience	
NAS 495	Independent Study (no more than 3 credits may count toward the minor)	
ENGL 356	Topics in Native American Literature	
POLS 355	Governments of Latin America	
Total Hours		18

Neuroscience, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

As the population of West Virginia and the nation age and as the opioid crisis expands, the demand for basic and applied neuroscience researchers and clinicians continues to grow. The goal of the BS in neuroscience program is to attract new students to West Virginia University from diverse cultural backgrounds and train them as neuroscience professionals. Students graduating from the BS in Neuroscience program are uniquely prepared for admission into advanced degree programs in neuroscience, biomedical engineering, medicine, and biomedical sciences at WVU or other institutions. These graduates are also prepared to serve in academic and technical positions in private industry as well as the broader healthcare industry.

Areas of Emphasis

- Behavioral Neuroscience
- Cellular and Systems Neuroscience

Minors

All students have the possibility of earning one or more minors; a list of all available minors and their requirements is available at <http://catalog.wvu.edu/undergraduate/minors/>. Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their course work and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

PROGRAM COORDINATOR

- Kris Martens - Ph.D. (Southern Illinois University - Carbondale)
Behavioral Neuroscience, Recovery from Traumatic Brain Injury

PROFESSORS

- Kevin C. Daly - Ph.D. (University of Arizona)
Sensory Neurobiology, Neural Coding, Brain-Behavior Interactions, Comparative Psychobiology
- Kevin T. Larkin - Ph.D. (University of Pittsburgh)
Department of Psychology Chair. Clinical Health Psychology, Applied Psychophysiology, Cardiovascular Behavioral Medicine
- Randy Nelson - Ph.D. (Psychology; University of California - Berkeley), Ph.D. (Endocrinology; University of California - Berkeley)
Hazel Ruby McQuain Chair for Neurological Research. Department of Neuroscience Chair. Disrupted Circadian Rhythms on Immune Functioning, Neuroinflammation, Metabolism, Sleep & Mood, Behavioral Neuroendocrinology
- Richard B. Thomas - Ph.D. (Clemson University)
Department of Biology Chair. Physiological Plant Ecology, Forest Ecology, Global Climate Change

ASSOCIATE PROFESSORS

- Karen Anderson - Ph.D. (University of Florida)
Behavioral Pharmacology, Self-Control & Impulsivity
- Andrew Dacks - Ph.D. (University of Arizona)
Neurobiology
- Sarah M. Farris - Ph.D. (University of Illinois - Urbana-Champaign)
Evolution & Development of the Insect Brain, Neuroanatomy
- John Navaratnam - Ph.D. (West Virginia University)
Wetland ecology

ASSISTANT PROFESSORS

- Sadie Bergeron - Ph.D. (University of Massachusetts - Amherst)
Developmental Neurobiology
- Melissa Blank - Ph.D. (Virginia Commonwealth University)
Behavioral Neuroscience, Tobacco Use, Tobacco-Related Health Risks, Genetics of Substance Use
- Cole Vonder Haar - Ph.D. (University of Southern Illinois - Carbondale)
Behavioral Dysfunction & Traumatic Brain Injury, Behavioral Neuroscience
- Gary Marsat - Ph.D. (McGill University)
Neurobiology
- 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

Admissions

- First-Time Freshmen with a minimum MATH ACT of 19 or a minimum MATH SAT OF 510 or above are admitted directly into the major.
- Students who transfer from another major at WVU must have a minimum overall GPA of a 2.0 and completed BIOL 115 & BIOL 116 and CHEM 115 & CHEM 115L with a C- or better.
- Students who transfer from another institution must have a minimum overall GPA of a 2.0 and completed BIOL 115 & BIOL 116 and CHEM 115 & CHEM 115L with a C- or better.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Neuroscience (<https://admissions.wvu.edu/academics/majors/neuroscience/>) major.

Degree Requirements

Students must complete WVU General Education Foundations requirements, College B.S. requirements, major requirements, and electives with a minimum of 120 hours. For complete details on these requirements, visit the B.S. Degrees tab on the Eberly College of Arts and Sciences (<http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/#bachelorofsciencetext>) page.

Departmental Requirements for the B.S. in Neuroscience

- **Capstone Requirement:** The university requires the successful completion of a Neuroscience capstone course NRSC 320 Neuroscience Research Capstone for a minimum of 3 credits.
- **Writing and Communication Skills Requirement:** Students in the Neuroscience Bachelor of Science complete this requirement by completing ENGL 101 and ENGL 102, or ENGL 103 and BIOL 115, BIOL 117, BIOL 219, and NRSC 320 Neuroscience Research Capstone.

- **Calculation of the Grade Point Average (GPA) in the Neuroscience major:** A GPA of 2.0 in all BIOL, NRSC and PSYC courses applied to the major is required for graduation. A minimum grade of C- is required in all Core Courses listed below. If a course is repeated, all attempts will be used to calculate the GPA in the Neuroscience major.
- **Area of Emphasis (AOE):** Students must select an area of emphasis and complete all requirements for the selected AoE.
- **Pre-Med Path:** Students wishing to apply to Medical School or other health professions areas should speak to their advisor.
- **Benchmark Expectations:** For details, go to the neuroscience admissions tab.

Curriculum Requirements

UNIVERSITY REQUIREMENTS: 16

NRSC 191 First-Year Seminar
GEF Requirements: credits may vary depending on overlap

ECAS B.S. REQUIREMENTS: 12

Global Studies and Diversity Requirement

MATH Requirement

MATH 155 Calculus 1
or:
MATH 153 Calculus 1a with Precalculus
& MATH 154 and Calculus 1b with Precalculus

Science Requirement:

See above (may overlap with GEF and major requirements)

DEPARTMENTAL REQUIREMENTS:

Core Courses: 45

BIOL 115 Principles of Biology
& BIOL 116 and Principles of Biology Laboratory

BIOL 117 Introductory Physiology
& BIOL 118 and Introductory Physiology Laboratory

BIOL 219 The Living Cell
& BIOL 220 and The Living Cell Laboratory

BIOL 348 Neuroscience 1

BIOL 349 Neuroscience 2

Select one of the following Chemistry Sequences:

CHEM 115 Fundamentals of Chemistry
& 115L and Fundamentals of Chemistry 1 - Laboratory

CHEM 117 Principles of Chemistry 1
& 117L and Principles of Chemistry 1 - Laboratory

Select one of the following Chemistry Sequences:

CHEM 116 Fundamentals of Chemistry
& 116L and Fundamentals of Chemistry 2 - Laboratory

CHEM 118 Principles of Chemistry 2
& 118L and Principles of Chemistry 2 - Laboratory

PSYC 101 Introduction to Psychology

NRSC 101 Introduction to the Neural Sciences

NRSC 201 Biological Foundations of Behavior

Select one pair:

PSYC 203 Research Methods & Analysis 1
& PSYC 204 and Research Methods & Analysis 2

STAT 211 Elementary Statistical Inference
& BIOL 302 and Biometry
or STAT 215 Introduction to Probability and Statistics

STAT 211 Elementary Statistical Inference
& STAT 312 and Intermediate Statistical Methods
or STAT 215 Introduction to Probability and Statistics

NRSC Chemistry elective, select one option:

BIOC 339 Introduction to Biochemistry

CHEM 231 & 231L	Organic Chemistry: Brief Course and Organic Chemistry: Brief Course - Laboratory	
CHEM 233 & CHEM 235	Organic Chemistry and Organic Chemistry Laboratory	
AREA OF EMPHASIS:		12
Select one option:		
Cellular & Molecular Neuroscience		
Behavior & Systems Neuroscience		
Electives:		6
Select 6 credits from one group outside of the AoE selected:		
Cellular & Molecular Neuroscience Courses:		
BIOL 339	Animal Communication	
BIOL 439	Neuroethology	
BIOL 474	Neurogenetics and Behavior	
BIOL 475	Neurobiological Diseases	
BIOL 478	Sensory Neural Systems and Behavior	
BIOL 479	Principles of Systems Neuroscience	
Behavior & Systems Neuroscience Courses:		
PSYC 234	Drugs and Behavior	
PSYC 302	Behavior Principles	
PSYC 425	Perception	
PSYC 426	Physiological Psychology	
PSYC 427	Psychobiology of Sleep	
PSYC 428	Hormones and Behavior	
Capstone:		3
NRSC 320	Neuroscience Research Capstone	
GENERAL ELECTIVES:		26
Number of credit may vary depending on course selection.		

Total Hours 120

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
NRSC 191		1 ENGL 101 (F1)	3
BIOL 115 & BIOL 116 (GEF 2; B.S. First Area 1)		4 BIOL 117 & BIOL 118 (GEF 8; B.S. First Area 2)	4
CHEM 115 & 115L (GEF 8; B.S. Second Area 1)		4 CHEM 116 & 116L (GEF 8; B.S. Second Area 2)	4
NRSC 101		3 PSYC 101 (F4)	3
MATH 155 (F3)		4	
		16	14

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (F1)		3 GEF 5	3
BIOL 219 & BIOL 220		4 GEF 6	3
NRSC 201		3 BIOL 348	3
PSYC 203 or STAT 211		3 PSYC 204 (or BIOL 302 or STAT 312)	3
General Elective		2 General Elective	3
		15	15

Third Year

Fall	Hours	Spring	Hours
BIOL 349		3 ECAS Global Studies and Diversity Requirement; F7	3

NRSC Chemistry Elective	4 NRSC Elective C.1	3
AoE Course 1	3 AoE Course 2	3
B.S. Third Area 1	4 B.S. Third Area 2	4
General Elective	1 General Elective	2
	15	15

Fourth Year

Fall	Hours	Spring	Hours
AoE Course 3		3 AoE Course 4	3
NRSC Capstone		3 General Elective	3
NRSC Elective C. 2		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
	15		15

Total credit hours: 120

Areas of Emphasis

- Behavioral Neuroscience (p. 367)
- Cellular and Systems Neuroscience (p. 367)

BEHAVIORAL NEUROSCIENCE AREA OF EMPHASIS REQUIREMENTS:

This focused training will prepare the graduate for careers from basic research to translational/clinical settings. Students interested in medicine or other healthcare-related fields should also consider this option.

Behavioral Neuroscience Courses:**12**

Select 4 classes:

BIOL 339	Animal Communication
BIOL 439	Neuroethology
PSYC 234	Drugs and Behavior
PSYC 302	Behavior Principles
PSYC 425	Perception
PSYC 426	Physiological Psychology
PSYC 427	Psychobiology of Sleep
PSYC 428	Hormones and Behavior
Any NRSC or PSYC at the 300-level or above, with adviser approval. *	

Total Hours 12

* Excluding NRSC 490, PSYC 490, 495, 497, and 498

CELLULAR AND SYSTEMS NEUROSCIENCE AREA OF EMPHASIS REQUIREMENTS

This focused training will prepare the graduate for careers from basic research to translational/clinical settings. Students interested in medicine or other healthcare-related fields should also consider this option.

Cellular and Systems Neuroscience Courses:**12**

Select 4 courses:

BIOL 339	Animal Communication
BIOL 439	Neuroethology
BIOL 474	Neurogenetics and Behavior
BIOL 475	Neurobiological Diseases
BIOL 476	Computational Neuroscience
BIOL 477	Central Nervous System Evolution and Development
BIOL 478	Sensory Neural Systems and Behavior
BIOL 479	Principles of Systems Neuroscience

Any NRSC or PSYC at the 300-level or above, with adviser approval. *

Total Hours

12

* Excluding NRSC 490, PSYC 490, 495, 497, and 498

Degree Progress

- By the end of their third semester into the major, students should have completed the following classes with a minimum grade of C-:
 - BIOL 115 BIOL 115 & BIOL 116 BIOL 116
 - BIOL 117 & BIOL 118
 - BIOL 219 & BIOL 220
 - CHEM 115 CHEM 115 & CHEM 115L CHEM 115L
 - NRSC 101
 - PSYC 101

Students who do not meet their benchmarks may be removed from the major.

Major Learning Outcomes

NEUROSCIENCE

This B.S. curriculum will provide a comprehensive introduction to the field of neuroscience and many of the professional skills needed for post-graduation career options.

Upon completion of the BS in Neuroscience program at WVU the, the graduate will be able to:

1. Describe the structure and function of the nervous system at the molecular, cellular and behavioral/organismal levels.
2. Apply fundamental principles underlying the organization and function of the nervous system across sub-systems and species.
3. Synthesize information from across the field of neuroscience to:
 - a. Read and comprehend basic neuroscience literature
 - b. Critically evaluate new neuroscience research and emerging techniques
 - c. Establish testable hypotheses
 - d. Design approaches to test hypotheses about nervous system function
4. Collect, analyze and interpret basic neuroscience research data
5. Communicate research via a variety of venues including:
 - a. Written reports
 - b. Oral presentation of journal articles
 - c. Poster-based oral presentations of their research

Philosophy/Humanities, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The Department of Philosophy is a small, academically vibrant, student-centered, undergraduate program. Our mission is to provide an outstanding liberal arts education with all the advantages of a large research university.

Philosophy students are trained to understand and to respond both critically and creatively to philosophical problems, theories, and arguments. Philosophy students investigate fundamental questions that have puzzled human beings for ages. Philosophy deals with questions such as: What do we know and how do we know it? What is morally right and how should we live? What is the nature of the human mind and self? Is there a God and how might human beings know about God? What is the ideal form of government? What is the ultimate nature of reality? Are human beings responsible for their actions, and if so, why? Philosophy also deals with gripping issues in contemporary society, such as questions about social justice, race and racism; sex and gender; research ethics; appropriate uses of science, medicine, and technology; privacy; access to affordable healthcare; environmental and animal welfare; quality of life; and much more.

The areas in which students receive instruction include logic, ethics, social-political philosophy, philosophy of law, theory of knowledge, philosophy of science, continental philosophy, metaphysics, history of philosophy, philosophy of sex and gender, philosophy of race, philosophy of language, and philosophy of religion.

Because of the vigorous critical thinking students enjoy in a philosophy class, the study of philosophy provides an ideal preparation for a wide range of interesting careers including law, business, medicine, higher education, library science, and journalism. Those who desire a career teaching philosophy in college will need the Ph.D. degree.

Philosophy is an especially strong major for students going to law school. We offer a pre-law area of emphasis within the philosophy major.

Along with coursework in the natural sciences, philosophy is an outstanding major for students going to medical school.

For students without any definite career plans, philosophy is an excellent major in that it provides skills essential for any career that requires clear communication, analytical thinking, problem solving, strong writing, evaluation and/or creation of policies and procedures, comfort with complexity and disagreement, attention to logical detail, imagination, and careful and creative thinking.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Humanities

No Degree Offered

Nature of the Program

The study of the humanities is the study of our effort to understand ourselves through history, literature, religion, philosophy, and fine arts. It is also the study of our effort to comprehend the masterpieces of the past and present as we seek to deepen our understanding of ourselves and our culture: what we are, why we are, and what our options for a significant life are.

Although we do not offer a major or a minor in the humanities, many students enjoy our courses as part of their General Education Foundations.

Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>) here. Please note that students may not earn a minor in their major field.

3+3 Program

The Department of Philosophy participates in the 3+3 Program with WVU's College of Law, which is an opportunity for qualified undergraduate students to earn their bachelor's degree and law degree in six years instead of seven years. Students accepted into the 3+3 program begin taking classes at WVU Law in what would be their senior year of college. Students participating in this program must meet certain eligibility criteria and progress benchmarks. For questions regarding your eligibility, please contact your department advisor.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

CHAIR

- Sharon Ryan - PhD
University of Rochester

PROFESSORS

- David Cerbone - Ph.D. (U.C. Berkeley)
Continental philosophy (esp. Heidegger), Wittgenstein, History of Analytic Philosophy
- Scott Davidson - Ph.D (Duquesne University)
Continental Philosophy; Social and Political Philosophy
- Sharon Ryan - Ph.D. (U. Rochester)
Epistemology, Philosophy of Religion, Metaphysics

ASSOCIATE PROFESSORS

- Geoff Georgi - PhD (U. Southern California)
Philosophy of Language, Metaphysics, Logic

- Matthew Talbert - PhD (UC Riverside)
Moral Psychology, Ethics

ASSISTANT PROFESSOR

- Devin Curry - PhD (U. Pennsylvania)
Philosophy of Mind, Philosophy of Science, Philosophy of Race, History of Philosophy

TEACHING ASSISTANT PROFESSOR

- David Hoinski - PhD (Duquesne University)
History of Philosophy

VISITING ASSISTANT PROFESSOR

- Daniel Miller - PhD (Florida State University)
Normative and Applied Ethics

PROFESSORS EMERITI

- Ralph W. Clark - PhD
U. Colorado
- Theodore M. Drange
- Virginia Klenk - PhD
Logic
- Henry Ruf
- Daniel Shapiro - PhD
U. Minnesota
- Mark Wicclair - PhD
Columbia University

Admissions

- Entering freshmen are admitted directly into the major.
- Students admitted from other majors or CLASS must have a 2.0 in any Philosophy coursework and a 2.0 overall GPA. However, the department is willing to work with students with a lower GPA if they have taken and done well in a PHIL course and their low GPA is the result of grades outside of humanities and social science coursework. Please contact a department adviser for details.
- Transfer students with a 2.0 overall GPA are admitted directly into the major.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Philosophy (<https://admissions.wvu.edu/academics/majors/philosophy/>) major.

Click here to view the Suggested Plan of Study (p. 372)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences page (p. 187).

Departmental Requirements for the B.A. in Philosophy

A degree in philosophy requires thirty hours in Philosophy, including three credits at any level, and 18 hours of work at the 300 level or above. All students wishing to obtain a degree in Philosophy must comply with the following:

- **Capstone Requirement:** The university requires the successful completion of a Capstone course.
 - Students in Philosophy usually take PHIL 480.
 - In some instances, with special permission from the department, students can write a thesis to fulfill the Capstone requirements. These students must take PHIL 496, and should make arrangements with a faculty member during the semester preceding the one in which they plan to write the thesis. Only students who have a 3.7 average or higher in Philosophy courses are eligible to write the senior thesis. Ability to enroll in PHIL 496 will depend upon the availability of a faculty member who is able to work with the student, the student's level of preparation for successful completion of a thesis, and the student's submission of an appropriate proposal for the thesis.
- **Writing and Communication Skills Requirement:** The Philosophy Bachelor of Arts is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Calculation of the GPA in the Major:** A grade of C- or higher must be earned in required courses, and majors must possess at least a 2.0 average in all Philosophy courses in order to graduate. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Pre-Law Area of Emphasis:** The course of study for the Pre-Law Area of Emphasis includes all of the requirements for the Philosophy major as well as PHIL 130, PHIL 323, and PHIL 325 as part of their PHIL electives.
- **Benchmark Expectations:** For details, go to the Philosophy admissions tab (p. 370).

Curriculum Requirements

UNIVERSITY REQUIREMENTS	25
PHIL 191 First-Year Seminar	
GEF Requirements (number of credit hours may vary depending on overlap):	
ECAS B.A. REQUIREMENTS	12
Foreign Languages	
Fine Arts Requirement	
Global Studies & Diversity Requirement	
DEPARTMENTAL REQUIREMENTS	
Basic Core Requirements:	9
PHIL 244 History of Ancient Philosophy	
PHIL 248 History of Modern Philosophy	
PHIL 260 Introduction to Symbolic Logic	
Philosophy Upper-Division Courses	6
Select one of the following:	
PHIL 301 Metaphysics	
PHIL 302 Theory of Knowledge	
Select one of the following:	
PHIL 321 Ethical Theory	
PHIL 346 History of Ethics	

Philosophy Upper-Division Electives:	9
Select 9 hours at the 300 level or above in PHIL	
Philosophy General Elective	3
Any PHIL course at the 100-level or above	
Capstone Experience:	3
Select one of the following:	
PHIL 480 Capstone Seminar	
PHIL 496 Senior Thesis	
General Electives	53
Number of electives may vary depending on overlap	
Total Hours	120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
PHIL 191		1 ENGL 101 (GEF 1)	3
GEF 2		3 GEF 2	3
PHIL 244 (GEF 5)		3 PHIL 260 (GEF 8)	3
Foreign Language 101		3 Foreign Language 102	3
General Elective		3 General Elective	3
General Elective		2	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 Foreign Language 204	3
GEF 3		3 ECAS Global Studies & Diversity Requirement (GEF 7)	3
GEF 4		3 PHIL 301 (GEF 8)	3
Foreign Language 203		3 General Elective	3
PHIL 248 (GEF 8)		3 General Elective	3
		15	15

Third Year

Fall	Hours	Spring	Hours
ECAS Fine Arts Requirement (GEF 6)		3 PHIL Upper Division Elective 2	3
PHIL Ethics Course		3 PHIL Upper Division Elective 3	3
PHIL General Elective		3 General elective	3
PHIL Upper Division Elective 1		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
General Elective		3 PHIL 480	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

3+3 Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
PHIL 191		1 ENGL 101 (GEF 1)	3
PHIL 130 (GEF 8; AoE Course 1)		3 PHIL 260 (GEF 3)	3
PHIL 244 (GEF 5)		3 Foreign Language 102	3
Foreign Language 101		3 General Elective	3
General Elective		3 GEF 2A	3
General Elective		2	
		15	15

Second Year

Fall	Hours	Spring	Hours
PHIL 248 (GEF 8)		3 ENGL 102	3
PHIL 321 or 346 (GEF 8)		3 PHIL 301 or 302 (GEF 8)	3
GEF 2A		3 ECAS Gl. St. and Div. Requirement (GEF 7)	3
GEF 4		3 Foreign Language 204	3
Foreign Language 203		3 General Elective	3
		15	15

Third Year

Fall	Hours	Spring	Hours
PHIL 323 (Upper Div. Ele. 1; AoE Course 2)		3 PHIL 480 or 496 (Capstone & Writing)	3
PHIL 325 (Upper-Div Ele. 2; AoE Course 3)		3 PHIL Upper Division Elective 3	3
ECAS Fine Arts Requirement (GEF 6)		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

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: 122

Degree Progress

- By the third semester into the major, students should have completed 3 classes in the major with the requisite grade.
- All majors must meet with a Philosophy department adviser each semester.

Students who do not meet these benchmarks may be removed from the major.

Major Learning Outcomes

PHILOSOPHY

Upon successful completion of the B.A. degree, **Philosophy** majors will be able to meet learning outcomes for each of the following categories:

1. History of Philosophy: Students will be able to trace the development of major themes in the history of philosophy and will be familiar with the positions of major figures within this history.
2. Contemporary Debates in Philosophy: Students will be familiar with a wide range of debates (about ethics, metaphysics, philosophy of mind,

epistemology, etc.) at the center of contemporary philosophy.

3. Logical Reasoning: Students will be able to distinguish valid and invalid forms of reasoning and will be able to formally analyze arguments.
4. Philosophical Writing: Students will be able to criticize arguments, and construct arguments of their own, in clear, well-written prose.
5. Analysis of Philosophical Texts: Students will be able to decipher and summarize complicated philosophical texts and arguments.

Physics and Astronomy

Degrees Offered

- Bachelor of Arts
- Bachelor of Science

Students may not earn both a B.A. and a B.S. in Physics.

Nature of the Program

There are two degree options for students in physics. The bachelor of science degree is designed for students committed to a career in research. It can be followed by graduate work in physics, chemistry, materials science, optical sciences, astrophysics, engineering, or in other physical sciences such as meteorology, oceanography, etc. Some students instead pursue positions in industry, high school teaching, or in a government laboratory immediately after completing the B.S. This degree program provides a comprehensive grounding in the fundamentals of physics and is usually accompanied by participation in one of the active research programs within the department.

The bachelor of arts degree is designed to prepare students for a career that utilizes physics preparation in conjunction with an applied emphasis. By allowing more free elective choices, it prepares a student for a career that combines a science background with subsequent professional training. Typical career paths for this degree program include teaching, medicine, dental school, medical school, patent law, forensics, health physics, environmental engineering, science journalism, government policy, and business management.

The courses in physics provide a mix of theoretical concepts and practical examples. Each course within a degree plan builds upon the knowledge base acquired in previous courses and, together, these courses allow a student to acquire the combination of physical insight and mathematical skill needed for success in today's demanding job markets.

The department also offers introductory survey courses in physics and astronomy that are of interest to a broad range of students in the social sciences, fine arts, humanities, health sciences, and education. These courses use a minimum of mathematics to introduce the principles of physics and they provide many examples from the "real world" of the environment, energy, space, communications, transportation, and medicine.

For the B.S. degree, an Area of Emphasis is required. The Professional Preparation Area of Emphasis is the typical plan of study for graduate study in physics. Recommendations for the other areas of emphasis include:

APPLIED PHYSICS

Students completing this area of emphasis use math and science along with courses in other related disciplines to focus on the practical application of physics. Students in this area of emphasis concentrate on career-oriented outcomes in a variety of professional fields.

BIOPHYSICS

Sometimes referred to as "the physics of life," students in this area of emphasis utilize physics and related coursework to discover related insights that range from molecular and cellular applications to the whole organism. Students often focus on biology and chemistry coursework, sometimes in preparation for medical school.

COMPUTATIONAL PHYSICS

Computational models sometimes help solve difficult problems in physics. Students in this area of emphasis learn statistical modeling and other related skills to help analyze various concepts in physics.

MATERIALS SCIENCE

Understanding how to manipulate materials, their properties and processes is a skill that will help students in this area of emphasis access wide variety of skills, particularly on a global level. Materials Science encompasses a range of disciplines and concepts.

MEDICAL PHYSICS

Students in the Medical Physics area of emphasis learn applications of physics that can lead to an exciting range of careers in the medical field. From researching and designing new medical equipment to helping plan radiation treatment for cancer patients, this area of physics is broad but important.

PHYSICS TEACHING

For many of us, a love of physics developed from interacting with a motivational physics teacher. This area of emphasis allows students to earn a degree in physics while simultaneously preparing for a career in teaching at the middle or high school level. Students develop pedagogical skills to help others strengthen quantitative reasoning and problem solving skills that are vital in physics -- and anywhere!

SPACE PHYSICS

Students in this area of emphasis learn skills that help address fundamental questions about our place in the universe, the history of our solar system and more. The challenges of understanding space exploration have led to fascinating expansions in technology, new industries and unprecedented relationships with other nations.

Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>) here. Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

CHAIR

- D. J. Pisano - Ph.D. (University of Wisconsin - Madison)
Astrophysics/Astronomy

ASSOCIATE CHAIR

- Alan Bristow - Ph.D. (University of Sheffield)
Experimental Condensed Matter Physics

PROFESSORS

- Wathiq Abdul-Razzaq - Ph.D. (University of Illinois - Chicago)
Physics Education
- Paul Cassak - Ph.D. (University of Maryland)
Plasma Physics, Theory
- Leonardo Golubovic - Ph.D. (University of Belgrade)
Theoretical Condensed Matter Physics and Statistical Physics
- Matthew Johnson - Ph.D. (California Institute of Technology)
Experimental Condensed Matter Physics
- Mark E. Koepke - Ph.D. (University of Maryland)
Plasma Physics, Experiment
- Lian Li - Ph.D. (University of Arizona)
Carroll Professor, Experimental Condensed Matter Physics
- Duncan R. Lorimer - Ph.D. (University of Manchester)
Astrophysics/Astronomy
- Maura McLaughlin - Ph.D. (Cornell University)
Eberly Family Professor, Astrophysics/Astronomy
- Sheena Murphy - Ph.D. (Cornell University)
Experimental Condensed Matter Physics

- Aldo Romero - Ph.D. (University of California - San Diego)
Theoretical 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)
Experimental Condensed Matter Physics
- Cheng Cen - Ph.D. (University of Pittsburgh)
Condensed Matter Physics
- Zach Etienne - Ph.D. (University of Illinois)
Astrophysics/Astronomy
- 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 Matter Physics
- John Stewart - Ph.D. (University of Illinois-Urbana Champaign)
Physics Education Research

ASSISTANT PROFESSORS

- Sarah Burke-Spolaor - Ph.D. (Swinburne University of Technology)
Astrophysics/Astronomy
- Adam Kobelski - Ph.D. (University of Montana)
Solar Physics, Physics Education Research
- Joonhee Lee - Ph.D. (Seoul National University)
Biophysics
- Sean McWilliams - Ph.D. (University of Maryland)
Astrophysics/Astronomy
- Kathryn Williamson - Ph.D. (Montana State University)
Astronomy Education Research
- Weichao Tu - Ph.D. (University of Colorado - Boulder)
Space Plasma Physics

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 E. 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)
Eberly Family Professor, Condensed Matter Physics
- Richard Treat - Ph.D. (University of California – Riverside)

General Relativity)

- H. Arthur Weldon - Ph.D. (Massachusetts Institute of Technology)
Particle Physics

Admissions

- First-Time Freshmen with a minimum MATH ACT score of 22 or a minimum MATH SAT of 540 are admitted directly into the B.A. or B.S. physics program.
- Students transferring from another major within WVU must meet milestones set by the department: a GPA of 2.2 in math & physics courses with at least one math & physics course completed and a 2.0 overall GPA. Please see a departmental adviser for details.
- Students transferring from another institution must meet milestones set by the department: a GPA of 2.2 in math & physics courses with at least one math & physics completed and a 2.0 overall GPA.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science and Bachelor of Arts in Physics (<https://admissions.wvu.edu/academics/majors/physics/>) major.

Degree Progress

- **GPA in the major:**
 - Students must have a cumulative GPA in the major requirements of 2.2 or better after completing two physics courses, or they will be placed on probation.
 - Students who do not raise their GPA in the major requirements above 2.2 after one semester on probation will be removed from the Major.
- **Repeated MATH and PHYS courses:**
 - Students not able to attain better than a D/F/W by the second attempt in a mathematics or physics course will be placed on probation.
 - A student with three grades of D/F/W in the same physics or mathematics course will be removed from the Major.

Major Learning Outcomes

PHYSICS

Upon successful completion of the B.S. degree, **Physics** majors will demonstrate:

1. An understanding of and ability to solve basic conceptual and quantitative problems in theoretical mechanics, electricity and magnetism, quantum mechanics, and thermodynamics.
2. An ability to perform accurate measurements of physical systems and communicate the results and implications of those measurements orally and in writing.
3. An ability to develop experiments to test basic or applied research questions, to perform accurate experimental measurements, and to critically evaluate others' answers to research questions.
4. Preparation for success in graduate school or in a post baccalaureate career.

Upon successful completion of the B.A. degree, **Physics** majors will demonstrate:

1. An understanding of and ability to solve basic conceptual and quantitative problems in foundational physics areas and to apply complex reasoning and problem solving skills developed in physics across disciplines, with focus on such application in a cognate area.
2. An ability to perform accurate measurements of physical systems and communicate the results and implications of those measurements orally and in writing.
3. An ability to develop experiments to test basic or applied research questions, to perform accurate experimental measurements, and to critically evaluate others' answers to research questions.
4. Preparation for success in a post baccalaureate career, or graduate or professional school in the cognate area.

The Physics B.A. is designed to prepare students for a career that utilizes physics preparation in conjunction with an applied emphasis. Some common examples are teaching, science journalism, medicine or patent law. Students work with their advisors to choose complementary courses tailored to suit the student's career aspirations. These hours are completed within the block of elective hours.

Physics B.A.

[Click here to view the Suggested Plan of Study \(p. 379\)](#)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences (p. 187) page.

Departmental Requirements for the B.A. in Physics

Students may not earn both a B.A. and a B.S. in Physics. All students wishing to obtain a B.A. degree in Physics must comply with the following:

- **Calculation of the GPA in the Major:** Students must maintain at least a minimum cumulative 2.2 GPA is required in all PHYS and MATH courses. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Writing and Communication Skills Requirement:** Physics Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two of the following **SpeakWrite Certified Courses™**: PHYS 191, PHYS 341, PHYS 376, PHYS 496, ASTR 469.
- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Students majoring in Physics must complete PHYS 496.
- **Benchmark Expectations:** For details, go to the Physics admissions tab (p. 377).

Curriculum Requirements

UNIVERSITY REQUIREMENTS		22
PHYS 191	First-Year Seminar (meets WVU First Year Seminar requirement)	
GEF Requirements (may vary depending on overlap)		
ECAS B.A. Requirements		12
Fine Arts Requirement (GEF 6)		
Foreign Language		
Global Studies and Diversity Requirement (GEF 7)		
DEPARTMENTAL REQUIREMENTS		
Physics Foundation Courses		11
PHYS 111	General Physics	
PHYS 112	General Physics	
PHYS 212	Oscillations and Thermal Physics	
Advanced Physics Courses		15
PHYS 314	Introductory Modern Physics	
Three additional Physics or Astronomy courses (9 hours minimum) at the 300 or 400-level *		
PHYS 341	Advanced Physics Laboratory 1	

or PHYS 376	Research Methods	
Science Requirement		8
8 credits from Biology, Chemistry, Computer Science, or Geology		
Mathematics Requirement		15
MATH 155	Calculus 1	
or MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 156	Calculus 2	
MATH 251	Multivariable Calculus	
MATH 261	Elementary Differential Equations **	
or	any mathematics course at the 300 or 400 level**	
Capstone Experience		3
PHYS 496	Senior Thesis	
GENERAL ELECTIVES ***		34
Number may vary depending on overlap		
Total Hours		120

* No more than 3 hours may be chosen from PHYS 490, 491, 494, 495, or 497

** Choose either Math 261 or any mathematics course at the 300 or 400 level, excluding Math 490, 494, 495, 497

*** The Physics B.A. is designed to prepare students for a career that utilizes physics preparation in conjunction with an applied emphasis. Some common examples are teaching, science journalism, medicine or patent law. Students work with their advisors to choose complementary courses tailored to suit the student's career aspirations. These hours are completed within the block of elective hours.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
PHYS 191 (First Year Seminar)		1 Foreign Language 102	3
Foreign Language 101		3 MATH 156 (GEF 8)	4
MATH 155 (GEF 3)		4 PHYS 111 (GEF 2)	4
Science Elective 1		4 Science Elective 2	4
General Elective		3	
		15	15

Second Year

Fall	Hours	Spring	Hours
Foreign Language 203		3 Foreign Language 204	3
GEF 4		3 PHYS 212	3
MATH 251		4 PHYS 314	4
PHYS 112 (GEF 8)		4 General Elective	4
		General Elective	1
		14	15

Third Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
GEF 5		3 ECAS Global Studies and Diversity Requirement (GEF 7)	3
GEF 8		3 MATH 261 (or 300- or 400-level MATH class)	4
PHYS Elective 1		3 PHYS 341 or 376	2-3
General Elective		3 General Elective	4
		15	16

Fourth Year

Fall	Hours	Spring	Hours
ECAS Fine Arts Requirement (GEF 6)		3 PHYS 496	3
PHYS Elective 2		3 General Elective	4
PHYS Elective 3		3 General Elective	4

General Elective	3 General Elective	4
General Elective	3	
	15	15

Total credit hours: 120

Physics B.S.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.S. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.S. Degrees tab on the Eberly College of Arts and Sciences (p. 190) pages.

Departmental Requirements for the B.S. in Physics

Students may not earn both a B.A. and a B.S. in Physics. All students wishing to obtain a degree in Physics must comply with the following:

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Students majoring in Physics must complete PHYS 496 (other options maybe available depending on AoE selected).
- **Writing and Communication Skills Requirement:** Physics Bachelor of Science students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two of the following **SpeakWrite Certified Courses™**: PHYS 191, PHYS 341, PHYS 376 PHYS 496, ASTR 496.
- **Calculation of the GPA in the Major:** Students are required to maintain at least a minimum cumulative 2.2 GPA in all courses counted toward the major. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Area of Emphasis:** Students completing a Bachelor of Science in Physics must complete an Area of Emphasis selected from Applied Physics, Biophysics, Computational Physics, Materials Science, Medical Physics, Physics Teaching, Professional Preparation, or Space Physics. **The Professional Preparation Area of Emphasis is the typical plan of study for a B.S. degree in physics.**
- **Course Requirement:** Physics students completing the Materials Science, Professional Preparation, or Space Physics Areas of Emphasis are required to complete two semesters of PHYS 341. Students completing Applied Physics, Biophysics, Computational Physics, or Medical Physics Areas of Emphasis only need to complete one semester of PHYS 341. Students completing the Physics Teaching Area of Emphasis are required to complete PHYS 376 in place of PHYS 341.
- **Benchmark Expectations:** For details, go to the Physics admissions tab (p. 377).

Curriculum Requirements

UNIVERSITY REQUIREMENTS	23
PHYS 191	First-Year Seminar
GEF Requirements (may vary depending on overlap)	
ECAS B.S. REQUIREMENTS	
Global Studies and Diversity Requirement	
College Mathematics Requirement	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus
or	
MATH 155	Calculus 1
Science Requirement:	
Please see the Eberly College of Arts and Sciences' Bachelor of Science (B.S.) tab.	
DEPARTMENTAL REQUIREMENTS	
Foundation Courses	15
PHYS 111	General Physics
PHYS 112	General Physics
PHYS 212	Oscillations and Thermal Physics
PHYS 314	Introductory Modern Physics
Mathematics Requirement	12
MATH 156	Calculus 2
MATH 251	Multivariable Calculus
MATH 261	Elementary Differential Equations
Science Electives: 8 credits in BIOL, CHEM, CS, or GEOL	8
May overlap with Eberly B.S. Requirements	
Physics Advanced Level Courses	17
PHYS 331	Theoretical Mechanics 1
PHYS 333	Electricity and Magnetism 1
PHYS 332	Theoretical Mechanics 2 *
or PHYS 334	Electricity and Magnetism
PHYS 341	Advanced Physics Laboratory 1 **
or PHYS 376	Research Methods
PHYS 451	Introductory Quantum Mechanics
PHYS 461	Thermodynamics and Statistical Mechanics
Area of Emphasis	12
Number of hours will vary, depending on Area of Emphasis.	
General Electives	33
Number may vary depending on overlap	
Total Hours	120

* Students completing the Physics Teaching AoE may substitute any PHYS 300- or 400- level course, chosen with advisor's permission, in place of PHYS 332 or PHYS 334.

** Please see individual AoE to select appropriate choice.

Areas of Emphasis

- Applied Physics (p. 382)
- Biophysics (p. 383)
- Computational Physics (p. 384)
- Materials Science (p. 384)
- Medical Physics (p. 385)
- Physics Teaching (p. 386)

- Professional Preparation (p. 388)
- Space Physics (p. 388)

APPLIED PHYSICS

EE 221 & EE 222	Introduction to Electrical Engineering and Introduction to Electrical Engineering Laboratory	4
EE 223 & EE 224	Electrical Circuits and Electrical Circuits Laboratory	4
EE 251 & EE 252	Digital Electronics and Digital Electronics Laboratory	4
CPE 271	Introduction to Digital Logic Design	3
PHYS 496 or EE 481	Senior Thesis Capstone Project - Implementation	3
Total Hours		18

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
PHYS 191		1 ENGL 101 (F1)	3
F4		3 CS 111 (B.S. First Area 2; F8)	4
CS 110 (B.S. First Area 1; F2)		4 MATH 156 (B.S. Second Area 1; F8)	4
MATH 155		4 PHYS 111 (B.S. Third Area 1; F8)	4
General Elective		3	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (F1)		3 F6	3
F5		3 MATH 261	4
MATH 251 (B.S. Second Area 2)		4 PHYS 212	3
PHYS 112 (B.S. Third Area 2; F8)		4 PHYS 314	4
General Elective		1 General Elective	1
		15	15

Third Year

Fall	Hours	Spring	Hours
EE 221 & EE 222		4 CPE 271	3
PHYS 331		3 EE 223 & EE 224	4
PHYS 341		2 PHYS 332 (or Elective)	3
ECAS Glob. St. & Div. Req. (F7)		3 PHYS 333	3
General Elective		3 General Elective	2
		15	15

Fourth Year

Fall	Hours	Spring	Hours
EE 251 & EE 252		4 PHYS 461	3
PHYS 334 (or Elective)		3 PHYS 496 or EE 481	3
PHYS 451		3 General Elective	3
General Elective		3 General Elective	3
General Elective		2 General Elective	3
		15	15

Total credit hours: 120

BIOPHYSICS

BIOL 115	Principles of Biology	3
BIOL 116	Principles of Biology Laboratory	1
BIOC 339	Introduction to Biochemistry	4
CHEM 231 & 231L or CHEM 233 & CHEM 235	Organic Chemistry: Brief Course and Organic Chemistry: Brief Course - Laboratory Organic Chemistry and Organic Chemistry Laboratory	4
PHYS 496	Senior Thesis	3
Total Hours		15

SUGGESTED PLAN OF STUDY**First Year**

Fall	Hours	Spring	Hours
PHYS 191		1 ENGL 101 (F1)	3
F 4		3 CHEM 116 & 116L (B.S. First Area 2; F8)	4
CHEM 115 & 115L (B.S. First Area 1; F2)		4 MATH 156 (B.S. Second Area 1; F8)	4
MATH 155 (F3)		4 PHYS 111 (B.S. Third Area 1)	4
General Elective		3	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (F1)		3 F6	3
BIOL 115 & BIOL 116		4 MATH 261	4
MATH 251 (B.S. Second Area 2)		4 PHYS 212	3
PHYS 112 (B.S. Third Area 2; F8)		4 PHYS 314	4
		General Elective	1
		15	15

Third Year

Fall	Hours	Spring	Hours
PHYS 331		3 CHEM 233 & CHEM 235	4
PHYS 341		2 PHYS 332 (or Elective)	3
ECAS Glo. Stu. & Div. Req. (F7)		3 PHYS 333	3
F5		3 General Elective	5
General Elective		4	
		15	15

Fourth Year

Fall	Hours	Spring	Hours
BIOC 339		4 PHYS 461	3
PHYS 334 (or Elective)		3 PHYS 496	3
PHYS 451		3 General Elective	3
General Elective		5 General Elective	3
		General Elective	3
		15	15

Total credit hours: 120

COMPUTATIONAL PHYSICS

CPE 271	Introduction to Digital Logic Design	3
CS 210	File and Data Structures	4
CS 220	Discrete Mathematics	3
PHYS 301	Computational Physics	3
PHYS 496 or CS 481	Senior Thesis Capstone Project - Implementation	3
Total Hours		16

SUGGESTED PLAN OF STUDY**First Year**

Fall	Hours	Spring	Hours
PHYS 191		1 ENGL 101 (F1)	3
F4		3 CS 111 (B.S. First Area 2)	4
CS 110 (B.S. First Area 1)		4 MATH 156 (B.S. Second Area 1; F8)	4
MATH 155 (F3)		4 PHYS 111 (B.S. Third Area 1; F2)	4
General Elective		3	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (F1)		3 F6	3
F5		3 MATH 261	4
MATH 251 (B.S. Second Area 2)		4 PHYS 212	3
PHYS 112 (B.S. Third Area 2; F8)		4 PHYS 314	4
General Elective		1 General Elective	1
		15	15

Third Year

Fall	Hours	Spring	Hours
CPE 271		3 CS 210	4
PHYS 331		3 PHYS 332 (or Elective)	3
PHYS 341		2 PHYS 333	3
ECAS Glo. Stu. & Div. Req. (F7)		3 F8	3
General Elective		4 General Elective	2
		15	15

Fourth Year

Fall	Hours	Spring	Hours
CS 220		3 PHYS 461	3
PHYS 301		3 PHYS 496 or CS 481	3
PHYS 334 (or Elective)		3 General Elective	3
PHYS 451		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

MATERIALS SCIENCE

EE 221 & EE 222	Introduction to Electrical Engineering and Introduction to Electrical Engineering Laboratory	4
CHE 366	Materials Science	3
CHE 466	Electronic Materials Processing	3
PHYS 341	Advanced Physics Laboratory 1	2
PHYS 471	Solid State Physics	3

PHYS 496 or CHE 456	Senior Thesis Chemical Process Design 2	3
Total Hours		18

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
PHYS 191		1 ENGL 101 (F1)	3
F4		3 CHEM 116 & 116L (B.S. First Area 1; F8)	4
CHEM 115 & 115L (B.S. First Area 1; F2)		4 MATH 156 (B.S. Second Area 1; F8)	4
MATH 155 (F3)		4 PHYS 111 (B.S. Third Area 1; F8)	4
General Elective		3	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (F1)		3 F6	3
F5		3 MATH 261	4
MATH 251 (B.S. Second Area 2)		4 PHYS 212	3
PHYS 112 (B.S. Third Area 2)		4 PHYS 314	4
General Elective		1 General Elective	1
		15	15

Third Year

Fall	Hours	Spring	Hours
EE 221 & EE 222		4 CHE 366	3
PHYS 331		3 PHYS 332 (or Elective)	3
PHYS 341		2 PHYS 333	3
ECAS Glob. Stu. & Div. Req. (F7)		3 PHYS 341	2
General Elective		3 General Elective	4
		15	15

Fourth Year

Fall	Hours	Spring	Hours
CHE 466		3 PHYS 461	3
PHYS 451		3 PHYS 471	3
General Elective		3 PHYS 334 (or Elective)	3
General Elective		3 PHYS 496 or CHE 456	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

MEDICAL PHYSICS

BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	4
BIOL 117 & BIOL 118	Introductory Physiology and Introductory Physiology Laboratory	4
CHEM 231 & 231L or CHEM 233 & CHEM 235	Organic Chemistry: Brief Course and Organic Chemistry: Brief Course - Laboratory * Organic Chemistry and Organic Chemistry Laboratory	4
PHYS 225	Medical Imaging Physics	3

PHYS 496	Senior Thesis	3
Total Hours		18

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
PHYS 191		1 ENGL 101 (F1)	3
F4		3 CHEM 116 & 116L (B.S. First Area 2; F8)	4
CHEM 115 & 115L (B.S. First Area 1; F2)		4 MATH 156 (B.S. Second Area 1; F8)	4
MATH 155 (F3)		4 PHYS 111 (B.S. Third Area; F8)	4
General Elective		3	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (F1)		3 F6	3
F5		3 MATH 261	4
MATH 251 (B.S. Second Area 2)		4 PHYS 212	3
PHYS 112 (B.S. Third Area 2; F8)		4 PHYS 314	4
General Elective		1 General Elective	1
		15	15

Third Year

Fall	Hours	Spring	Hours
BIOL 115 & BIOL 116		4 BIOL 117 & BIOL 118	4
PHYS 331		3 PHYS 332 (or Elective)	3
PHYS 341		2 PHYS 333	3
ECAS Glo. Stu. & Div. Req. (F7)		3 General Elective	4
General Elective		4	
		16	14

Fourth Year

Fall	Hours	Spring	Hours
CHEM 233 & CHEM 235		4 PHYS 225	3
PHYS 334 (or Elective)		3 PHYS 461	3
PHYS 451		3 PHYS 496	3
General Elective		3 General Elective	3
General Elective		2 General Elective	3
		15	15

Total credit hours: 120

PHYSICS TEACHING AREA OF EMPHASIS

PHYS 490	Teaching Practicum	3
Choose one of the following sets of courses		6-8
MATH 376 & C&I 434	Foundations, Functions and Regression Models and Teaching Mathematics: Secondary School	
CHEM 215 & 215L & CHEM 231 & CHEM 231L	Introductory Analytical Chemistry and Introductory Analytical Chemistry Laboratory and Organic Chemistry: Brief Course and Organic Chemistry: Brief Course - Laboratory	

CHEM 215 & 215L & CHEM 341 & CHEM 342	Introductory Analytical Chemistry and Introductory Analytical Chemistry Laboratory and Physical Chemistry: Brief Course and Experimental Physical Chemistry	
CHEM 231 & 231L & CHEM 341 & CHEM 342	Organic Chemistry: Brief Course and Organic Chemistry: Brief Course - Laboratory and Physical Chemistry: Brief Course and Experimental Physical Chemistry	
PHYS 496	Senior Thesis	3
Total Hours		12

SUGGESTED PLAN OF STUDY FOR THE B.S. IN PHYSICS WITH AN AREA OF EMPHASIS IN TEACHING

First Year

Fall	Hours	Spring	Hours
F6		3 ENGL 101 (F1)	3
CHEM 115 & 115L (ECAS B.S. First Area 1; F2B)		4 CHEM 116 & 116L (ECAS B.S. First Area 2; F8)	4
MATH 155 (F3)		4 MATH 156 (GEF 8; B.S. Second Area 1; F8)	4
General Elective		1 PHYS 111 (ECAS B.S. Third Area 1; F8)	4
PHYS 191 (First Year Experience)		1	
General Elective		2	
		15	15

Second Year

Fall	Hours	Spring	Hours
F4		3 ECAS Glob. & Div. Studies Req; F7	3
ENGL 102 (F1)		3 MATH 261	4
MATH 251 (B.S. Second Area 2)		4 PHYS 212	3
PHYS 112 (ECAS B.S. Third Area 2)		4 PHYS 314	4
General Elective		1 General Elective	1
		15	15

Third Year

Fall	Hours	Spring	Hours
PHYS Teaching AoE Course 1		4 PHYS Teaching AoE Course 2	4
PHYS 331		3 PHYS 376	3
General Elective		3 PHYS 332 (or Elective)*	3
General Elective		3 PHYS 333	3
General Elective		2 General Elective	2
		15	15

Fourth Year

Fall	Hours	Spring	Hours
F5		3 PHYS 496	3
PHYS 334 (or Elective)		3 PHYS 461	3
PHYS 451		3 General Elective	3
PHYS 490		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

* May also be satisfied by 300 or 400 level PHYS elective or MATH 318.

PROFESSIONAL PREPARATION AREA OF EMPHASIS

Physics Courses	9
Select three ASTR or PHYS at the 300-or 400 level **	
Mathematics or Science Elective:	3
Any Mathematics, Computer Science, or Statistics course at the 300 or 400 level	
Required Courses:	5
PHYS 341 Advanced Physics Laboratory 1	
PHYS 496 Senior Thesis	
<hr/> Total Hours	<hr/> 17

** No more than 6 hours combined of ASTR/PHYS 490, 491, 494, 495, or 497 may be used to fulfill major requirements.

SUGGESTED PLAN OF STUDY**First Year**

Fall	Hours	Spring	Hours
PHYS 191		1 ENGL 101 (F1)	3
F4		3 B.S. First Area 2	4
B.S. First Area 1; F2		4 MATH 156 (B.S. Second Area 1; F8)	4
MATH 155 (F3)		4 PHYS 111 (Third Area 1; F8)	4
General Elective		3	
		<hr/> 15	<hr/> 15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (F1)		3 F6	3
F5		3 MATH 261	4
MATH 251 (B.S. Second Area 2)		4 PHYS 212	3
PHYS 112 (B.S. Third Area 2; F8)		4 PHYS 314	4
General Elective		1 General Elective	1
		<hr/> 15	<hr/> 15

Third Year

Fall	Hours	Spring	Hours
PHYS 331		3 PHYS 332 (or Elective)	3
PHYS 341		2 PHYS 333	3
ECAS Glob. Stu. and Div. Req. (F7)		3 PHYS 341	2
General Elective		4 Physics or Astronomy Elective 1	3
General Elective		3 General Elective	1
		General Elective	3
		<hr/> 15	<hr/> 15

Fourth Year

Fall	Hours	Spring	Hours
PHYS 334 (or Elective)		3 PHYS 461	3
PHYS 451		3 PHYS 496	3
Math Elective		3 Physics or Astronomy Elective 3	3
Physics or Astronomy Elective 2		3 General Elective	3
General Elective		3 General Elective	3
		<hr/> 15	<hr/> 15

Total credit hours: 120

SPACE PHYSICS

ASTR 367	Astrophysics 1	3
EE 221 & EE 222	Introduction to Electrical Engineering and Introduction to Electrical Engineering Laboratory	4
PHYS 341	Advanced Physics Laboratory 1	2
PHYS 321	Optics	3
Choose one of the following		3
PHYS 481 or ASTR 368	Plasma Physics Astrophysics 2	
PHYS 496	Senior Thesis	3
Total Hours		18

SUGGESTED PLAN OF STUDY**First Year**

Fall	Hours	Spring	Hours
PHYS 191		1 ENGL 101 (F1)	3
F4		3 CS 111 (B.S. First Area 2)	4
CS 110 (B.S. First Area 1)		4 MATH 156 (F8)	4
MATH 155 (F3)		4 PHYS 111 (B.S. Third Area 1; F2)	4
General Elective		3	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (F1)		3 F6	3
F5		3 MATH 261	4
MATH 251 (B.S. Second Area 1)		4 PHYS 212	3
PHYS 112 (B.S. Third Area 2; F8)		4 PHYS 314	4
General Elective		1 General Elective	1
		15	15

Third Year

Fall	Hours	Spring	Hours
EE 221 & EE 222		4 PHYS 321	3
PHYS 331		3 PHYS 332 (or General Elective)	3
PHYS 341		2 PHYS 333	3
ECAS Glob. Stu. & Div. Req. (F7)		3 PHYS 341	2
F8		3 General Elective	4
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ASTR 367		3 PHYS 461	3
PHYS 334 (or General Elective)		3 PHYS 481 or ASTR 368	3
PHYS 451		3 PHYS 496	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

WVUteach

Physics 9-Adult

Teaching changes lives. It is a rewarding profession that makes a difference. WVUteach is an innovative program uniting in-depth science and mathematics education with teacher preparation. Science and Mathematics teachers are some of the most sought after high school teachers.

WVUteach is designed to give undergraduate students the opportunity to explore the profession of teaching in STEM fields (science, technology, engineering, and math) in a hands-on way. In their very first semester in the program, students will have the opportunity to develop and teach a lesson in a local classroom. WVUteach allows students to complete a rigorous degree in any STEM field and earn a secondary teaching certification in tandem with the 4-year degree in mathematics or science. Students earn one degree, with an additional career option. WVUteach is designed to give the essential tools to forge change in the next generation.

In WVUteach, students take the same courses as students in non-teaching options, with slight variations. They are able to compete with students in the non-teaching option for the same jobs and graduate programs in their field. Students thinking about graduate school should always speak to the Graduate Advisor for the program to determine the coursework expected for applicants.

For more information on licensure requirements, please visit our webpage (<http://WVUteach.wvu.edu>) and schedule an appointment with a WVUteach advisor.

Students seeking Physics 9-Adult teaching certification complete the Physics B.A. or B.S. major requirements and the following courses (27 hours). The WVUteach curriculum can be completed within the 120 hours required for graduation with a B.A. or B.S. in Physics. Physics B.S. students are advised to select the Physics Teaching Area of Emphasis to facilitate appropriate course choices.

WVUTEACH: PHYSICS 9-ADULT

ARSC 120	Inquiry Approaches to Teaching	1
ARSC 220	Inquiry-Based Lesson Design	1
UTCH 221	Knowing and Learning in Mathematics and Science (GEF 4)	3
UTCH 222	Classroom Interactions in Math and Science	3
UTCH 420	Project-Based Instruction in Mathematics and Science	3
UTCH 430	Apprentice Teaching in Math and Science	10
MATH 318	Perspectives on Mathematics and Science (GEF 5)	3
PHYS 376	Research Methods *	3
Total Hours		27

* All WVUteach students need to select PHYS 376 instead of PHYS 341 for their research requirement.

** A second area of licensure is recommended. WVUteach students should discuss second area licensure requirements with their advisor to best support their interests. Completion of a second area of licensure can normally fit within 120 hours required for graduation for the B.A. or B.S. in Physics.

ADDITIONAL COURSEWORK FOR NON-PHYSICS MAJORS

Core Coursework		12
PHYS 111	General Physics	
PHYS 112	General Physics	
PHYS 314	Introductory Modern Physics	
Physics Electives		9
CE 321	Fluid Mechanics for Civil Engineers	
CHE 310	Process Fluid Mechanics	
CHE 320	Chemical Engineering Thermodynamics	
EE 223	Electrical Circuits	
EE 345	Engineering Electromagnetics	
MAE 241	Statics	
MAE 242	Dynamics	
MAE 320	Thermodynamics	
MAE 331	Fluid Mechanics	
MAE 421	Problems in Thermodynamics	
MAE 423	Heat Transfer	

MINE 382	Mine Power Systems
PHYS 211	Introduction to Mathematical Physics
PHYS 321	Optics
PHYS 331	Theoretical Mechanics 1
PHYS 333	Electricity and Magnetism 1
PHYS 461	Thermodynamics and Statistical Mechanics
PHYS 490	Teaching Practicum
Additional Coursework	
24	
Mathematics	
MATH 155	Calculus 1
MATH 156	Calculus 2
Chemistry	
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory
Biology	
Select one of the following sequences:	
BIOL 101 & BIOL 103	General Biology and General Biology Laboratory
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory
Geology	
Select one of the following sequences:	
GEOL 101 & GEOL 102	Planet Earth and Planet Earth Laboratory
GEOL 103 & GEOL 104	Earth Through Time and Earth Through Time Laboratory

Political Science, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The undergraduate curriculum in the Department of Political Science has five main objectives:

- To acquaint students with the nature and role of government in modern society, thus contributing to the general education of political science majors. In order to achieve this objective, the department offers the general political science emphasis. This emphasis is open to any student who has an interest in political science but who has not yet focused on a specific career goal.
- To impart a broad understanding of the American political system. Courses are offered on national institutions, political actors, and political behavior. Other courses focus on the policy making process and on various substantive policy issue-areas. Students who seek to work in politics and/or government should enroll in the American politics and policy area of emphasis.
- To provide a broad foundation of relevant courses for students who plan careers in law.
- To prepare students who wish to pursue future careers in international relations, comparative politics, and national security area.
- To provide pre-professional training for students who intend to pursue political science as a career. Those who intend to be teachers, researchers, or administrators should plan to enroll in graduate school after completing their bachelor's degrees, and our major is designed to provide a strong foundation for that.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Honors Program

The Department of Political Science, in cooperation with the University Honors College, offers courses that are open exclusively to honors students. These courses are listed in the University's Schedule of Courses each semester. Students who meet the standards of the University Honors Program may enroll in these courses.

3+3 Program

The Department of Political Science participates in the WVU College of Law 3+3 Program at WVU, which is an opportunity for qualified undergraduate students to earn their **bachelor's degree and law degree in six years** instead of seven years. Students accepted into the 3+3 program begin taking classes at WVU Law in what would be their senior year of college. Students participating in this program must meet certain eligibility criteria and progress benchmarks. For questions regarding your eligibility, please contact your department advisor.

Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>) here. Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

CHAIR

- John C. Kilwein - Ph.D. (Ohio State University)

DIRECTOR OF UNDERGRADUATE STUDIES

- John C. Kilwein - Ph.D. (Ohio State University)

PROFESSORS

- Joe D. Hagan - Ph.D. (University of Kentucky)
Barnette Professor in Political Science.
- Erik Herron - Ph.D. (Michigan State University)
Eberly Family Professor

ASSOCIATE PROFESSORS

- R. Scott Crichlow - Ph.D. (Louisiana State University)
- Christina Fattore - Ph.D. (Florida State University)
- John C. Kilwein - Ph.D. (Ohio State University)
- Jason MacDonald - Ph.D. (The George Washington University)
- Philip Michelbach - Ph.D. (University of California)
- Trisha Phillips - Ph.D. (Rice University)

TEACHING ASSOCIATE PROFESSORS

- Clarissa Estep - Ph.D. (West Virginia University)
- David Hauser - Ph.D. (University of Pittsburgh)

ASSISTANT PROFESSORS

- Shauna Fisher - Ph.D. (University of Washington)
- William Franko - Ph.D. (University of Iowa)
- Patrick Hickey - Ph.D. (University of Texas)
- Matthew Jacobsmeier - Ph.D. (University of Rochester)
- Jay Krehbiel - Ph.D. (Washington University)
- Mason Moseley - Ph.D. (Vanderbilt University)

TEACHING ASSISTANT PROFESSORS

- Boris Barkanov - Ph.D. (University of California)

PROFESSORS EMERITI

- Richard Brisbin - Ph.D. (Johns Hopkins)
- Robert E. DiClerico - Ph.D. (Indiana University)
- Allan S. Hammock - Ph.D. (University of Virginia)
- Sophia L. Peterson - Ph.D. (University of California)
- Susan Hunter - Ph.D. (The Ohio State University)
- James Whisker - Ph.D. (University of Maryland)
- Jeffrey S. Worsham - Ph.D. (University of Wisconsin)

Admissions

- All First-Time Freshmen are admitted directly to the major.
- Students admitted from other majors within WVU must have an overall GPA of 2.0 and have completed at least one POLS class with a grade of C- or higher.
- Students transferring from another institution must have an overall GPA of 2.0.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Political Science (<https://admissions.wvu.edu/academics/majors/political-science/>) major.

Click here to view the Suggested Plan of Study (p. 395)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences page (p. 187).

Departmental Requirements for the B.A. in Political Science

All students wishing to obtain a degree in Political Science must complete a minimum of 39 credits of POLS courses, and comply with the following:

- **Capstone Requirement:** The General Education Foundations requires the successful completion of a Capstone course. Political Science majors must successfully complete one of the following: POLS 484, POLS 487, POLS 488, POLS 489.

- **Writing Requirement:** The Department of Political Science is a SpeakWrite Affiliated Program, committed to fostering and assessing students' written, verbal, visual, and mediated communication skills. The Political Science major requires its Bachelor of Arts program graduates to complete ENGL 101 and ENGL 102 (or ENGL 103), and a minimum of four additional **SpeakWrite Certified Courses™** as a part of their programs of study.
- **Calculation of the GPA in the Major:** A cumulative and political science GPA of 2.0 is required for graduation. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Area of Emphasis:** All Political Science majors must complete a minimum of 39 credits of POLS courses. Students may select an Area of Emphasis, depending on their academic or career interests.
- **Minor:** All students must complete a minor in a related area, except for students who select the Pre-Law and Legal Studies Area of Emphasis.
- **Benchmarks Expectations:** For details, go to the Political Science admissions tab (p. 393).

Curriculum Requirements

UNIVERSITY REQUIREMENTS	22
POLS 191 First-Year Seminar	
GEF: number of classes will vary depending on overlap	
ECAS B.A. Requirements	12
Fine Arts Requirement	
Foreign Language	
International Studies Requirement	
DEPARTMENTAL REQUIREMENTS	36
Core Requirement	
POLS 102 Introduction to American Government	
Political Science Policy Analysis or Public Administration requirement:	
POLS 230 Introduction to Policy Analysis	
or POLS 240 Introduction to Public Administration	
POLS 250 Introduction to Comparative Politics	
Political Science International Requirement:	
POLS 103 Global Political Issues	
or POLS 260 Introduction to International Relations	
POLS 270 Concepts in Political Theory	
or POLS 271 History of Political Thought 2	
POLS 300 Empirical Political Analysis	
Political Science Economics:	
POLS 334 Politics of Economic Policy	
or POLS 360 International Political Economy	
15 additional credit hours in POLS above the 100-level, excluding POLS 230, 240, 260, 270, 271, 334, 360	
Capstone Experience	3
Select one of the following:	
POLS 484 Capstone: Build a Politics Podcast	
POLS 487 Capstone: Senior Paper	
POLS 488 Capstone: Political Simulation	
POLS 489 Capstone: Citizenship Seminar	
Minor	15
All Political Science majors must complete a minor in a related area, except for students who choose to complete the Law and Legal Studies Area of Emphasis	
General Electives	32
Number of General Electives may vary depending on GEF overlap and Area of Emphasis	
Total Hours	120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
POLS 191		1 ENGL 101 (GEF 1)	3
Foreign Language 101		3 GEF 2A	3
POLS 102 (GEF 4)		3 GEF 3	3
POLS 103 or 260 (ECAS Glo. St. & Div.; GEF 7)		3 Foreign Language 102	3
General Elective		2 POLS 270 or 271	3
GEF 2A		3	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 GEF 5	3
Foreign Language 203		3 ECAS Fine Arts Requirement (GEF 6)	3
POLS 250		3 Foreign Language 204	3
General Elective		3 POLS 230 or 240	3
General Elective		3 POLS 300	3
		15	15

Third Year

Fall	Hours	Spring	Hours
POLS 334 or 360		3 POLS Elective 200-level or above 3	3
POLS Elective 200-level or above 1		3 POLS Elective 200-level or above 4	3
POLS Elective 200-level or above 2		3 Minor Course 2	3
Minor Course 1*		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
POLS Elective 200-level or above 5		3 POLS Capstone	3
Minor Course 3		3 Minor Course 5	3
Minor Course 4		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

* Students completing a minor, a double major or a dual degree fulfill the GEF 8 requirement.

Areas of Emphasis

AMERICAN POLITICS AND POLICY AREA OF EMPHASIS REQUIREMENTS

Select five of the following courses: 15

POLS 261	Introduction to National Security
POLS 310	American Presidency
POLS 311	Political Parties & Elections
POLS 313	American Constitutional Law
POLS 314	Civil Liberties in the United States
POLS 315	Law and Public Policy
POLS 316	Public Opinion and Politics
POLS 317	Interest Groups and Democracy
POLS 320	American Federalism and Policy
POLS 321	West Virginia Government

POLS 323	Religion & Politics	
POLS 324	Sexuality, Law, and Politics	
POLS 331	Criminal Law Policy and Administration	
POLS 333	Politics of Social Welfare	
POLS 334	Politics of Economic Policy	
POLS 335	Civil Rights, Policy, and Politics	
POLS 337	Gender/Politics and Policy	
POLS 338	Environmental Policy	
POLS 339	National Security Analysis	
POLS 342	Bureaucratic Politics	
POLS 373	American Political Philosophy	
Total Hours		15

PRE-LAW AND LEGAL STUDIES AREA OF EMPHASIS REQUIREMENTS

PRE-LAW AND LEGAL STUDIES EMPHASIS

Law-Related Courses in Political Science 12

Select 2 classes:

POLS 210	Law and the Legal System	
POLS 313	American Constitutional Law	
or POLS 314	Civil Liberties in the United States	

Select 2 classes:

POLS 314	Civil Liberties in the United States ((alternate classes from above))	
or POLS 313	American Constitutional Law	
POLS 315	Law and Public Policy	
POLS 324	Sexuality, Law, and Politics	
POLS 331	Criminal Law Policy and Administration	
POLS 357	Comparative Law and Politics	
POLS 363	International Law	
POLS 452	European Union Law/Legal Systems	
POLS 453	European Union Law/Institutions	

Skills & Related Courses 6

Select two of the following:

ENGL 304	Business and Professional Writing	
PHIL 170	Introduction to Critical Reasoning	
PHIL 260	Introduction to Symbolic Logic	
PHIL 325	Philosophy of Law	
STAT 211	Elementary Statistical Inference	
or ECON 225	Elementary Business and Economics Statistics	

Political Science Electives 3

Select 3 credits above 100 level, except POLS 230, 250, 260, 270 or 300 for 39 total credits in POLS.

Total Hours 21

INTERNATIONAL RELATIONS, COMPARATIVE POLITICS, AND NATIONAL SECURITY AREA OF EMPHASIS REQUIREMENTS

Select Five of the following: 15

POLS 261	Introduction to National Security	
POLS 350	Government of Japan	
POLS 351	Russian and Post-Soviet Politics	
POLS 352	Politics of the European Union	
POLS 353	Western Democratic Governments	
POLS 354	Government of China	

POLS 355	Governments of Latin America
POLS 356	Politics of the Middle East
POLS 357	Comparative Law and Politics
POLS 358	Politics of Africa
POLS 359	Politics of Terrorism
POLS 360	International Political Economy
POLS 361	International Law and Institutions
POLS 362	Comparative Foreign Policy
POLS 363	International Law
POLS 364	American Foreign Relations
POLS 365	Foreign Policy Decision-Making
POLS 368	Politics of War and Peace
POLS 369	Far East International Affairs
POLS 370	Dictatorship and Democratization
POLS 376	Contentious Politics
POLS 450	Elections and Political Parties Around the World
POLS 453	European Union Law/Institutions
POLS 452	European Union Law/Legal Systems
POLS 460	Gender and International Relations
POLS 461	Transformation of War
POLS 462	Intelligence Failures

History	3
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Select one of the following:

HIST 209	Twentieth Century Europe
HIST 242	Latin America: Reform and Revolution
HIST 321	Colonial Africa and Independence
HIST 325	Modern China
HIST 463	American Foreign Relations to 1941
HIST 464	American Foreign Relations 1941 to Present

Total Hours	18
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3+3 Program Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
POLS 191		1 ENGL 101 (GEF 1)	3
POLS 102 (GEF 4)		3 POLS 270 or 271	3
POLS 103 or 260		3 GEF 2A	3
GEF 2A		3 GEF 3	3
Foreign Language 101		3 Foreign Language 102	3
General Elective		2	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 POLS 230 or 240	3
POLS 210		3 POLS 300	3
POLS 250		3 GEF 5	3
POLS Law-Related Course 1		3 ECAS Fine Arts Requirement (GEF 6)	3
Foreign Language 203		3 Foreign Language 204	3
		15	15

Third Year

Fall	Hours	Spring	Hours
POLS 334 or 360		3 Skills & Related Course 2	3

POLS 313 or 314	3 POLS Capstone	3
POLS Law-Related Course 2	3 General Elective	3
POLS at the 200-Level or Above	3 General Elective	3
Skills & Related Course 1	3 General Elective	3
	15	15

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: 122

Degree Progress

Within four semesters in the POLS major, students must

- have completed four of the following courses: POLS 102, POLS 230 or POLS 240, POLS 250, POLS 260, POLS 270,
- maintain a 2.0 GPA overall and in the major,
- meet with their POLS adviser each semester.

Students who do not meet these benchmarks may be removed from their major.

Major Learning Outcomes**POLITICAL SCIENCE**

Political Science Department Learning Outcomes

1. A command of basic substantive knowledge about the basic institutions, political actors, and relevant processes in state, national, and international political systems – in particular as they apply to the student's particular area of emphasis.
2. A knowledge of major policy issues in state, national, and international affairs and an appreciation of the complexity reflective of the uncertainties, trade-offs, and institutional/bureaucratic context of problems confronting governments.
3. An ability to think critically about political phenomena in a way that applies alternative explanatory perspectives across the major theoretical schools of thought in the political science literature.
4. A demonstrated capability to carry out systematic empirical research in political science, i.e. articulate a theoretical question, construct a rigorous research design, and analyze data or cases using appropriate methodological approaches.
5. An appreciation of the policy implications of different theoretical approaches and, more generally, how they relate to the larger ethical issues facing the West Virginia, national, and international communities.

Psychology**Degrees Offered**

- Bachelor of Arts
- Bachelor of Sciences

Students may not earn both a B.A. and a B.S. in Psychology.

Nature of the Program

Psychology is the science of behavior. Courses in this discipline convey the principles, methods, and theories that are necessary for a better understanding of human and animal behaviors. Students who choose this subject as their major are expected to fulfill certain requirements, but the program is structured to allow considerable flexibility. Students who choose this subject as their major are expected to fulfill certain requirements, but the program is structured to allow considerable flexibility. Studying psychology at WVU allows students to work toward either a BS or BA degree that allows them to seek classes and experiences that enable them to be prepared for careers that may be more applied or more research focused. Typically, individuals tailor their schedules according to the career paths they choose, and these decisions generally fall into three categories: pursuit of

graduate studies, pursuit of a career applying principles of psychology to human problems, or pursuit of a career in a related field, such as medicine, law, education, or business.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Honors Program

The Department of Psychology honors program is designed to provide special enrichment, attention, and recognition for exceptional psychology majors. Admission to the program requires completion of nine hours of psychology, a psychology GPA of 3.5, and an overall GPA of 3.4. Graduation with departmental honors in psychology requires the same GPAs and completion of an honors thesis (three to six hours of PSYC 498). Information about the program is available in the department's student records office or from the director of undergraduate training.

Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/.html>) here. Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

CHAIR

- Kevin T. 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 Medical 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, Infant Stress and Coping, Infant Temperament, Infant Assessment
- 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 for Outstanding Teaching. Leadership Studies
- Melanie C. Page - Ph.D. (Arizona State University)
Assistant Vice President for Creative and Scholarly Activity. 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)
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 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 Children, Positive Psychology
- Elisa Krackow - Ph.D. (Binghamton University-SUNY)
Children and Adults as Witnesses, Developmental Psychopathology
- Elizabeth Levelle - Ph.D. (West Virginia University)
Teaching of Psychology, Academic Advising
- Aaron Metzger - Ph.D. (University of Rochester)
Adolescent Social-Cognitive Development, Civic Engagement, Adolescent-Parent Communication
- Constance (Connie) Toffle - Ph.D. (West Virginia University)
Teaching of Psychology, Curriculum Design

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)
Behavior Analysis, Assessment and Treatment of Challenging Behavior
- Kris Martens - Ph.D. (Southern Illinois University - Carbondale)
Behavioral Neuroscience, Recovery from Traumatic Brain Injury
- Shari Steinman - Ph.D. (University of Virginia)
Cognitive Bias in Anxiety Disorders, Treatment of Anxiety and Obsessive Compulsive Disorders
- Sharon Tenenholz - Ph.D. (University of California, Los Angeles)
Teaching of Psychology, Curriculum Design, Academic Advising
- 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

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 C. Caldwell - Ph.D.
- Stanley H. Cohen - Ph.D.
- Philip Comer - Ph.D.
- William J. Fremouw - Ph.D.
- Robert Hawkins - Ph.D.
- B. Kent Parker - Ph.D.
- Hayne W. Reese - Ph.D.

ADJUNCT ASSISTANT PROFESSOR

- Louis Slimak - Ph.D. (Purdue University)

Admissions

- First-Time Freshmen with a minimum Math ACT of 19 or a minimum Math SAT of 510 or above are admitted directly into the major. Other students are advised in the Center for Learning, Advising, and Student Success until they meet the milestones below.
- Students coming from another major at WVU must have an overall GPA 2.0, completion of PSYC 101 with a C- or higher, and MATH 124 or 126 or higher completed or in progress.
- Students coming from another institution must have an overall GPA 2.0, completion of PSYC 101 with a C- or higher, and MATH 124 or 126 or higher completed or in progress.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science and Bachelor of Arts in Psychology (<https://admissions.wvu.edu/academics/majors/psychology/>) major.

Degree Progress

- By the end of their second semester in the program, students should have completed , PSYC 101 with a C- or better, and MATH 124 or higher.
- By the end of their fourth semester in the program, they should have completed PSYC 203 (<http://catalog.wvu.edu/search/?P=PSYC%20203>) (with a C- or better) and PSYC 204 (<http://catalog.wvu.edu/search/?P=PSYC%20204>) (with a C- or better),
- By the end of their sixth semester, they should have completed PSYC 301 (<http://catalog.wvu.edu/search/?P=PSYC%20301>) and PSYC 302 (<http://catalog.wvu.edu/search/?P=PSYC%20302>).
- All students must maintain a GPA of at least 2.0 in the major and overall.
- All majors must attend either a Group Advising meeting or individual advising sessions each semester, as specified by their Psychology adviser.

Students who fail to meet these benchmarks may be removed from their major.

Major Learning Outcomes

PSYCHOLOGY

Upon successful completion of the B.A. or B.S. degree, **Psychology** majors will be able to:

1. Describe the central principles, facts, concepts, and theories of major areas of psychology (i.e., Behavior Analysis, Behavioral Neuroscience, Clinical, Developmental) including: Theory, Content, and Research Methods. Students will also be able to describe advanced principles.
2. Demonstrate critical thinking, by applying scientific principles of psychology to analyze and solve basic and applied problems.
3. Create, evaluate, and revise text (oral, written) that effectively communicates information using APA format.

Psychology, B.A.

[Click here to view the Suggested Plan of Study \(p. 403\)](#)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, [visit the B.A. Degrees tab on the Eberly College of Arts and Sciences page.](#)

Departmental Requirements for the B.A. in Psychology

Students may not earn both a B.A. and a B.S. in Psychology. All students wishing to complete a B.A. must comply with the following:

- **Capstone Requirement:** : The university requires the successful completion of a Capstone course: PSYC 490A, PSYC 491A, PSYC 495A, or PSYC 498A.
- **Writing and communication Skills Requirement:** The Psychology Bachelor of Arts is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Calculation of the GPA in the Major:** Students must maintain an overall cumulative GPA of 2.0 or higher. Students must also earn an overall cumulative 2.0 GPA in all courses with a PSYC designation, and a grade of C- or better in PSYC 101, PSYC 203 and PSYC 204. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Note:** Students are required to have completed algebra with applications, college algebra, or a higher MATH course, and a grade of C- in PSYC 101 in order to register for PSYC 203.
- **Residence requirement:** To graduate from WVU with a major in Psychology, a student must have successfully completed (with a passing grade) a minimum of 10 credit hours of 300- and 400-level psychology coursework at WVU, *not* including PSYC 304, 315, 490, 491, 495, 497, 498. Online courses taught by WVU may be counted toward the 10 credit hours of coursework at WVU.
- **Benchmark Expectations:** For details, go to the Psychology admissions tab (p. 400).

Curriculum Requirements

UNIVERSITY REQUIREMENTS	32
PSYC 191 First-Year Seminar	
GEF Requirements (number of credits may vary based on overlap)	
ECAS B.A. Requirements	12
Foreign Language	
Fine Arts Requirement	
Global Studies & Diversity Requirement	
DEPARTMENTAL REQUIREMENTS	
Foundation Courses	17
PSYC 101 Introduction to Psychology (minimum grade of C-)	
PSYC 203 Research Methods & Analysis 1 (minimum grade of C-)	
PSYC 204 Research Methods & Analysis 2 (minimum grade of C-)	
PSYC 301 Biological Foundations of Behavior (minimum grade C- for courses that require 301 as prerequisite)	
PSYC 302 Behavior Principles (minimum grade of C- for courses that require 302 as prerequisite)	
Select one course from Cluster A or B	3
Cluster A: Learning and Cognition:	
PSYC 423 Cognition and Memory	
PSYC 424 Learning and Behavior Theory	
PSYC 474 Applied Behavior Analysis	
Cluster B: Biological Bases of Behavior	
PSYC 425 Perception	
PSYC 426 Physiological Psychology	
PSYC 427 Psychobiology of Sleep	
PSYC 428 Hormones and Behavior	
Cluster C: Clinical and Individual Differences (Select one):	3
PSYC 281 Introduction to Abnormal Psychology	
PSYC 362 Psychological Assessment	
PSYC 363 Personality Theory	
PSYC 364 Psychology of Adjustment	
PSYC 365 Forensic Psychology	
PSYC 367 Introduction to Clinical Psychology	
PSYC 382 Exceptional Children	
Cluster D: Developmental Psychology (Select one):	3

PSYC 241	Introduction to Human Development	
PSYC 341	Child Development	
PSYC 342	Prenatal and Infant Development	
PSYC 343	Child and Adolescent Development	
PSYC 344	Adolescent Development	
PSYC 345	Adulthood and Aging	
Cluster E: Social Processes (Select one):		3
PSYC 231	Leadership and Human Relations	
PSYC 232	Sex Roles and Behavior	
PSYC 251	Introduction to Social Psychology	
PSYC 332	Multiculturalism in Psychology	
PSYC 351	Topics in Social Psychology	
PSYC 379	Community Psychology	
PSYC 370	Emotions and Mood	
Psychology Electives		6
Alternate 300 or 400-level PSYC course *		
Capstone Course (Select one of the following):		3
PSYC 490A	Teaching Practicum	
PSYC 491A	Professional Field Experience	
PSYC 495A	Independent Study	
PSYC 498A	Honors	
GENERAL ELECTIVES		38
Number of electives may vary based on overlap		
Total Hours		120

* Excluding PSYC 304, 315, 490, 491, 495, 497, or 498.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
PSYC 191		1 ENGL 101 (GEF 1)	3
GEF 5		3 Foreign Language 102	3
Foreign Language 101		3 PSYC 203	3
GEF 3		3 PSYC Cluster D	3
PSYC 101 (GEF 4)		3 General Elective	3
General Elective		2	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 GEF 2	4
ECAS Global Studies & Diversity Requirement (GEF 7)		3 GEF 8*	3
Foreign Language 203		3 Foreign Language 204	3
PSYC 204		3 PSYC Cluster C	3
PSYC Cluster E		3 General Elective	2
		15	15

Third Year

Fall	Hours	Spring	Hours
ECAS Fine Arts Requirement (GEF 6)		3 GEF 8*	3
GEF 8*		3 PSYC 301	4
PSYC 302		4 General Elective	3
General Elective		3 General Elective	3

General Elective	2 General Elective	2
	15	15
Fourth Year		
Fall	Hours	Spring
		Hours
PSYC Cluster A/B		3 PSYC Capstone
PSYC Upper-Division Elective		3 PSYC Upper-Division Elective
General Elective		3 General Elective
General Elective		3 General Elective
General Elective		3 General Elective
	15	15

Total credit hours: 120

* Students completing a minor, a second major or dual degree already fulfill F 8.

Psychology, B.S.

Click here to view the Suggested Plan of Study (p. 406)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.S. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.S. Degrees tab on the Eberly College of Arts and Sciences page (p. 190).

Departmental Requirements for the B.S. in Psychology

Students may not earn both a B.A. and a B.S. in Psychology. Students wishing to graduate with a B.S. in Psychology must comply with the following:

- **Capstone Requirement:** The university requires the successful completion of a Capstone course: PSYC 490A, PSYC 491A, PSYC 495A, PSYC 498A.
- **Writing and Communication Skills requirement:** The Psychology Bachelor of Science is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.

- **Calculation of the GPA in the Major:** Students must maintain an overall cumulative GPA of 2.0 or higher. Students must also earn an overall cumulative 2.0 GPA in all courses with a PSYC designation, and a minimum grade of C- or better in PSYC 101, PSYC 203, and PSYC 204. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Note:** Students must successfully complete MATH 153 and 154, or MATH 155 to fulfill B.S. requirements. Math 126 or higher must be completed before enrolling in PSYC 203. PSYC 101 with a C- must be completed before enrolling in PSYC 203.
- **Residence Requirement:** To graduate from WVU with a major in Psychology, a student must have successfully completed (with a passing grade) a minimum of 10 credit hours of 300- and 400-level psychology coursework at WVU, *not* including PSYC 304, PSYC 315, PSYC 490, PSYC 491, PSYC 495, and PSYC 498. Online courses taught by WVU may be counted toward the 10 credit hours of coursework at WVU.
- **Benchmark Expectations:** For details, go to the Psychology admissions tab (p. 400).

Curriculum Requirements

UNIVERSITY REQUIREMENTS	20
PSYC 191	First-Year Seminar
GEF Requirements: number of credits will vary depending on overlap	
ECAS B.S. REQUIREMENTS	24
Global Studies & Diversity Requirement	
Mathematics Requirement:	
Select one of the following:	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus
MATH 155	Calculus 1
Science Requirement:	
Please see the Eberly College of Arts and Sciences' Bachelor of Science (B.S.) tab.	
DEPARTMENTAL REQUIREMENTS	
Foundation Courses	17
PSYC 101	Introduction to Psychology (minimum grade of C-)
PSYC 203	Research Methods & Analysis 1 (minimum grade of C-)
PSYC 204	Research Methods & Analysis 2 (Minimum grade of C-)
PSYC 301	Biological Foundations of Behavior (minimum grade of C- for courses that require 301 as prerequisite)
PSYC 302	Behavior Principles (minimum grade of C- for courses that require 301 as prerequisite)
Select one course from Cluster A or B:	3
Cluster A: Learning and Cognition	
PSYC 423	Cognition and Memory
PSYC 424	Learning and Behavior Theory
PSYC 474	Applied Behavior Analysis
Cluster B: Biological Bases of Behavior	
PSYC 425	Perception
PSYC 426	Physiological Psychology
PSYC 427	Psychobiology of Sleep
PSYC 428	Hormones and Behavior
Cluster C: Clinical and Individual Differences (Select one):	3
PSYC 281	Introduction to Abnormal Psychology
PSYC 362	Psychological Assessment
PSYC 363	Personality Theory
PSYC 364	Psychology of Adjustment
PSYC 365	Forensic Psychology
PSYC 367	Introduction to Clinical Psychology
PSYC 382	Exceptional Children
Cluster D: Developmental Psychology (Select one):	3
PSYC 241	Introduction to Human Development
PSYC 341	Child Development

PSYC 342	Prenatal and Infant Development	
PSYC 343	Child and Adolescent Development	
PSYC 344	Adolescent Development	
PSYC 345	Adulthood and Aging	
Cluster E: Social Processes (Select one):		3
PSYC 231	Leadership and Human Relations	
PSYC 232	Sex Roles and Behavior	
PSYC 251	Introduction to Social Psychology	
PSYC 332	Multiculturalism in Psychology	
PSYC 351	Topics in Social Psychology	
PSYC 379	Community Psychology	
PSYC 370	Emotions and Mood	
Upper-Division Psychology Electives:		6
Alternate 300 or 400 level PSYC courses *		
Capstone Course (Select one of the following):		3
PSYC 490A	Teaching Practicum	
PSYC 491A	Professional Field Experience	
PSYC 495A	Independent Study	
PSYC 498A	Honors	
GENERAL ELECTIVES		38
Number of general electives may vary based on overlap		
Total Hours		120

* Excluding PSYC 304, 315, 490, 491, 495, 497, and 498.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
PSYC 191		1 ENGL 101 (GEF 1)	3
MATH 155 (GEF 3)		4 PSYC 203	3
GEF 2 (B.S. First Area 1)		4 PSYC Cluster D	3
GEF 5		3 GEF 8 (B.S. First Area 2)	4
PSYC 101 (GEF 4)		3 General Elective	2
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 GEF 8 (B.S. Second Area 2)	4
GEF 8 (B.S. Second Area 1)		4 GEF 6	3
PSYC Cluster C		3 PSYC Cluster E	3
PSYC 204		3 General Elective	3
General Elective		2 General Elective	2
		15	15

Third Year

Fall	Hours	Spring	Hours
B.S. Third Area 1		4 B.S. Third Area 2	4
PSYC 301		4 ECAS Global Studies & Diversity Requirement (GEF 7)	3
PSYC Upper-Division Elective		3 PSYC 302	4
General Elective		3 General Elective	3
General Elective		1 General Elective	1
		15	15

Fourth Year

Fall	Hours	Spring	Hours
PSYC Cluster A/B		3 General Elective	3
Capstone		3 General Elective	3
PSYC Upper-Division Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

Regents Bachelor of Arts

Degree Offered

- Regents Bachelor of Arts (R.B.A.)

Nature of the Program

West Virginia University offers the Regents Bachelor of Arts (Regents BA) Degree Program through the Eberly College of Arts and Sciences. Regents BA is an innovative degree program designed to meet the unique needs of adult learners and non-traditional students. Specifically, Regents BA provides a comprehensive general education and individualized curriculum designed to align with the needs of each student. The Regents BA program is designed to be flexible and can be tailored toward goals/aspirations such as pursuing a graduate/professional degree, transitioning into a new career, increasing one's marketability within an established career, and/or fulfilling a life-long goal of completing a bachelor's degree.

The Regents BA program can be completed either on campus or online at one's own pace. Additionally, Regents BA students may pursue any Minors (<http://catalog.wvu.edu/undergraduate/minors/#minorsofferedtext>) offered through West Virginia University or Areas of Emphasis unique to the Regents BA program.

Moreover, Regents BA offers unique opportunities not available through traditional degree programs. The Regents BA program offers F-Forgiveness (<https://rba.wvu.edu/degree-info/f-forgiveness-policy/>) to students if the failing grades are obtained four years or more prior to admission/readmission to the program. Additionally, eligible students may acquire college credit for professional, volunteer, and military experiences in select areas via the many credit for prior learning options (<https://rba.wvu.edu/credit-for-prior-learning/>) available through the Regents BA program. Pursuing the Regents BA program and utilizing the unique opportunities available through the program provides many students with a time efficient and cost effective avenue to obtain a Bachelor of Arts degree.

Program Contact Information

Regents BA Degree Program

2nd Floor Arnold Hall
 West Virginia University
 Morgantown, WV 26505-6211
 Phone: (304) 293-5441
 E-mail: rba@mail.wvu.edu
 Website: <https://rba.wvu.edu/>

FACULTY

DIRECTOR

- Renée Nicholson - M.F.A. Creative Writing (West Virginia University)
 Certification of Professional Achievement in Narrative Medicine (Columbia University)

Admissions

The Regents BA program is designed for adult learners/non-traditional students. **All students must have graduated from high school at least four years prior to admission to the program.**

- First-Time Freshmen are admitted directly in the Regents BA program.
- Students admitted from another major within the West Virginia University system are admitted directly into the Regents BA program.
- Transfer students from another institution are admitted directly into the Regents BA program.
- Students earning the Regents BA may not earn a second major or a second degree at the same time.

- Students who have completed a bachelor's degree from a regionally accredited institution are not eligible for admission into the Regents BA program.

Students who are new to the Regents BA program should speak with their academic advisor to see if they can benefit from the Regents BA F-Forgiveness (<https://rba.wvu.edu/degree-info/f-forgiveness-policy/>). They should also inquire about the possibility of applying credit hours from institutions which are recognized by the United States Department of Education (USDE) but are not regionally accredited.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Regents Bachelor of Arts major.

Degree Requirements

- **General Education:**
 - Communication Skills (6 hours) Outcome: Courses in this area must provide the student with skills and knowledge to be able to communicate effectively in a variety of formats.
 - Humanities (6 hours) Outcome: Courses in this area must demonstrate knowledge in the interdisciplinary study and philosophy of diverse cultures.
 - Social Science (6 hours) Outcome: Courses will demonstrate understanding of the development, diversity, and complexity of human behavior and institutions.
 - Natural or Physical Science (3 hours) Outcome: Courses in this area must provide an understanding of the physical world through the scientific method (understanding of the basic facts, principles, theories and methods of science)
 - Mathematics, Statistics, or Computer Science (3 hours)
- **Upper Division:** A maximum 12 teaching practicum hours will be accepted toward graduation requirements if teaching practicum hours have been completed at the upper-division level. Teaching practicum hours are not a requirement for graduation. (Minimum of 27 hours)
- **Residency:** Students must complete a residency requirement of 24 hours of coursework taken at one or more institutions within West Virginia's public higher education system. Six of the 24 hours must be taken at WVU.
- **Portfolios:** Students may earn credit through academic portfolios for prior learning and experiences to reach 120 hours.
- **Grade Point Average:** Students must have a minimum GPA of 2.00 to be eligible for graduation.

Curriculum Requirements

GENERAL EDUCATION:

Communication Skills	6
Select courses fulfilling GEF 1 or courses fulfilling this outcome and approved by an advisor.	
Humanities	6
Select courses fulfilling GEF 5 or 6, or courses fulfilling this outcome and approved by an advisor.	
Social Science	6
Select courses fulfilling GEF 4 or 7, or courses fulfilling this outcome and approved by an advisor.	
Natural or Physical Science	3
Select courses fulfilling GEF 2, or courses fulfilling this outcome and approved by an advisor.	
Mathematics, Statistics, or Computer Science	3
Select courses fulfilling GEF 3, or courses fulfilling this outcome and approved by an advisor.	
UPPER-DIVISION COURSES	27
Select any courses at the 300 or 400 level	
ELECTIVES	69
Select any courses at any level	
Total Hours	120

Degree Progress

- Regents BA students are expected to maintain satisfactory progress toward degree completion as determined in consultation with their advisor.
- Regents BA students are expected to enroll in coursework which applies toward completing the degree requirements of the program.
- Regents BA students are expected to complete all coursework with a D- or higher and maintain a minimum 2.0 GPA each term. These expectations are in place to ensure students remain in, or are working toward, good academic standing (<http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification/#probationsuspensionstext>) and remain on track for graduation.

Policies

F-FORGIVENESS

The R.B.A. offers unique opportunities not available through traditional degree programs. The Regents BA program offers F-forgiveness to students if the failing grades were obtained four years or more prior to admission/readmission to the program. This policy applies to both grades earned at WVU or that have been transferred from another institution.

"F" Forgiveness is unique and only benefits students while in the RBA program. Thus, should students join the RBA program and benefit from the F-Forgiveness policy but later elect to transfer to another program, then all F's that were forgiven will be re-instituted.

CREDIT FOR PRIOR LEARNING

Eligible students may acquire college credit for professional, volunteer, and military experiences in select areas via the many credit for prior learning options (<https://rba.wvu.edu/credit-for-prior-learning/>) available through the R.B.A. majors. These opportunities provide many students with a time efficient and cost effective avenue to obtain a Bachelor of Arts degree.

R.B.A. program allows adult learners to earn College Equivalent Credits (CECs) for work/career, life, and other academic experiences. The program recognizes the fact that many students have accumulated a wealth of work and life experiences that may be compatible with some of the courses that WVU and other state institutions offer. Thus we encourage our students to take advantage of this unique opportunity to petition for CECs if they have already acquired similar or equivalent learning experiences due to their work experiences. If successful, awarded credits could help meet graduation requirements while reducing the overall costs of their college experience.

However, it is important that students understand that they are not being given credits for the years of service in their respective fields. Rather, they are being given credits based on their ability to articulate how their varied career experiences may have helped them to acquire equivalent or similar knowledge that they would have otherwise acquired in the classroom.

For instructions on how to submit a portfolio to petition for CECs, please visit the Portfolio Submission Guidelines (<https://rba.wvu.edu/credit-for-prior-learning/portfolios/>) page.

Areas of Emphasis

Regents BA students may pursue any Minors offered through WVU (<http://catalog.wvu.edu/undergraduate/minors/#minorsofferedtext>) as well as any Area of Emphasis (AoE) offered through the Regents BA program. Coursework required for an AoE is determined by faculty within the specified academic area.

All coursework required for an AoE must be graded and completed with **C-** or higher. Credit for WVU coursework earned via credit for prior learning is not assigned a letter grade and will not apply toward the requirements of an AoE. An AoE will appear on the transcript as a concentration within the Regents BA degree program.

Regents BA students may pursue more than one AoE and/or Minor as long as the coursework does not overlap. Additionally, an AoE and a Minor cannot be declared in the same discipline. The RBA AoE offerings are outlined, below.

AREAS OF EMPHASIS OFFERED

- Child Development (p. 409)
- Communication Studies (p. 410)
- Energy Land Management (p. 410)
- History (p. 410)
- Sociology (p. 410)

Child Development Requirements

Must have a C- grade or better in all CDFS designated courses

Prerequisite

CDFS 110	Families Across the Life Span	3
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Two of the following courses/pre requisites depending on upper level options		6
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CDFS 112	Introduction to Marriage and Family
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CDFS 210	Introduction to Parenting
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CDFS 211	Infant Development
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CDFS 212	Development in Early and Middle Childhood
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CDFS 250	Research Methods (writing course recommended for prior support for CDFS 400 level courses)
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Three Courses-upper level:	9
CDFS 316	Child Development Practicum (need 212 prior)
CDFS 412	Adolescent Development (need 212)
CDFS 413	Stress in Families (need 212)
CDFS 414	Adolescent Problems and Disorders (need 212)
CDFS 415	Family Interaction and Communication (need 212)
CDFS 430	Best Practices in Pre-K Movement (need 211 or 212)
CDFS 431	Infant Toddler Language and Literacy (need 211 prior)
CDFS 432	Early Socio-Emotional Development (Need 211 prior)
Total Hours	18

Communication Studies Requirements

Select any COMM 300-400 level courses with a grade of 'C-' or higher (Excluding COMM 490 and 491) 15

Energy Land Management Requirements

Must complete all of the courses below with a C- or higher

ENLM 300	Ethics and Negotiations for Energy Land Managers	3
ENLM 400	Energy Land Management Contracts 1	3
ENLM 420	Energy Land Management Contracts 2	3
ENLM 442	GIS Skills for Energy Land Management	3
ENLM 450	Energy Land Management Strategic Planning	3
Total Hours		15

History Requirements

Minimum grade of C required in all courses.

Select 5 courses from the following:	15
HIST 304	History of Sacred Places
HIST 350	The Aztec, Maya, and Inca
HIST 353	1920s America
HIST 412	Introduction to Public History
HIST 421	Hitler and the Third Reich
HIST 422	Twentieth-Century Germany from Weimar to Bonn
HIST 442	The French and Indian War, 1754-1763
HIST 453	Civil War and Reconstruction
HIST 460	World War II in America
HIST 473	Appalachian Regional History
HIST 477	Working Class America
Total Hours	15

Sociology Requirements

Minimum grade of C required in all classes.

SOCA 101	Introduction to Sociology	3
Select 15 credits of Upper-division hours excluding SOCA		15
Total Hours		18

Major Learning Outcomes

REGENTS BACHELOR OF ARTS

Due to the unique nature of the Regents BA program, the only consistent curriculum requirement for all Regents BA students is the general education requirement. Therefore the learning outcomes for Regents BA students are those outlined by the Association of American Colleges and Universities

(AACU) Liberal Education and American Promise (LEAP). All general education courses will incorporate at least one of the LEAP Essential Learning Outcomes (<https://registrar.wvu.edu/curriculum-catalog/general-education-foundations-gef/gef-transition/leap-essential-learning-outcomes/>) listed below. The Regents BA program assesses and measures LEAP Essential Learning Outcomes through completion of the general education requirement.

1. **Knowledge of Human Cultures and the Physical and Natural World** - Measured by completion of Regents BA Natural/Physical Science, Mathematics, Social Science, and Humanities general education requirements
2. **Intellectual and Practical Skills** - Measured by completion of Regents BA Communication Skills, Natural/Physical Science, and Mathematics general education requirements
3. **Personal and Social Responsibility** - Measured by completion of Regents BA Social Science and Humanities general education requirements
4. **Integrative and Applied Learning** - Measured by completion of Regents BA Communication Skills, Natural/Physical Science, and Mathematics general education requirements

Religious Studies, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The program for religious studies in the Eberly College of Arts and Sciences meets the needs of West Virginia University students by offering instruction in the history and practice of many world religions including Judaism, Christianity, Islam, Hinduism, Buddhism, and Near Eastern traditions. In addition, the program offers opportunities to explore many other interesting areas of study including Hebrew and Christian scriptures, ethics, and current topics of interest. The program for religious studies also seeks to address issues of interest within the WVU community by providing activities such as guest lectures and panel forums for students and the public.

In the program, students have the unique opportunity to study religious issues from a scholarly perspective. Hence, religion courses at West Virginia University are intended to stimulate interest in the academic discipline of religious studies, which involves studying world faiths objectively, without an agenda. Instructors utilize various methodologies that allow students to immerse themselves in, and learn about, many different traditions. Some of these methodologies include studying ancient texts, examining the history and traditions of various world cultures, the use of resource texts from reputable scholars, and the analysis of archaeological data.

The degree in religious studies offers a general liberal arts education for students entering such professions as law, medicine, and business, if electives are chosen carefully. This major is useful to anyone seeking a professional career in religion, such as the ministry, teaching, graduate study of theology, biblical studies, and religious journalism. For further information about this program, please go to: <http://religiousstudies.wvu.edu>.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>) here. Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

COORDINATOR

- Aaron M. Gale - Ph.D. (Northwestern University)
Associate Professor, New Testament Studies, World Religions, Archaeology

TEACHING ASSOCIATE PROFESSOR

- Alex Snow - Ph.D. (Syracuse University)
Asian Religions

TEACHING ASSISTANT PROFESSOR

- Alyssa Beall - Ph.D. (Syracuse University)
Cultural Studies

Admissions

- First-Time Freshmen are admitted directly into the major.
- WVU students transferring from another major must meet a minimum standard of a 2.00 overall GPA. Please see an adviser for details.
- Students transferring from another institution must meet minimum standard of a 2.00 overall GPA.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Religious Studies (<https://admissions.wvu.edu/academics/majors/religious-studies/>) major.

Click here to view the Suggested Plan of Study (p. 413)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences (p. 187) pages.

Departmental Requirements for the B.A. in Religious Studies

All students wishing to obtain a degree in Religious Studies must complete a minimum of 30 credits of course work in Religious Studies and comply with the following:

- **Capstone Experience:** The university requires the successful completion of Capstone course. Religious Studies majors must complete RELG 482.
- **Writing and Communication Skills Requirement:** Religious Studies Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and at least two additional **SpeakWrite Certified Courses™** selected from: RELG 219, RELG 223, RELG 230, RELG 231, RELG 301, RELG 310, RELG 482.
- **Calculation of the GPA in the Major:** A cumulative GPA of 2.0 in all RELG courses is required for graduation; only grades of C- or higher will be applied toward major requirements. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Benchmarks Expectations:** For details, go to the Religious Studies admissions tab (p. 412).

Curriculum Requirements

UNIVERSITY REQUIREMENTS	37
RELG 191 First-Year Seminar	
GEF: number of hours may vary depending on options selected and overlap with major; please see above	
ECAS B.A. Requirements	12
Foreign Language	
Fine Arts Requirement	
Global Studies & Diversity Requirement	
DEPARTMENTAL REQUIREMENTS	
All RELG courses must be completed with a grade of C- or higher	
Religious Studies Basic Requirements	3
Select one of the following:	
RELG 102 Introduction to World Religions	
RELG 105 Introduction to Issues in Religious Studies	
Religious Studies Intermediate Requirements	9
Select three from the following:	
RELG 219 The History of Christianity	
RELG 222 History and Practice of Judaism	
RELG 223 Christianity in America	
RELG 230 Religions of India	
RELG 231 Religions of China and Japan	
RELG 232 History and Practice of Islam	
RELG 255 Religion Across Cultures	
RELG 293 Special Topics	
Religious Studies Advanced Requirements	15
RELG 350 Religious Ethics/Current Issues	
Select four from the following:	
PHIL 308 Philosophy of Religion	
RELG 301 Studies in Asian Scriptures	
RELG 303 Studies in Christian Scripture	
RELG 304 Studies in Hebrew Scriptures	
RELG 305 Biblical History/Archaeology	
RELG 306 Biblical History and Archeology of Israel	
RELG 310 Historical Theology	
RELG 393 Special Topics	
RELG 410 Apocalypse	
RELG 493 Special Topics	
RELG 494 Seminar	
Capstone Experience	3
RELG 482 Interactions in World Religions	
General Electives	41
Number of electives may vary depending on GEF overlap	
Total Hours	120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
RELG 191		1 ENGL 101 (GEF 1)	3
GEF 3		3 GEF 2	3
GEF 4		3 Foreign Language 102	3
Foreign Language 101		3 RELG Intern. Course 1	3

RELG Basic Course		3 General Elective	3
General Elective		2	
		15	15
Second Year			
Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 GEF 5	3
GEF 2		3 ECAS Fine Arts Requirement (GEF 6)	3
Foreign Language 203		3 ECAS Global Studies & Diversity Requirement (GEF 7)	3
RELG Intern. Course 2		3 Foreign Language 204	3
General Elective		3 RELG 350	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
RELG Intern. Course 3		3 GEF 8*	3
RELG Advanced Course 1		3 GEF 8*	3
RELG Advanced Course 2		3 RELG Advanced Course 3	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
GEF 8*		3 RELG 482 (Capstone)	3
RELG Advanced Course 4		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

* Students who complete a minor, a double major or a dual degree already meet F 8.

Degree Progress

- By the end of the 4th semester in the major students should have successfully completed RELG 102, all three 200-level required RELG courses, RELG 304, and maintain a 2.0 GPA in all courses counted toward the major.
- All majors must meet with RELG program adviser each semester.

Students who fail to meet these benchmarks may be removed from their major.

Major Learning Outcomes

RELIGIOUS STUDIES

1. Identify and differentiate among the core principles and theories of at least three major world religions.
2. Research and critique, utilizing academic methods of inquiry, sacred texts from at least two major world religions.
3. Demonstrate satisfactory research and writing skills, coherent thought, and ability to articulate with clarity concepts related to the study of world religions.
4. Demonstrate a general knowledge of religious ethics and theology.
5. Demonstrate the use of critical methods in the analysis of religious texts.
6. Summarize and compare the histories and cultural settings of at least three major world religions

Social Studies/Secondary Education, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

Students who want to become secondary Social Studies teachers (grades 5-Adult) complete a series of Secondary Education courses, requirements for General Education Foundations (GEF) components that are related to the area of specialization, and courses specific to the area of specialization: Social Studies, Grade 5-Adult.

The program boasts a clear set of research-based program goals and carefully sequenced learning experiences. Students will learn to integrate what one teaches with how it is taught and will receive more than 1,000 hours of experience in public school classrooms. The program functions in close collaboration with exemplary local public schools and has selective and rigorous standards for admission and retention of students as well as rigorous performance requirements that are relevant to effective teaching practice.

Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>) here. Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Approved Shared Content from /shared/certificate_global_engagement/

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their course work and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

Admissions

- First-Time Freshmen are admitted directly into the major.
- Students transferring from another WVU major must meet the following GPA benchmarks:
 - Students with 60 or fewer credits need a 2.5 GPA to be admitted to the major
 - Students with 61 credits or more need a 2.75 GPA
- Students transferring from another institution must meet the follow overall GPA benchmark:
 - Students with 60 or fewer credits need a 2.5 GPA to be admitted to the major
 - Students with 61 credits or more need a 2.75 GPA

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Social Studies/Secondary Education (<https://admissions.wvu.edu/academics/majors/social-studies-secondary-education/>) major.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 credit hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences (<http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/#bachelorofartstext>) page.

Departmental Requirements for the B.A. in Social Studies

Students wishing to graduate with a degree in Social Studies must complete a total of 96 credit hours in their major. Students must abide by the following rules:

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Students majoring in Social Studies will complete HIST 484.
- **Writing and Communication Skills:** The Social Studies program is a **SpeakWrite Affiliated Program**, committed to fostering and assessing student's written, verbal, visual, and mediated communication skills. The Social Studies major requires its Bachelor of Arts program graduates to complete ENGL 101 and ENGL 102 (or ENGL 103), HIST 250, HIST 464, HIST 484 PSYC 241.
- **Calculation of the GPA in the major:** Students must earn a minimum grade of C- in all C&I, EDP, EDUC, HIST, and SPED courses applied toward degree requirements, and a minimum cumulative grade point average of 2.75. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **WV State Certification Requirements:**
 - Successful completion of PRAXIS I Core Academic Skills for Educators (CASE) is required for admission to the teacher education program: PRAXIS Core Reading #5712, PRAXIS Core Writing #5722 and PRAXIS Core Math #5732. (NOTE: PRAXIS Core test scores are not required of students who have either earned a Master's degree, or scored a 26 or higher on the ACT, or took the SAT prior to March 2016 and received a combined Math and Critical Reading score of 1170 or higher, or took the SAT after March 2016, and earned a combined Math and Evidence-Based Reading and Writing score of 1240 or higher.)
 - PRAXIS II #5081 Social Studies Content Knowledge (NOTE: Successful completion of this assessment is required prior to student teaching; scores must be received prior to obtaining a student teaching permit.)
 - edTPA Teacher Performance Assessment – a three-part performance exam during student teaching. NOTE: Successful completion of this assessment is required for program completion.
 - Teacher candidates complete field experience hours in middle and high schools while completing professional education coursework. During the final year of the program, teacher candidates are placed in an appropriate school to complete their clinical student teaching experience. The College of Education and Human Services coordinates the placement and supervision of teacher candidates as they engage in these professional experiences.
- **Benchmark Expectations:** Please check the admissions tab.

UNIVERSITY REQUIREMENTS

13

HIST 191 First-Year Seminar
GEF Requirements: credits may vary because of overlap

EBERLY COLLEGE REQUIREMENTS

12

Fine Arts Requirement
Global Studies and Diversity Requirement
Foreign Language Requirement

SOCIAL STUDIES CONTENT REQUIREMENTS

History Requirement: 18

HIST 152 Growth of the American Nation to 1865
HIST 153 Making of Modern America: 1865 to the Present
HIST 179 World History to 1500
HIST 180 World History Since 1500
HIST 250 West Virginia
HIST 464 American Foreign Relations 1941 to Present

Economics Requirement: 6

ECON 201 Principles of Microeconomics
ECON 202 Principles of Macroeconomics

Geography Requirement: 7

GEOG 102 World Regions
and:
GEOG 150 Digital Earth
& GEOG 149 and Digital Earth Lab

or:			
GEOG 107 & GEOG 106	Physical Geography and Physical Geography Laboratory		
Political Science Requirement:			6
POLS 102	Introduction to American Government		
POLS 220	State and Local Government		
Psychology Requirement:			6
PSYC 101	Introduction to Psychology		
PSYC 241	Introduction to Human Development		
Sociology and Anthropology Requirement:			6
SOCA 101	Introduction to Sociology		
SOCA 105	Introduction to Anthropology		
Social Studies Electives:			6
HIST (Non-Western) at the 300-Level or above			
HIST at the 300-Level or above			
UNDERGRADUATE PROFESSIONAL EDUCATION REQUIREMENTS:			38
C&I 324	Teaching Language Arts: Secondary School		
C&I 453	Disciplinary Foundations for Social Studies Teaching		
C&I 454	Teaching Social Studies: Secondary School		
C&I 489	Identity and Cultural Diversity in the Classroom		
C&I 490	Teaching Practicum		
C&I 491	Professional Field Experience		
C&I 494	Seminar		
EDUC 200	Professional Inquiry in Education		
EDP 301	Learning in PreK-Adult Educational Settings		
SPED 304	Special Education in Contemporary Society		
SPED 461	Differentiated Secondary Instruction		
CAPSTONE REQUIREMENT:			3
HIST 484	Historical Research-Capstone		
Total Hours			121

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
GEF 3		3 HIST 153 (GEF 8)	3
ENGL 101 (GEF 1)		3 HIST 179 (ECAS Glo. St. & Dev. Req.; GEF 7)	3
GEOG 102		3 POLS 102 (GEF 8)	3
HIST 152 (GEF 5)		3 PSYC 101 (GEF 4)	3
HIST 191		1 Foreign Language 102	3
Foreign Language 101		3	
		16	15

Second Year

Fall	Hours	Spring	Hours
ECON 201 (GEF 8)		3 ECON 202	3
ENGL 102 (GEF 1)		3 EDUC 200	3
POLS 220		3 HIST 250	3
GEOG 106 & GEOG 107 (GEF 2)		4 SOCA 101	3
or		Foreign Language 204	3
GEOG 149 & GEOG 150			

Foreign Language 203		3		
		16		15
Third Year				
Fall	Hours		Spring	Hours
C&I 453			3 C&I 324	3
HIST 180			3 C&I 454	3
EDP 301			3 C&I 489	3
SOCA 105			3 HIST (Non-Western) at the 300-level or above	3
SPED 304			3 SPED 461	3
C&I 490			1 C&I 490	1
		16		16
Fourth Year				
Fall	Hours		Spring	Hours
C&I 491			9 ECAS Fine Arts Requirement (GEF 6)	3
C&I 494			3 HIST Elective at the 300-level or above	3
			HIST 464	3
			HIST 484	3
			PSYC 241	3
		12		15

Total credit hours: 121

Degree Progress

- By the end of the fourth semester in the major, the student must have completed EDUC 200 with a C- or better and must have a minimum GPA of 2.75. If a student does not meet these criteria, they will be removed from the major until the benchmarks are met.
- By the end of the sixth semester in the major, the student must have completed 125 hours of field placement and must have a minimum GPA of a 2.75.
- To graduate with this major, a student needs an overall GPA of 2.75.

Major Learning Outcomes

SOCIAL STUDIES/SECONDARY EDUCATION

The learning goals for the WVU Secondary Teacher Education Program are to prepare students who:

1. Have commitment and skills to engage in life-long learning;
2. Are effective communicators;
3. Recognize that teaching is a professional, moral, and ethical enterprise with well-developed ethical frameworks which facilitate effective teaching;
4. Will serve as a facilitator of learning for all students;
5. Possess in-depth knowledge of both pedagogy and content, and the relationships between them;
6. Are reflective practitioners;
7. Are aware of, and have respect for, human diversity;
8. 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.

Social Work, B.S.W.

Degree Offered

- Bachelor of Social Work

Nature of the Program

The School of Social Work provides students with a comprehensive program of professional education in social work, including degree programs at the baccalaureate and master's levels, and a range of part-time and continuing education opportunities.

The BSW and MSW programs at West Virginia University are fully accredited by the Council on Social Work Education, which makes graduates eligible to seek licensure as social workers in West Virginia and other states, depending on individual state laws. The degree programs offered by the

School of Social Work allow students the opportunity to prepare for entry-level professional practice at the baccalaureate level and to specialize at the advanced (graduate) level of study. The baccalaureate program prepares social workers for generalist practice and is a recognized national leader in the development of baccalaureate-level curriculum to support this educational goal.

B.S.W. Program Mission

The mission of the B.S.W. Social Work Program at West Virginia University is to educate students to become generalist social workers. Generalist social work is grounded in the liberal arts, the person-in-environment framework, and competency-based education. Generalist social workers use a range of prevention and intervention methods in social work practice with diverse individuals, families, groups, organizations, and communities. Generalist social workers identify with the profession and apply ethical principles and critical thinking at the micro, mezzo, and macro levels of practice. Generalist practitioners are strengths-based, engage diversity in practice, and advocate for human rights and social and economic justice. They engage in research-informed practice and actively respond to the impact of context on professional practice.

The 2 + 2 Program

WVU and several colleges have entered into a joint commitment to increase the college-going rate within the state of WV and throughout the country, as well as the number of social workers within the state, through a special 2+2 arrangement that will lead to a bachelor of social work degree from WVU. Current affiliation agreements for the 2 + 2 program include Pierpont Community and Technical College, WV Northern Community College, and Bermuda College. For students from these colleges to enjoy the benefits of the 2+2 program they must be ready to enter the major when they matriculate to WVU. Students in the 2+2 program must meet the admissions standards for WVU and the B.S.W. program and must follow the B.S.W. program's policies for transfer students.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

DIRECTOR

- Deana Morrow - Ph.D. (North Carolina State University)
SOWK Education, SOWK Practice Regulation, Older Adults: social isolation, dementia, congregate care, community care; Behavioral Health, Sexual Minority Populations, Older Adults, Mental Health

BACCALAUREATE PROGRAM DIRECTOR

- Linda Ferrise - MSW (West Virginia University)
BSW Program Director; Undergraduate Education, Mental Health, Adoption

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)
SOWK Education, SOWK Practice Regulation, Older Adults: social isolation, dementia, congregate care, community care; Behavioral Health, Sexual Minority Populations, Older Adults, Mental Health
- Carrie Rishel - Ph.D. (University of Pittsburg)
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 SOWK 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 SOWK Education
- Mary LeCloux - Ph.D.(Simmons College)

Master's Program Director; Suicide Prevention, Substance Abuse, Health Service Disparities, Evidence-Based SOWK 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 PROFESSORS

- Linda Ferrise - MSW (West Virginia University)
Baccalaureate Program Director; Undergraduate Education, Mental Health, Adoption

CLINICAL ASSISTANT PROFESSORS

- Jenifer Gamble - Ph.D. (University of Louisville)
Field Education Director, Macro Practice & Organizational Systems, Non-profit Leaderships, International SOWK

TEACHING ASSISTANT PROFESSORS

- Jeffrey Hanna - DSW (Rutgers University)
Clinical practice, social work theory, geriatrics, social work assessment and diagnosis

CLINICAL INSTRUCTORS

- Carol Amendola - MSW (West Virginia University), LCSW
Baccalaureate Program Coordinator, Social Work Practice, Child Welfare
- Jacqueline Englehardt - MSW (West Virginia University), LCSW
MSW Admissions & Recruitment Coordinator, Clinical Instructor, Title IV-E Coordinator, Nonprofit Management, Professional Development, Continuing Education Certificate Programs
- 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

TEACHING INSTRUCTORS

- Rhonda Hayes - MSW (West Virginia University)
Instructor; Substance Abuse & Recovery, Family Victimology, Grant Writing, Social Agency and Program Administration

EMERITUS FACULTY

- Majorie 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 Pennsylvania)

Admissions

Freshmen and sophomore students in good standing (2.0) can declare social work as their major at any time.

In order for social work majors at WVU, its branch campuses, or 2+2 program students to attain *professional* social work status, they must meet the B.S.W. program's admission criteria, complete a formal application for admission, and have their application approved by the School of Social Work B.S.W. Admission Committee. The process is competitive, and students are selectively admitted to the advanced level of the program for their final two years of education, which includes the upper-division courses in social work.

To be eligible for admission to the advanced level (junior and senior year) and become *professional* social work majors, students must meet the following minimum criteria in order to apply to the *professional* level:

- Have a 2.50 GPA on a four-point scale.
- Complete 100 hours of human service activity (paid or volunteer) by the time of application with verification of completed hours on the BSW program application form.
- Submit a supportive or generally positive reference letter from the volunteer site supervisor(s), or a faculty member.
- Complete fifty-eight credit hours by the conclusion of the semester during which application to the *professional* major is made.

- Earn a final grade of C or higher in SOWK 147 and SOWK 151 (Students may be enrolled in one or both of these courses at the time of application to the *professional* major; additionally, students applying to the program through the 2+2 arrangement or as transfers from another institution can replace the SOWK 147 course with another minority course pre-approved by the B.S.W. Program Director).
- Successful completion of at least 75% of the General Education Foundation courses (GEF) by the conclusion of the semester during which application to the advanced level is made.
- Demonstrate college-level writing skills.
- Sensitivity to and respect for human diversity, with a basic capacity for nonjudgmental behavior toward individuals whose values, beliefs, and lifestyles may be different for the student's own.
- Reliability in carrying out responsibilities, as demonstrated in classes and volunteer experience. (punctual, dependable, observes assignment deadlines, meets attendance expectations).

Applications are submitted in January for entry to the advanced *professional* social work major level the following fall semester.

Transfer Students

Transfer students, including 2+2 students, who wish to enter the social work major must contact WVU's Office of Admissions and the B.S.W. Program Coordinator no later than the semester before you intend to matriculate to WVU. For entry to the B.S.W. program, students must meet all requirements that apply to major status. Students, who plan to matriculate to WVU in the fall semester at the *professional* social work major level should contact WVU's Office of Admissions the prior December and complete the application to the B.S.W. program for admission at the *professional* social work major level in January.

Upper-division social work courses taken at other institutions do not automatically transfer to WVU and meet the program's requirements. To gain approval for these courses students must have earned a B or higher in the course(s) and must submit course syllabi and other appropriate course materials to Linda Ferrise, the B.S.W. program director. Courses that are not approved count as electives. The lower-division social work courses taught on 2+2 campuses have received approval via the formal agreement with the program.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Social Work (<https://admissions.wvu.edu/academics/majors/social-work/>) major.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, School of Social Work (major) requirements, and electives to total a minimum of 120 hours.

SCHOOL REQUIREMENTS FOR THE BACHELOR OF SOCIAL WORK

The undergraduate social work program consists of a foundation in the liberal arts, and students must complete all courses outlined below, with 58 credits at the 200-level or above. Students are encouraged to consult with the social work adviser regarding the selection of electives appropriate for their career interest.

- **Capstone Requirement:** The university requires the successful completion of a capstone course, preferably in the major. Social Work majors satisfy these requirements by completing SOWK 494A.
- **Writing and Communication Skills Requirement:** Social Work BSW students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two additional **SpeakWrite Certified Courses™**: SOWK 320 and SOWK 494.
- **GPA in the major:** Social Work majors must maintain a 2.00 GPA in their major courses; students must complete all required GERO and SOWK courses—in their proper sequence—with grades of C- or higher, except for SOWK 319, 491A and 491, which are taken P/F. If a course is repeated, the all attempts will be included in the calculation of the GPA. Students who are unable to meet the performance standards for social work courses are permitted to repeat a course once. Students who are unsuccessful in the second attempt will be counseled out of the program. If a student is unsuccessful in either SOWK 494A or SOWK 491, both courses must be repeated and successfully completed to meet graduation requirements.
- **Field Instruction Requirements:** Students must successfully complete 12 credits of field placement.
- **Benchmark expectations:** For details, go to the Social Work admissions tab (p. 420).

Curriculum Requirements

UNIVERSITY REQUIREMENTS	28
SOWK 191	First-Year Seminar
GEF: Number of credits may vary based on overlap	
PROGRAM REQUIREMENTS	
Foundation Social Work Requirement	6
SOWK 147	Human Diversity
SOWK 151	Introduction to Social Work
Social Science Requirement:	6
POLS 220	State and Local Government
SOCA 221	Families and Society
Social Science Electives:	9
One class in PSYC 200 level or above	
One class in SOCA 200 level or above	
One class in POLS, PSYC, or SOCA- 200 level or above	
Minority Content Class:	3
Select one class in:	
ASP 220	Introduction to Africana Studies
COMM 212	Gender Communication
COMM 317	Communication and Aging
ENGL 154	African American Literature
ENGL 251	American Folklore and Culture
ENGL 252	Appalachian Fiction
ENGL 254	African American Literature
ENGL 285	Images of Women in Literature
ENGL 352	Topics in Appalachian Studies
ENGL 387	Topics in Women's Literature
HIST 250	West Virginia
HIST 473	Appalachian Regional History
POLS 337	Gender/Politics and Policy
PSYC 232	Sex Roles and Behavior
PSYC 345	Adulthood and Aging
SOCA 235	Race and Ethnic Relations

SOCA 323	Sociology of Rural Life	
SOCA 360	Women and Men in Society	
WGST 170	Introduction to Women's and Gender Studies	
WGST 242	Women's Health and Fitness	
Advanced Social Work Courses		25
SOWK 300	Social Welfare Policy and Services 1	
SOWK 310	Social Welfare Policy and Services 2	
SOWK 319	Skills Lab 1	
SOWK 320	Social Work Methods 1	
SOWK 322	Social Work Methods 2	
SOWK 324	Methods 3: Organizations and Communities	
SOWK 330	Human Behavior in the Social Environment 1	
SOWK 350	Human Behavior in the Social Environment 2	
SOWK 360	Social Work Research and Statistics	
Social Work Electives		6
GERO 212	Introduction to Gerontology	
GERO 410	Rural Gerontology	
SOWK 400	Legal Issues in Social Work	
SOWK 493	Special Topics	
Field Instruction		12
SOWK 491	Professional Field Experience	
Capstone Experience		3
SOWK 494A	Seminar	
GENERAL ELECTIVES		22
Number of hours may vary depending on overlap		
Total Hours		120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
SOWK 191		1 ENGL 102 (GEF 1)	3
ENGL 101 (GEF 1)		3 GEF 2	3
GEF 3		3 GEF 5	3
GEF 6		3 SOWK 147 (GEF 7)	3
SOWK 151		3 General Elective	3
General Elective		2	
		15	15

Second Year

Fall	Hours	Spring	Hours
GEF 2		3 GEF 8*	3
POLS 220 (GEF 4)		3 SOCA 221 (GEF 8)	3
SOCA 200-level Elective		3 PSYC 200-level Elective	3
General Elective		3 Minority Content Course	3
General Elective		3 General Elective	3
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 8*		3 SOWK 310	3
SOWK 300		3 SOWK 322	3
SOWK 319		1 SOWK 350	3
SOWK 320		3 SOWK Elective 1	3
SOWK 330		3 General Elective	3

General Elective		2		
		15		15
Fourth Year				
Fall	Hours		Spring	Hours
SOWK 360			3 SOWK 494A (Capstone)	3
SOWK 324			3 SOWK 491	12
SOWK Elective 2		3		
Social Science Elective		3		
General Elective		3		
		15		15

Total credit hours: 120

* Student completing a minor, a second major or a dual degree already fulfill F 8.

Degree Progress

By January of the 4th semester, students must submit an application to the *professional* major.

For the application, students:

- must have earned a final grade of C- or higher in SOWK 147 and 151.
- must complete 100 hours volunteer service.
- must submit a personal statement and a reference from academic or volunteer service individual.
- have earned a minimum overall GPA of 2.50 GPA. (Students must maintain a 2.0 GPA overall after admission to the professional major).
- All majors must meet with their SOWK adviser each semester.

Students who do not meet these benchmarks are not eligible to apply to the *professional* level and may be removed from their major.

Major Learning Outcomes

SOCIAL WORK

Upon successful completion of the B.S.W. degree, **Social Work** majors will demonstrate:

1. Competence for entry-level generalist practice, with an emphasis on rural and small town settings, gained through a curriculum including liberal arts and social work foundations, human behavior in the social environment (HBSE) practice, policy, assessment/research with individuals, families, groups, communities, and society.
2. Ability to engage in effective practice that is responsive to changing the social context, with an existing value base and ethical standards of the social work profession.
3. Skills for effective for practice with diverse, vulnerable, and oppressed populations and to further social and economic justice.
4. A foundational identity as a professional social worker and commitment to conduct oneself accordingly.
5. Sensitivity, knowledge, and understanding of human needs and rights, social welfare issues, and approaches toward resolving social problems.

Sociology, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

Sociology examines human society with an emphasis on social structure, processes of social interaction, and social change. Students learn the methods of social science as well as the specialized knowledge and insights of discipline while selecting from a range of substantive course topics. These include but are not limited to: Racial and ethnic relations, sex and gender, social class and poverty, families and relationships, social psychology and media, health and health care, and urban and rural sociology. Courses in the department also are intended to facilitate the application of sociological principles to a wide range of contemporary social problems.

The major prepares students to pursue a broad range of careers that require knowledge of social organization and social processes. It also prepares students for graduate studies in the social sciences in pursuit of academic or applied research careers or for professional training in law, public administration, social work, public health and other fields. For more information about this program, please visit the departmental website (<http://soca.wvu.edu/students/undergraduate-students/>).

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>) here. Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

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
- S. Melissa Latimer - Ph.D. (University of Kentucky) Sociology
Gender/race/ethnicity, Inequality/labor markets/welfare systems
- R. Gregory Dunaway - Ph.D. (University of Cincinnati) Sociology
Dean of the Eberly College of Arts and Sciences
- 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
- Lisa M. Dilks - Ph.D. (University of South Carolina) Sociology
Social psychology, Group processes, Law and society, Quantitative methods
- Amy Hirshman - Ph.D. (Michigan State University) Anthropology
Mesoamerican archaeology, Social complexity, Ceramics
- Jason Manning - Ph.D. (University of Virginia) Sociology
Conflict and social control, Violence, Sociology of knowledge
- Daniel Renfrew - Ph.D. (Binghamton University) Anthropology
Environmental and political anthropology, Social movements, Latin American cultures
- 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

TEACHING INSTRUCTORS

- Daniel Brewster - M.A. (West Virginia University) Communication Studies
- Douglas Sahady - M.A. (California University of Pennsylvania) Social Science
- Genesis Snyder - M.A. (Western Michigan University) Anthropology

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

- First Time Freshmen are admitted directly into the major.
- Students coming from another major within WVU need an overall GPA of a 2.0 and have completed the following courses with a grade of a C- or better before being admitted to the major: SOCA 101 and SOCA 105. It is recommended that students have also completed the pre-requisite or are qualified to take STAT 211.
- Students transferring from another institution need an overall GPA of a 2.0 and have completed the following courses with a grade of a C- or better before being admitted to the major: SOCA 101 and SOCA 105. It is recommended that students have also completed the pre-requisite or are qualified to take STAT 211.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Sociology (<https://admissions.wvu.edu/academics/majors/sociology/>) major.

Click here to view the Suggested Plan of Study (p. 428)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Departmental Requirements for the B.A. in Sociology

All Sociology majors must complete a common set of required courses and choose major electives based on their scholarly and career interests.

- **Calculation of GPA:** A minimum GPA of 2.0 is required across all SOCA courses counted toward meeting major requirements. A minimum grade of C- is required in SOCA 101, SOCA 105, and SOCA 191. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Experiential Learning:** Students are encouraged to pursue a Professional Field Experience (SOCA 491) or Independent Study (SOCA 495) in their junior or senior year, combining experiential work with previously acquired skills in a project appropriate to their career goals. SOCA 490, SOCA 491, and SOCA 495 can be taken for variable credit and will count as general elective credits towards graduation, but they cannot be applied to major requirements.
- **Capstone Requirement:** The General Education Foundation requires the successful completion of a Capstone course. Sociology majors must complete SOCA 488.
- **Writing and Communication Skills Requirement:** Sociology Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two **SpeakWrite Certified Courses**TM: SOCA 488, and a 2nd course selected from HIST 203, HIST 207, HIST 221, HIST 241, HIST 242, HIST 259, HIST 264, PSYC 241, SOCA 318, SOCA 323, SOCA 350, SOCA 352, SOCA 354, SOCA 360, SOCA 450, SOCA 457, SOCA 458, WGST 150, WGST 225.
- **Benchmark Expectations:** For details, go to the Sociology admissions tab (p. 426).

Curriculum Requirements

UNIVERSITY REQUIREMENTS		30
GEF Requirements: may vary depending on overlap		
ECAS B.A. Requirements		12
Fine Arts Requirement		
Foreign Language		
Global Studies and Diversity Requirement		
DEPARTMENTAL REQUIREMENTS		
Orientation Requirement		1
SOCA 191 or SOCA 361	First-Year Seminar (A minimum grade of C- is required) Practicing Sociology and Anthropology	
Common Core Requirements		13
SOCA 101	Introduction to Sociology (A minimum grade of C- is required)	
SOCA 105	Introduction to Anthropology (A minimum grade of C- is required)	
SOCA 301	Sociological Theory	

SOCA 311	Social Research Methods		
Statistics Requirement			3
STAT 211	Elementary Statistical Inference		
Sociology Requirements			15
Select five of the following (at least three must be 300 or 400-level):			
SOCA 207	Social Problems in Contemporary America		
SOCA 221	Families and Society		
SOCA 223	Death and Dying		
SOCA 225	Inequality and the Media		
SOCA 226	Sexuality and Society		
SOCA 235	Race and Ethnic Relations		
SOCA 302	Deviant Behavior		
SOCA 304	Complex Organizations		
SOCA 318	Hate Crime		
SOCA 320	Social Psychology		
SOCA 323	Sociology of Rural Life		
SOCA 331	Sociology of Law		
SOCA 333	Sociology of Work and Work Places		
SOCA 337	Sociology of American Business		
SOCA 360	Women and Men in Society		
SOCA 405	Class, Status, and Power		
SOCA 415	Mass Media, Crime and Deviance		
SOCA 463	Economy and Society		
SOCA 470	Cities and Urban Life		
Anthropology, Criminology, or Sociology Electives:			6
Two additional courses in sociology, anthropology, or criminology (at least one must be 300 or 400-level)			
Capstone Experience			3
SOCA 488	The Capstone Experience		
General Electives			37
Number of electives may vary depending on overlap and AP credits			
Total Hours			120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
SOCA 191		1 ENGL 101 (GEF 1)	3
GEF 5		3 GEF 2	3
Foreign Language 101		3 ECAS Fine Arts Requirement (GEF 6)	3
GEF 3		3 Foreign Language 102	3
SOCA 101 (GEF 4)		3 SOCA 105 (ECAS Global Studies and Diversity Requirement; GEF 7)	3
General Elective		1 General Elective	1
		14	16

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 GEF 2	3
GEF 8*		3 GEF 8*	3
Foreign Language 203		3 Foreign Language 204	3
200-level Sociology Course		3 200-level Sociology Course	3
Statistics Requirement		3 General Elective	3
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 8*		3 SOCA 311	3
SOCA 301		3 Upper-level Sociology Course	3
Upper-level Sociology Course		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
Upper-level Sociology Course		3 SOCA 488 (Capstone)	3
Anthropology, Criminology, or Sociology Elective 1		3 Anthropology, Criminology, or Sociology Elective 2	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

* Students completing a minor, a second major or a dual degree already fulfill F 8.

Degree Progress

Students are expected to meet the benchmarks set below.

- Complete SOCA 101 and SOCA 105 with grades of C- or higher by the end of the second semester in the program;
- Complete 200-level SOCA coursework and STAT 211 by the end of the fourth semester in the program;
- Complete four 300-level courses (including SOCA 301 and SOCA 311) by the end of the sixth semester in the program.
- Maintain a GPA of 2.0 overall and a minimum GPA of 2.0 in all SOCA courses counting toward major requirements.
- All majors must meet with their adviser every semester.

Students who do not meet these benchmarks may be removed from their major.

Major Learning Outcomes**SOCIOLOGY**

Students graduating with a BA in **Sociology** will have the ability to:

1. Describe sociology's core concepts and approaches to the study of social structures, social dynamics, and social issues, and how it is similar to and different from other social sciences.
2. Demonstrate the sociological imagination by describing how culture and social structure operate, how society shapes individuals and individuals shape society, and the intersectionality of race/ethnicity, gender, class, or other bases of inequality.
3. Identify and compare sociology's core theoretical and methodological approaches and discuss their role in building knowledge about society.
4. Apply ethical principles to the conduct of sociological research and the applications of its findings.
5. Critically analyze sociological questions and issues by retrieving and synthesizing appropriate information and evidence and identifying implications for research and practice/policy.
6. Demonstrate effective, clear and persuasive communication skills according to disciplinary conventions.

Statistics**Nature of the Program**

A Minor in Statistics is available to any undergraduate students at WVU. The Statistics Minor requires 15 credit hours not counted toward another minor with a grade of C- or higher in each course. If you are interested in pursuing a Minor, please contact your academic adviser.

FACULTY

PROGRAM COORDINATOR

- Mark Culp - Ph.D. (University of Michigan)
Statistical Machine Learning, Computational Statistics, Semi-supervised and Multi-view Learning

PROFESSORS

- Mark Culp - Ph.D. (University of Michigan)
Statistical Machine Learning, Computational Statistics, Semi-supervised and Multi-view Learning
- Kenneth J. Ryan - Ph.D. (Iowa State University)
Experimental Design, Statistical Machine Learning, Biometrics

ASSISTANT PROFESSORS

- Stacey Culp - Ph.D. (University of Michigan)
Experimental Design, Healthcare Applications

TEACHING ASSOCIATE PROFESSOR

- Huey Miin Lee - Ph.D. (Johns Hopkins University)
Bioinformatics, Operations Research, 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)
Bioinformatics, Statistical Computing, Statistical Modeling, Statistical Learning
- 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

Statistics Minor

Minor Code - U034

The Statistics minor requires 15 hours not counted toward another minor.

Minimum grade of C- is required in all courses applied toward the minor.

Core Course:		3
STAT 211	Elementary Statistical Inference	
or STAT 215	Introduction to Probability and Statistics	
or ECON 225	Elementary Business and Economics Statistics	
Upper-Division Electives:		12
One STAT course numbered 200 or above or one MATH course numbered 126 or above		
Select 9 STAT credits numbered 300 or above		
Total Hours		15

Minor Learning Outcomes

STATISTICS

Undergraduate courses in statistics, and sequences of statistics courses leading to a minor in statistics or a major in Industrial Mathematics and Statistics, provide a foundation of statistical literacy, statistical reasoning, and statistical thinking. Our aim is for all of our students to be challenged and encouraged in their statistical course work. In particular, we enable our students to:

- Appreciate the inherent variation and uncertainty of information, and understand that statistics can be a resource for improved decision making;
- Develop critical thinking skills for application of statistics in novel situations;
- Effectively communicate the results of statistical analysis;
- Become responsible and competent practitioners of statistics in order to attain personal goals, either in a profession or in further educational experiences.

Women's and Gender Studies, B.A.

Degree Offered

- Bachelor of Arts

The Center for Women's and Gender Studies offers a bachelor of arts degree in women's and gender studies, as well as a minor. Many students in women's and gender studies double major in other fields such as history, psychology, communication studies, English, and other fields in the social sciences, humanities, and physical sciences.

Nature of the Program

Scholarship on women and gender has revolutionized most academic disciplines over the last several years. This field studies the advancement of women, as well as how gender influences the questions that are asked, the methods that are used, and the uses of knowledge in creating feminist scholarship within a multicultural and historical framework. Women's and gender studies courses lead students to challenge the stereotypes of women and men, and to explore the relationships among gender, race, ethnicity, sexual identity, socioeconomic class, and age. As an interdisciplinary field, women's and gender studies embraces the arts, humanities, social sciences, life sciences, and physical sciences.

Career Opportunities

Business, public administration, health care, communications, law, teaching, social work, counseling, creative arts, government, and journalism are all fields in which a major or minor in women's and gender studies may be a valuable professional credential. A background in this field is helpful to both women and men entering professions that have traditionally been restricted to one sex. These areas of study are especially useful for employment in fields such as family law, international development, child and family counseling, domestic violence, social services, and education.

Academic Opportunities in Women's and Gender Studies

Women's and Gender Studies courses are offered in a variety of academic disciplines throughout the University. Many of these courses fulfill General Education Curriculum requirements. In addition to the Women's & Gender Studies courses listed in this catalog, many other courses are offered through other departments. Updated lists of these courses are available from the Center for Women's & Gender Studies each semester.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

DIRECTOR

- Sharon Bird - Ph.D. (Washington State University)

PROFESSORS

- Lupe Davidson - Ph.D. (Duquesne University)
Woodburn Professor of Women's and Gender Studies
- Cris Mayo - Ph.D. (University of Illinois Urbana-Champaign)

ASSOCIATE PROFESSOR

- Cynthia Gorman - Ph.D. (Rutgers University)
- Jennifer Kasi Jackson - Ph.D. (University of Kentucky)

INSTRUCTOR

- Kristiina Riivald

Admissions

- First-Time Freshmen are admitted directly into the major.
- Students transferring from another WVU major must have a 2.00 GPA.
- Students transferring from another institution must have a 2.00 GPA.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Women's and Gender Studies (<https://admissions.wvu.edu/academics/majors/women-s-and-gender-studies/>) major.

Click here to view the Suggested Plan of Study (p. 434)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences (p. 187) pages.

Departmental Requirements

The Women's and Gender Studies major requires 30 hours, 24 of which must be unique (not counted toward another major or minor). Women's and Gender Studies majors are also required to complete a minor or a second major of their choice.

- **Capstone Requirement:** The university requires the successful completion of a Capstone course: WGST 484.
- **Writing and Communication Skills Requirement:** The Women's and Gender Studies Bachelor of Arts is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Calculation of the GPA in the Major:** Students must earn a C- or better in WGST 170, WGST 330, WGST 360, and WGST 484 and attain a final cumulative GPA of 2.0 overall in WGST courses that they wish to apply toward their major requirements. Students must also earn an overall 2.0 GPA in their minor. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Secondary Concentration:** Students must complete a minor outside of Women's & Gender Studies or a second major.
- **Credit Limitations:** Students may not count more than three hours of WGST 490 and six hours of any combination of WGST 490, WGST 491 or WGST 495 toward their major requirements.
- **Benchmark Expectations:** For details, go to the Women and Gender Studies admissions tab (p. 432).

Curriculum Requirements

UNIVERSITY REQUIREMENTS 25

WGST 191 First-Year Seminar

GEF: number of credits may vary depending on overlap

ECAS B.A. Requirements 12

Foreign Language

Fine Arts Requirement

Global Studies and Diversity Requirement

DEPARTMENTAL REQUIREMENTS

Core Courses: 9

WGST 170 Introduction to Women's and Gender Studies

WGST 330 Feminist Theory (Prerequisite to WGST 484)

WGST 360 Queer Theories

Electives: 18

Choose 18 hours from Group A & B. A minimum of two courses must be from Group A, 9 credits must be at the 300- and 400-level.

Group A

WGST 150 Women in Movies

WGST 215 African Women Writers

WGST 225 Women in Appalachia

WGST 260 Perspectives on Lesbian, Gay, Bisexual, Transgender, and Queer Studies

WGST 340 Gender and Violence

WGST 448 Sexuality in American Culture

Group B:

Any other WGST course at the 100, 200, 300 or 400 level

ACE 471 Women and Sport

ARHS 348 Women in Art

BIOL 122 Human Sexuality

CDFS 413 Stress in Families

CHPR 365 Men's Health

CHPR 380 Women and Health

COMM 212 Gender Communication

DISB 380 Disability and the Family

DISB 385 Disability and Society

ENGL 156 Literature of Native America

ENGL 180 Literature of Love, Sex, and Gender

ENGL 235 Novel

ENGL 241 American Literature 1

ENGL 242 American Literature 2

ENGL 254 African American Literature

ENGL 255 Multiethnic Literature

ENGL 285 Images of Women in Literature

ENGL 288 Sexual Diversity in Literature and Film

ENGL 385 American Women Writers

ENGL 386 British Women Writers

ENGL 387 Topics in Women's Literature

ENGL 388 Topics in Gay/Lesbian Studies

FCLT 250 Russian Fairy Tales

FCLT 281 Vampire: Blood and Revolution

FCLT 460 Sexuality and Gender in Hispanic Cinema

FLIT 237 French Women Writers

FCLT 280 Science Fiction: East and West

FLIT 238 African Women Writers

FLIT 239	Francophone Literature in Translation	
FLIT 240	Italian Women Writers	
FLIT 316	Arab Women Writers	
GEOG 412	Geography of Gender	
GERO 412	Public Policy of Aging	
GERO 418	Aging, Women and Culture	
GERO 212	Introduction to Gerontology	
HIST 346	Women, Gender, and Kinship in Premodern Europe	
HIST 207	Revolutionary Europe	
HIST 445	History of American Women	
HN&F 171	Introduction to Human Nutrition	
HN&F 200	Nutrition/Activity/Health	
IDT 430	Women in International Development	
NSG 310	Maternal Infant Nursing & Women's Health Care	
NSG 489	Reproductive Issues in Women	
PHIL 130	Current Moral Problems	
PHIL 331	Health Care Ethics	
POLS 317	Interest Groups and Democracy	
POLS 324	Sexuality, Law, and Politics	
POLS 337	Gender/Politics and Policy	
POLS 460	Gender and International Relations	
PSYC 232	Sex Roles and Behavior	
PSYC 298	Honors	
PSYC 343	Child and Adolescent Development	
SOWK 401	Social Work Practice and Human Sexuality	
SOCA 221	Families and Society	
SOCA 324	Gender and Crime	
SOCA 235	Race and Ethnic Relations	
SOCA 358	Anthropology of Health and Illness	
SOCA 360	Women and Men in Society	
SOCA 405	Class, Status, and Power	
SPED 381	Special Problems and Workshop in Special Education	
ULIB 301	Gender and the Research Process	
Minor Requirement		15
Students must complete a minor (or a second major)		
Capstone Experience		3
WGST 484	Seminar:Capstone	
GENERAL ELECTIVES		38
Number of electives may vary depending on overlap		
Total Hours		120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
WGST 191		1 ENGL 101 (GEF 1)	3
GEF 2		3 GEF 2	3
GEF 3		3 GEF 4	3
WGST 170 (ECAS Global Studies & Diversity Requirement; GEF 7)		3 Foreign Language 101	3
Foreign Language 101		3 General Elective	3
General Elective		2	
	15		15

Second Year

Fall	Hours	Spring	Hours
GEF 5		3 ENGL 102 (GEF 1)	3
ECAS Fine Arts Requirement (GEF 6)		3 Foreign Language 204	3
Foreign Language 203		3 WGST Upper Division Elective 1	3
WGST Elective Group A 1		3 Minor Requirement 1*	3
General Elective		3 General Elective	3
		15	15

Third Year

Fall	Hours	Spring	Hours
WGST 330		3 WGST 360	3
WGST Upper Division Elective 2		3 WGST Elective Group A 2	3
Minor Requirement 2		3 Minor Requirement 3	3
General Elective		3 Minor Requirement 4	3
General Elective		3 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
WGST Upper Division Elective 3		3 WGST 484 (Capstone)	3
WGST Elective at any level		3 Minor Requirement 5	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

* Completion of the minor also fulfills F 8.

Degree Progress

- By the end of the second semester in the major, students should have completed WGST 170 WGST 170WGST 170WGST 170 with a minimum grade of C-.
- Students should review their progress in the major each semester with their WGST adviser.
- Students should maintain a GPA of 2.0 in courses that will count toward the major by their Junior year, with minimum grade of C- in WGST 330 and WGST 360.

Students who do not meet these benchmarks may be removed from their major.

Major Learning Outcomes**WOMEN'S AND GENDER STUDIES**

Upon successful completion of the B.A. degree, **Women's and Gender Studies** majors will demonstrate competency in the field relative to three lenses: content, skills and application of knowledge.

1. Content—Students will be able to:
 - Demonstrate how gender, class, race, ethnicity, age, sexuality and sexual identity shape experience and reflect societal constructs.
 - Demonstrate an understanding of key terms and concepts related to the field.
 - Use the lens of feminist and gender theory to analyze manifestations of human endeavor.
2. Skills—Students will be able to:
 - Use critical thinking skills to formulate and defend positions by developing, supporting and presenting the information in written and oral form.
 - Use critical reading skills to analyze, dissect, and criticize, and reflect on arguments to demonstrate an understanding of the scholarship and theoretical underpinning of the field of women's and gender studies.
 - Apply approaches to problem solving that go beyond a single disciplinary framework.
3. Application of knowledge—Students will:
 - Develop the knowledge and gain the experience to apply social justice aspects of women's and gender studies scholarship and activism in the classroom and in the community.

- Apply transformational learning in the discipline (the interconnection between theory and practice) to coursework outside of the field of WGST, to their future education, careers, and/or civic and community engagement.

World Languages, Literatures, and Linguistics

Degree Offered

Bachelor of Arts in Chinese Studies, French, German Studies, Russian Studies, and Spanish

Nature of the Program

Coursework is offered in world literatures and cultures, linguistics, and languages, including Arabic, Chinese, French, German, Italian, Japanese, Latin (Classics), Portuguese, Russian, and Spanish. Literature courses taught in English are designated as Foreign Literature in Translation (FLIT) courses. Culture and film courses taught in English are designated as Foreign Culture in Translation (FCLT) courses. Other areas of instruction are Language Teaching Methods (LANG), dealing with second language acquisition and teaching methodology, Linguistics (LING), and English as a Second Language (ESL).

The primary goal of the majors offered by the Department of World Languages, Literatures, and Linguistics is to provide students with a solid liberal arts education that is the foundation for personal and professional success and growth over a lifetime. The curricula are designed to provide students with well-developed cognitive and communication skills and with a broad knowledge base that will enable them to pursue additional studies at the graduate level or to enter the job market in positions that will demand the ability to communicate in more than one language and in a variety of cultural contexts. The majors offered by the Department of World Languages, Literatures, and Linguistics complement and add value to a degree in any field.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Career Goals for Graduates

In today's rapidly increasing global economy, students may use foreign language study to add a valuable international dimension to myriad career opportunities such as teaching, business, economics, government work and Foreign Service, journalism, law, medicine, computer, and other scientific research.

Study Abroad

The Department of World Languages regularly offers language courses abroad. Currently, summer courses are offered in Canada, China, France, Germany, Italy, Japan, Jordan, Mexico, Spain, and Taiwan. Students participating in a summer program normally register for six credit hours. Contingent upon funding and faculty availability, the department offers similar programs every year. Course work completed abroad at the appropriate level can be used to fulfill various requirements for the major, with permission from a World Languages adviser.

Credit for Prior Knowledge

Many of our students have studied another language in high school, or are native speakers of the language they wish to study. The Department of World Languages offers several ways in which students can receive College credit for their knowledge.

Placement Testing

- Students who have studied French, German, or Spanish in high school and who wish to continue the study of these languages at WVU must take a computerized placement test before entering the program. The placement test can be taken one time only and must be taken before completing any coursework in the languages at WVU.
- Students who have studied languages for which there is no placement test should check with the coordinator for that language if placement in a class above 101 is appropriate.
- Those who complete the course in which they are placed with a B- or better will be eligible to apply for retroactive credit for all applicable courses in the 101, 102, 203, and 204 sequences out of which they placed. Please check with an adviser before making the decision to add credits to your transcript.

Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>) here. Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds.

Students will be required to apply their knowledge of contemporary issues and global social contexts to their coursework and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

FACULTY

CHAIR

- Amy S. Thompson - Ph.D. (Michigan State University)
Applied Linguistics

ASSOCIATE CHAIRS

- Pablo Garcia Loaeza - Ph.D. (Indiana University Bloomington)
Undergraduate Studies, Spanish Language, Latin American Colonial Literature
- Sandra Stjepanovi# - Ph.D. (University of Connecticut)
Graduate Studies, Linguistics, Syntax, Psycholinguistics, Semantics

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. 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 Braid - 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, Los Angeles)
German, 18th through 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
- 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, Portuguese Literature, Spanish-American Literature, Brazilian Literature
- Jonah Katz - Ph.D. (Massachusetts Institute of Technology)
Phonetics, Phonology, Theoretical 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

- Anastella 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

INSTRUCTORS

- Yumiko Adachi - M.A. (University of Wisconsin-Madison)
Japanese Linguistics
- Livia Cascao - M.A. (West Virginia University)
ESL
- Tracy Dingess - 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

- Veronica Evans - M.A. (West Virginia University)
Classics, Italian
- Lisa Dunn - M.A. (West Virginia University)
Spanish
- Irina Manukova - M.S. (Georgian Polytechnical University)
Russian

VISITING ASSISTANT PROFESSORS

- Ramona Kreis - Ph.D. (University of South Florida)
Applied Linguistics
- Yilin Liao-Carlson - Ph.D. (Purdue University)
Chinese Studies

VISITING INSTRUCTORS

- Hilary Woodrum - M.A. (West Virginia University)
French

PROFESSORS EMERITI

- 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. (Universidad Complutense de Madrid)

Spanish Literature and Culture

- Michael Lastinger - Ph.D. (University of Georgia)
French, 19th Century French Literature, Critical Theory
- Kathleen McNerney - Ph.D. (University of New Mexico)
Spanish, Catalan Language and Literature, Spanish Literature and Culture, Women Writers

Admissions

- First Time freshmen are admitted directly into the major.
- Students transferring from another major within WVU must meet minimum requirements: 2.0 overall and a minimum of one language course with at least a C- (language courses do not include FCLT, FLIT, LANG, LING).
- Students transferring from another institution must meet minimum requirements: 2.0 overall and a minimum of one language course with at least a C- (language courses do not include FCLT, FLIT, LANG, LING).

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in the following majors.

- Chinese Studies (<https://admissions.wvu.edu/academics/majors/chinese-studies/>)
- French (<https://admissions.wvu.edu/academics/majors/french/>)
- German Studies (<https://admissions.wvu.edu/academics/majors/german-studies/>)
- Russian Studies (<https://admissions.wvu.edu/academics/majors/world-languages-literatures-and-linguistics-russian-studies/>)
- Spanish (<https://admissions.wvu.edu/academics/majors/spanish/>)

For specific information on the following programs, please see the links to the right:

- **Chinese Studies, B.A.**
- **French, B.A.**
- **German Studies, B.A.**
- **Russian Studies, B.A.**
- **Spanish, B.A.**

Chinese Studies, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The primary goal of the major in Chinese Studies is to provide students with a solid liberal arts education that is the foundation for personal and professional success and growth over a lifetime. The curriculum is designed to provide students with well-developed cognitive and communication skills and with a broad knowledge base that will enable them to pursue additional studies at the graduate level or to enter the job market in positions that will demand knowledge of Chinese language and culture. The skills provided by a Bachelor of Arts in Chinese Studies complement and add value to a degree in any field.

Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>) here. Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Approved Shared Content from /shared/certificate_global_engagement/

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their course work and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

Departmental Requirements for the B.A. in Chinese

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Chinese Studies majors complete CHIN 496.
- **Writing and Communication Skills Requirement:** The Chinese Bachelor of Arts is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Calculation of GPA in the Major:** Chinese majors must achieve a minimum grade point average of 2.25, both overall and in the major, to qualify for graduation.
- **Residency Requirements:** Students completing a major in Chinese studies at WVU must fulfill a residency requirement by completing at least fifteen credit hours above 204 on campus in their language/area of study, excluding courses numbered 490 and 491, and courses obtained through credit by examination.
- **Benchmark Expectations:** For details, go to the World Languages Admissions tab (<http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/foreignlanguages/#admissionstext>).

CURRICULUM REQUIREMENTS

UNIVERSITY REQUIREMENTS	37
LANG 191 First-Year Seminar	
GEF: Number of electives may vary depending on overlap	
ECAS B.A. REQUIREMENTS	9
Foreign Language	
Fine Arts Requirement	
Global Studies and Diversity Requirement	
DEPARTMENTAL REQUIREMENTS	
Language Courses	15
CHIN 204 Second Year Chinese 2	
Select four of the following courses: *	
CHIN 301 Third Year Chinese 1	
CHIN 302 Third Year Chinese 2	
CHIN 303 Readings in Modern Chinese 1	
CHIN 304 Readings in Modern Chinese 2	
CHIN 461 Business Chinese	
CHIN 465 Chinese Media	
CHIN 471 Intensive Mandarin Chinese 2	
CHIN 495 Independent Study	
Literature and Culture Requirement	6
Select two of the following courses:	
FCLT 210 Chinese Civilization and Culture	
FLIT 216 Chinese Literature Translation 1	
FLIT 217 Chinese Literature in Translation 2	
Chinese Studies Electives	9
Select three courses in any of the following categories:	
1. Alternate upper-division courses in Chinese language	
2. Alternate FLIT or FCLT courses in Chinese literature or culture	
3. Any courses from the following list:	
HIST 325 Modern China	
LING 311 Introduction to Structural Linguistics	
POLS 354 Government of China	
RELG 231 Religions of China and Japan	
HIST 435 History of Chinese Thought	
Capstone	3
CHIN 496 Senior Thesis	

GENERAL ELECTIVES	41
Total Hours	120

* May include Upper-division Study Abroad Courses.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
LANG 191		1 ENGL 101 (GEF 1)	3
GEF 2		3 GEF 4	3
GEF 3		3 GEF 5	3
CHIN 101		3 CHIN 102	3
General Elective		3 General Elective	3
General Elective		2	
		15	15

Second Year

Fall	Hours	Spring	Hours
CHIN 203		3 ENGL 102 (GEF 1)	3
GEF 2		3 CHIN 204	3
ECAS Fine Arts Requirement (GEF 6)		3 CHIN Literature & Culture Course 2	3
Chinese Literature & Culture Course 1		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Third Year

Fall	Hours	Spring	Hours
CHIN 301		3 CHIN 302	3
CHIN 303		3 CHIN 304	3
CHIN Studies Elective 1		3 GEF 8*	3
ECAS Global Studies and Diversity Requirement (GEF 7)		3 GEF 8*	3
General Elective		3 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
CHIN Studies Elective 2		3 CHIN 496 (Capstone)	3
CHIN Studies Elective 3		3 General Elective	3
GEF 8*		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

Degree Progress

- A progress review will be completed in the middle of the 3rd semester.
- By the end of the fourth semester in the major, students must have completed CHIN 204.
- Students must retain a 2.25 GPA in courses that count toward the major by their junior year.
- All majors must meet with a WLLL department adviser each semester.

Students who do not meet these benchmarks may be removed from their major.

Major Learning Outcomes

CHINESE STUDIES

Upon successful completion of the B.A. degree in **World Language and Cultural Studies**, students will meet the following outcomes:

1. Critical Thinking Outcome

Students will be able to:

- analyze the values, ideas, and belief systems of Chinese;
- evaluate the relationship between the cultural forms, everyday life, and the power structures in historical and sociopolitical contexts;
- use their knowledge of Chinese language and culture to analyze issues across a range of disciplines.

2. Cultural Knowledge Outcome

Students will be able to:

- describe key perspectives and practices of Chinese culture as they are demonstrated in cultural products, including literature, film, and other print and audio-visual sources;
- identify fundamental differences between Chinese culture and their own.

3. Intercultural Learning Outcome

Students will be able to:

- recognize that significant differences in behaviors exist among cultures;
- relate Chinese products, practices, and perspectives to their own;
- demonstrate culturally appropriate behavior in a variety of situations to avoid major social blunders.

4. Interpretive Communication Outcome

Students will be able to:

- interpret accurately a variety of audio, print, and audio-visual texts on a wide range of topics related to Chinese culture.

5. Interpersonal Communication Outcome

Students will be able to:

- interact and negotiate meaning appropriately using spoken language in a variety of contexts;
- exchange information appropriately using written language in a variety of contexts.

6. Presentational Communication Outcome

Students will be able to:

- present information orally to different audiences and for various purposes using appropriate language and conventions;
- present information in writing to different audiences and for various purposes using appropriate language and conventions.

7. Linguistic Knowledge Outcome

Students will be able to:

- demonstrate an understanding of the grammatical system of Chinese;
- compare Chinese structures with those in their own language.

French, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The primary goal of the major in French is to provide students with a solid liberal arts education that is the foundation for personal and professional success and growth over a lifetime. The curriculum is designed to provide students with well-developed cognitive and communication skills and with a broad knowledge base that will enable them to pursue additional studies at the graduate level or to enter the job market in positions that will demand the ability to communicate in French in a variety of cultural contexts. The skills provided by a Bachelor of Arts in French complement and add value to a degree in any field.

Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>) here. Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Approved Shared Content from /shared/certificate_global_engagement/

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their course work and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

Departmental Requirements for the B.A. in French

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. French majors compete FRCH 496 or the Capstone section of FRCH 421, FRCH 422, FRCH 431, FRCH 432, FRCH 433, FRCH 450.
- **Writing and Communication Skills Requirement:** The French Bachelor of Arts is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Calculation of GPA in the Major:** French majors must achieve a minimum grade point average of 2.25, both overall and in the major, to qualify for graduation.
- **Residency Requirements:** Students completing a major in world languages/world language studies at WVU must fulfill a residency requirement by completing at least fifteen credit hours on campus in their language/area of study, excluding courses numbered 100, 101, 102, 200, 203, 204, 493, and courses obtained through credit by examination.
- **Benchmark Expectations:** For details, go to the World Languages Admissions tab (<http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/foreignlanguages/#admissionstext>).

CURRICULUM REQUIREMENTS

University Requirements	37
LANG 191	First-Year Seminar
GEF: Number of electives may vary depending on overlap	
ECAS B.A. Requirements	12
Foreign Language	
Fine Arts Requirement	
Global Studies and Diversity Requirement	
Core Courses	15
FRCH 301	Language Through Civilization
FRCH 302	Language Through Culture
FRCH 303	Structure and Communication
FRCH 304	Advanced Readings
LING 311	Introduction to Structural Linguistics
Literature Requirement	3
FRCH 421	Survey of Literature 1
or FRCH 422	Survey of Literature 2
Culture Requirement - take one of the following	3
FRCH 431	French Civilization
FRCH 432	Contemporary Culture
FRCH 433	Francophone Cultures
Electives	9
Select 3 classes from the list below:	
1-Additional upper-division French classes (may include alternate courses from above).	
2-Up to 3 credits in FLIT 230-239, 330-339, FCLT 230-239, 330-339).	
Capstone Requirement	3

Select one course from the list below:

FRCH 421	Survey of Literature 1
FRCH 422	Survey of Literature 2
FRCH 431	French Civilization
FRCH 432	Contemporary Culture
FRCH 433	Francophone Cultures
FRCH 450	French Cinema
FRCH 496	Senior Thesis
General Electives	38

Total Hours 120

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
LANG 191		1 ENGL 101 (GEF 1)	3
GEF 2		3 FRCH 200	6
GEF 4		3 GEF 2	3
FRCH 100		6 General Elective	3
General Elective		2	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 GEF 5	3
GEF 3		3 ECAS Fine Arts Requirement (GEF 6)	3
FRCH 301 (GEF 8)		3 FRCH 303	3
FRCH 302		3 FRCH 304	3
LING 311		3 General Elective	3
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 8*		3 GEF 8*	3
ECAS Global Studies and Diversity Requirement (GEF 7)		3 FRCH Elective 1	3
French Literature Requirement		3 FRCH Elective 2	3
General Elective		3 FRCH Elective 3	3
General Elective		3 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
FRCH Culture Requirement		3 Capstone Requirement	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

* Students completing a minor, a major or a dual degree already meet F 8.

Degree Progress

- A progress review will be completed in the middle of the 3rd semester.
- By the end of the fourth semester in the major, students must have completed FRCH 204 and LING 311.

- Students must retain a 2.25 GPA in courses that count toward the major by their junior year.
- All majors must meet with a WLLL department adviser each semester.

Students who do not meet these benchmarks may be removed from their major.

Major Learning Outcomes

FRENCH

Upon successful completion of the B.A. degree in **World Languages**, students will meet the following outcomes:

1. Linguistic Knowledge Outcome

Students will be able to:

- demonstrate a thorough understanding of the grammatical system of French;
- compare French structures with those in their own language;
- demonstrate an awareness of the dialectal variations in French;
- use French appropriately in formal and informal situations.

2. Interpretive Communication Outcome

Students will be able to:

- interpret accurately audio, print, and audio-visual texts on a wide variety of familiar and general interest topics across various time frames in French.

3. Interpersonal Communication Outcome

Students will be able to:

- interact and negotiate meaning appropriately in spontaneous discussions across various time frames in a variety of contexts;
- exchange information effectively using written language across various time frames in a variety of contexts.

4. Presentational Communication Outcome

Students will be able to:

- deliver detailed and organized presentations on familiar as well as unfamiliar topics using accurate French;
- present detailed and organized information in writing to different audiences and for specific purposes using accurate language and conventions.

5. Cultural Knowledge Outcome

Students will be able to:

- describe key perspectives and practices of French and Francophone cultures as they are demonstrated in cultural products, including literature, film, and other print and audio-visual sources;
- identify fundamental differences between French and Francophone cultures and their own.

6. Intercultural Learning Outcome

Students will be able to:

- recognize that significant differences in behaviors exist among cultures;
- relate target-culture products, practices, and perspectives to their own;
- demonstrate culturally appropriate behavior in a variety of situations to avoid major social blunders.

7. Critical Thinking Outcome

Students will be able to:

- evaluate objectively and without prejudice products, practices and perspectives of French and Francophone cultures.
- use their knowledge of French language and French and Francophone culture to analyze issues across a range of disciplines.

German Studies, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The primary goal of the major in German Studies is to provide students with a solid liberal arts education that is the foundation for personal and professional success and growth over a lifetime. The curriculum is designed to provide students with well-developed cognitive and communication skills and with a broad knowledge base that will enable them to pursue additional studies at the graduate level or to enter the job market in positions that will demand knowledge of German language and culture. The skills provided by a Bachelor of Arts in German Studies complement and add value to a degree in any field.

Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>) here. Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Approved Shared Content from /shared/certificate_global_engagement/

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their course work and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

Departmental Requirements for the B.A. in German Studies

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. German Studies majors complete GER 496.
- **Writing and Communication Skills Requirement:** The German Studies Bachelor of Arts is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Calculation of GPA in the Major:** German Studies majors must achieve a minimum grade point average of 2.0, both overall and in the major, to qualify for graduation.
- **Residency Requirements:** Students completing a major in German Studies at WVU must fulfill a residency requirement by completing at least fifteen credit hours on campus in their language/area of study, excluding courses numbered 100, 101, 102, 200, 203, 204, 493, and courses obtained through credit by examination.
- **Benchmark Expectations:** For details, go to the World Languages Admissions tab (<http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/foreignlanguages/#admissionstext>).

CURRICULUM REQUIREMENTS

University Requirements

37

LANG 191 First-Year Seminar

GEF: Number of electives may vary depending on overlap

ECAS B.A. Requirements

9

Foreign Language

Fine Arts Requirement

Global Studies and Diversity Requirement

Core Courses

21

GER 204 Intermediate German 2: Life in Germany

GER 301 Language and Society

GER 303 Youth Culture in German-Speaking Countries

GER 304 Culture and Science in German-speaking Countries

FCLT 322 The Vikings & Early Germanic Civilization (Kings and Warriors in Early Germanic Civilization)

Select three courses from the following list:

FCLT 324 Weimar and the Third Reich in Literature and Film (Weimar and the Third Reich in Literature and Film)

FCLT 425 Art and Politics in Early German Cultures (Art and Politics in Early German Cultures)

FLIT 426 Love and War in German Literature (Love and War in German Literature)

Electives		9
Select 3 classes from the following list (only one course can be outside of GER, FLIT, or FCLT)		
FLIT 229	German Literature Since World War II	
FCLT 321	Norse Mythology	
FCLT 323	German Cinema (History of German Cinema)	
FCLT 494	Seminar (Topics in Contemporary German Literatures and Cultures)	
FLIT 226	German Fairy Tales: Nationalism and Supernaturalism during the Romantic Era	
GER 222	German Pronunciation	
GER 302	Conversations in Context 2: Germany Today	
GER 361	German for Professional Purposes	
GER 362	German for STEM	
GER 401	TurboDeutsch: Intensive German in Review	
GER 494	Seminar	
HIST 317	German Central Europe, 1648-1900	
HIST 318	Twentieth Century German Central Europe	
LANG 421	The Teaching of Foreign Languages	
LING 311	Introduction to Structural Linguistics	
PHIL 354	Themes in Continental Philosophy	
Capstone Requirement		3
GER 496	Senior Thesis	
General Electives		41
Number of courses may vary		
Total Hours		120

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
LANG 191		1 ENGL 101 (GEF 1)	3
GEF 2		3 GEF 2	3
GEF 3		3 GEF 5	3
GEF 4		3 GER 102	3
GER 101		3 German Studies Elective 1	3
General Elective		2	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 ECAS Global Studies and Diversity Requirement (GEF 7)	3
GER 203		3 GER 204	3
German Studies Elective 2		3 German Studies Elective 3	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 8*		3 GEF 8*	3
GEF 8*		3 GER 303	3
GER 301		3 German Studies Elective 2	3
Core FCLT Course		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
GER 304		3 GER 496 (Capstone)	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

* Students completing a minor, a second major or a dual degree already fulfill F 8.

Degree Progress

- A progress review will be completed in the middle of the 3rd semester.
- By the end of the fourth semester in the major, students must have completed GER 204.
- Students must retain a 2.0 GPA in courses that count toward the major by their junior year.
- All majors must meet with a WLLL department adviser each semester.

Students who do not meet these benchmarks may be removed from their major.

Major Learning Outcomes

GERMAN STUDIES

Upon successful completion of the B.A. degree in **World Language and Cultural Studies**, students will meet the following outcomes:

1. Critical Thinking Outcome

Students will be able to:

- analyze the values, ideas, and belief systems of German;
- evaluate the relationship between the cultural forms, everyday life, and the power structures in historical and sociopolitical contexts;
- use their knowledge of German language and culture to analyze issues across a range of disciplines.

2. Cultural Knowledge Outcome

Students will be able to:

- describe key perspectives and practices of German culture as they are demonstrated in cultural products, including literature, film, and other print and audio-visual sources;
- identify fundamental differences between German culture and their own.

3. Intercultural Learning Outcome

Students will be able to:

- recognize that significant differences in behaviors exist among cultures;
- relate German products, practices, and perspectives to their own;
- demonstrate culturally appropriate behavior in a variety of situations to avoid major social blunders.

4. Interpretive Communication Outcome

Students will be able to:

- interpret accurately a variety of audio, print, and audio-visual texts on a wide range of topics related to German culture.

5. Interpersonal Communication Outcome

Students will be able to:

- interact and negotiate meaning appropriately using spoken language in a variety of contexts;
- exchange information appropriately using written language in a variety of contexts.

6. Presentational Communication Outcome

Students will be able to:

- present information orally to different audiences and for various purposes using appropriate language and conventions;
- present information in writing to different audiences and for various purposes using appropriate language and conventions.

7. Linguistic Knowledge Outcome

Students will be able to:

- demonstrate an understanding of the grammatical system of German;
- compare German structures with those in their own language.

Russian Studies, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The primary goal of the major in Russian Studies is to provide students with a solid liberal arts education that is the foundation for personal and professional success and growth over a lifetime. The curriculum is designed to provide students with well-developed cognitive and communication skills and with a broad knowledge base that will enable them to pursue additional studies at the graduate level or to enter the job market in positions that will demand knowledge of Russian language and culture. The skills provided by a Bachelor of Arts in Russian Studies complement and add value to a degree in any field.

Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>) here. Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their course work and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

Departmental Requirements for the B.A. in Russian Studies

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Russian Studies majors complete RUSS 496.
- **Writing and Communication Skills Requirement:** The Russian Studies Bachelor of Arts is a SpeakWrite Certified Program. SpeakWrite certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Calculation of the GPA in the Major:** Russian Studies majors must achieve a minimum grade point average of 2.25, both overall and in the major, to qualify for graduation.
- **Residency Requirement:** Students completing a major in Russian Studies at WVU must fulfill a residency requirement by completing at least fifteen credit hours above 204 on campus in their language/area of study, excluding courses numbered 490 and 491, and courses obtained through credit by examination.
- **Benchmark Expectations:** For details, go to the World Languages Admissions tab.

CURRICULUM REQUIREMENTS

UNIVERSITY REQUIREMENTS

37

LANG 191 First-Year Seminar
GEF: Number of electives may vary depending on overlap

ECAS B.A. REQUIREMENTS

12

Foreign Language
Fine Arts Requirement
Global Studies and Diversity Requirement

Language courses

18

RUSS 204 Intermediate Russian 2

Select five from the following courses:		
RUSS 301	Conversation and Composition 1	
RUSS 302	Conversation and Composition 2	
RUSS 303	Advanced Structure and Reading 1	
RUSS 304	Advanced Structure and Reading 2	
RUSS 331	The Russian Short Story	
RUSS 332	The Russian Short Story	
RUSS 341	Survey of Russian Literature	
RUSS 342	Survey of Russian Literature	
RUSS 351	Russian Through Music	
RUSS 352	Russian in Action	
RUSS 450	Modern Russian Society	
RUSS 451	Russian Culture	
RUSS 452	Business and Political Russian	
Russian Studies Electives		15
Select two from the following culture/literature courses:		
FCLT 250	Russian Fairy Tales	
FCLT 280	Science Fiction: East and West	
FLIT 256	Russian Literature Translation 1	
FLIT 257	Russian Literature Translation 2	
Select three from the following courses:		
HIST 217	History of Russia to 1917	
HIST 218	History of Russia: 1900-Present	
HIST 419	Revolutionary Russia: 1900-1953	
HIST 420	USSR and After: 1953 to Present	
LING 311	Introduction to Structural Linguistics	
Or any alternate upper-division course in Russian		
Or any alternate FCLT or FLIT course, or upper-division study abroad courses with approval of adviser		
Capstone		3
RUSS 496	Senior Thesis	
GENERAL ELECTIVES		35
Number of credit hours may vary		
Total Hours		120

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
LANG 191		1 ENGL 101 (GEF 1)	3
GEF 2		3 GEF 2	3
GEF 3		3 GEF 4	3
RUSS 101		3 RUSS 102	3
General Elective		3 General Elective	3
General Elective		2	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 ECAS Fine Arts Requirement (GEF 6)	3
GEF 5		3 RUST Lit & Cult Course 2	3
RUST Lit & Cult Course 1		3 RUSS 204	3
RUSS 203		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Third Year

Fall	Hours	Spring	Hours
ECAS Global Studies & Diversity Requirement (GEF 7)		3 GEF 8 *	3
RUSS Language Course 1		3 GEF 8 *	3
RUST Hist & Ling 1		3 RUSS Language Course 2	3
General Elective		3 RUSS Language Course 3	3
General Elective		3 General Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
RUSS Language Course 4		3 RUSS 496 (Capstone)	3
RUSS Language Course 5		3 RUST Hist & Ling 3	3
RUST Hist & Ling 2		3 GEF 8 *	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

* Students completing a minor, a second major or a dual degree already fulfill F 8.

Degree Progress

- A progress review will be completed in the middle of the 3rd semester.
- By the end of the fourth year in the major, students must have completed RUSS 204.
- Students must retain a 2.0 GPA in courses that count toward the major by their junior year.
- All majors must meet with a WLLL department adviser each semester.

Students who do not meet these benchmarks may be removed from their major.

Major Learning Outcomes**RUSSIAN STUDIES**

Upon successful completion of the B.A. degree in **Russian Studies**, students will meet the following outcomes:

1. Critical Thinking Outcome

Students will be able to:

- analyze the values, ideas, and belief systems of Russian;
- evaluate the relationship between the cultural forms, everyday life, and the power structures in historical and sociopolitical contexts;
- use their knowledge of Russian language and culture to analyze issues across a range of disciplines.

2. Cultural Knowledge Outcome

Students will be able to:

- describe key perspectives and practices of Russian culture as they are demonstrated in cultural products, including literature, film, and other print and audio-visual sources;
- identify fundamental differences between Russian culture and their own.

3. Intercultural Learning Outcome

Students will be able to:

- recognize that significant differences in behaviors exist among cultures;
- relate Russian products, practices, and perspectives to their own;
- demonstrate culturally appropriate behavior in a variety of situations to avoid major social blunders.

4. Interpretive Communication Outcome

Students will be able to:

- interpret accurately a variety of audio, print, and audio-visual texts on a wide range of topics related to Russian culture.

5. Interpersonal Communication Outcome

Students will be able to:

- interact and negotiate meaning appropriately using spoken language in a variety of contexts;
- exchange information appropriately using written language in a variety of contexts.

6. Presentational Communication Outcome

Students will be able to:

- present information orally to different audiences and for various purposes using appropriate language and conventions;
- present information in writing to different audiences and for various purposes using appropriate language and conventions.

7. Linguistic Knowledge Outcome

Students will be able to:

- demonstrate an understanding of the grammatical system of Russian;
- compare Russian structures with those in their own language.

Spanish, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The primary goal of the major in Spanish is to provide students with a solid liberal arts education that is the foundation for personal and professional success and growth over a lifetime. The curriculum is designed to provide students with well-developed cognitive and communication skills and with a broad knowledge base that will enable them to pursue additional studies at the graduate level or to enter the job market in positions that will demand the ability to communicate in Spanish in a variety of cultural contexts. The skills provided by a Bachelor of Arts in Spanish complement and add value to a degree in any field.

Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (<http://catalog.wvu.edu/undergraduate/minors/>) here. Please note that students may not earn a minor in their major field.

Certificate of Global Engagement

Approved Shared Content from /shared/certificate_global_engagement/

Students in the Eberly College, regardless of their major, can earn a Certificate of Global Engagement. Completion of the Certificate demonstrates the student's knowledge of diverse cultures, as well as the ability to communicate and interact effectively with people of different cultural backgrounds. Students will be required to apply their knowledge of contemporary issues and global social contexts to their course work and their broader citizenship. For details regarding Certificate requirements, please visit the Eberly College page (p. 186).

Departmental Requirements for the B.A. in Spanish

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Spanish majors complete SPAN 480 or SPAN 481.
- **Writing and Communication Skills Requirement:** The Spanish Bachelor of Arts is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Calculation of GPA in the Major:** Spanish majors must achieve a minimum grade point average of 2.25, both overall and in the major, to qualify for graduation.

- **Residency Requirements:** Students completing a major in Spanish at WVU must fulfill a residency requirement by completing at least fifteen credit hours on campus in their language/area of study, excluding courses numbered 100, 101, 102, 200, 203, 204, 493, and courses obtained through credit by examination.
- **Benchmark Expectations:** For details, go to the World Languages Admissions tab (<http://catalog.wvu.edu/undergraduate/everlycollegeofartsandsciences/foreignlanguages/#admissionstext>).

CURRICULUM REQUIREMENTS

University Requirements		37
LANG 191	First-Year Seminar	
GEF: Number of electives may vary depending on overlap		
ECAS B.A. Requirements		12
Foreign Language		
Fine Arts Requirement		
Global Studies and Diversity Requirement		
Core Courses		15
LING 311	Introduction to Structural Linguistics	
SPAN 310 or SPAN 314	Spanish for Heritage Speakers Spanish Conversation	
SPAN 311	Readings in Spanish	
SPAN 312	Writing in the Hispanic World	
SPAN 313	Spanish Through Media	
Literature and Culture Requirement		6
Select one of the following pairs of courses:		
SPAN 333 & SPAN 340	Spanish American Literature and Culture of Spain	
SPAN 343 & SPAN 330	Spanish Literature and Latin American Culture	
Electives		9
Select 3 classes from		
1-Additional upper-division Spanish classes (may include alternate courses from above)		
2-Up to 3 credits in FLIT 260-269, 360-369, FCLT 260-269, 360-369, or a course in a directly related area approved by the department.		
Capstone Experience		3
SPAN 480 or SPAN 481	Issues in the Hispanic World Hispanic Presence in the World	
General Electives		38
Total Hours		120

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
LANG 191		1 ENGL 101 (GEF 1)	3
GEF 2		3 GEF 2	3
GEF 3		3 SPAN 200	6
SPAN 100		6 General Elective	3
General Elective		2	
	15		15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 GEF 5	3
GEF 4		3 ECAS Fine Arts Requirement (GEF 6)	3
LING 311		3 SPAN 312	3
SPAN 311		3 General Elective	3

General Elective		3 General Elective	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
SPAN 313		3 GEF 8 *	3
SPAN 314		3 GEF 8 *	3
General Elective		3 Spanish Literature Requirement	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
GEF 8 *		3 SPAN Capstone	3
SPAN Culture Requirement (ECAS Global Studies and Diversity Requirement (GEF7)		3 SPAN Elective 2	3
SPAN Elective 1		3 SPAN Elective 3	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
		15	15

Total credit hours: 120

* Students completing a minor, a second major or a dual degree already fulfill F 8.

Degree Progress

- A progress review will be completed in the middle of the 3rd semester.
- By the end of the second year in the major, students must have completed SPAN 204 and LING 311.
- Students must retain a 2.25 GPA in courses that count toward the major by their junior year.
- All majors must meet with a WLLL department adviser each semester.

Students who do not meet these benchmarks may be removed from their major.

Major Learning Outcomes

SPANISH

Upon successful completion of the B.A. degree in **World Languages**, students will meet the following outcomes:

1. Linguistic Knowledge Outcome

Students will be able to:

- demonstrate a thorough understanding of the grammatical system of Spanish;
- compare Spanish structures with those in their own language;
- demonstrate an awareness of the dialectal variations in Spanish;
- use Spanish appropriately in formal and informal situations.

2. Interpretive Communication Outcome

Students will be able to:

- interpret accurately audio, print, and audio-visual texts on a wide variety of familiar and general interest topics across various time frames in Spanish.

3. Interpersonal Communication Outcome

Students will be able to:

- interact and negotiate meaning appropriately in spontaneous discussions across various time frames in a variety of contexts;
- exchange information effectively using written language across various time frames in a variety of contexts.

4. Presentational Communication Outcome

Students will be able to:

- deliver detailed and organized presentations on familiar as well as unfamiliar topics using accurate Spanish;
- present detailed and organized information in writing to different audiences and for specific purposes using accurate language and conventions.

5. Cultural Knowledge Outcome

Students will be able to:

- describe key perspectives and practices of Hispanic cultures as they are demonstrated in cultural products, including literature, film, and other print and audio-visual sources;
- identify fundamental differences between Hispanic cultures and their own.

6. Intercultural Learning Outcome

Students will be able to:

- recognize that significant differences in behaviors exist among cultures;
- relate target-culture products, practices, and perspectives to their own;
- demonstrate culturally appropriate behavior in a variety of situations to avoid major social blunders.

7. Critical Thinking Outcome

Students will be able to:

- evaluate objectively and without prejudice products, practices and perspectives of Hispanic cultures.
- use their knowledge of Spanish language and Hispanic cultures to analyze issues across a range of disciplines.

Business and Economics

Degrees Offered

- Bachelor of Science in Business Administration
 - Accounting
 - Entrepreneurship and Innovation
 - Finance
 - General Business
 - Global Supply Chain Management
 - Hospitality and Tourism Management
 - Management
 - Management Information Systems
 - Marketing
 - Organizational Leadership
- Bachelor of Science
 - Economics

Historical Background

The John Chambers College of Business and Economics was founded in November of 1951 and graduated its first class in the spring of 1953. Since that time, the Chambers College has become one of the largest colleges at West Virginia University. In 1954, the College became fully accredited by The Association to Advance Collegiate Schools of Business (AACSB) International, the gold standard for business accreditation.

The John Chambers College of Business and Economics building is located on the site of old Mountaineer Stadium on the downtown campus adjacent to historic Woodburn Hall. The four-story facility houses modern classrooms, including high technology distance-learning classrooms, auditoriums, state-of-the-art computer laboratories, and space for the College's research and service centers.

Mission

Through our people and our values, the WVU John Chambers College of Business & Economics is committed to educate and transform our students, our state, and our world toward greater prosperity.

Vision

The WVU John Chambers College of Business and Economics fosters a diverse and inclusive culture and builds business leaders while dedicating ourselves to excellence, innovation, and ethics. We catalyze interdisciplinary solutions that advance economic growth in the state of West Virginia, and beyond.

Goals

- Foster and advance the reputation of the Chambers College and its programs
- Recruit, retain, and graduate high-quality students
- Recruit and retain top-notch faculty and staff devoted to the land grant mission of the University and Chambers College
- Continually enhance the educational environment for student learning
- Promote discovery and exchange of knowledge and ideas
- Improve West Virginia's economic health and quality of life

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.

Statement of Quality

The faculty, staff, administrators, and student employees of the Chambers College of Business and Economics are committed to being responsive, sensitive, and understanding to the needs of the students and to the needs of each other. Our conduct shall be positive, professional, and supportive to all.

Accreditation

Business programs in the John Chambers College of Business and Economics are accredited by The Association to Advance Collegiate Schools of Business (AACSB) International at the undergraduate and graduate levels. AACSB International accreditation assures students and prospective employers that our programs adhere to the highest standards of excellence in worldwide recognized business programs. The Chambers College has maintained full accreditation in the AACSB International since 1954.

Honor Societies

- Beta Gamma Sigma Honorary for Bachelor of Science in Business Administration candidates of all majors.
- Beta Alpha Psi for accounting, finance and management information systems majors.

Technology

The array of technology available to students in the John Chambers College of Business and Economics is impressive. Through coursework, students develop skills with technology and its application to business. Business students have access to standard and specialized business software, e-mail, and Internet services through two computer labs in the Business and Economics building.

Students use the latest word processing, spreadsheet, database, and presentation software. Each student is encouraged to purchase a personal computer; special purchase plans are available through the WVU Technology Service Center. A wireless network provides Internet access from anywhere in the Business and Economics building to students with properly equipped laptop computers. In addition, all general-purpose classrooms have multimedia presentation capabilities, and the building houses two fully equipped distance-learning sites.

Careers

The John Chambers College of Business & Economics focuses heavily on career preparation services that help our students to secure internship positions and full-time opportunities after graduation. The Center for Career Development (CCD), a resource specifically dedicated to business students, facilitates a variety of recruitment and networking events on campus throughout the year to connect students with diverse employer partners. The CCD team also offers one-on-one career coaching sessions, resume and cover letter reviews, virtual and in-person mock interviews, internship and full-time search assistance, salary negotiation guidance, and more. These networking opportunities and resources, in conjunction with the support of the Center's staff, allow students to expand their networks, gain valuable professional and internship experiences, and ultimately reach their desired career outcomes.

Student Organizations

WVU recognizes 480+ student organizations across academic colleges and areas of interest. Student organizations are a great way to get involved on campus. Connect with fellow Mountaineers who share your interests in academic majors, careers and industries, leisure and entertainment activities, political and religious affiliations, and more! Visit studentorgs.wvu.edu (<http://studentorgs.wvu.edu>) to view the complete list of WVU student organizations, including Chambers College-specific clubs.

Questions?

Contact Ashley Lesnick at Ashley.Lesnick@mail.wvu.edu or 304-293-6513.

Definition of Good Academic Standing

To remain in good academic standing with the John Chambers College of Business and Economics a student must possess a minimum overall GPA of 2.0 and demonstrate reasonable progress toward completion of the degree requirements. Students may attempt a course three times (including withdrawing); if at the end of the third attempt the appropriate grade was not attained, they will be referred to the Center for Learning, Advising, and Student Success. Students who have a cumulative GPA of below 2.0 after the fall semester will be placed on academic probation and will be required to attend Mid-Year Academy and sign a contract outlining the requirements for removal from probation. Students who fail to complete these requirements will be referred to the Center for Learning, Advising, and Student Success. Those who have below a 2.0 after the spring semester will be suspended. Students who have been suspended are able to appeal to the College's Academic Standards committee.

The John Chambers College of Business and Economics has high standards of conduct for its students. Any student who has been found to have broken the Code of Student Conduct may be dismissed from the Chambers College.

A minimum grade of C- is normally required in each of the prerequisite courses required for admission to the program or for enrollment in upper-division business (BCOR) or major core courses; however, some academic majors require heightened grade requirements in the prerequisite courses. Please see detailed information on prerequisite courses in the academic major sections that follow.

Chambers College of Business and Economics undergraduate students not direct admitted to a major as a first-time freshman or a first-time transfer normally apply for admission to an academic major at the beginning of the first semester of the sophomore year. Although a minimum overall GPA of 2.5 is required for admission consideration (2.0 for majors in Entrepreneurship and Innovation, General Business, and Hospitality and Tourism Management), some academic majors may require a more competitive overall GPA. At the beginning of the semester in which students intend to complete the prerequisite courses, they will meet with their academic advisor to review the student's transcript to determine if all prerequisite courses have been taken with the required grade in order to move into the desired major. Once verified, the advisor will complete an Academic Status Update, declaring the student's major.

This publication was produced well in advance of the start of the academic year; therefore, students are advised to review current academic program requirements on the College's website.

Classes Taken at Other Institutions

Business and economics majors may petition the Chambers College to complete upper-division business administration coursework out of residence, provided the courses are completed at other AACSB-accredited institutions. Courses must be approved by the dean or designee of the College before registering at another institution. Ordinarily, required business courses must be taken at WVU.

Upper level coursework in business will only be accepted in transfer from other AACSB-accredited institutions. Up to 15 hours of upper level coursework will be accepted in transfer. Students who have taken courses at non-AACSB-accredited institutions may petition to have their coursework accepted for degree credit. These courses will only be accepted as electives. Courses taken at two-year institutions will not be given upper level credit.

Maximum and Minimum Load

A minimum of twelve hours in a semester is required for full-time status in the Chambers College of Business and Economics. The maximum load is twenty hours. Exceptions to the minimum or maximum load require approval of the student's academic advisor before registration. Students seeking to withdraw from individual courses must seek approval from their academic advisor whenever the remaining load falls below the required minimum, even though all other conditions supporting the request for the individual course withdrawal may be in order.

Undergraduate Advising

Eligible students are admitted into the John Chambers College of Business and Economics through the Office of Undergraduate Programs and Advising, Room 358, Business and Economics Building. The telephone number is (304) 293-4959. Professional academic advisors assist students with academic planning and career counseling. Course registration and graduation certification are also administered by this office. Any student in the Chambers College in need of academic advising may make an appointment with an advisor upon request.

REGULATIONS AFFECTING DEGREE COMPLETION

Consistent with University requirements, a student has seven years from the first semester at WVU to complete the requirements. After seven years, the student will have to meet the requirements of a later catalog that is no more than seven years old when the student completes his or her studies. With the consent of the student's advisor and dean, a student may choose to meet the conditions published in a later catalog.

Transfer or returning students who have upper-division business or economics coursework completed more than seven years prior must have that coursework evaluated by the Chambers College before the credit may apply to a degree awarded by the Chambers College.

Regarding pass-fail courses and grading, University regulations limit full-time students with a 2.0 GPA or higher to a maximum of four semester hours each term. Courses taken for pass-fail grading must be unrestricted (free) electives. The Chambers College permits pass-fail grading in business and economics courses only if the credit does not apply toward the 120 credit hours requirement.

Students are permitted to apply a maximum of six semester hours of Professional Field Experience (491) toward a business administration or economics degree. Some academic departments prohibit or limit the use of Professional Field Experience towards requirements in the major. Students should consult an academic advisor to ascertain how Professional Field Experience applies to a respective degree program.

Students are required to complete a minimum of 90 credit hours, or 30 of their final 36 credit hours of study at WVU. Students must have completed 120 credit hours, met all degree requirements, and possess a cumulative GPA of 2.0 and a major GPA of 2.0, in order to be eligible for graduation.

Multiple and Concurrent Bachelor's Degrees

If a student seeks to earn two bachelor's degrees simultaneously, and one of the two is the bachelor of science in business administration or the bachelor of science in economics, the student must meet all requirements leading to the undergraduate degree offered by the John Chambers College of Business and Economics.

Students seeking to double-major in the Chambers College of Business and Economics may use a maximum of 6 credit hours toward both majors. Those majoring and minoring in the College may use no more than 6 credit hours toward the major and the minor.

The student must complete all University GEF requirements, all Chambers College of Business and Economics core requirements, and must satisfy the course requirements of one of the College's curricula. (See Requirements for Degrees.) Students seeking to earn a Bachelor of Science in Business Administration or Bachelor of Science in Economics and another bachelor's degree simultaneously must earn a minimum of 150 hours.

International Opportunities

The John Chambers College of Business and Economics offers students a number of opportunities to add an international dimension to their studies by participating in programs that span the globe. We currently offer three-credit hour short-term study abroad courses, and semester-long experiences.

Short-term programs

Each Summer and Spring Break, the Chambers College coordinates several 12-day faculty-led study abroad experiences where a student can earn up to three credit hours. These courses and trips include the destinations such as Brazil, China, India/Nepal, Dubai, and Bahrain. In the future, we hope to include South Africa, Guatemala, and Germany to this list.

Study Abroad Brazil. This course, entitled Doing Business in Brazil, gives students a first-hand look at the business climate in Brazil. The visit includes a group case competition with Brazilian business students on modes of global entry for existing U.S. and Brazilian companies. Institutional visits included Nespresso, the B3 (stock exchange), Havaianas (footwear), Natura (cosmetics), Vale S.A. (metals and mining). Cities visited include Sao Paulo and Sao Luis do Maranhao.

Study Abroad China. The China trip and course also includes a case study competition with Chinese students at two highly esteemed universities. Company visits include Shanghai General Motors, Coca-Cola Tianjin, Huawei, Johnson & Johnson, and the Hong Kong Shanghai Bank. You will get a chance to explore Beijing, Shanghai, and Xian. You will also visit the Great Wall and see the Terra Cotta Warriors.

Study Abroad India/Nepal. This course, entitled Doing Business in India, gives students a first-hand look at the business climate in India and Nepal. In the past, trip visits and lectures have taken place at Dell, JLL, MTV, GE Healthcare, and IBM. These visits helped students understand differences in the way personal computers, commercial real estate, music television programming, hospital diagnostic equipment, cloud computing, and prosthetic devices are marketed in the Indian market. You will tour the Taj Mahal and take a plane ride through the Himalaya mountains.

Study Abroad Dubai. This course and trip are tailored for WVU Hospitality & Tourism majors (but accepts any major) and focus on the hotel industry in Dubai as it readies itself for EXPO 2020 – the world expo to be hosted there next year. Here, students enjoy learning experiences at sites including the Sheikh Mohammed Centre for Cultural Understanding, Emirates Academy of Hospitality Management, the iconic Burj Al Arab Jumeirah Hotel, EXPO Center itself, Dubai Festival City Mall, Amity University, Dubai Ritz Carlton, Emirates Palace, Ferrari World, and Hotel Atlantis.

Semester-long programs

The John Chambers College of Business & Economics proudly participates in all WVU Education Abroad commissioned semester-long exchange programs. This program is aligned with accredited and prestigious schools around the world, including institutions in Australia, Brazil, China, France, Germany, Hong Kong, Italy, Ireland, Israel, Japan, South Korea, Spain, and the United Kingdom. There, you will spend a full semester earning course credit.

We have a special arrangement through a consortium in Italy with thirty-four schools for the purpose of providing international study opportunities for their students. The consortium's classes are held on a campus in Paderno del Grappa, Italy. Paderno is in northern Italy about thirty miles northwest of Venice. Students have the opportunity to attend either for a full semester or for a summer session. All classes are taught in English by faculty from the consortium universities with the students also being from the consortium member schools. Students who attend have the opportunity to take upper-division business, language, culture, and other specialized classes. Students pay tuition and fees as well as room and board to the consortium. The contact person for the Italy program is the College's coordinator of international studies.

ADMINISTRATION

DEAN

- Javier Reyes - Ph.D. (Texas A&M University)
Economics

ASSOCIATE DEAN, GRADUATE PROGRAMS & RESEARCH

- Virginia Kleist - Ph.D. (University of Pittsburgh)
Management Information Systems

ASSOCIATE DEAN, ACADEMIC AFFAIRS & UNDERGRADUATE PROGRAMS

- A. Graham Peace - Ph.D. (University of Pittsburgh)
Management Information Systems

ASSISTANT DEANS

- W. Constinia Charbonette - Ed.D.
Assistant Dean of Graduate Programs
- John Deskins - Ph.D. (University of Tennessee)
Assistant Dean for Outreach and Engagement
- Abigail Esguerra - M.A. Communication Studies (West Virginia University)
Assistant Dean of Development
- Heather Richardson
Assistant Dean of Communications, Engagement and Impact
- Linda Rudy
Assistant Dean for Finance and Administration
- Rebel Smith - Ed.D. (University of Arkansas)
Assistant Dean for Undergraduate Programs
- Elizabeth Vitullo - Ph.D. (West Virginia University)
Assistant Dean of Strategic Initiatives

Accreditation

The following programs within the College of Business and Economics have specialized accreditation through the Association to Advance Collegiate Schools of Business International (AACSB).

- Accounting
- Economics
- Entrepreneurship and Innovation
- Finance
- General Business
- Global Supply Chain Management
- Hospitality and Tourism Management
- Management
- Management Information Systems
- Marketing
- Organizational Leadership

Admission to the Chambers College

The John Chambers College of Business and Economics offers admission to eligible freshmen. Students interested in pursuing the degree of Bachelor of Science in Business Administration or the degree of Bachelor of Science in Economics are encouraged to apply to the University online at <http://apply.wvu.edu/>.

Admission for First Time Freshmen

The John Chambers College of Business and Economics offers two different classifications of admission to first time freshmen. Students are eligible for direct admission to a major or general admission to Business. Students offered direct admission to a major may select from one of eleven academic majors: Accounting, Economics, Entrepreneurship and Innovation, Finance, General Business, Global Supply Chain Management, Hospitality and Tourism Management, Management, Management Information Systems (MIS), Marketing or Organizational Leadership. Please review the table below to verify your admission eligibility.

1. **Direct Admission to Major** - 3.0 HS GPA, ACT Math score of 22 or SAT Math score of 570
2. **Admission to Business** - admitted to WVU with an ACT Math score of 19 or SAT Math score of 510

Students who take the ACT or SAT more than once should note that WVU superscores results. The highest ACT and SAT scores are combined to determine eligibility for admission. Students who satisfy the requirements for admission to WVU but not those stated above will be admitted to the Center for Learning, Advising, and Student Success until they are eligible for admission to the John Chambers College of Business and Economics.

Admission for Transfer and International Students

To be admitted into the John Chambers College of Business and Economics, all non-first time freshmen students are required to have a 2.25 minimum CUM GPA and the eligibility to take College Algebra.

GPA calculation for admission is computed using all (transferable) baccalaureate coursework attempted at regionally accredited institutions. All students entering the John Chambers College of Business and Economics who do not qualify for direct admission to a major as freshmen will declare their major once eligible for College Algebra and a 2.25 CUM GPA. International students who do not have an ACT or SAT score will be admitted to CLASS until the appropriate level of Math and minimum GPA of 2.25 is reached.

Admission to Major and Eligibility to Enroll in Upper-Division Business Courses

Students are asked to refer to the individual major pages for admission to the major and eligibility to enroll in upper-division business courses.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Chambers College of Business and Economics (<http://www.be.wvu.edu>).

Degree Designation Learning Outcomes

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION (BSBAD)

1. Critical Thinking - *Graduates will be able to think critically and determine appropriate actions.*

1. Students can define the problem by describing it (what is wrong in the present situation and identifying its source).
2. Students can establish criteria for a good solution to the problem.
3. Students can determine appropriate solutions for qualitative and quantitative problems.

2. Teamwork - *Graduates will be able to deal with the dynamics of individuals and teams within organizations.*

1. Students can identify characteristics of an effective team.
2. Students can identify characteristics of an effective goal.
3. Students can distinguish the basic conflict management styles.

3. Global Awareness - *Graduates will recognize the opportunities and challenges associated with the global marketplace.*

1. Students can objectively evaluate the foreign market potential for a product or service.
2. Students can recognize the implications of cross-cultural differences
3. Students can objectively evaluate and select appropriate global strategies for organizations.

4. Ethics - *Graduates will have an appreciation of the ethical, legal, and regulatory issues impacting the decision-making process.*

1. Students can identify an ethical dilemma.
2. Students can distinguish the components of a problem as ethical or legal.
3. Students can apply ethical principles to business situations.

5. Communication - *Graduates will be able to communicate recommendations to management and other constituencies.*

1. Students can effectively present material in written format.
2. Students can effectively communicate material and respond appropriately.

6. Functional Knowledge – *Graduates will be able to demonstrate and apply the basic concepts in each of the following areas: accounting, economics, finance, management, management information systems, and marketing.*

Accounting

1. Students use accounting terminology to communicate economic events to external stakeholders.
2. Students use accounting terminology to communicate economic events to internal stakeholders.

Economics

1. Students can use supply and demand to analyze how world events affect market equilibrium prices and quantities.
2. Students understand the theory of the firm and its implications for prices and production under different market structures.
3. Students understand the role of prices and profits and losses in coordinating economic activity.
4. Students can evaluate the efficiency of competitive market outcomes relative to alternative arrangements.

5. Students can explain how GDP, the unemployment rate, inflation, interest rates, and economic growth are measured, can distinguish between real and nominal variables, and can explain the significance of these measures.
6. Students understand and can analyze the determinants of long-run variations in national economic growth rates, wealth, and income.
7. Students understand and can analyze the determinants of short-run fluctuations of economic variables over the business cycle.
8. Students understand the goals and tools of monetary and fiscal policy.

Statistics

1. Students can organize and display data in a meaningful way and communicate its essential features using tables and charts.
2. Students can compute and interpret summary measures of data, especially measures of central tendency and dispersion.
3. Students understand the basics of probability and sampling distributions.
4. Students can conduct, understand and interpret confidence interval estimation and hypothesis testing.
5. Students can conduct, understand, and interpret correlation analysis and simple linear regression analysis.

Finance

1. Students can translate values across time.
2. Students can value common stock, bonds, and preferred stock.
3. Students can determine the cost of capital.
4. Students can make business decisions using a discounted cash flow model.

Management

1. Graduates can describe the characteristics of effective leaders
2. Graduates can identify and explain the four functions of management.
3. Graduates can explain the importance of an operations strategy in gaining a competitive strategy.
4. Graduates can describe the processes of competitive strategy formulation and implementation.

Management Information Systems

1. Students can identify types of information systems
2. Students can explain the value of information systems for organizations.
3. Students can demonstrate the ability to use appropriate IT applications, such as database and spreadsheet software.
4. Students can define the technical foundations of hardware, software, telecommunications, and data management.
5. Students can compare and contrast the methods by which information systems are created.

Marketing

1. Students explain core concepts related to the marketing functions of an organization.
2. Students can explain the marketing concept.
3. Students can explain the value of being a market-driven organization.
4. Students can describe the importance of customer behavior and marketing research in the marketer's decision-making process.
5. Students can apply the concepts of market segmentation, target marketing, and product positioning.

Center for Career Development

The Center for Career Development (CCD) guides students in identifying career opportunities that fit with their skills, interests, and aspirations. We facilitate specialized programs, generate internship and full-time opportunities, and build connections between students and employers.

All Chambers College students and alumni can take advantage of the CCD's services:

- Individualized career exploration, planning, and job search strategies
- Peer career coaching sessions
- One-on-one resume and cover letter creation
- Mock interviews, both virtual and in-person
- Graduate school preparation
- Job shadowing opportunities and company site visits
- Career fairs, networking events, and professional development workshops
- On-campus interviews with nationwide employers hiring for internships and full-time roles

- Handshake, WVU's premier job portal, where thousands of internships and full-time jobs are posted annually
- Competitive internships with national organization throughout the academic year as part of WVU Works, our new campus internship center

Visit our website at <https://business.wvu.edu/centers/center-for-career-development> (<https://business.wvu.edu/centers/center-for-career-development/>) for details.

Research and Outreach Centers

BUREAU OF BUSINESS AND ECONOMIC RESEARCH

Since the 1940s, the BBER's mission has been to serve the people of West Virginia by providing the state's business and policy-making communities with reliable data and rigorous applied economic research and analysis that enables the state's leaders to design better business practices and public policies. Our goal is to be the premier applied economics research organization serving West Virginia's government and business leaders for economic research, forecasting, and policy analysis and, as such, help fulfill a key part of West Virginia University's mission as a land-grant institution.

Active programs include:

- West Virginia Economic Outlook with economic forecasts of the state and its regional economies
- West Virginia Public Policy Program with studies on state and local public finance and the implication of national policies on the state level
- Demographic Program with population projections and socioeconomic studies
- Industry Studies Program focuses on major industries including energy, manufacturing, tourism, and the arts
- Target industry and labor market studies
- Strategic planning
- Statewide and regional economic outlook conferences and briefings
- Special studies for the State of West Virginia and local governments in the state

Publications include:

- The West Virginia Economic Outlook
- Regional West Virginia Economic Outlook
- County Data Profiles

Undergraduate research assistants assist with bureau research. Visit our website at: <https://business.wvu.edu/centers/bureau-of-business-and-economic-research> (<https://business.wvu.edu/centers/bureau-of-business-and-economic-research/>) for details.

ENCOVA CENTER FOR INNOVATION AND ENTREPRENEURSHIP

Established in 2002, the Encova Center for Innovation and Entrepreneurship serves the entire University community. The Center's mission is to promote entrepreneurship education that leads to economic development. In 2005, the Center launched a minor in entrepreneurship open to all non-Chambers College of Business and Economics majors. Additionally, the Center supports an Area of Emphasis (AoE) in Entrepreneurship offered to all majors within the College - more information may be found under the Management section of the catalog. The Center hosts the Statewide Collegiate Business Plan Competition in which teams of students from colleges and universities across West Virginia, with the help of trained professionals, develop business plans for their business ideas to be judged by a panel of experts. The winning team receives a grand prize consisting of seed money and business services to help start a new business in the state. Through partnerships, the Center also actively participates in an internship program that provides students with real world experience. The Center sponsors the CEO Club and is actively involved in outreach promoting innovation and entrepreneurship across the state.

Visit our website at <https://business.wvu.edu/research-outreach/encova-center-for-innovation-and-entrepreneurship> (<https://business.wvu.edu/research-outreach/encova-center-for-innovation-and-entrepreneurship/>) for details.

CENTER FOR EXECUTIVE EDUCATION

The goal of the Center for Executive Education is to strengthen organizations, leaders, and human capability through training, seminars, conferences, speaking engagements, and select consulting. We accomplish this through the development and delivery of individualized and group programs, both in person and via technology. The Center helps decision-makers from industries, government, and not-for-profit organizations become more dynamic and forward-thinking leaders, more effective managers, and more valuable team members.

The Center uses Chambers College and University faculty, augmented by outside subject matter experts, to deliver high-quality programs and services. Examples of services include executive coaching, facilitation of strategic planning sessions, technical and continuing professional education, and facilitation services.

The Center for Executive Education is aligned with the John Chambers College of Business and Economics mission of providing an inclusive culture and building business leaders while dedicating ourselves to excellence, innovation, and ethics. Additionally, the Center for Executive Education works

within the framework of Health, Prosperity, and Education and the values of Curiosity, Service, Respect, Appreciation, and Accountability in the focus and delivery of our product, both within and without the State.

Visit our website at <https://business.wvu.edu/centers/center-for-executive-education> (<https://business.wvu.edu/centers/center-for-executive-education/>) for details.

CENTER FOR CHINESE BUSINESS

The Center for Chinese Business was established at the West Virginia University John Chambers College of Business and Economics in 1994 to provide international management education, business facilitation, and research services focused on countries throughout the world. Fostering close relationships among academia, business, and government in the United States and Chinese speaking countries and regions, the Center focuses on furthering mutually beneficial enterprise.

The Center has formed many mutually advantageous partnerships with local government, educational organizations, and businesses in which all parties have benefited from their participation. These partnerships include entities such as Shanghai Municipal government, Tianjin Municipal government, Shaanxi Provincial Government, West Virginia Development Office, and the West Virginia District Export Council. The Center has formed relationships with educational organizations such as the Shanghai University of Finance and Economics, the Shanghai Education Center for Administrators, the U.S. Department of Education, Tianjin University of Finance and Economics, and Shanghai Business School.

Additionally, the Center has worked closely with many U.S. and Chinese companies such as Cisco Systems, Baoshan Steel Group, Allegheny Wood Products, TRW Inc., China Minsheng Bank, Development Dimensions International, Shanghai Airlines, and TEDA.

Visit our website at <http://business.wvu.edu/centers/center-for-chinese-business> (<http://business.wvu.edu/centers/center-for-chinese-business/>) for details.

CENTER FOR FINANCIAL LITERACY AND EDUCATION

The Center for Financial Literacy and Education promotes financial literacy and education in the state of West Virginia through experiential learning opportunities, faculty engagement in research initiatives and collaborations, and the promotion of better financial decision making.

The Center is divided into four pillars: banking, insurance, personal finance, and investments. These pillars serve as a foundation and create a strong tie to our mission: 1) to prepare students for careers in finance via curriculum and experiential learning; 2) to serve corporate partners by facilitating access to WVU's best and brightest students, and 3) to provide leading-edge research and consulting for high-performance organizations.

Visit our website at <https://business.wvu.edu/research-outreach/center-for-financial-literacy-and-education> (<https://business.wvu.edu/research-outreach/center-for-financial-literacy-and-education/>)

CENTER FOR FORENSIC BUSINESS STUDIES

The College of Business and Economics in collaboration with the WVU Forensic Science Institute offers several programs meeting the needs of the forensic community. These initiatives include:

- (1) The FORESIGHT Project which assists forensic science laboratories in standardizing definitions for performance metrics to evaluate work process while linking financial information to work tasks and functions.
- (2) The Forensic Management Academy which is a certificate program designed to provide forensic laboratory managers with contemporary business and leadership skills.
- (3) The Masters in Forensic and Fraud Examination (MS-FFE) and the Forensic Accounting and Fraud Examination Certificate (FAFE) expose students to practicing experts, real-world and simulated case examinations and nationally renowned faculty. The real world, hands-on experiential case examinations, including written and oral communications, in the classroom prepares students for successful careers.

Visit our website at <https://business.wvu.edu/graduate-degrees/forensic-accounting-fraud-examination-graduate-certificate> (<https://business.wvu.edu/graduate-degrees/forensic-accounting-fraud-examination-graduate-certificate/>) for more details.

STUART M. AND JOYCE N. ROBBINS CENTER FOR GLOBAL BUSINESS AND STRATEGY 20/21

The Stuart M. and Joyce N. Robbins Center for Global Business and Strategy 20/21 was established through an endowment to the John Chambers College of Business and Economics. The mission of the Center is to support research, education, and outreach activities related to global business and strategy focusing on G-20 countries. Through the Center, the Chambers College has developed student and faculty exchanges with top universities in G-20 countries. For example, students may pursue studies in Australia, Brazil, China, France, Germany, Hong Kong, Italy, Ireland, Israel, Japan, South Korea, Spain, and the United Kingdom, to name a few.

The Center is also responsible for developing stronger connections with international institutions and global business enterprises.

Visit our website at <https://business.wvu.edu/centers/robbins-center-for-global-business-and-strategy> (<https://business.wvu.edu/centers/robbins-center-for-global-business-and-strategy/>) for details.

John Chambers College of Business and Economics Minors

- Accounting (<http://catalog.wvu.edu/undergraduate/minors/accounting/>)
- Business Cybersecurity (<http://catalog.wvu.edu/undergraduate/minors/businesscybersecurity/>)
- Business Data Analytics (<http://catalog.wvu.edu/undergraduate/minors/buda/>)
- Economics (<http://catalog.wvu.edu/undergraduate/minors/economics/>)
- Entrepreneurship (<http://catalog.wvu.edu/undergraduate/minors/entrepreneurship/>)
- Finance (<http://catalog.wvu.edu/undergraduate/minors/finance/>)
- General Business (http://catalog.wvu.edu/undergraduate/minors/general_business/)
- Hospitality and Tourism Management (http://catalog.wvu.edu/undergraduate/minors/hospitality_and_tourism_mgmt/)
- Insurance (<http://catalog.wvu.edu/undergraduate/minors/insurance/>)
- International Business (<http://catalog.wvu.edu/undergraduate/minors/internationalbusiness/>)
- Marketing (<http://catalog.wvu.edu/undergraduate/minors/marketing/>)
- Professional Sales (<http://catalog.wvu.edu/undergraduate/minors/professionalsales/>)

Note: Students may only declare two minors from the John Chambers College of Business and Economics.

Accounting, B.S.B.AD.

Degree Offered

- Bachelor of Science in Business Administration

Nature of the Program

The accounting program has a rich heritage of producing successful accounting professionals and business leaders. Graduates excel on professional examinations, and the majority of students seeking employment upon graduation are successful. With a strong alumni network and a solid reputation among major accounting firms, the accounting program at WVU has an excellent record of placing students in the accounting profession.

The faculty is comprised of twelve tenure-track faculty, five teaching instructors, and one visiting professor.

Faculty members are actively engaged in the following goals as drivers for our strategic plan:

1. To improve professional preparedness.
2. To improve our scholarly output and research rankings.
3. To lead academia in the niche of fraud, forensics, and ethics.
4. To consistently and continually review and evaluate our academic offerings, content, and instructional effectiveness to identify and address stakeholder and professional needs.
5. To grow enrollment in a manner that supports our stakeholders and the state.
6. To embrace and lead in the use of technology and data analysis.
7. To provide meaningful service to the profession, state and university.

The overarching goal of the accounting programs is to meet the evolving needs of its stakeholders through teaching, research, and service. The undergraduate accounting degree program builds upon a general education curriculum to provide students with a base of academic knowledge in business and accounting. It is designed to integrate basic knowledge with a professional orientation and form a foundation for future learning as well as career and academic success. The accounting program and course offerings are subject to periodic review for timeliness, professional requirements, and relevance in a global marketplace.

The advanced courses in the program provide both specialized knowledge in accounting and financial reporting and an integrated overview of the economic activities of a business entity. These courses give students the basic educational foundation required for a variety of entry-level positions in accounting, business, government, and not-for-profit organizations. Accounting graduates may pursue careers that lead to positions such as certified public accountants, managerial accountants, controllers, financial officers, tax accountants, financial fraud examiners, forensic accountants, budget analysts, internal auditors, public administration officers, and other executives.

The accounting major is also designed to give students the basic educational foundation necessary to prepare for the professional examinations that may be required of them in their careers. These examinations include those needed to become a Certified Public Accountant (CPA), Certified Management Accountant (CMA), Certified Fraud Examiner (CFE), and Certified Internal Auditor (CIA). Requirements to sit for the Uniform CPA Examination vary by jurisdiction, and students are encouraged to become familiar with the requirements of the jurisdictions where they plan to

be certified. Many states, including West Virginia, require a bachelor degree to sit for the exam and 150 semester hours of college credit to be certified. The John Chambers College of Business and Economics offers a master of accountancy (M.Acc.) that helps students meet the professional certification requirement while allowing students to earn a graduate degree. The Chambers College also offers an innovative Master of Science in Forensic & Fraud Examination (MS FFE) and a graduate certificate in Forensic Accounting and Fraud Examination (FAFE), both designed to prepare entry-level accountants and others making career adjustments for forensic accounting and fraud examination careers.

The accounting program at WVU has been separately accredited by AACSB International, the Association to Advance Collegiate Schools of Business, since 1997. As of March 2017, only 180 programs had achieved this distinction internationally.

FACULTY

CHAIR

- Richard Riley - PhD (University of Tennessee)
Louis F. Tanner Distinguished Professor of Public Accounting, CPA/CFF, CFE, FCPA. Financial accounting, Fraud and forensic accounting, Auditing, Consulting, Entrepreneurship.

PROFESSORS

- Barbara Apostolou - Ph.D. (Louisiana State University)
CPA, CGMA. Auditing, Assurance services, Fraud and forensic accounting.
- Richard B. Dull - Ph.D. (Virginia Polytechnic Institute and State University)
GoMart Professor in Accounting Information Systems, CPA/CFF, CFE, CISA. Accounting information systems, Fraud and forensic accounting, IT auditing.
- Presha Neidermeyer - Ph.D. (Virginia Commonwealth University)
CPA. International accounting. Federal and state income taxation, Estate planning, Financial accounting.
- L. Christian Schaupp - Ph.D. - (Virginia Polytechnic Institute and State University)
David W. and Nancy F. Hamstead Professor, CFE. Accounting information Systems, IT Auditing

ASSOCIATE PROFESSORS

- Jack W. Dorminey - Ph.D. (Virginia Commonwealth University)
Financial accounting, Regulatory accounting.
- Arron Scott Fleming - Ph.D. (Virginia Polytechnic Institute and State University)
CPA, CMA. Managerial and financial accounting, Fraud and forensic accounting, behavioral research.
- Kip Holderness - Ph.D. (Bentley University)
CPA, CMA, CFE. Managerial accounting, Forensic accounting, Behavioral research.
- Mark Nigrini - Ph.D. (University of Cincinnati)
Auditing, Forensic analytics, Prosecution of fraud schemes.

ASSISTANT PROFESSORS

- Lauren Cooper - Ph.D. (Oklahoma State University)
Taxation, Financial accounting
- Ji Woo Ryou - Ph.D. (University of Memphis)
Financial, Advanced and cost accounting, Financial statement analysis.
- Trevor Sorensen - Ph.D. (University of Alabama)
Taxation, Managerial Accounting, Financial Accounting
- John Treu - LLM (New York University) JD (University of Utah)
Taxation

TEACHING ASSISTANT PROFESSORS

- Cindy Dalton - MBA (Waynesburg College)
CPA, Financial accounting
- Gary LeDonne - MPA (West Virginia University)
CPA, Income Taxation
- Nancy P. Lynch - M.S. (University of Colorado)
CPA, CMA. Principles of accounting. Financial accounting.
- Megan McBride Schaupp - M.A.C.I.S. (Virginia Polytechnic Institute and State University)
CISA. Principles of accounting, Financial accounting, Accounting information systems.

- Dennis Seamon - B.S. Accounting (West Virginia University)
Financial accounting, Tax, Financial statement analysis, Energy finance and accounting.

VISITING PROFESSOR

- Nicholas Apostolou - D.B.A. (University of Tennessee)
CPA, CGMA. Financial accounting, Managerial accounting, Fraud and forensic accounting.

EMERITI

- Jay H. Coats
- Robert Maust
- Adolph Neidermeyer
- David Pariser
- Ann B. Pushkin

Admissions

Students who are direct admitted to the major as first-time freshmen must possess an overall GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major at the beginning of the semester in which they satisfy the course prerequisites listed below. Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

ACCT 201 & ACCT 202	Principles of Accounting and Principles of Accounting *	6
CS 101	Intro to Computer Applications	4
ECON 201 & ECON 202	Principles of Microeconomics and Principles of Macroeconomics	6
ECON 225 or STAT 211	Elementary Business and Economics Statistics Elementary Statistical Inference	3
ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	6
Choose one of the Following:		3-4
MATH 124	Algebra with Applications	
MATH 126	College Algebra	
MATH 129	Pre-Calculus Mathematics	
MATH 153	Calculus 1a with Precalculus	
Choose one of the Following:		3-4
MATH 150	Applied Calculus **	
MATH 154	Calculus 1b with Precalculus **	
MATH 155	Calculus 1 **	
MATH 156	Calculus 2 **	
Total Hours		31-33

Students who are direct admitted to the major and meet the requirements listed above are guaranteed permission to enroll in upper-division course work. The Chambers College will accommodate as many accounting majors as resources are available. Students who are denied admission to the accounting major may apply for admission in a future application period or accept admission to an alternative major in the Chambers College.

* A minimum grade of a B- each in ACCT 201 and ACCT 202 is required for admission to the program and to enroll in ACCT 311, Intermediate Accounting.

** A minimum grade of C- in MATH 150 is required for admission to the program. A grade of D- in MATH 154 or a higher level of college calculus also satisfies the calculus requirement for admission to the program.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Business Administration in Accounting (<https://admissions.wvu.edu/academics/majors/accounting/>) major.

Click here to view Suggested Plan of Study (p. 469)

Accounting Program Requirements

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

To qualify for the Bachelor of Science in Business Administration students must meet the following criteria:

- Complete a minimum of 120 credit hours.
- Possess an overall GPA of 2.0.
- Possess a minimum GPA of 2.0 for all major courses (i.e. ACCT, BLAW), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.
- The College of Business and Economics accepts all baccalaureate transferable course work completed at public and private colleges in West Virginia and other regionally accredited institutions. Since the College is AACSB accredited, upper-division courses (courses equivalent to 300/400 level at WVU) must be evaluated by the Dean or designee before they may count toward business core, major core and major restricted electives in the Bachelor of Science in Business Administration or Bachelor of Science in Economics program.

Curriculum Requirements

Overall GPA of 2.0 required

Possess a minimum GPA of 2.0 for all major courses (i.e. ACCT, BLAW), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.

ACCT 201	Principles of Accounting (Minimum grade of B-)	3
ACCT 202	Principles of Accounting (Minimum grade of B-)	3
CS 101	Intro to Computer Applications (Minimum grade of C-; may fulfill GEF 2A)	4
ECON 201	Principles of Microeconomics (Minimum grade of C-; may fulfill GEF 8)	3
ECON 202	Principles of Macroeconomics (Minimum grade of C-; may fulfill GEF 8)	3
Select one of the following (Minimum Grade of C-; may fulfill GEF 8):		3
ECON 225	Elementary Business and Economics Statistics	
STAT 211	Elementary Statistical Inference	
Select one of the following (may fulfill GEF 1; minimum grade of C-):		3-6
ENGL 101 & ENGL 102	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research	
ENGL 103	Accelerated Academic Writing	
GEF 2A, Science and Technology		3
GEF 5, Human Inquiry and the Past		3

GEF 6, The Arts & Creativity		3
GEF 7, Global Studies and Diversity		3
Select one of the following; minimum grade of C- in MATH 150 or D- in MATH 154 or higher (may fulfill GEF 3):		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	
Select one of the following (may fulfill GEF 4):		3
PSYC 101	Introduction to Psychology	
SOCA 101	Introduction to Sociology	
BCOR 191	First-Year Seminar	1
BCOR 199	Introduction to Business	3
BCOR 299	Business Communication (Fulfills Writing and Communication Skills Requirement)	3
BCOR 320	Legal Environment of Business	3
BCOR 330	Information Systems and Technology	3
BCOR 340	Principles of Finance	3
BCOR 350	Principles of Marketing	3
BCOR 360	Supply Chain Management	3
BCOR 370	Managing Individuals & Teams	3
BCOR 380	Business Ethics	3
BCOR 460	Contemporary Business Strategy (Fulfills University Capstone requirement)	3
ACCT 311	Intermediate Accounting (Minimum grade of C- to attempt ACCT 312)	3
ACCT 312	Intermediate Accounting	3
ACCT 321	Introduction to Accounting Systems	3
ACCT 322	Accounting Systems	3
ACCT 431	Cost Management	3
ACCT 441	Income Tax Accounting 1	3
ACCT 451	Auditing Theory	3
ACCT 442	Income Tax Accounting 2	3
Any 300-level or 400-level ACCT Electives		6
Unrestricted Electives (needed to reach 120 hours) *		16
Total Hours		120

* A maximum of six credit hours of ACCT 491, Professional Field Experience, may apply towards the 120 credit hours required for the degree.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
BCOR 199		3 ACCT 201	3
BCOR 191		1 ECON 201 (GEF 8)	3
CS 101 (GEF 2A)		4 ENGL 101 (GEF 1)	3
Select one of the following (GEF 4):		3 Select one of the following:	3-4
PSYC 101		MATH 150	
SOCA 101		MATH 154	
Select one of the following (GEF 3):		3-4 MATH 155	
MATH 124		MATH 156	
MATH 129		GEF (Choose from F2A, F5, F6 or F7)	3
MATH 150			
MATH 153			

MATH 155				
GEF (Choose from F2A, F5, F6 or F7)			3	
			17	15
Second Year				
Fall	Hours	Spring		Hours
ACCT 202		3 ACCT 311		3
ECON 202 (GEF 8)		3 ACCT 321		3
ECON 225 (GEF 8)		3 BCOR 299		3
ENGL 102 (GEF 1)		3 BCOR 330		3
GEF (Choose from F2A, F5, F6 or F7)		3 BCOR 370		3
		15		15
Third Year				
Fall	Hours	Spring		Hours
ACCT 312		3 ACCT 451		3
ACCT 441		3 ACCT 442		3
BCOR 340		3 BCOR 360		3
BCOR 350		3 BCOR 380		3
GEF (Choose from F2A, F5, F6 or F7)		3 Minor or Unrestricted Electives		3
		15		15
Fourth Year				
Fall	Hours	Spring		Hours
ACCT 431		3 ACCT 322		3
BCOR 320		3 BCOR 460		3
Minor or Unrestricted Electives		6 Any 300-level or 400-level ACCT Elective		3
Any 300-level or 400-level ACCT Elective		3 Minor or Unrestricted Electives		4
		15		13
Total credit hours: 120				

Major Learning Outcomes

ACCOUNTING

The objective of providing a foundational education in accounting at the undergraduate level cannot be realized without appropriate curricula content, effective teaching, and ultimately, learning. Within the undergraduate accounting major, we subscribe to the following learning goals for each of our undergraduate students.

- Competence in core technical areas
- Knowledge of the use of accounting information systems
- Awareness of the Professional Standards and the US Federal Income Tax Code
- The ability to identify the effect of regulatory and ethical issues on the global practice of accounting

Economics, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

In the broadest sense, economics is the science of decision-making. In economics, students learn how to identify the costs, benefits, and consequences of a decision. Government economists assess economic conditions in the U.S. and abroad and estimate the economic impact of specific changes in legislation or public policy. Economists in private industry work for marketing research firms, management consulting firms, banks, investment firms, insurance companies, and in pricing and strategy departments of firms like Amazon and Microsoft. A degree in economics is also highly desirable for students who plan to attend law school or graduate school in economics, data analytics, or public policy. The John Chambers College of Business and Economics has an excellent record of placing economics students in both law and graduate schools.

The Department of Economics has several areas of strength including market-based solutions to social and economic problems, urban and regional economics, and health economics.

Economics is an excellent major for anybody interested in a career in:

- Banking
- Business
- Domestic government service
- Foreign service
- Law
- Politics

FACULTY

DEPARTMENT CHAIRPERSON

- 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 Macro 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)

EMERITI

- Robert Britt
- Brian Cushing
- Stratford Douglas
- Clifford Hawley
- Ming-Jeng Hwang
- Patrick Mann
- William Reece
- Tom Witt

Admissions

Students who are direct admitted to the major as first-time freshmen must possess an overall GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major at the beginning of the semester in which they satisfy the course prerequisites listed below. Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

ACCT 201 & ACCT 202	Principles of Accounting and Principles of Accounting	6
CS 101	Intro to Computer Applications	4
ECON 201 & ECON 202	Principles of Microeconomics and Principles of Macroeconomics *	6
ECON 225 or STAT 211	Elementary Business and Economics Statistics Elementary Statistical Inference	3
ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	3-6
Choose one of the following:		3-4
MATH 124	Algebra with Applications	
MATH 126	College Algebra	
MATH 129	Pre-Calculus Mathematics	
MATH 153	Calculus 1a with Precalculus	
Choose one of the following:		3-4
MATH 150	Applied Calculus **	
MATH 154	Calculus 1b with Precalculus **	
MATH 155	Calculus 1 **	
MATH 156	Calculus 2 **	

Total Hours

28-33

Students who are direct admitted to the major and meet the requirements listed above are guaranteed permission to enroll in upper-division course work. The Chambers College will accommodate as many economics majors as resources are available. Students who are denied admission to the economics major may apply for admission in a future application period or accept admission to an alternative major in the Chambers College.

* A minimum grade of B- is required in ECON 201 and ECON 202 for admission to the program.

** A minimum grade of B- is required in MATH 150 for admission to the program. A grade of C- in MATH 154 or a higher college calculus course satisfies the calculus requirement for admission to the program.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Economics (<https://admissions.wvu.edu/academics/majors/economics-b-s/>) major.

Click here to view the Suggested Plan of Study (p. 474)

Economics Program Requirements

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

To qualify for the Bachelor of Science in Economics students must meet the following criteria:

- Complete a minimum of 120 credit hours.
- Possess an overall GPA of 2.0.
- Possess a minimum GPA of 2.0 for all major courses (i.e. ECON), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.
- The College of Business and Economics accepts all baccalaureate transferable course work completed at public and private colleges in West Virginia and other regionally accredited institutions. Since the College is AACSB accredited, upper-division courses (courses equivalent to 300/400 level at WVU) must be evaluated by the Dean or designee before they may count toward business core, major core and major restricted electives in the Bachelor of Science in Business Administration or Bachelor of Science in Economics program.

Curriculum Requirements

Most economics electives should not be attempted until ECON 301 has been completed with a minimum grade of C-. Students interested in graduate work in economics should take ECON 421 and ECON 425. Of the twenty-one semester hours of required business electives and business and economics electives completed by an Economics major, no more than twelve semester hours may consist of economics courses.

Minimum GPA of 2.0 is required

Possess a minimum GPA of 2.0 for all major courses (i.e. ECON), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.

ACCT 201	Principles of Accounting (Minimum grade of C-)	3
ACCT 202	Principles of Accounting (Minimum grade of C-)	3
CS 101	Intro to Computer Applications (Minimum grade of C-; may fulfill GEF 2A)	4
ECON 201	Principles of Microeconomics (Minimum grade of one B- and one C- in ECON 201 and ECON 202; may fulfill GEF 4 or 8)	3
ECON 202	Principles of Macroeconomics (Minimum grade of one B- and one C- in ECON 201 and ECON 202; may fulfill GEF 4 or 8)	3

Select one of the following (Minimum Grade of C-; may fulfill GEF 8): 3

ECON 225	Elementary Business and Economics Statistics	
STAT 211	Elementary Statistical Inference	
Select one of the following (Minimum Grade of C-; may fulfill GEF 1):		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; minimum grade of B- in MATH 150 or C- in MATH 154 or higher		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		6
BCOR 191	First-Year Seminar	1
BCOR 199	Introduction to Business (Fulfills First Year Seminar requirement)	3
BCOR 299	Business Communication (Fulfills Writing and Communication Skills Requirement)	3
ECON 301	Intermediate Micro-Economic Theory (Minimum grade of C-)	3
ECON 302	Intermediate Macro-Economic Theory (Minimum grade of C-)	3
ECON 482	Applied Economic Research	3
Economics Electives		15
Business Electives		9
Business & Economics Electives		12
Unrestricted Electives		22
Total Hours		120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
BCOR 191		1 ACCT 201	3
BCOR 199		3 ECON 201 (GEF 4)	3
CS 101 (GEF 2A)		4 ENGL 101 (GEF 1)	3
Select one of the following:		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
GEF (Choose from F2A, F5, F6 or F7)	3		
Unrestricted Electives	3		
		17	15

Second Year

Fall	Hours	Spring	Hours
ACCT 202		3 BCOR 299	3
ECON 202 (GEF 8)		3 Business Elective	3
ECON 225 (GEF 8)		3 Business and Economics Elective	3

ENGL 102 (GEF 1)	3 ECON 301	3
GEF (Choose from F2A, F5, F6 or F7)	3 GEF (Choose from F2A, F5, F6 or F7)	3
	15	15

Third Year

Fall	Hours	Spring	Hours
Business and Economics Elective		3 Business and Economics Elective	3
ECON 302		3 Economics Elective	3
Economics Elective		3 Economics Elective	3
Minor or Unrestricted Electives		6 Minor or Unrestricted Electives	6
	15		15

Fourth Year

Fall	Hours	Spring	Hours
Business Elective		3 Business Elective	3
Business and Economics Elective		3 Economics Elective	3
Economics Elective		3 ECON 482	3
Minor or Unrestricted Electives		6 Minor or Unrestricted Electives	3-4
	15		13

Total credit hours: 120

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

Major Learning Outcomes**ECONOMICS**

The objective of providing a foundational education in economics at the undergraduate level cannot be realized without appropriate curricula content, effective teaching, and ultimately, learning. Within the undergraduate economics major, we subscribe to the following learning goals for each of our undergraduates. Students will:

- Use supply and demand to analyze how world events affect market equilibrium prices and quantities.
- Translate the theory of the firm and its implications for prices and production under different market structures.
- Communicate the role of prices and profits and losses in coordinating economic activity.
- Document the efficiency of competitive market outcomes relative to alternative arrangements.
- Explain how GDP, the unemployment rate, inflation, interest rates, and economic growth are measured, can distinguish between real and nominal variables, and can explain the significance of these measures.
- Articulate the determinants of long-run variations in national economic growth rates, wealth, and income.
- Analyze the determinants of short-run fluctuations of economic variables over the business cycle.
- Specify the goals and tools of monetary and fiscal policy.

Entrepreneurship and Innovation, B.S.B.AD.**Degree Offered**

- Bachelor of Science in Business Administration

Nature of the Program

The Entrepreneurship and Innovation Major will prepare graduates for starting new ventures, as well as positions in organizations that propose, analyze, and implement entrepreneurial growth strategies. Through a flexible series of courses that emphasize both conceptual and hands-on/experiential

learning, students will develop knowledge and skills that will provide them with a platform to start, run, and grow entrepreneurial enterprises. Career options for Entrepreneurship and Innovation Majors include:

- Business owner or operator
- Business or economic development
- Corporate innovation
- New product or service development
- Management consulting

FACULTY

CHAIR

- A. Graham Peace - Ph.D. (University of Pittsburgh)

ASSISTANT PROFESSOR

- Ryan Angus - Ph.D.

TEACHING ASSISTANT PROFESSOR

- Robert Waggoner

Admissions

Students who are direct admitted to the major as first-time freshmen must possess an overall GPA of at least 2.0 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major at the beginning of the semester in which they satisfy the course prerequisites listed below. Applicants also must possess an overall GPA of at least 2.0 to be considered for admission to the major.

ACCT 201 & ACCT 202	Principles of Accounting and Principles of Accounting	6
CS 101	Intro to Computer Applications	4
ECON 201 & ECON 202	Principles of Microeconomics and Principles of Macroeconomics	6
ECON 225 or STAT 211	Elementary Business and Economics Statistics Elementary Statistical Inference	3
ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	6
Choose one of the Following:		3-4
MATH 124	Algebra with Applications	
MATH 126	College Algebra	
MATH 129	Pre-Calculus Mathematics	
MATH 153	Calculus 1a with Precalculus	
Choose one of the Following:		3-4
MATH 150	Applied Calculus *	
MATH 154	Calculus 1b with Precalculus	
MATH 155	Calculus 1	
MATH 156	Calculus 2	

Total Hours

31-33

Students who are direct admitted to the major and meet the requirements listed above are guaranteed permission to enroll in upper-division course work. The Chambers College will accommodate as many majors as resources are available. Students who are denied admission to the major may apply for admission in a future application period or accept admission to an alternative major in the Chambers College.

* A minimum grade of D- in Math 150 or a higher level of college calculus satisfies the calculus requirement for admission to the program.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Business Administration in Entrepreneurship and Innovation (<https://admissions.wvu.edu/academics/majors/entrepreneurship-and-innovation/>) major.

Click here to view the Suggested Plan of Study (p. 480)

Entrepreneurship & Innovation Program Requirements

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students seeking admission to the Bachelor of Science in Business Administration, Entrepreneurship & Innovation Major offered by the College of Business and Economics (B&E) must make formal application to the program. Ideally, a student will apply for admission to the program when he/she has completed the pre-requisite coursework (listed in the table below) with a minimum grade of C- at the end of the application term, an overall GPA of at least 2.0 (B&E student 2.0, other students 2.5) and completed a minimum of 45 semester hours at the end of the application term.

Minimum Overall GPA of 2.0 is required

Pre-requisite Coursework

ACCT 201	Principles of Accounting (Minimum grade of C-)	3
ACCT 202	Principles of Accounting (Minimum grade of C-)	3
CS 101	Intro to Computer Applications (Minimum grade of C-; may fulfill GEF 2A)	4
ECON 201	Principles of Microeconomics (Minimum grade of C-; may fulfill GEF 8)	3
ECON 202	Principles of Macroeconomics (Minimum grade of C-; may fulfill GEF 8)	3
Select one of the following (Minimum grade of C-; may fulfill GEF 8):		3
ECON 225	Elementary Business and Economics Statistics	
STAT 211	Elementary Statistical Inference	
Select one of the following (Minimum grade of C-; may fulfill GEF 1):		3-6
ENGL 101 & ENGL 102	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research	
ENGL 103	Accelerated Academic Writing	
GEF 2A, Science & Technology		3
GEF 5, Human Inquiry & the Past		3
GEF 6, The Arts & Creativity		3
GEF 7, Global Studies & Diversity		3
Select one of the following; minimum grade of D- in MATH 150, MATH 154 or MATH 155 (may fulfill GEF 3):		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	
Select one of the following (may fulfill GEF 4):		3
PSYC 101	Introduction to Psychology	
SOCA 101	Introduction to Sociology (May fulfill GEF 4)	
Business Core coursework		
BCOR 191	First-Year Seminar	1
BCOR 199	Introduction to Business	3
BCOR 299	Business Communication (Fulfills Writing and Communication Skills Requirement)	3
BCOR 320	Legal Environment of Business	3
BCOR 330	Information Systems and Technology	3
BCOR 340	Principles of Finance	3
BCOR 350	Principles of Marketing	3
BCOR 360	Supply Chain Management	3
BCOR 370	Managing Individuals & Teams	3
BCOR 380	Business Ethics	3
BCOR 460	Contemporary Business Strategy	3
ENTR 400	Fundamentals of Entrepreneurship	3
ENTR 405	Entrepreneurial Creativity & Innovation	3
ENTR 420	Entrepreneurial Finance	3
MKTG 320	Personal Selling 1	3
Choose one of the two course sequence options:		6
ENTR 430 & ENTR 440	Business Analysis and Planning and Small Business Consulting	
ENTR 455 & ENTR 460	Entrepreneurial Opportunity Identification and Entrepreneurial Strategy: Managing New Entry, Innovation & Growth	
Choose four of the following electives (two must be in Chambers):		12
Entrepreneurship (ENTR) Courses 400+		
ACCT 331	Managerial Accounting	
COMM 306	Organizational Communication	
COMM 404	Persuasion	
MKTG 321	Professional Selling 2	
MKTG 345	Selling with Digital Media	
MKTG 350	Product and Price Policies	
Unrestricted Electives (needed to reach 120 hours)		16
Total Hours		120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
BCOR 199		3 ACCT 201	3
BCOR 191		1 ECON 201 (GEF 8)	3
CS 101 (GEF 2A)		4 ENGL 101 (GEF 1)	3
Select one of the following (GEF 3):		3-4 Select one of the following:	
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
Select one of the following: (GEF 4):	3		
PSYC 101			
SOCA 101 (GEF 4)			
GEF (Choose from F2A, F5, F6 or F7)	3		
	17		15
Second Year			
Fall	Hours	Spring	Hours
ACCT 202		3 BCOR 299	3
ECON 202 (GEF 8)		3 BCOR 330	3
ECON 225 (GEF 8)		3 BCOR 340	3
ENGL 102 (GEF 1)		3 BCOR 350	3
GEF (Choose from F2A, F5, F6, or F7)		3 BCOR 370	3
	15		15
Third Year			
Fall	Hours	Spring	Hours
BCOR 320		3 BCOR 360	3
ENTR 400		3 ENTR 420	3
ENTR 405		3 MKTG 320	3
Minor or Unrestricted Electives		3 Major Elective	3
GEF (Choose from F2A, F5, F6 or F7)		3 Minor or Unrestricted Electives	3
	15		15
Fourth Year			
Fall	Hours	Spring	Hours
BCOR 380		3 BCOR 460	3
Select one of the following:		3 Select one of the following:	3
ENTR 430		ENTR 440	
ENTR 455		ENTR 460	
Major Elective		6 Major Elective	3
Minor or Unrestricted Electives		3 Minor or Unrestricted Electives	4
	15		13

Total credit hours: 120

Major Learning Outcomes

ENTREPRENEURSHIP AND INNOVATION

The objective of providing a foundational education in entrepreneurship and innovation at the undergraduate level cannot be realized without appropriate curricula content, effective teaching, and ultimately, learning. Within the undergraduate entrepreneurship and innovation major, we subscribe to the following learning goals for each of our undergraduate students:

- Graduates will be able to manage and evaluate organizational systems focused on the following entrepreneurial outcomes.
 - Identify organizational tasks, roles, and responsibilities of managing entrepreneurial ventures.
 - Designate the interrelationships between functional areas of entrepreneurial ventures.
 - Describe the interrelationships between resources, organizational structure, and strategies utilized to create and grow entrepreneurial ventures.
 - Demonstrate an understanding of entrepreneurial phenomena across organizational contexts, including start-ups, small and medium sized enterprises, family businesses, and corporate ventures.
 - Prescribe effective practices in identifying and exploiting entrepreneurial opportunities.
 - Identify alternative ways to market a new product or service that contribute to the growth of an entrepreneurial venture.
 - Assess entrepreneurial opportunities using financial methods.
- Graduates will be able to think critically and solve problems in entrepreneurial ventures.
- Graduates will be able to deal with the dynamics of individuals and teams within organizations and to motivate, lead, and inspire employees toward achieving organizational goals.

- Graduates will be able to use computer and information technology in solving problems and perform functions commonly seen in managing businesses and other organizations.
- Graduates will be able to effectively communicate recommendations to management and other constituencies, orally and in writing.
- Graduates will have knowledge of business disciplines: accounting, finance, management, management information systems, and marketing.

Finance, B.S.B.AD.

Degree Offered

- Bachelor of Science in Business Administration

Nature of the Program

Finance is the study of the creation and management of wealth and the allocation of resources in capital markets. A finance major learns how to evaluate and control risk, appropriately price new projects, perform capital expansion for firms, and maximize returns from investments. The finance program prepares students for a variety of positions in financial enterprises. Areas of Emphasis within the major are aligned with career opportunities existing in investments, wealth management, corporate valuation and management, personal finance, insurance, risk management, energy finance and commercial banking.

People with degrees in finance have careers such as:

- Financial Manager
- Commercial Banker
- Credit Manager
- Financial Analyst
- Financial Planner
- Institutional Portfolio Manager
- Insurance and Risk Manager
- Insurance Underwriter
- Investment Banker
- Loan Officer

FACULTY

DEPARTMENT CHAIRPERSON

- Naomi Boyd - Ph.D. (George Washington University)
Market Microstructure, Investments, Derivative Markets, and Personal Finance.

PROFESSORS

- Victor Chow - Ph.D., CFA (University of Alabama)
Investments, Portfolio Management.
- Alexander Kurov - Ph.D., CFA (Binghamton University (SUNY))
Financial Market Microstructure, Futures Markets.
- Paul J. Speaker - Ph.D. (Purdue University)
Corporate Finance, Public Sector Financial Management, Business Valuation, and Business of Forensics.

ASSOCIATE PROFESSORS

- Ashok Abbott - Ph.D. (Virginia Polytechnic Institute and State University)
Financial Institutions, Corporate Finance, and Mergers and Acquisitions.
- Naomi Boyd - Ph.D. (George Washington University)
Market Microstructure, Investments, Derivative Markets, and Personal Finance.
- Ann Marie Hibbert - Ph.D. (Florida International University)
Behavioral Finance, Corporate Finance, Fixed Income Securities, Derivative Securities
- Terry L. Rose - Ph.D. (University of Illinois)
Insurance, Risk Management.

ASSISTANT PROFESSORS

- Ruiyuan Chen - Ph. D. (University of South Carolina)
Empirical Corporate Finance, Banking, International Finance, Government Ownership.
- Bingxin Li - Ph.D. (University of Houston)
Derivatives Modeling, Financial Risk Management, Empirical Asset Pricing, and Energy Finance.
- He (Helen) Wang - Ph. D. (University of South Carolina)
Corporate Finance, International Finance, Corporate Social Responsibility.
- Gulnara Zaynutdinova - Ph.D. (Washington State University)
Empirical Asset Pricing, Institutional Investors, Mutual Funds and Investor Behavior

TEACHING ASSISTANT PROFESSORS

- Jonathan T. Fluharty-Jaidee - Ph.D. (West Virginia University)
Corporate Finance, CEO Compensation, Mergers and Acquisitions, Behavioral Finance, Principles of Finance, International Finance, and Advanced Corporate Finance.
- Frank DeGeorge - MSA, CPA (Duquesne University)
Financial Statement Analysis, Advanced Financial Accounting, Principles of Finance, and Corporate Finance.

ADJUNCT ASSOCIATE PROFESSOR

- Eric Olson - Ph. D. (University of Alabama)
Financial Economics

EMERITI

- Howard L. Brewer
- William B. Riley
- Frederick C. Scherr

Admissions

Students who are direct admitted to the major as first-time freshmen must possess an overall GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major at the beginning of the semester in which they satisfy the course prerequisites listed below. Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

ACCT 201 & ACCT 202	Principles of Accounting and Principles of Accounting	6
CS 101	Intro to Computer Applications	4
ECON 201 & ECON 202	Principles of Microeconomics and Principles of Macroeconomics *	6
ECON 225 or STAT 211	Elementary Business and Economics Statistics Elementary Statistical Inference	3
ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	6
Choose one of the Following:		3-4
MATH 124	Algebra with Applications	
MATH 126	College Algebra	
MATH 129	Pre-Calculus Mathematics	
MATH 153	Calculus 1a with Precalculus	
Choose one of the Following:		3-4
MATH 150	Applied Calculus **	
MATH 154	Calculus 1b with Precalculus **	
MATH 155	Calculus 1 **	
MATH 156	Calculus 2 **	

Total Hours

31-33

Students who are direct admitted to the major and meet the requirements listed above are guaranteed permission to enroll in upper-division course work. The Chambers College will accommodate as many majors as resources are available. Students who are denied admission to the major may apply for admission in a future application period or accept admission to an alternative major in the Chambers College.

* A minimum grade of B- is required in ECON 201 and ECON 202 for admission to the program.

** A minimum grade of B- is required in MATH 150 for admission to the program. A minimum grade of C- in MATH 154 or a higher college calculus course satisfies the calculus requirement for admission to the program.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Business Administration in Finance (<https://admissions.wvu.edu/academics/majors/finance/>) major.

Click here to view the Suggested Plan of Study (p. 485)

Finance Program Requirements

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

To qualify for the Bachelor of Science in Business Administration students must meet the following criteria:

- Complete a minimum of 120 credit hours.
- Possess an overall GPA of 2.0.
- Possess a minimum GPA of 2.0 for all major courses (i.e. FIN), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.
- The College of Business and Economics accepts all baccalaureate transferable course work completed at public and private colleges in West Virginia and other regionally accredited institutions. Since the College is AACSB accredited, upper-division courses (courses equivalent to 300/400 level at WVU) must be evaluated by the Dean or designee before they may count toward business core, major core and major restricted electives in the Bachelor of Science in Business Administration or Bachelor of Science in Economics program.

Curriculum Requirements

Minimum overall GPA of 2.0 is required

Possess a minimum GPA of 2.0 for all major courses (i.e. FIN), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.

ACCT 201	Principles of Accounting (Minimum grade of C-)	3
ACCT 202	Principles of Accounting (Minimum grade of C-)	3
CS 101	Intro to Computer Applications (Minimum grade of C-; may fulfill GEF 2A)	4
ECON 201	Principles of Microeconomics (Minimum grade of B-; may fulfill GEF 8)	3
ECON 202	Principles of Macroeconomics (Minimum grade of B-; may fulfill GEF 8)	3

Select one of the following (Minimum Grade of C-; may fulfill GEF 8):		3
ECON 225	Elementary Business and Economics Statistics	
STAT 211	Elementary Statistical Inference	
Select one of the following (Minimum Grade of C-; may fulfill GEF 1):		3-6
ENGL 101 & ENGL 102	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research	
ENGL 103	Accelerated Academic Writing	
GEF 2A, Science & Technology		3
GEF 5, Human Inquiry & the Past		3
GEF 6, The Arts & Creativity		3
GEF 7, Global Studies & Diversity		3
Select one of the following; minimum grade of B- in MATH 150 or C- in MATH 154 or higher; (may fulfill GEF 3):		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	
Select one of the following (may fulfill GEF 4):		3
PSYC 101	Introduction to Psychology	
SOCA 101	Introduction to Sociology (May fulfill GEF 4)	
BCOR 191	First-Year Seminar	1
BCOR 199	Introduction to Business	3
BCOR 299	Business Communication (Fulfills Writing and Communication Skills Requirement)	3
BCOR 320	Legal Environment of Business	3
BCOR 330	Information Systems and Technology	3
BCOR 340	Principles of Finance (Minimum grade of B- to advance to FIN courses, except FIN 350)	3
BCOR 350	Principles of Marketing	3
BCOR 360	Supply Chain Management	3
BCOR 370	Managing Individuals & Teams	3
BCOR 380	Business Ethics	3
BCOR 460	Contemporary Business Strategy	3
FIN 305	Intermediate Finance (B- or better in BCOR 340)	3
FIN 310	Investments (B- or better in BCOR 340)	3
FIN 315	Financial Data Analytics	3
FIN 320	Financial Statements Analysis (B- or better in BCOR 340)	3
FIN 330	Financial Institutions (B- or better in BCOR 340)	3
FIN 350	Introduction to Risk Management & Insurance	3
Required Area of Emphasis		12
Unrestricted Electives (needed to reach 120 hours)		16
Total Hours		120

* FIN 491, Professional Field Experience, may not be used to fulfill finance elective credit. A maximum of six credit hours of professional field experience may be counted towards the 120 credit hours required for the degree.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
BCOR 199		3 ACCT 201	3
BCOR 191		1 ECON 201 (GEF 8)	3
CS 101 (GEF 2A)		4 ENGL 101 (GEF 1)	3

Select one of the following (GEF 3):	3	Select one of the following:	3
MATH 124		MATH 150	
MATH 129		MATH 154	
MATH 150		MATH 155	
MATH 153		MATH 156	
MATH 155		GEF (Choose from 2A, 5, 6 or 7)	3
Select one of the following (GEF 4):	3		
SOCA 101 (GEF 4)			
PSYC 101 (GEF 4)			
GEF (Choose from 2A, 5, 6 or 7)	3		

17 15

Second Year

Fall	Hours	Spring	Hours
ACCT 202		3 BCOR 299	3
ECON 202 (GEF 8)		3 BCOR 330	3
ECON 225 (GEF 8)		3 BCOR 340	3
ENGL 102 (GEF 1)		3 BCOR 370	3
GEF (Choose from F2A, F5, F6, or F7)		3 FIN 350	3

15 15

Third Year

Fall	Hours	Spring	Hours
BCOR 350		3 BCOR 320	3
BCOR 360		3 BCOR 380	3
FIN 305		3 FIN 310	3
FIN 320		3 FIN 315	3
FIN 330		3 Minor or Unrestricted Electives	3

15 15

Fourth Year

Fall	Hours	Spring	Hours
Area of Emphasis		3 BCOR 460	3
Area of Emphasis		3 Area of Emphasis	3
GEF (Choose from 2A, 5, 6 or 7)		3 Area of Emphasis	3
Minor or Unrestricted Electives		6 Minor or Unrestricted Electives	4

15 13

Total credit hours: 120

Areas of Emphasis

- Banking (p. 486)
- Corporate Finance and Valuation (p. 487)
- Energy Finance (p. 487)
- General Finance (p. 487)
- Investments (p. 487)
- Risk Management and Insurance (p. 487)
- Wealth Management (p. 488)

BANKING AREA OF EMPHASIS

The Banking Area of Emphasis prepares finance majors for successful careers in the banking industry. Graduates will be familiar with the composition of this sector, its regulatory environment, and factors influencing commercial bank performance.

FIN 460	Bank Management	3
FIN 461	Advanced Bank Management	3
Select two of the following:		6
FIN 411	Derivatives	

FIN 420	Business Valuation	
FIN 421	Mergers and Acquisitions	
FIN 422	Advanced Financial Statement Analysis	
FIN 465	Applied Investment Management	
FIN 480	International Finance	
FIN 485	Advanced Topics in Financial Planning	

Total Hours 12

CORPORATE FINANCE AND VALUATION AREA OF EMPHASIS

The Corporate Finance/Valuation Area of Emphasis prepares finance majors for successful careers in financial management for private and public corporations, valuation, and entrepreneurial enterprises. Graduates also meet the professional standards required for the Certified Valuation Analyst (CVA) certification.

FIN 420	Business Valuation (minimum grade of B-)	3
FIN 421	Mergers and Acquisitions (minimum grade of B-)	3
Select two of the following:		6
FIN 422	Advanced Financial Statement Analysis	
FIN 470	Advanced Corporate Finance	
FIN 480	International Finance	

Total Hours 12

ENERGY FINANCE AREA OF EMPHASIS

FIN 411	Derivatives	3
FIN 430	Energy Financial Economics	3
FIN 431	Energy Law and Regulations	3
FIN 432	Energy Financial Accounting	3
FIN 433	Energy Financial Risk Management	3

Total Hours 15

GENERAL FINANCE AREA OF EMPHASIS

Finance Electives^{*} 12

Total Hours 12

* The General Finance area of emphasis is available to Finance majors who do not meet the requirements of other Finance Major areas of emphasis.

INVESTMENTS AREA OF EMPHASIS

Select four of the following: 12

FIN 410	Security Analysis and Portfolio Management	
FIN 411	Derivatives	
FIN 420	Business Valuation	
FIN 465	Applied Investment Management (Course may be repeated once for a total of 6 credits)	
FIN 480	International Finance	
FIN 485	Advanced Topics in Financial Planning	

Total Hours 12

RISK MANAGEMENT AND INSURANCE AREA OF EMPHASIS

The Risk Management and Insurance area of emphasis prepares students for practices and procedures in the business of corporate risk management and insurance industry operations.

Select four of the following: 12

FIN 451	Life and Health Insurance	
FIN 452	Employee Benefit Plans	
FIN 453	Life Insurance and Estate Planning	

FIN 454	Property and Liability Insurance	
FIN 455	Risk Management	
Total Hours		12

WEALTH MANAGEMENT AREA OF EMPHASIS

The Wealth Management Area of Emphasis provides students with a strong foundation for becoming a practicing financial planner. The curriculum meets the educational requirements for the Certified Financial Planning designation (CFP).

FIN 370	Personal Finance	3
FIN 452	Employee Benefit Plans	3
FIN 453	Life Insurance and Estate Planning	3
FIN 485	Advanced Topics in Financial Planning	3
Total Hours		12

Major Learning Outcomes

FINANCE

The undergraduate finance curriculum offers rigorous study and investigation of a variety of topics related to financial markets, decision making, products, and institutions. Within the undergraduate finance major, we subscribe to the following learning goals for each of our undergraduate students.

- Competence in core technical areas
- Knowledge of financial markets and institutions
- Ability to value and analyze financial products and firms
- Execute financial decisions for firms and individuals that demonstrate an understanding of risk and return

General Business, B.S.B.AD.

Degree Offered

- Bachelor of Science in Business Administration

Nature of the Program

The General Business program is for students who may desire an "individualized" (i.e. less prescriptive) business major. For instance, a student interested in working for a market research firm may want to combine courses from both management information systems (MIS) and marketing.

Under the program, the major in General Business is comprised of twenty-four semester hours of upper#division business core course work (required of all candidates for the degree of B.S. in Business Administration) and thirty semester hours of upper division business and economics electives. The thirty semester hours of course work must be approved by the academic advisor and should *not* exceed more than nine semester hours in one academic discipline (e.g. MTKG).

Students interested in pursuing the General Business major should contact an academic advisor in the Office of Undergraduate Programs and Advising, 3rd Floor, Business and Economics Building to prepare a matriculation plan that satisfies the requirements for the degree and academic major and that compliments their professional career interests.

Admissions

Students who are direct admitted to the major as first-time freshmen must possess an overall GPA of at least 2.0 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major at the beginning of the semester in which they satisfy the course prerequisites listed below. Applicants also must possess an overall GPA of at least 2.0 to be considered for admission to the major.

ACCT 201 & ACCT 202	Principles of Accounting and Principles of Accounting	6
CS 101	Intro to Computer Applications	4
ECON 201 & ECON 202	Principles of Microeconomics and Principles of Macroeconomics	6
ECON 225 or STAT 211	Elementary Business and Economics Statistics Elementary Statistical Inference	3

ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	6
Choose one of the Following:		3-4
MATH 124	Algebra with Applications	
MATH 126	College Algebra	
MATH 129	Pre-Calculus Mathematics	
MATH 153	Calculus 1a with Precalculus	
Choose one of the Following:		3-4
MATH 150	Applied Calculus *	
MATH 154	Calculus 1b with Precalculus	
MATH 155	Calculus 1	
MATH 156	Calculus 2	
Total Hours		31-33

Students who are direct admitted to the major and meet the requirements listed above are guaranteed permission to enroll in upper-division course work. The College will accommodate as many majors as resources are available. Students who are denied admission to the major may apply for admission in a future application period or accept admission to an alternative major in the College.

* A minimum grade of D- in Math 150 or a higher level of college calculus satisfies the calculus requirement for admission to the program.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Business Administration in General Business (<https://admissions.wvu.edu/academics/majors/general-business/>) major.

[Click here to view the Suggested Plan of Study \(p. 491\)](#)

General Business Program Requirements

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

To qualify for the Bachelor of Science in Business Administration-General Business students must meet the following criteria:

- Complete a minimum of 120 credit hours.
- Possess an overall GPA of 2.0.

- Possess a minimum GPA of 2.0 for all major courses (i.e. ACCT, MANG, MKTG), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.
- The College of Business and Economics accepts all baccalaureate transferable course work completed at public and private colleges in West Virginia and other regionally accredited institutions. Since the College is AACSB accredited, upper-division courses (courses equivalent to 300/400 level at WVU) must be evaluated by the Dean or designee before they may count toward business core, major core and major restricted electives in the Bachelor of Science in Business Administration or Bachelor of Science in Economics program.

Curriculum Requirements

Minimum Overall GPA of 2.0 is required

Possess a minimum GPA of 2.0 for all major courses (i.e. ACCT, MANG, MKTG), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.

ACCT 201	Principles of Accounting (Minimum grade of C-)	3
ACCT 202	Principles of Accounting (Minimum grade of C-)	3
CS 101	Intro to Computer Applications (Minimum grade of C-; may fulfill GEF 2A)	4
ECON 201	Principles of Microeconomics (Minimum grade of C-; may fulfill GEF 8)	3
ECON 202	Principles of Macroeconomics (Minimum grade of C-; may fulfill GEF 8)	3
Select one of the following (Minimum Grade of C-; may fulfill GEF 8):		3
ECON 225	Elementary Business and Economics Statistics	
STAT 211	Elementary Statistical Inference	
Select one of the following (Minimum Grade of C-; may fulfill GEF 1):		3-6
ENGL 101 & ENGL 102	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research	
ENGL 103	Accelerated Academic Writing	
GEF 2A, Science & Technology		3
GEF 5, Human Inquiry & the Past		3
GEF 6, The Arts & Creativity		3
GEF 7, Global Studies & Diversity		3
Select one of the following; minimum grade of D- in MATH 150 or D- in MATH 154 or higher; (may fulfill GEF 3):		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	
Select one of the following (may fulfill GEF 4):		3
PSYC 101	Introduction to Psychology	
SOCA 101	Introduction to Sociology	
BCOR 191	First-Year Seminar	1
BCOR 199	Introduction to Business	3
BCOR 299	Business Communication (Fulfills Writing and Communication Skills Requirement)	3
BCOR 320	Legal Environment of Business	3
BCOR 330	Information Systems and Technology	3
BCOR 340	Principles of Finance	3
BCOR 350	Principles of Marketing	3
BCOR 360	Supply Chain Management	3
BCOR 370	Managing Individuals & Teams	3
BCOR 380	Business Ethics	3
BCOR 460	Contemporary Business Strategy	3
Major Electives *		30

Unrestricted Electives (needed to reach 120 hours)	16
Total Hours	120

* The thirty semester hours of major electives that form the General Business major must consist of upper-division business and economics courses in disciplines such as Accounting (ACCT), Economics (ECON), Finance (FIN), (HTOR) Hospitality and Tourism Management, Management (MANG), Management Information Systems (MIST), Marketing (MKTG) and (GSCM) Supply Chain Management. No more than nine semester hours in one of the aforementioned disciplines may apply toward the major. General Business majors may apply for up three credit hours of Professional Field Experience toward the major electives and the remaining three credit hours toward unrestricted electives.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
BCOR 199		3 ACCT 201	3
BCOR 191		1 ECON 201 (GEF 8)	3
CS 101 (GEF 2A)		4 ENGL 101 (GEF 1)	3
Select one of the following (GEF 3):		3 Select one of the following:	3
MATH 124		MATH 150	
MATH 129		MATH 154	
MATH 150		MATH 155	
MATH 153		MATH 156	
MATH 155		GEF (Choose from 2A, 5, 6 or 7)	3
Select one of the following (GEF 4):		3	
SOCA 101			
PSYC 101			
GEF (Choose from 2A, 5, 6 or 7)		3	
		17	15

Second Year

Fall	Hours	Spring	Hours
ACCT 202		3 BCOR 299	3
ECON 202 (GEF 8)		3 BCOR 320	3
Select one of the following (GEF 8):		3 BCOR 330	3
ECON 225		BCOR 350	3
STAT 211		BCOR 370	3
ENGL 102 (GEF 1)		3	
GEF (Choose from 2A, 5, 6, or 7)		3	
		15	15

Third Year

Fall	Hours	Spring	Hours
BCOR 340		3 BCOR 380	3
BCOR 360		3 Major Elective	3
Major Elective		3 Major Elective	3
Major Elective		3 Major Elective	3
Minor or Unrestricted Electives		3 GEF (Choose from 2A, 5, 6 or 7)	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
Major Elective		3 BCOR 460	3
Major Elective		3 Major Elective	3
Major Elective		3 Major Elective	3
Minor or Unrestricted Electives		6 Minor or Unrestricted Electives	4
		15	13

Total credit hours: 120

Major Learning Outcomes

GENERAL BUSINESS

The objective of providing a foundational education in general business at the undergraduate level cannot be realized without appropriate curricula content, effective teaching, and ultimately, learning. Within the undergraduate general business major, we subscribe to the following learning goals for each of our undergraduate students

- Graduates will be able to think critically and solve problems in business settings.
- Graduates will be able to deal with the dynamics of individuals and teams within organizations and to motivate, lead, and inspire employees toward achieving organizational goals.
- Graduates will be able to use computer and information technology in solving problems and perform functions commonly seen in managing businesses and other organizations.
- Graduates will recognize the opportunities and challenges associated with the global marketplace.
- Graduates will have an appreciation of the ethical, legal, and regulatory issues impacting the decision-making process.
- Graduates will be able to communicate recommendations to management and other constituencies, orally and in writing.

Global Supply Chain Management, B.S.B.AD.

Degree Offered

- Bachelor of Science in Business Administration

Nature of the Program

Global Supply Chain Management (GSCM) is a challenging and rewarding professional field that has become critical to successful companies and will continue to grow in importance, offering a broad range of career opportunities across a wide range of industries. Supply chain roles and responsibilities comprise a vast array of business functions, such as demand planning, inventory control, customer fulfillment, logistics, freight, warehousing, production planning, purchasing, sourcing, among others. The Global Supply Chain Management program at WVU provides an integrated end-to-end perspective and prepares students to view the chain of supplies as a complex and global system. Through experiential learning activities, projects with industry and government, and interaction with supply chain professionals, the program prepares students to identify critical interdependencies to lead supply chain activities effectively, rethink supply chain processes to improve performance, strategically integrate technology and innovate, and make ethical supply chain decisions. The curriculum and activities focus not only on the core technical knowledge but also on the essential leadership skills needed for a successful career in this exciting and increasingly critical field.

Entry-level job opportunities include:

- Area manager
- Business analyst
- Buyer/planner
- Category analyst
- Consultant
- Freight coordinator
- Inventory manager
- Logistics manager
- Materials planning manager
- Operational performance analyst
- Operations supervisor
- Production planning
- Supply chain analyst
- Supply chain manager

ADMINISTRATION

GLOBAL SUPPLY CHAIN MANAGEMENT PROGRAM COORDINATOR

- Ednilson Bernardes - Ph.D.
University Minnesota
-

FACULTY

CHAIR

- A. Graham Peace - Ph.D. (University of Pittsburgh)

GSCM PROGRAM COORDINATOR, PROFESSOR

- Ednilson Bernardes - Ph.D. (University of Minnesota)
Supply Chain Management

ASSOCIATE PROFESSOR

- John Saldanha - Ph.D. (Penn State University)
Supply Chain Management

ASSISTANT PROFESSOR

- Bo Lan - Ph.D. (Iowa State University)

TEACHING ASSISTANT PROFESSOR

- Jeremy Roberts - Ph.D.

Admissions

Students who are direct admitted to the major as first-time freshmen must possess an overall GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major at the beginning of the semester in which they satisfy the course prerequisites listed below. Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

ACCT 201 & ACCT 202	Principles of Accounting and Principles of Accounting	6
CS 101	Intro to Computer Applications	4
ECON 201 & ECON 202	Principles of Microeconomics and Principles of Macroeconomics	6
ECON 225 or STAT 211	Elementary Business and Economics Statistics Elementary Statistical Inference	3
ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	3-6
Choose one of the Following:		3-4
MATH 124	Algebra with Applications	
MATH 126	College Algebra	
MATH 129	Pre-Calculus Mathematics	
MATH 153	Calculus 1a with Precalculus	
Choose one of the Following:		3-4
MATH 150	Applied Calculus *	
MATH 154	Calculus 1b with Precalculus *	
MATH 155	Calculus 1 *	
MATH 156	Calculus 2 *	
Total Hours		28-33

* A minimum grade of B- in MATH 150 is required for admission to the program. A grade of C- in MATH 154 or a higher college calculus course satisfies the calculus requirement.

Students who are direct admitted to the major and meet the requirements listed above are guaranteed permission to enroll in upper-division course work. The Chambers College will accommodate as many majors as resources are available. Students who are denied admission to the major may apply for admission in a future application period or accept admission to an alternative major in the Chambers College.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Business Administration in Global Supply Chain Management (<https://admissions.wvu.edu/academics/majors/global-supply-chain-management/>) major.

Click here to view the Suggested Plan of Study (p. 495)

Global Supply Chain Management Program Requirements

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum Requirements

Overall GPA of 2.0 required

Possess a minimum GPA of 2.0 for all major courses (i.e. ACCT, GSCM) calculated using all attempted GPA hours unless excluded by the D/F repeat policy.

ACCT 201	Principles of Accounting (Minimum grade of C-)	3
ACCT 202	Principles of Accounting (Minimum grade of C-)	3
CS 101	Intro to Computer Applications (Minimum grade of C-; may fulfill GEF 2A)	4
ECON 201	Principles of Microeconomics (Minimum grade of C-; may fulfill GEF 8)	3
ECON 202	Principles of Macroeconomics (Minimum grade of C-; may fulfill GEF 8)	3
Select one of the following (Minimum grade of C-, may fulfill GEF 8):		3
ECON 225	Elementary Business and Economics Statistics	
STAT 211	Elementary Statistical Inference	
Select one of the following (Minimum grade of C-; may fulfill GEF 1):		3-6
ENGL 101 & ENGL 102 ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	
GEF 2A, Science and Technology		3
GEF 5, Human Inquiry & the Past		3
GEF 6, The Arts & Creativity		3
GEF 7, Global Studies & Diversity		3
Select one of the following; minimum grade of B- in MATH 150 or C- in MATH 154 or higher; (may fulfill GEF 3):		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	
Select one of the following (may fulfill GEF 4):		3
PSYC 101	Introduction to Psychology	
SOCA 101	Introduction to Sociology	
BCOR 191	First-Year Seminar	1
BCOR 199	Introduction to Business	3
BCOR 299	Business Communication	3
BCOR 320	Legal Environment of Business	3
BCOR 330	Information Systems and Technology	3
BCOR 340	Principles of Finance	3
BCOR 350	Principles of Marketing	3
BCOR 360	Supply Chain Management	3
BCOR 370	Managing Individuals & Teams	3
BCOR 380	Business Ethics	3
BCOR 460	Contemporary Business Strategy	3
ACCT 331	Managerial Accounting	3
GSCM 350	Sourcing and Supply Management	3
GSCM 355	Logistics and Distribution Management	3
GSCM 360	Supply Chain Analytics	3
GSCM 370	Transportation Management	3
GSCM 425	Supply Chain Network Design	3
GSCM 430	Supply Chain Technology	3
GSCM 450	Supply Chain Quality Management	3
GSCM 455	Project Management	3
GSCM 470	Global Supply Chain Systems	3
Unrestricted Electives (needed to reach 120 hours)		16
Total Hours		120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
BCOR 199		3 ACCT 201	3
BCOR 191		1 ECON 201 (GEF 8)	3
CS 101 (GEF 2A)		4 ENGL 101 (GEF 1)	3
Select one of the following (GEF 3):		3 Select one of the following:	3
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
Select one of the following (GEF 4):		3	
SOCA 101			
PSYC 101			
GEF (Choose from F2A, F5, F6 or F7)		3	
		17	15

Second Year

Fall	Hours	Spring	Hours
ACCT 202		3 BCOR 299	3
ECON 202 (GEF 8)		3 BCOR 330	3

ECON 225 (GEF 8)		3 BCOR 340	3
ENGL 102 (GEF 1)		3 BCOR 350	3
GEF (Choose from F2A, F5, F6, or F7)		3 BCOR 370	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
BCOR 360		3 ACCT 331	3
GSCM 350		3 BCOR 380	3
GSCM 355		3 GSCM 360	3
GEF (Choose from F2A, F5, F6 or F7)		3 GSCM 370	3
Minor or Unrestricted Electives		3 Minor or Unrestricted Electives	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
BCOR 320		3 BCOR 460	3
GSCM 425		3 GSCM 455	3
GSCM 430		3 GSCM 470	3
GSCM 450		3 Minor or Unrestricted Electives	4
Minor or Unrestricted Electives		3	
		15	13

Total credit hours: 120

Major Learning Outcomes

GLOBAL SUPPLY CHAIN MANAGEMENT

Students who successfully complete the program will be prepared and competitive for entry-level positions in areas pertaining to supply chain management. These jobs include areas such as materials project manager, sourcing leader, supply chain analyst, production analyst, logistics planning, shipping and delivery management, among others.

- Graduates from the program will have the knowledge and skills to manage and coordinate all supply chain functions in an enterprise, from overseeing acquisition, internal allocation of resources, movement and storage of raw materials and inventory, to managing complex networks of supply and demand.
- They will have the knowledge and skills to lead supply chain improvement projects, to function in supply chain teams, and to perform or lead supply chain activities.
- Graduates will be able to recognize the systemic and global nature of supply chain processes and activities in the decision-making process, the interdependencies critical to effectively manage and improve performance, the role of supply chain information technology in the effective management and improvement of supply chain activities, and the complexities of global supply chain operations and related ethical issues.
- In addition, students will recognize the great potential that supply chain activities and decisions offer in terms of making a positive contribution not only to the improvement of business performance but also to society.

Hospitality and Tourism Management, B.S.B.AD.

Degree Offered

- Bachelor of Science in Business Administration

Nature of the Program

The mission of the Hospitality and Tourism Management program is to prepare future business leaders in the hospitality and tourism industry. The program seeks to be known as an innovation leader in the education of hospitality business students. The curriculum provides a solid foundation in all core business functions along with specialized courses in the field. The curriculum balances theory and practice with internship requirements that take students around the world.

Hospitality and Tourism Management students are actively involved in the Hospitality Innovation Technology (HIT) Lab, a platform for both industry and academia to come together to solve the problems of the hospitality and tourism industry. The program includes student-run Hospitality Club and several networking opportunities with the Advisory Council and industry partners. Students also has an opportunity to join the Eta Sigma Delta (ESD) WVU chapter, an international hospitality management honor society.

Students have been successfully placed with companies such as the Marriott International, Walt Disney, Hilton, Hyatt Hotels Corporation, InterContinental Hotels Group, Stonebridge Companies, Real Hospitality Group, Fresh Hospitality Group, The Greenbrier Resort, Nemaocolin Woodlands Resorts, and other hospitality organizations.

FACULTY

CHAIR

- A. Graham Peace - Ph.D. (University of Pittsburgh)

DIRECTOR, HIT LAB, AND ASSOCIATE PROFESSOR

- Ajay Aluri - Ph.D. (Oklahoma State University)
Founding Director, Hospitality Innovation and Technology (HIT) Lab, Hospitality Revenue Management, Hospitality Social CRM (Customer Relationship Management).

TEACHING ASSOCIATE PROFESSOR

- Frank DeMarco - M.B.A. (West Virginia University)
Hospitality and tourism leadership, Hotel operations and restaurant management, Event planning, Professional field experience.

Admissions

Students who are direct admitted to the major as first-time freshmen must possess an overall GPA of at least 2.0 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major at the beginning of the semester in which they satisfy the course prerequisites listed below. Applicants also must possess an overall GPA of at least 2.0 to be considered for admission to the major.

ACCT 201 & ACCT 202	Principles of Accounting and Principles of Accounting	6
CS 101	Intro to Computer Applications	4
ECON 201 & ECON 202	Principles of Microeconomics and Principles of Macroeconomics	6
ECON 225 or STAT 211	Elementary Business and Economics Statistics Elementary Statistical Inference	3
ENGL 101 & ENGL 102	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research	6
Choose one of the following:		3-4
MATH 124	Algebra with Applications	
MATH 126	College Algebra	
MATH 129	Pre-Calculus Mathematics	
MATH 153	Calculus 1a with Precalculus	
Choose one of the following:		3-4
MATH 150	Applied Calculus *	
MATH 154	Calculus 1b with Precalculus *	
MATH 155	Calculus 1 *	
MATH 156	Calculus 2 *	
Total Hours		31-33

Students who are direct admitted to the major and meet the requirements listed above are guaranteed permission to enroll in upper-division course work. The Chambers College will accommodate as many majors as resources are available. Students who are denied admission to the major may apply for admission in a future application period or accept admission to an alternative major in the Chambers College.

* A grade of D- in Math 150 or a higher level of college calculus satisfies the calculus requirement for admission to the program.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Business Administration in Hospitality and Tourism Management (<https://admissions.wvu.edu/academics/majors/hospitality-and-tourism-management/>) major.

Click here to view the Suggested Plan of Study (p. 499)

Hospitality and Tourism Management Program Requirements

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

To qualify for the Bachelor of Science in Business Administration students must meet the following criteria:

- Complete a minimum of 120 credit hours.
- Possess an overall GPA of 2.0.
- Possess a minimum GPA of 2.0 for all major courses (i.e. HTOR), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.
- The Chambers College of Business and Economics accepts all baccalaureate transferable course work completed at public and private colleges in West Virginia and other regionally accredited institutions. Since the College is AACSB accredited, upper-division courses (courses equivalent to 300/400 level at WVU) must be evaluated by the Dean or designee before they may count toward business core, major core and major restricted electives in the Bachelor of Science in Business Administration or Bachelor of Science in Economics program.

Curriculum Requirements

Minimum Overall GPA of 2.0 is required

Possess a minimum GPA of 2.0 for all major courses (i.e. HTOR), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.

ACCT 201	Principles of Accounting (Minimum grade of C-)	3
ACCT 202	Principles of Accounting (Minimum grade of C-)	3
CS 101	Intro to Computer Applications (Minimum grade of C-; may fulfill GEF 2A)	4
ECON 201	Principles of Microeconomics (Minimum grade of C-; may fulfill GEF 8)	3
ECON 202	Principles of Macroeconomics (Minimum grade of C-; may fulfill GEF 8)	3
Select one of the following (Minimum Grade of C-; may fulfill GEF 8):		3
ECON 225	Elementary Business and Economics Statistics	
STAT 211	Elementary Statistical Inference	
Select one of the following (Minimum Grade of C-; may fulfill GEF 1):		3-6
ENGL 101 & ENGL 102	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research	
ENGL 103	Accelerated Academic Writing	

GEF 2A, Science & Technology		3
GEF 5, Human Inquiry & the Past		3
GEF 6, The Arts & Creativity		3
GEF 7, Global Studies & Diversity		3
Select one of the following; minimum grade of D- in MATH 150 or D- in MATH 154 or higher (may fulfill GEF 3):		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	
Select one of the following (may fulfill GEF 4):		3
PSYC 101	Introduction to Psychology	
SOCA 101	Introduction to Sociology	
BCOR 191	First-Year Seminar	1
BCOR 199	Introduction to Business (Fulfills First Year Seminar requirement)	3
BCOR 299	Business Communication (Fulfills Writing and Communication Skills Requirement)	3
BCOR 320	Legal Environment of Business	3
BCOR 330	Information Systems and Technology	3
BCOR 340	Principles of Finance	3
BCOR 350	Principles of Marketing	3
BCOR 360	Supply Chain Management	3
BCOR 370	Managing Individuals & Teams	3
BCOR 380	Business Ethics	3
BCOR 460	Contemporary Business Strategy	3
HTOR 376	Hospitality & Tourism Leadership	3
HTOR 470	Tourism Management	3
HTOR 471	Restaurant Management	3
HTOR 472	Hotel Operations Management	3
HTOR 473	Hospitality Social Customer Relationship Management	3
HTOR 474	Hospitality Revenue Management	3
HTOR 480	Event Planning Practicum	3
HTOR 491	Professional Field Experience *	6
MANG 330	Human Resource Management Fundamentals	3
Minor or Unrestricted Electives (needed to reach 120 hours)		16
Total Hours		120

* Hospitality and Tourism Management majors must complete two distinct professional field experiences, each of which must be approved by the academic department.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
BCOR 199		3 ACCT 201	3
BCOR 191		1 ECON 201 (GEF 8)	3
CS 101 (GEF 2A)		4 ENGL 101 (GEF 1)	3
Select one of the following (GEF 3):		3 Select one of the following:	3
MATH 124		MATH 150	
MATH 129		MATH 154	
MATH 150		MATH 155	
MATH 153		MATH 156	

MATH 155		GEF (Choose from 2A, 5, 6 or 7)	3
GEF (Choose from 2A, 5, 6 or 7)		3	
Select one of the following (may fulfill GEF 4)		3	
SOCA 101			
PSYC 101			
		17	15
Second Year			
Fall	Hours	Spring	Hours
ACCT 202		3 BCOR 299	3
ECON 202 (GEF 8)		3 BCOR 340	3
ECON 225 or STAT 211 (GEF 8)		3 BCOR 350	3
ENGL 102 (GEF 1)		3 BCOR 370	3
GEF (Choose from 2A, 5, 6 or 7)		3 HTOR 376	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
BCOR 320		3 BCOR 330	3
BCOR 360		3 BCOR 380	3
HTOR 470		3 HTOR 472	3
HTOR 471		3 HTOR 474	3
Minor or Unrestricted Electives		3 GEF (Choose from 2A, 5, 6 or 7)	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
HTOR 473		3 BCOR 460	3
HTOR 491		3 HTOR 480	3
MANG 330		3 HTOR 491	3
Minor or Unrestricted Electives		6 Minor or Unrestricted Electives	4
		15	13

Total credit hours: 120

Major Learning Outcomes

HOSPITALITY AND TOURISM MANAGEMENT

The objective of providing a foundational education in hospitality and tourism management at the undergraduate level cannot be realized without appropriate curricula content, effective teaching, and ultimately, learning. Within the undergraduate hospitality and tourism management major, we subscribe to the following learning goals for each of our undergraduate students:

- Graduates will be able to manage and evaluate functional systems in lodging and restaurant operations.
 - Students can identify front of the office and back of the office tasks, roles, and responsibilities of managing operations.
 - Students can operate and manage functional areas of lodging and restaurant operations effectively and efficiently.
 - Students can describe the interrelationship of organizational structure and the operational strategy of hotels and restaurants.
 - Students can list the functions of various other departments in hotels and restaurants.
 - Students can describe the effective best practices in managing hotels and restaurants.
 - Students can identify ways to market a product or service that contribute to increased guest satisfaction and experience.
 - Students can identify financial goals and results by analyzing the costs involved in managing hotel and restaurant operations.
- Graduates will be able to think critically and solve problems in the Hospitality and Tourism industry.
- Graduates will be able to deal with the dynamics of individuals and teams within organizations and to motivate, lead, and inspire employees toward achieving organizational goals.
- Graduates will be able to use computer and information technology in solving problems and perform functions commonly seen in managing businesses and other organizations.
- Graduates will be able to communicate recommendations to management and other constituencies, orally and in writing.

- Graduates will have knowledge of basic business disciplines: accounting, economics, finance, management, management information systems, and marketing.

Integrated Marketing Communication, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

The Integrated Marketing and Communications program is a wholly online, interdisciplinary major through two nationally accredited WVU programs: marketing in the Chambers College of Business and Economics and advertising and public relations in the Reed College of Media.

This major combines the complementary business and communications fields of advertising, marketing and public relations. As such, students develop an understanding of using traditional, digital/social media and other promotional and marketing techniques to reach and engage consumers and stakeholders. Students will learn about ethical, legal and socially responsible considerations in such efforts and will demonstrate an understanding of research, data, diverse audiences and inclusive practices.

Admissions

The Integrated Marketing Communications major uses the same undergraduate admission standards for first-time freshmen as West Virginia University (WVU).

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Integrated Marketing Communications (<https://online.wvu.edu/programs/integrated-marketing-communications-b-s/>) major.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

IMC 191 (Minimum grade of C-)		2
General Education Requirements		
GEF 1, 2, 5, 6, and 7		21
MDIA 101	Media and Society	3
IMC 215	Principles of Integrated Marketing Communications (IMC) (Minimum grade of C-)	3
MDIA 215	Media Writing	3
ACCT 200	Survey of Accounting	3

STCM 315 or PR 324	Strategic Advertising and Public Relations Writing Public Relations Writing and Applications	3
PSYC 101 or SOCA 101	Introduction to Psychology Introduction to Sociology	3
BCOR 350	Principles of Marketing	3
ADPR 439	Strategic Social Media	3
MKTG 330	Distribution Channels	3
BCOR 380	Business Ethics	3
ECON 225	Elementary Business and Economics Statistics (GEF 3)	3
ADPR 421 or MKTG 325	Advertising & PR Audience Insights & Analysis Marketing Research	3
MKTG 350	Product and Price Policies	3
ADV 450 or MKTG 315	Audience Psychology and Behavior Buyer Behavior	3
ADV 403	Media Planning/Strategy	3
ADV 491 or PR 491 or MKTG 491	Professional Field Experience Professional Field Experience Professional Field Experience	3
ADPR 438	Branded Content and Narrative	3
MKTG 400-Level Elective		3
IMC 459	IMC Capstone (Minimum grade of C-)	3
BCOR 320	Legal Environment of Business	3
Required Minor *		15
General Electives		22
Total Hours		120

* Wholly online minors (which must have 9 distinct hours that aren't applied toward a major requirement) include Agribusiness Management, Child Development, Communication Studies, Criminology, Entertainment Media, Event, Planning, Family and Youth, Forensic and Investigative Science, General Business, Health Promotion, History, Human Services, Infant and Toddler, Music Industry, Political Science, Professional Writing and Editing, Religious Studies, Sport Communication, Sport and Exercise Psychology, Strategic Social Media.

First Year

Fall	Hours	Spring	Hours
IMC 191		2 ACCT 200	3
ENGL 101 (GEF 1)		3 MDIA 215	3
MDIA 101 (GEF 4)		3 GEF 2	3
IMC 215		3 Minor Course 1	3
Elective		3 Elective	3
Elective		1	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 ECON 225 (GEF 3)	3
BCOR 350		3 ADPR 439	3
PSYC 101 or SOCA 101		3 BCOR 380	3
STCM 315 or PR 324		3 MKTG 330	3
GEF 2		3 Minor Course 2	3
		15	15

Third Year

Fall	Hours	Spring	Hours
ADPR 421 or MKTG 325		3 ADV 403	3
MKTG 350		3 MKTG 315 or ADV 450	3
Minor Course 3		3 Minor Course 4	3

GEF 5	3 GEF 6	3
Elective	3 Elective	3
<hr/>		
		15

Fourth Year

Fall	Hours	Spring	Hours
ADV 491, PR 491, or MKTG 491		3 IMC 459	3
ADPR 438		3 BCOR 320	3
Minor Course 5		3 GEF 7	3
400-level MKTG Elective		3 Elective	3
Elective		3 Elective	3
<hr/>			
		15	15

Total credit hours: 120

Major Learning Outcomes**INTEGRATED MARKETING COMMUNICATIONS**

Graduates of the undergraduate IMC program will:

1. Apply critical thinking, creativity and secondary research skills in collaboration with student colleagues and in the completion of written assignments.
2. Illustrate an understanding of consumer and business segments and the importance of reaching, serving and engaging diverse publics.
3. Demonstrate an understanding of the strategic marketing communications planning process and the importance of a demonstrated return on investment.
4. Demonstrate an understanding of the history of media, advertising, marketing and public relations, their complementary roles, and the influence of technology on these professions.
5. Know when and how to apply traditional and social media planning and placement buys in support of an organization's goals.
6. Be able to evaluate and assess ethical, legal and socially responsible marketing communications decisions.
7. Describe the major types of consumer behavior and the stages in the buyer decision process.

Department of Management, B.S.B.AD.**Degree Offered**

- Bachelor of Science in Business Administration

Nature of the Program

The management major provides the skills and knowledge needed for students who aspire to leadership roles in business. The major prepares them for various managerial positions. Students choose from one of three areas of emphasis (AoE) in management:

- Entrepreneurship
 - Human Resource Management
 - International Business
- Students pursuing the **Entrepreneurship** area of emphasis pursue positions such as small business manager, entrepreneur, franchise owner or opportunities with large companies with an innovation focus.
 - Students pursuing the **Human Resource Management** area of emphasis develop capabilities for careers in compensation, recruiting, or training that could lead to managerial positions in human resources.
 - Students pursuing the **International Business** area of emphasis are encouraged to study a foreign language and to participate in a study abroad program. Students electing this area of emphasis would be prepared to work in overseas locations and develop expertise in managing operations outside the United States.

Management majors must declare one area of emphasis and complete all requirements for the major and the AoE to be eligible for graduation. Students who prefer not to pursue an area of emphasis may declare the General Business major, which offers students the opportunity to complete electives in more than one of the areas of emphasis.

FACULTY

CHAIR

- Abhishek Srivastava - Ph.D. (University of Maryland, College Park)

PROFESSORS

- Mark Gavin - Ph.D. (Purdue University)
Organizational behavior, Human resource management, Ph.D. seminars-Research methods, Structural equation modeling.
- Jodi Goodman - Ph.D. (Georgia Institute of Technology)
Organization behavior, Human resource management, Learning & training methodologies, Statistics, Ph.D. seminar-Organizational behavior.
- Edward Tomlinson - Ph.D. (The Ohio State University)

ASSOCIATE PROFESSORS

- Olga Bruyaka - Ph.D. (Jean Moulin University Lyon 3, EM Lyon)
Strategic management, Technology management and innovation, Strategic alliances, Firm internationalization, Social issues in management
- David Dawley - Ph.D. (Florida State University)
Strategic management, Strategic turnaround decisions and organization commitment, Ph.D. seminar-Strategy.
- Jeffrey Houghton - Ph.D. (Virginia Polytechnic Institute and State University)
International human resources management, Self leadership, Team processes, Ph.D. seminar-Leadership.
- XiaoXiao Hu - Ph.D.
- Nancy McIntyre - Ph.D. (University of Rhode Island)
Management, Organizational behavior.

ASSISTANT PROFESSORS

- Tianxu Chen - Ph.D.
- James Field - Ph.D.
Virginia Commonwealth University
- Kayla Follmer - Ph.D.
- Lily Morse - Ph.D.

TEACHING PROFESSOR

- David Cale - Ph.D. (Duquesne University-Pittsburgh)
Business ethics
- Suzanne Gosden-Kitchen - Ed.D. (West Virginia University)
Human resource management, Diversity, EEO, Disability, Business writing, Higher education leadership.
- Kelly Nix - Ph.D.
West Virginia University
- Thomas Zeni - Ph.D. (University of Oklahoma, Norman)
Ethical decision-making, Counterproductive work behaviors, Emotions in organizations, and Quantitative methodology and research design

PROFESSORS EMERITI

- Gerald Blakely
- Neil Bucklew
- Randy D. Elkin
- Jack Fuller - PhD
Professor Emeritus
- John Harpell, Jr.
- Richard W. Humphreys
- Thomas S. Isaack
- Ali H. Mansour

ADJUNCT PROFESSORS

- Margrit Blakely
- Anna Carrier - J.D.
- Susan Catanzarite - J.D.
- Deborah (DJ) Hendricks - Ph.D.

- David Hendrickson - J.D.
- Eric London - J.D.
- Tina Parton - M.S.I.R.
- Jon Reed - J.D.
- Bob Richardson - J.D.
- Kellyn Smith - M.S.I.R.
- Mark Sullivan - M.S.I.R.
- Jessika Thomas - J.D.

Admissions

Students who are direct admitted to the major as first-time freshmen must possess an overall GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major at the beginning of the semester in which they satisfy the course prerequisites listed below. Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

ACCT 201 & ACCT 202	Principles of Accounting and Principles of Accounting	6
CS 101	Intro to Computer Applications	4
ECON 201 & ECON 202	Principles of Microeconomics and Principles of Macroeconomics	6
ECON 225 or STAT 211	Elementary Business and Economics Statistics Elementary Statistical Inference	3
ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	6
Choose one of the Following:		3-4
MATH 124	Algebra with Applications	
MATH 126	College Algebra	
MATH 129	Pre-Calculus Mathematics	
MATH 153	Calculus 1a with Precalculus	
Choose one of the Following:		3-4
MATH 150	Applied Calculus *	
MATH 154	Calculus 1b with Precalculus *	
MATH 155	Calculus 1 *	
MATH 156	Calculus 2 *	
Total Hours		31-33

Students who are direct admitted to the major and meet the requirements listed above are guaranteed permission to enroll in upper-division course work. The Chambers College will accommodate as many majors as resources are available. Students who are denied admission to the major may apply for admission in a future application period or accept admission to an alternative major in the Chambers College.

* A minimum grade of C- in MATH 150 is required for admission to the program. A grade of D- in MATH 154 or a higher level of college calculus also satisfies the calculus requirement for admission to the program.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Business Administration in Management (<https://admissions.wvu.edu/academics/majors/management/>) major.

Click here to view the Suggested Plan of Study (p. 507)

Management Program Requirements

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Management Program Requirements

To qualify for the Bachelor of Science in Business Administration students must meet the following criteria:

- Complete a minimum of 120 credit hours.
- Possess an overall GPA of 2.0 or higher.
- Possess a minimum GPA of 2.0 for all Major Courses (i.e., ACCT, ENTR, GSCM, HRMG, INBS, MANG, and all AOE courses) calculated using all attempted GPA hours unless excluded by the D/F repeat policy.
- The College of Business and Economics accepts all baccalaureate transferable course work completed at public and private colleges in West Virginia and other regionally accredited institutions. Since the College is AACSB accredited, upper-division courses (courses equivalent to 300/400 level at WVU) must be evaluated by the Dean or designee before they may count toward business core, major core and major restricted electives in the Bachelor of Science in Business Administration or Bachelor of Science in Economics program.

Curriculum Requirements

Overall GPA of 2.0 or higher is required

Possess a minimum GPA of 2.0 for all Major Courses (i.e. ACCT, ENTR, GSCM, HRMG, INBS, MANG, and all AOE courses), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.

ACCT 201	Principles of Accounting (Minimum grade of C-)	3
ACCT 202	Principles of Accounting (Minimum grade of C-)	3
CS 101	Intro to Computer Applications (Minimum grade of C-; may fulfill GEF 2A)	4
ECON 201	Principles of Microeconomics (Minimum grade of C-; may fulfill GEF 8)	3
ECON 202	Principles of Macroeconomics (Minimum grade of C-; may fulfill GEF 8)	3
Select one of the following (Minimum Grade of C-; may fulfill GEF 8):		3
ECON 225	Elementary Business and Economics Statistics	
STAT 211	Elementary Statistical Inference	
Select one of the following (Minimum grade of C-; may fulfill GEF 1):		3-6
ENGL 101 & ENGL 102 ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	
GEF 2A, Science and Technology		3
GEF 5, Human Inquiry & the Past		3
GEF 6, The Arts & Creativity		3
GEF 7, Global Studies & Diversity		3
Select one of the following; minimum grade of C- in MATH 150 or D- in MATH 154 or higher; (may fulfill GEF 3):		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	
Select one of the following (may fulfill GEF 4):		3
PSYC 101	Introduction to Psychology	
SOCA 101	Introduction to Sociology	
BCOR 191	First-Year Seminar	1
BCOR 199	Introduction to Business (Fulfills First Year Seminar requirement)	3
BCOR 299	Business Communication (Fulfills Writing and Communication Skills Requirement)	3
BCOR 320	Legal Environment of Business	3
BCOR 330	Information Systems and Technology	3
BCOR 340	Principles of Finance	3
BCOR 350	Principles of Marketing	3
BCOR 360	Supply Chain Management	3
BCOR 370	Managing Individuals & Teams	3
BCOR 380	Business Ethics	3
BCOR 460	Contemporary Business Strategy	3
ACCT 331	Managerial Accounting	3
MANG 330	Human Resource Management Fundamentals	3
MANG 360	International Business	3
MANG 422	The Individual and the Organization	3
MANG 434	Business Research Methods	3
Required Area of Emphasis		12
Business Elective (Upper-Division ACCT, ECON, ENTR, FIN, HOTR, MANG, MIST, MKTG, GSCM, ORGL)		3
Unrestricted Electives (needed to reach 120 hours)		16
Total Hours		120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
BCOR 199		3 ACCT 201	3
BCOR 191		1 ECON 201 (GEF 8)	3
CS 101 (GEF 2A)		4 ENGL 101 (GEF 1)	3
Select one of the following (GEF 3):		3 Select one of the following:	3
MATH 124		MATH 150	
MATH 129		MATH 154	
MATH 150		MATH 155	
MATH 153		MATH 156	
MATH 155		GEF (Choose from F2A, 5, 6 or 7)	3
Select one of the following (GEF 4):		3	
SOCA 101			
PSYC 101			
GEF (Choose from F2A, 5, 6 or 7)		3	
		17	15

Second Year

Fall	Hours	Spring	Hours
ACCT 202		3 BCOR 299	3
ECON 202 (GEF 8)		3 BCOR 330	3
ECON 225 (GEF 8)		3 BCOR 340	3

ENGL 102 (GEF 1)		3 BCOR 350	3
GEF (Choose from F2A, F5, F6, or F7)		3 BCOR 370	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
Area of Emphasis Elective		3 Area of Emphasis Elective	3
BCOR 320		3 BCOR 360	3
MANG 330		3 MANG 360	3
GEF (Choose from F2A, 5, 6 or 7)		3 MANG 422	3
Minor or Unrestricted Electives		3 Minor or Unrestricted Electives	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
Area of Emphasis Elective		3 Area of Emphasis Elective	3
ACCT 331		3 Area of Emphasis Elective or Unrestricted Electives	3
BCOR 380		3 BCOR 460	3
Business Elective		3 MANG 434	3
Minor or Unrestricted Electives		2 Minor or Unrestricted Electives	2
		14	14

Total credit hours: 120

Area of Emphasis

A student must declare an Area of Emphasis (AoE) upon matriculation to the management program. The required courses for each area of emphasis are listed in the charts below.

HUMAN RESOURCE MANAGEMENT AREA OF EMPHASIS

HRMG 440	Training and Development	3
HRMG 450	Staffing and Selection	3
HRMG 460	Compensation and Benefits	3
HRMG 470	Conflict Management	3
or HRMG 480	Collective Bargaining and Labor Relations	3
Total Hours		12

INTERNATIONAL BUSINESS AREA OF EMPHASIS

INBS 310	Global Business Communication	3
INBS 480	Global Strategic Issues	3
Choose two of the following:		6
ECON 451	International Economics	
FIN 480	International Finance	
MKTG 440	Export Management	
MKTG 485	Global Marketing	
Total Hours		12

Major Learning Outcomes

MANAGEMENT

The objective of providing a foundational education in management at the undergraduate level cannot be realized without appropriate curricula content, effective teaching, and ultimately, learning. Within the undergraduate management major, we subscribe to the following learning goals for each of our undergraduate students:

- Graduates will be able to deal with the dynamics of individuals and teams within organizations and to motivate, lead, and inspire employees toward achieving organizational goals.
- Graduates will have an appreciation of the ethical, legal, and regulatory issues impacting the decision-making process.

- Graduates will recognize the opportunities and challenges associated with the global marketplace.
- Graduates will acquire knowledge of basic functional areas of human resource management.

Management Information Systems (MIS), B.S.B.AD.

Degree Offered

- Bachelor of Science in Business Administration

Nature of the Program

Students in the MIS program gain the skills necessary to analyze an organization's information needs and develop technological solutions to effectively solve business problems. In today's fast-paced, global environment, technology is a necessary and integral part of business. MIS professionals have the knowledge to understand both the business goals and information needs of the organization, and to deliver the application of technology to meet those needs. Career opportunities include:

- Consulting
- Database Administration
- Information Systems Security
- Networking and Telecommunications
- Systems Analysis and Design
- Technology Management

This is an excellent major for students who enjoy technology and want to apply their knowledge in a business environment.

FACULTY

DEPARTMENT CHAIRPERSON

- A. Graham Peace - Ph.D. (University of Pittsburgh)
Management information systems.

PROFESSOR

- Virginia Franke Kleist - Ph.D. (University of Pittsburgh)
Management information systems.

ASSOCIATE PROFESSORS

- A. Graham Peace - Ph.D. (University of Pittsburgh)
Management information systems.
- Nanda Surendra - Ph.D. (University of Cincinnati)
Management information systems.

ASSISTANT PROFESSOR

- Stephane Collignon - Ph.D. (Virginia Tech)
Business Information and Technology
- Salman Nazir - Ph.D. (McGill University)
Management information systems
- Brad Price - Ph.D. (University of Minnesota)
Statistics

EMERITUS

- Thomas L. Blaskovics

TEACHING ASSISTANT PROFESSOR

- Janet Fraser - Ph.D. (Pennsylvania State University)
Business data analytics.
- Christopher Ramezan - Ph.D. (West Virginia University)
Cybersecurity.

Admissions

Students who are direct admitted to the major as first-time freshmen must possess an overall GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major at the beginning of the semester in which they satisfy the course prerequisites listed below. Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

ACCT 201 & ACCT 202	Principles of Accounting and Principles of Accounting	6
CS 101	Intro to Computer Applications	4
ECON 201 & ECON 202	Principles of Microeconomics and Principles of Macroeconomics	6
ECON 225 or STAT 211	Elementary Business and Economics Statistics Elementary Statistical Inference	3
ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	3-6
Choose one of the following:		3-4
MATH 124	Algebra with Applications	
MATH 126	College Algebra	
MATH 129	Pre-Calculus Mathematics	
MATH 153	Calculus 1a with Precalculus	
Choose one of the following:		3-4
MATH 150	Applied Calculus *	
MATH 154	Calculus 1b with Precalculus *	
MATH 155	Calculus 1 *	
MATH 156	Calculus 2 *	
Total Hours		28-33

* A minimum grade of B- in MATH 150 is required for admission to the program. A grade of C- in MATH 154 or a higher college calculus course satisfies the calculus requirement.

Students who are direct admitted to the major and meet the requirements listed above are guaranteed permission to enroll in upper-division course work. The Chambers College will accommodate as many majors as resources are available. Students who are denied admission to the major may apply for admission in a future application period or accept admission to an alternative major in the Chambers College.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Business Administration in Management Information Systems (<https://admissions.wvu.edu/academics/majors/management-information-systems/>) major.

Click here to view the Suggested Plan of Study (p. 512)

Management Information Systems Program Requirements

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

To qualify for the Bachelor of Science in Business Administration students must meet the following criteria:

- Complete a minimum of 120 credit hours.
- Possess an overall GPA of 2.0.
- Possess a GPA of 2.0 for all major courses (i.e. ACCT, MIST), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.
- The Chambers College of Business and Economics accepts all baccalaureate transferable course work completed at public and private colleges in West Virginia and other regionally accredited institutions. Since the College is AACSB accredited, upper-division courses (courses equivalent to 300/400 level at WVU) must be evaluated by the Dean or designee before they may count toward business core, major core and major restricted electives in the Bachelor of Science in Business Administration or Bachelor of Science in Economics program.

Curriculum Requirements

Minimum Overall GPA of 2.0 is required

Possess a GPA of 2.0 for all major courses (i.e. ACCT, MIST), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.

ACCT 201	Principles of Accounting (Minimum grade of C-)	3
ACCT 202	Principles of Accounting (Minimum grade of C-)	3
CS 101	Intro to Computer Applications (Minimum grade of C-; may fulfill GEF 2A)	4
ECON 201	Principles of Microeconomics (Minimum grade of C-; may fulfill GEF 8)	3
ECON 202	Principles of Macroeconomics (Minimum grade of C-; may fulfill GEF 8)	3
Select one of the following (Minimum grade of C-; may fulfill GEF 8):		3
ECON 225	Elementary Business and Economics Statistics	
STAT 211	Elementary Statistical Inference	
Select one of the following (Minimum Grade of C-; may fulfill GEF 1):		3-6
ENGL 101 & ENGL 102	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research	
ENGL 103	Accelerated Academic Writing	
GEF 2A, Science & Technology		3
GEF 5, Human Inquiry & the Past		3
GEF 6, The Arts & Creativity		3
GEF 7, Global Studies & Diversity		3
Select one of the following; minimum grade of B- in MATH 150 or C- in MATH 154 or higher; (may fulfill GEF 3):		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	
Select one of the following (may fulfill GEF 4):		3
PSYC 101	Introduction to Psychology	
SOCA 101	Introduction to Sociology	
BCOR 191	First-Year Seminar	1
BCOR 199	Introduction to Business (Fulfills First Year Seminar requirement)	3

BCOR 299	Business Communication (Fulfills Writing and Communication Skills Requirement)	3
BCOR 320	Legal Environment of Business	3
BCOR 330	Information Systems and Technology	3
BCOR 340	Principles of Finance	3
BCOR 350	Principles of Marketing	3
BCOR 360	Supply Chain Management	3
BCOR 370	Managing Individuals & Teams	3
BCOR 380	Business Ethics	3
BCOR 460	Contemporary Business Strategy	3
MIST 320	Managing Information Technology	3
MIST 351	Database Management Systems	3
MIST 352	Business Application Programming	3
MIST 353	Advanced Information Technology	3
MIST 355	Data Communications	3
MIST 450	Systems Analysis	3
MIST 452	Systems Design and Development	3
MIST Electives		9
Unrestricted Electives (needed to reach 120 hours)		16
Total Hours		120

The College restricts students to six credit hours of Professional Field Experience toward completion of a degree. No more than three credit hours may apply toward the major.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
BCOR 199		3 ACCT 201	3
BCOR 191		1 ECON 201 (GEF 8)	3
CS 101 (GEF 2A)		4 ENGL 101 (GEF 1)	3
Select one of the following (GEF 3):		3 Select one of the following:	3
MATH 124		MATH 150	
MATH 129		MATH 154	
MATH 150		MATH 155	
MATH 153		MATH 156	
MATH 155		GEF (Choose from 2A, 5, 6, or 7)	3
Select one of the following (GEF 4):		3	
SOCA 101			
PSYC 101			
GEF (Choose from 2A, 5, 6, or 7)		3	
		17	15

Second Year

Fall	Hours	Spring	Hours
ACCT 202		3 BCOR 299	3
ECON 202 (GEF 8)		3 BCOR 330	3
ECON 225 (GEF 8)		3 BCOR 350	3
ENGL 102 (GEF 1)		3 BCOR 370	3
GEF (Choose from F2A, F5, F6, or F7)		3 MIST 351	3
		15	15

Third Year

Fall	Hours	Spring	Hours
BCOR 340		3 BCOR 380	3
MIST 320		3 MIST 355	3

GEF (Choose from 2A, 5, 6, or 7)	3 Minor or Unrestricted Electives	6
MIST 352	3 MIST 353	3
Minor or Unrestricted Electives	3	
<hr/>		
	15	15

Fourth Year

Fall	Hours	Spring	Hours
BCOR 320		3 BCOR 460	3
BCOR 360		3 MIST 452	3
MIST 450		3 MIS Elective	3
MIS Elective		6 Minor or Unrestricted Electives	4
<hr/>			
		15	13

Total credit hours: 120

Major Learning Outcomes

MANAGEMENT INFORMATION SYSTEMS

The objective of providing a foundational education in management information systems and innovation at the undergraduate level cannot be realized without appropriate curricula content, effective teaching, and ultimately, learning. Within the undergraduate management information systems major, we subscribe to the following learning goals for each of our undergraduate students:

- Competence in core technical areas associated with MIS, such as programming, data communications and databases
- Knowledge of the selection, implementation and use of management information systems in organizations
- Awareness of how to analyze business problems and to design, build and maintain appropriate technological systems to solve those problems
- An ability to apply business skills to technical problems while using an information ethics lens to achieving solutions

Marketing, B.S.B.AD.

Degree Offered

- Bachelor of Science in Business Administration

Nature of the Program

Marketing professionals are involved in the exchange of value through planning, promoting, pricing, and distributing products and services. The marketing program is designed to give students a strong understanding of the elements of marketing plans used by organizations to satisfy customer needs and wants. In addition to the foundations of marketing strategy, the required courses provide an appreciation of how marketing strategies are used in the globalized economy. Students may select from three tracks: integrated digital marketing communications (iDMC), professional sales, and sustainable pathways to markets. Career opportunities for marketing majors include:

- Digital Marketing
- Distribution and Channel Management
- International Business
- Marketing Analytics
- Marketing Management
- Product Management
- Professional Sales
- Promotions
- Retail Management
- Sustainable Marketing

FACULTY

CHAIR

- Michael Walsh - Ph.D. (University of Pittsburgh)
Integrated marketing communications, Sales, Global Marketing, Public policy and marketing

PROFESSOR

- M. Paula Fitzgerald - Ph.D. (University of South Carolina)
Consumer behavior, Promotion, Marketing research

ASSOCIATE PROFESSORS

- Jody Crosno - Ph.D. (University of Kentucky)
Marketing channels, Product and price policies
- Annie Peng Cui - Ph.D. (Kent State University)
Brand management, International marketing, Consumer behavior

ASSISTANT PROFESSORS

- Laurel Anne Cook - Ph.D. (University of Arkansas)
Consumer collaboration, Consumer health & welfare, Public policy
- Julian Givi - Ph.D. (Carnegie Mellon University)
Consumer Behavior, Gift Giving
- Stephen He - Ph.D. (Georgia Institute of Technology)
Consumer information processing and make decisions in digital marketplaces
- Emily Tanner - Ph.D. (Oklahoma State University)
Formation and management of marketing relationships and the outcomes associated with strong relationships
- Xinchun Wang - Ph.D.
Sales

TEACHING ASSOCIATE PROFESSORS

- Chas Koermer - Ph.D. (University of Nebraska)
Intercultural communication (Middle East Gulf Region), Organizational communication and Instructional communication
- Beth Tomlinson - Ph.D. (Kent State University)
English
- Li Wang - Ph.D. (Ohio University)
Business communication, Diffusion of innovations, Digital communication.

TEACHING ASSISTANT PROFESSORS

- Suzanne Bal - MBA
- Rebecca Johnston - M.A.
Business communications.
- Susan Lantz - Ph.D. (West Virginia University)
First year students, Business communication, Gender and diversity in business

EMERITUS

- James R. Brown - DBA
- Robert Cook
- Cy Logar
- Philip Mahin
- John L. Porter

Admissions

Students who are direct admitted to the major as first-time freshmen must possess an overall GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major at the beginning of the semester in which they satisfy the course prerequisites listed below. Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

ACCT 201 & ACCT 202	Principles of Accounting and Principles of Accounting	6
CS 101	Intro to Computer Applications	4
ECON 201 & ECON 202	Principles of Microeconomics and Principles of Macroeconomics	6
ECON 225	Elementary Business and Economics Statistics	3

or STAT 211	Elementary Statistical Inference	
ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	3-6
Choose one of the following:		3-4
MATH 124	Algebra with Applications	
MATH 126	College Algebra	
MATH 129	Pre-Calculus Mathematics *	
MATH 153	Calculus 1a with Precalculus *	
Choose one of the following:		3-4
MATH 150	Applied Calculus *	
MATH 154	Calculus 1b with Precalculus *	
MATH 155	Calculus 1 *	
MATH 156	Calculus 2 *	
Total Hours		28-33

Students who are direct admitted to the major and meet the requirements listed above are guaranteed permission to enroll in upper-division course work. The Chambers College will accommodate as many majors as resources are available. Students who are denied admission to the major may apply for admission in a future application period or accept admission to an alternative major in the Chambers College.

* A minimum grade of C- in MATH 150 is required for admission to the program. A grade of D- in MATH 154 or a higher college calculus course satisfies the calculus requirement for admission to the program.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Business Administration in Marketing (<https://admissions.wvu.edu/academics/majors/marketing/>) major.

[Click here to view the Suggested Plan of Study \(p. 517\)](#)

Marketing Program Requirements

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

To qualify for the degree of Bachelor of Science in Business Administration, Marketing, students must meet the following criteria:

- Complete a minimum of 120 credit hours.
- Possess a minimum overall GPA of 2.0.
- Possess a GPA of 2.0 for all major courses (i.e. MKTG), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.
- The Chambers College of Business and Economics accepts all baccalaureate transferable course work completed at public and private colleges in West Virginia and other regionally accredited institutions. Since the College is AACSB accredited, upper-division courses (courses equivalent to 300/400 level at WVU) must be evaluated by the Dean or designee before they may count toward business core, major core and major restricted electives in the Bachelor of Science in Business Administration or Bachelor of Science in Economics program.

Curriculum Requirements

Minimum Overall GPA of 2.0 is required

Possess a GPA of 2.0 for all major courses (i.e. MKTG), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.

ACCT 201	Principles of Accounting (Minimum grade of C-)	3
ACCT 202	Principles of Accounting (Minimum grade of C-)	3
CS 101	Intro to Computer Applications (Minimum grade of C-; may fulfill GEF 2A)	4
ECON 201	Principles of Microeconomics (Minimum grade of C-; may fulfill GEF 8)	3
ECON 202	Principles of Macroeconomics (Minimum grade of C-; may fulfill GEF 8)	3
Select one of the following (Minimum grade of C-; may fulfill GEF 8):		3
ECON 225	Elementary Business and Economics Statistics	
STAT 211	Elementary Statistical Inference	
Select one of the following (Minimum Grade of C-; may fulfill GEF 1):		3-6
ENGL 101 & ENGL 102	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research	
ENGL 103	Accelerated Academic Writing	
GEF 2A, Science & Technology		3
GEF 5, Human Inquiry & the Past		3
GEF 6, The Arts & Creativity		3
GEF 7, Global Studies & Diversity		3
Select one of the following; minimum grade of C- in MATH 150 or D- in MATH 154 or higher; (may fulfill GEF 3):		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	
Select one of the following (may fulfill GEF 4):		3
PSYC 101	Introduction to Psychology	
SOCA 101	Introduction to Sociology	
BCOR 191	First-Year Seminar	1
BCOR 199	Introduction to Business	3
BCOR 299	Business Communication (Fulfills Writing and Communication Skills Requirement)	3
BCOR 320	Legal Environment of Business	3
BCOR 330	Information Systems and Technology	3
BCOR 340	Principles of Finance	3
BCOR 350	Principles of Marketing (Minimum grade of C- to advance to MKTG courses)	3
BCOR 360	Supply Chain Management	3
BCOR 370	Managing Individuals & Teams	3
BCOR 380	Business Ethics	3
BCOR 460	Contemporary Business Strategy	3
MKTG 315	Buyer Behavior	3
MKTG 325	Marketing Research	3
MKTG 330	Distribution Channels	3

MKTG 350	Product and Price Policies	3
MKTG 415	Customer Relationship Marketing	3
MKTG 485	Global Marketing	3
or MKTG 440	Export Management	
Area of Emphasis *		12
Unrestricted Electives (needed to reach 120 hours)		16
Total Hours		120

* Students may opt to complete 12 additional hours of 300/400 level MKTG coursework for instances where an Area of Emphasis cannot be achieved.

** MKTG 491, Professional Field Experience, may not be used to fulfill marketing elective credit. A maximum of six credit hours of professional field experience may be counted towards the 120 credit hours required for the degree.

Suggested Plan of Study

All Marketing Majors are required to take MKTG 315 Buyer Behavior, MKTG 325 Marketing Research, MKTG 330 Distribution Channels, MKTG 350 Product and Price Policies, and MKTG 485 Global Marketing

First Year

Fall	Hours	Spring	Hours
BCOR 199		3 ACCT 201	3
BCOR 191		1 ECON 201 (GEF 8)	3
CS 101 (GEF 2A)		4 ENGL 101 (GEF 1)	3
Select one of the following (GEF 3):		3 Select one of the following:	3
MATH 124		MATH 150	
MATH 129		MATH 154	
MATH 150		MATH 155	
MATH 153		MATH 156	
MATH 155		GEF (Choose from 2A, 5, 6, or 7)	3
Select one of the following (GEF 4):		3	
SOCA 101			
PSYC 101			
GEF (Choose from 2A, 5, 6, or 7)		3	
		17	15

Second Year

Fall	Hours	Spring	Hours
ACCT 202		3 BCOR 299	3
ECON 202 (GEF 8)		3 BCOR 320	3
ECON 225 (GEF 8)		3 BCOR 330	3
ENGL 102 (GEF 1)		3 BCOR 350	3
GEF (Choose from 2A, 5, 6, or 7)		3 BCOR 370	3
		15	15

Third Year

Fall	Hours	Spring	Hours
BCOR 340		3 BCOR 380	3
BCOR 360		3 MKTG 325	3
MKTG 315		3 MKTG 350	3
MKTG 330		3 Area of Emphasis Course	3
Minor or Unrestricted Electives		3 Minor or Unrestricted Electives	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
Area of Emphasis Courses		6 BCOR 460	3
GEF (Choose from 2A, 5, 6, or 7)		3 MKTG 415	3

Minor or Unrestricted Electives	6 MKTG 485 or 440	3
	Area of Emphasis Course	3
	Minor or Unrestricted Electives	1
	15	13

Total credit hours: 120

DIGITAL MARKETING PROMOTIONS AREA OF EMPHASIS

MKTG 380	Integrated Promotions	3
MKTG 389	Online Analytics	3
MKTG 474	Integrated Promotions Campaign	3
MKTG 475	Social Media and Marketing	3
Total Hours		12

PROFESSIONAL SALES AREA OF EMPHASIS

MKTG 320	Personal Selling 1	3
MKTG 321	Professional Selling 2	3
MKTG 345	Selling with Digital Media	3
MKTG 420	Sales Management	3
Total Hours		12

Major Learning Outcomes

MARKETING

The overall goal of the undergraduate marketing program at the College of Business and Economics is to provide students with a rigorous education that prepares them for successful careers as professional marketing executives in industry, and for further graduate studies. More specifically, the marketing program has the following Learning Goals:

- Students will develop an understanding of the strategic marketing management planning process, and be able to integrate the various facets of marketing and apply these concepts to marketing decisions and the development of marketing plans.
- Students will demonstrate quantitative marketing techniques and be able to conduct, analyze and interpret marketing research
- Students will be able to describe the major types of consumer buying behavior, the stages in the buyer decision process and how the firms' marketing strategy and marketing mix must evolve and adapt to match consumer behavior.
- Students will be able to describe major bases for segmenting consumer and business markets; define and be able to apply the concepts of market segmentation, target marketing, and market positioning to a marketing situation.
- Students will be able to demonstrate the ability to develop marketing strategies based on product, price, place and promotion objectives.
- Students will be able to evaluate and assess the legal, ethical and social responsibility ramifications of marketing actions and decisions.
- Students will be able to demonstrate an understanding of global marketing and how to adapt domestic marketing programs to the global market.

Organizational Leadership, B.S.B.AD.

Degree Offered

- Bachelor of Science in Business Administration

Nature of the Program

The Organizational Leadership major will introduce students to leadership theory and practice, organizational behavior and teams, the ethical dimensions of leadership and decision making, how to lead organizational change, and how to handle conflict and negotiation.

FACULTY

CHAIR

- Abhishek Srivastava - Ph.D. (University of Maryland)
Organizational Behavior

ASSOCIATE PROFESSOR

- Jeff Houghton - Ph.D. (Virginia Polytechnic Institute and State University)
Organizational behavior.

TEACHING ASSISTANT PROFESSOR

- Kelly Nix - Ph.D. (West Virginia University)
Human and community development leadership.

Admissions

Students who are direct admitted to the major as first-time freshmen must possess an overall GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major at the beginning of the semester in which they satisfy the course prerequisites listed below. Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

Students who are direct admitted to the major and meet the requirements listed above are guaranteed permission to enroll in upper-division course work. The Chambers College will accommodate as many majors as resources are available. Students who are denied admission to the major may apply for admission in a future application period or accept admission to an alternative major in the Chambers College.

- A minimum grade of C- in MATH 150 is required for admission to the program. A grade of D- in MATH 154 or a higher level of college calculus also satisfies the calculus requirement for admission to the program.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Business Administration in Organizational Leadership (<https://admissions.wvu.edu/academics/majors/organizational-leadership/>) major.

Organizational Leadership Program Requirements

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

To qualify for the Bachelor of Science in Business Administration students must meet the following criteria:

- Complete a minimum of 120 credit hours.
- Possess an overall GPA of 2.0.
- Possess a minimum GPA of 2.0 for all major courses (i.e. ACCT, ENTR, LDR, MANG, and ORGL), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.

- The Chambers College of Business and Economics accepts all baccalaureate transferable course work completed at public and private colleges in West Virginia and other regionally accredited institutions. Since the College is AACSB accredited, upper-division courses (courses equivalent to 300/400 level at WVU) must be evaluated by the Dean or designee before they may count toward business core, major core and major restricted electives in the Bachelor of Science in Business Administration or Bachelor of Science in Economics program.

Curriculum Requirements

Overall GPA of 2.0 or higher is required

Possess a minimum GPA of 2.0 for all Major Courses (i.e. ACCT, ENTR, LDR, MANG, and ORGL courses), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.

ACCT 201	Principles of Accounting (Minimum grade of C-)	3
ACCT 202	Principles of Accounting (Minimum grade of C-)	3
CS 101	Intro to Computer Applications (Minimum grade of C-; may fulfill GEF 2A)	4
ECON 201	Principles of Microeconomics (Minimum grade of C-; may fulfill GEF 8)	3
ECON 202	Principles of Macroeconomics (Minimum grade of C-; may fulfill GEF 8)	3
Select one of the following (Minimum Grade of C-; may fulfill GEF 8):		3
ECON 225	Elementary Business and Economics Statistics	
STAT 211	Elementary Statistical Inference	
Select one of the following (Minimum grade of C-; may fulfill GEF 1):		3-6
ENGL 101 & ENGL 102	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research	
ENGL 103	Accelerated Academic Writing	
GEF 2A, Science and Technology		3
GEF 5, Human Inquiry & the Past		3
GEF 6, The Arts & Creativity		3
GEF 7, Global Studies & Diversity		3
Select one of the following; minimum grade of C- in MATH 150 or D- in MATH 154 or higher; (may fulfill GEF 3):		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	
Select one of the following (may fulfill GEF 4):		3
PSYC 101	Introduction to Psychology	
SOCA 101	Introduction to Sociology	
BCOR 191	First-Year Seminar	1
BCOR 199	Introduction to Business	3
BCOR 299	Business Communication (Fulfills Writing and Communication Skills Requirement)	3
BCOR 320	Legal Environment of Business	3
BCOR 330	Information Systems and Technology	3
BCOR 340	Principles of Finance	3
BCOR 350	Principles of Marketing	3
BCOR 360	Supply Chain Management	3
BCOR 370	Managing Individuals & Teams	3
BCOR 380	Business Ethics	3
BCOR 460	Contemporary Business Strategy	3
ENTR 416	Social Entrepreneurship	3
HRMG 470	Conflict Management	3
LDR 201	Principles of Leadership	3
MANG 422	The Individual and the Organization	3
MANG 480	Corporate Social Responsibility	3

ORGL 310	Leadership and Ethical Decision Making Skills	3
ORGL 320	Theories of Leadership and Organizational Change	3
ORGL 410	Youth Leadership Development	3
ORGL 420	Nonprofit Leadership	3
ORGL 491	Professional Field Experience	3
Unrestricted Electives (needed to reach 120 hours)		16

Total Hours 120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
BCOR 191		1 ACCT 201	3
BCOR 199		3 ECON 201 (GEF 8)	3
CS 101 (GEF 2A)		4 ENGL 101 (GEF 1)	3
Select one of the following (GEF 3):		3 Select one of the following:	3
MATH 124		MATH 150	
MATH 129		MATH 154	
MATH 150		MATH 155	
MATH 153		MATH 156	
MATH 155		GEF (Choose from F2A, 5, 6 or 7)	3
Select one of the following (GEF 4):		3	
SOCA 101			
PSYC 101			
GEF (Choose from F2A, 5, 6 or 7)		3	
		17	15

Second Year

Fall	Hours	Spring	Hours
ACCT 202		3 BCOR 299	3
ECON 202 (GEF 8)		3 BCOR 330	3
ECON 225 (GEF 8)		3 BCOR 340	3
ENGL 102 (GEF 1)		3 BCOR 370	3
GEF (Choose from F2A, F5, F6, or F7)		3 LDR 201	3
		15	15

Third Year

Fall	Hours	Spring	Hours
BCOR 320		3 BCOR 360	3
BCOR 350		3 ENTR 416	3
ORGL 310		3 MANG 422	3
Minor or Unrestricted Electives		6 ORGL 320	3
		GEF (Choose from F2A, 5, 6 or 7)	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
BCOR 380		3 BCOR 460	3
HRMG 470		3 ORGL 420	3
ORGL 410		3 ORGL 491	3
Minor or Unrestricted Electives		6 MANG 480	3
		Minor or Unrestricted Electives	1
		15	13

Total credit hours: 120

Major Learning Outcomes

ORGANIZATIONAL LEADERSHIP

1. **Leadership Skill Development**--*Graduates will be have the skills necessary to lead others.*
2. **Ethical Thinking**- *Graduates will demonstrate the values, ethics, and principles necessary to be a good leader.*
3. **Leading Organizational Change** - *Graduates will be able to lead organizational change efforts.*
4. **Team Building**-*Graduates will be able to deal with the dynamics of individuals and teams within organizations and to motivate, lead, and inspire employees toward achieving organizational goals.*
5. **Conflict Resolution**-*Graduates will be able to lead negotiations and resolve conflict*

Center for Learning, Advising and Student Success

Center for Learning, Advising and Student Success

The Center for Learning, Advising and Student Success (<https://advisingcenter.wvu.edu/>) (CLASS) is a community of academic professionals and resources dedicated to guiding students on a pathway to graduation. The CLASS team is committed to helping students transition to college by providing academic support, such as advising, coaching and tutoring.

ACADEMIC ADVISING

The advising center (<https://advisingcenter.wvu.edu/advising/>) is the academic home for undecided and many pre-major students admitted to West Virginia University (WVU). Each student is assigned a professional advisor who specializes in one or more pathways designed to support majors that share complementary academic and career interests. Students continue to receive support until they are admitted to a college/school. Undecided students may remain exploratory for one year or until they have earned 30 credit hours, at which point they must declare either a pre-major or transition to a college/school.

FIRST-YEAR EXPERIENCE

The First-Year Experience (<https://firstyearexperience.wvu.edu/>) office assists students in transitioning to college by providing tools and resources to establish a foundation for academic success. This is accomplished through building professional and social relationships, developing critical thinking skills and creating a holistic plan for success. The staff serves as the central contact for all First-Year Seminar faculty, including curriculum consultation, instructor resources, and professional development.

HIGH SCHOOL ACCESS EARLY COLLEGE PROGRAM

The High School ACCESS (<https://www.access.wvu.edu/>) Early College program offers traditional or home-schooled high school sophomores, juniors and seniors the opportunity to jump start their college career by enrolling in college courses. Students who possess a 3.0 or higher high school GPA may complete courses online, on campus or on-site in participating high schools. Students may enroll in courses that fulfill general education requirements at most West Virginia public colleges and universities.

OFFICE OF STUDENT SUCCESS

The Student Success (<https://studentsuccess.wvu.edu/>) office helps all WVU students regardless of major reach their potential through academic support, such as tutoring and coaching. Student Success provides programming for first-generation college students (neither parent has graduated from a four-year institution), as well as students of color and other underrepresented groups through its RISE program. The First-Year Pathways program supports students who are provisionally admitted to WVU. WV GEAR UP students receive supplemental support from this office.

STUDENT SUPPORT SERVICES/TRIO

Student Support Services (<https://sss.wvu.edu/>) (SSS) is a federally funded TRIO program sponsored by the U.S. Department of Education. SSS helps undergraduate students from challenged backgrounds persist and graduate from WVU. To be eligible for SSS, students must be income eligible as determined by the federal government, first-generation college attendees (neither parent has graduated from a four-year institution) and/or have a documented disability. SSS provides participants with academic instruction and tutoring, advising, mentoring, financial aid information and application assistance, financial literacy education, graduate school preparation, and other supports necessary to earn a post-secondary education. The program is voluntary and participants are selected through an application process, as spaces are limited.

UPWARD BOUND/TRIO

Upward Bound (<https://upwardbound.wvu.edu/>) (UB) is a federally funded TRIO program sponsored by the U.S. Department of Education. UB assists income-eligible high school students who will be the first in their families to go to college. Specifically, UB assists students from Preston and Grafton high schools with overcoming academic, social and cultural barriers to higher education, with the goals of being successful in high school and college enrollment, persistence and completion. UB must meet federally established objectives and provides both academic year and summer services to the students in the program.

ADMINISTRATION

EXECUTIVE DIRECTOR

- Joseph Seiaman
Retention, Persistence and Completion

DIRECTORS

- Rhonda Black
First-Year Experience

- Regan Bruni-Swan
Office of Student Success
- Rishira Dille
High School ACCESS
- Cindy Drumm
Student Support Services
- Frederick McDonald
Advising and Recruitment
- Landon Southerly
Upward Bound

FACULTY

PROFESSOR

- Carolyn Peluso Atkins - Ed.D.
Public Speaking, Coordinator of the Presidential Ambassadors Program

Creative Arts

Degrees Offered

- **Bachelor of Arts** with majors in Art History, Dance, Interactive Design for Media, Music, Music (Contemporary and Integrative Performance), Music Industry, Technical Art History, and Theatre
- **Bachelor of Fine Arts** with majors in Acting, Art Education, Ceramics, Graphic Design, Intermedia/Photography, Musical Theatre, Painting, Printmaking, Puppetry, Sculpture, and Theatre Design and Technology
- **Bachelor of Music** with majors in Music Composition, Music Education, Music Performance (Instrumental, Jazz Studies, Piano, and Voice), and Music Therapy
- **Bachelor of Science** with a major in Music and Health
- **Bachelor of Multidisciplinary Studies**

Introduction

Creative development in art, music, theatre, dance and multidisciplinary studies is central to the College of Creative Arts. The College is made up of three professionally accredited and nationally recognized Schools of Art & Design, Music, and Theatre & Dance. The College of Creative Arts provides students with a place where young artists forge a personal understanding between artistic practice and theory and form 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, 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. In a rich environment of plays, exhibitions, and concerts, the College offers students the knowledge, skills, and inspiration necessary for artistic and professional success.

Vision Statement

The College of Creative Arts envisions 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 experiential 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.

Study Abroad

The College of Creative Arts realizes the importance of the personal and professional benefits that result from studying abroad. Through WVU's international programs, students can gain a global perspective, broaden their experiences, and discover new career paths. College of Creative Arts' students have the opportunity to study abroad through one of the programs coordinated by the College or by the Office of International Programs.

Interested students should work with their academic advisor to develop a program of study that includes a study abroad experience.

For more information about International programs, see each School's individual program descriptions in this catalog, visit each School's website, or go to West Virginia University's International Programs website at <http://internationalstudies.wvu.edu/>.

Graduation Requirements

Each School in the College of Creative Arts has specific graduation requirements for its programs. Students should refer to the individual program descriptions for graduation.

Application for Graduation

Three semesters prior to the anticipated date of graduation, each student should come to the College of Creative Arts Records Office to request an academic records audit to ensure that all program requirements will be fulfilled by the completion of the final semester of study. During the first month of a student's final semester or summer session (the one in which the student will graduate), each student must apply for graduation and a diploma. If a student does not complete all program requirements by the end of the anticipated final semester, it will be necessary to reapply for a later graduation date. No candidate can graduate without this application.

College Scholarship Resources

The College of Creative Arts offers a limited number of special College-based scholarship awards for freshmen and students currently enrolled in its programs. College-based awards are granted on the demonstration of outstanding talent, academic achievement, and the demonstration of future potential success in the College of Creative Arts.

Information regarding both University and College of Creative Arts Scholarships can be found at ccarts.wvu.edu/academics/scholarships (<http://ccarts.wvu.edu/academics/scholarships/>)

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 undergraduate 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).

With the exception of the College's newer degrees (the Bachelor of Multidisciplinary Studies in the Arts, the Bachelor of Arts in Interactive Design for Media, the Bachelor of Arts in Technical Art History, the Bachelor of Science in Music and Health, and the Bachelor of Arts in Dance - all which are pending "intent for accreditation,") the appropriate association of the Council has awarded accreditation to all of West Virginia University's undergraduate 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 undergraduate degrees offered by the College. **Specific learning goals for individual majors and programs are listed under each School's section of the catalog.** Due to the nature of the College's specialized degrees, none of these goal lists are intended to be comprehensive.

BACHELOR OF ARTS-GENERAL LEARNING GOALS

The Bachelor of Arts (BA) degree is based on a breadth of general, liberal arts studies (humanities, natural and physical sciences, and social sciences) with a specialized focus in one area of the Arts.

- The ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency and rhetorical force.
- An informed acquaintance with the mathematical and experimental methods of the physical and biological sciences, and with the main forms of analysis of the historical and quantitative techniques needed for investigating the workings and developments of modern society.
- An ability to address culture and history from a variety of perspectives.
- Understanding of, and experience in thinking about, moral and ethical problems.

- The ability to respect, understand and evaluate work in a variety of disciplines.
- The capacity to explain and defend views effectively and rationally.

BACHELOR OF FINE ARTS-GENERAL LEARNING GOALS

The Bachelor of Fine Arts (BFA) is a professional degree with an intensive focus on an area of the Arts supported by a program in general studies. The intent of the BFA is to prepare for professional practice in the area of the degree.

- The ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency and rhetorical force.
- An informed acquaintance with the mathematical and experimental methods of the physical and biological sciences, and with the main forms of analysis of the historical and quantitative techniques needed for investigating the workings and developments of modern society.
- An ability to address culture and history from a variety of perspectives.
- Understanding of, and experience in thinking about, moral and ethical problems.
- The ability to respect, understand and evaluate work in a variety of disciplines.
- The capacity to explain and defend views effectively and rationally.
- Growth in artistry and gaining technical skills requisite for artistic self-expression

BACHELOR OF MUSIC-GENERAL LEARNING GOALS

The Bachelor of Music (BM) is a professional undergraduate degree in music. Students enrolled in professional undergraduate degrees in music are expected to develop the knowledge, skills, concepts, and sensitivities essential to the professional life of the musician.

- The ability to think, speak and write clearly and effectively.
- An informed acquaintance with fields of study beyond music such as those in the arts and humanities, the natural and physical sciences and the social sciences.
- A functional awareness of the differences and commonalities regarding work in artistic, scientific and humanistic domains. Awareness that multiple disciplinary perspectives and techniques are available to consider all issues and responsibilities including, but not limited to, history, culture, moral and ethical issues and decision-making.
- The ability to identify possibilities and locate information in other fields that have bearing on musical questions and endeavors.
- Technical skills requisite for artistic self-expression in at least one major performance area at a level appropriate for a particular music concentration.
- An overview understanding of the repertory in their major performance area and the ability to perform from a cross-section of that repertory.
- The ability to sight-read with fluency demonstrating both general musicianship and, in the major performance area, a level of skill relevant to professional standards appropriate for a particular music concentration.
- Knowledge and skills sufficient to work as a leader and in collaboration on matters of musical interpretation.
- Keyboard competency.
- Growth in artistry, technical skills, collaborative competence and knowledge of repertory through regular ensemble experiences.
- An understanding of the common elements and organizational patterns of music and their interaction and the ability to employ this understanding in aural, verbal and visual analyses.
- The ability to place music in historical, cultural, and stylistic contexts.
- A rudimentary capacity to create original or derivative music.
- A basic knowledge of music history and repertories through the present time
- While synthesis is a lifetime process, students must be able to work on musical problems by combining, as appropriate to the issue, their capabilities in performance; aural, verbal, and visual analysis; composition/improvisation; and history and repertory.

Admissions

ADMISSIONS REQUIREMENTS

The College of Creative Arts uses the admission standards and procedures of the University; acceptance into the College and/or one of its Schools is contingent upon admission to WVU as an undergraduate student. Each School within the College also has individual admission requirements.

- The School of Music requires that all applicants complete a successful audition before consideration for admission into one of its programs. The BA in Music Industry (Multi-Instrumental track) follows the University guidelines for admittance.
- The School of Art & Design requires all applicants to the Bachelor of Fine Arts (BFA) in studio art to submit and successfully pass a portfolio review before admission into the program. The BA in Art History, the BA in Technical Art History, and the BA in Interactive Design for Media follows the University guidelines for admittance.
- The School of Theatre and Dance requires all applicants to the Bachelor of Fine Arts (BFA) programs to complete a successful audition and interview.

- The School of Theatre and Dance follows the University guidelines for admittance for all applicants to the Bachelor of Arts (BA) in Theatre.
- The School of Theatre and Dance requires all applicants to the Bachelor of Arts (BA) in Dance to complete a successful audition.

Potential 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. Students should also check the College's website for audition dates which are held throughout the year.

Students transferring to the College of Creative Arts from other colleges and universities are required to present a minimum grade point average (GPA) of 2.0 in addition to the standard auditions or portfolio reviews. Students entering the Art Education program must have a minimum 2.5 GPA; students entering the Music Education program or the Music Therapy program must have a minimum 2.75 GPA. Special exceptions may be made in the case of first-semester freshman students.

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, dance, 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.

For more information about studying at the College of Creative Arts, please contact:

James Froemel, Recruitment and Retention Specialist
College of Creative Arts
West Virginia University
P.O. Box 6111
Morgantown, WV 26506-6111
Phone: (304) 293-4339

Email: ccarecruitment@mail.wvu.edu.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the College of Creative Arts (<https://ccarts.wvu.edu/>).

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 program(s) will also be assessed the Applied Lesson tuition.

SCHOLARSHIPS AND FINANCIAL AID

The College of Creative Arts offers a number of special College-based scholarship awards for freshmen and students currently enrolled in its programs. College-based awards are granted on the demonstration of outstanding talent, academic achievement, and the student's potential for success in their chosen area of study. These undergraduate scholarships are a form of financial aid that helps students pay for their education. In order to receive and maintain an award from the College, a student must plan to enroll or be enrolled as a full-time major in one of the College's programs of study.

For general information on College-based scholarships, please contact the College of Creative Arts Recruitment Office at ccarecruitment@mail.wvu.edu. Because each School in the College of Creative Arts has specific criteria for its scholarships or cash awards, students should refer to the School's individual program descriptions in this catalog and on the School's website.

College of Creative Arts' scholarship and cash awards are made based on student talent, the needs of the College, and the student's financial needs. Students who receive a scholarship should note that any award from the College may impact one's overall financial aid package. Recipients of other forms of financial aid who also receive a scholarship or cash award from the College should consult with the WVU Financial Aid office to discuss the parameters of their complete financial aid package. To get more information about financial aid as well as other University-based scholarships, please visit the WVU Financial Aid website at <http://financialaid.wvu.edu/>.

College of Creative Arts Minors

In addition to their major areas of study, all of the Schools in the College of Creative Arts offer academic minors. A minor is comprised of a set of courses that students take outside of their major; a successful audition, portfolio review, minimum grade, or grade point average may also be required for admission and/or completion of the minor. Requirements for academic minors are set by the School offering the minor, and the student should consult each individual School's program description in this catalog or the School's website for the program's specific requirements.

The College of Creative Arts offers a number of different minors that range from a general overview of a particular discipline to an in-depth experience in a practical application of an art form. Currently, the following minors are offered by the College:

- The School of Art & Design offers minors in Art History, Ceramics, Electronic Media, Interactive Design for Media, Painting, Photography, Printmaking, and Sculpture.
- The School of Music offers minors in Appalachian Music, Appalachian Studies, Music (General Musicianship), Jazz Studies, Music Industry, Music Performance, Music Technology, and World Music.

- The School of Theatre & Dance offers minors in Dance, Theatre, and Theatre Production.
- The College of Creative Arts offers minors in Arts Administration and Arts Entrepreneurship.

If a student successfully completes the requirements of a minor, it will be recorded on the student's official record and will appear on transcripts.

COLLEGE MINOR

- Arts Administration (http://catalog.wvu.edu/undergraduate/minors/arts_administration/)
- Arts Entrepreneurship (http://catalog.wvu.edu/undergraduate/minors/arts_entrepreneurship/)

SCHOOL OF ART & DESIGN

- Art History (http://catalog.wvu.edu/undergraduate/minors/art_history/)
- Ceramics (<http://catalog.wvu.edu/undergraduate/minors/ceramics/>)
- Electronic Media (http://catalog.wvu.edu/undergraduate/minors/electronic_media/)
- Interactive Design for Media (<http://catalog.wvu.edu/undergraduate/minors/interactivedesignformedia/minor/>)
- Painting (<http://catalog.wvu.edu/undergraduate/minors/painting/>)
- Photography (<http://catalog.wvu.edu/undergraduate/minors/photography/>)
- Printmaking (<http://catalog.wvu.edu/undergraduate/minors/printmaking/>)
- Sculpture (<http://catalog.wvu.edu/undergraduate/minors/sculpture/>)

SCHOOL OF MUSIC

- Appalachian Music (<http://catalog.wvu.edu/undergraduate/minors/appalachianmusic/>)
- Appalachian Studies (http://catalog.wvu.edu/undergraduate/minors/appalachian_studies/)
- Jazz Studies (http://catalog.wvu.edu/undergraduate/minors/jazz_studies/)
- Music (http://catalog.wvu.edu/undergraduate/minors/general_musicianship/)
- Music Industry (<http://catalog.wvu.edu/undergraduate/minors/musicindustry/>)
- Music Performance (<http://catalog.wvu.edu/undergraduate/minors/performance/>)
- Music Technology (http://catalog.wvu.edu/undergraduate/minors/music_technology/)
- World Music (http://catalog.wvu.edu/undergraduate/minors/world_music/)

SCHOOL OF THEATRE & DANCE

- Dance (<http://catalog.wvu.edu/undergraduate/minors/dance/>)
- Theatre (<http://catalog.wvu.edu/undergraduate/minors/theatre/>)
- Theatre Production (<http://catalog.wvu.edu/undergraduate/minors/theatreproduction/>)

Accreditation

The following programs within the College of Creative Arts have specialized accreditation through the National Association for Accreditation of Schools of Theatre: Acting, Musical Theatre, Puppetry, Theatre, Theatre Design and Technology

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

The following programs within the College of Creative Arts have specialized accreditation through the National Council of Accreditation of Teacher Education: Art Education, Music Education

• The following programs within the College of Creative Arts have specialized accreditation through the National Association of Schools of Music: Music, Music (Contemporary & Integrative Performance), Music Composition, Music Education, Music Industry, Music Performance: Instrumental, Music Performance: Jazz Studies, Music Performance: Piano, Music Performance: Voice, Music Therapy

School of Art and Design

- Degrees Offered (p. 530)
- Mission (p. 530)
- Nature of the Program (p. 530)
- Global Positioning Studies (GPS) (p. 530)
- International Study Opportunities (p. 530)
- Scholarships (p. 530)

Degrees Offered

- Bachelor of Arts with majors in Art History, Technical Art History, and Interactive Design for Media.
- Bachelor of Fine Arts in Art and Design with majors in Art Education, Ceramics, Graphic Design, Intermedia/Photography, Painting, Printmaking, and Sculpture.

Mission

The mission of the School of Art and Design is to contribute to the greater good of art, education, and culture.

Nature of Program

The School of Art and Design is an accredited institutional member of the National Association of Schools of Art and Design (NASAD). The curriculum of the School is designed to afford the student an opportunity to explore the visual arts. Undergraduate programs offer scholarly and studio experiences to potential artists and teachers. The in-depth instruction is enhanced by the close working relationship between students and faculty, which allows sharing the insights and investigative processes of professional artists and scholars.

Global Positioning Studies (GPS)

Global Positioning Studies (GPS) is an interdisciplinary visual arts initiative within the School of Art and Design. It positions students at the crossroads between a local sense of place and a global understanding of that place in the world. Through direct experience, GPS courses encourage students to engage the world as a fertile ground for art making and critical research. Art and Design majors (except those in the Art Education or Interactive Design for Media programs) are required to take at least one GPS-designated course to count toward degree requirements. See course details at artanddesign.wvu.edu/gps (<http://artanddesign.wvu.edu/gps/>).

International Study Opportunities

The School of Art and Design has established excellent international educational programs. These include summer study, short term, and semester-long programs. The focus of these international programs is with sister institutions in Chile, China, and Italy. Additional opportunities in other countries are also available. Students should consult with their academic advisor about taking language courses and other liberal studies courses that would support international studies. See details at: <http://artanddesign.wvu.edu/field-study/international-programs> (<http://artanddesign.wvu.edu/field-study/international-programs/>).

Scholarships

The College of Creative Arts offers a limited number of special College-based scholarship awards for freshman and current students enrolled in its programs. College-based awards are granted on the demonstration of outstanding talent, academic achievement, and potential success in the Art and Design program.

Information regarding both University, College of Creative Arts, and Art and Design Scholarships can be found at <http://ccarts.wvu.edu/academics/scholarships>. (<http://ccarts.wvu.edu/academics/scholarships/>)

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 PROFESSORS

- 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 PROFESSORS

- 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, 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 and Art History
- Janet Snyder
Art History

ASSOCIATE PROFESSORS EMERITI

- Victoria Fergus
Art Education

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the School of Art & Design (<https://artanddesign.wvu.edu/apply/>).

BA DEGREES

There are no additional entrance requirements for applicants to the Bachelor of Arts programs in Art History, Interactive Design for Media, or Technical Art History. Applicants should visit the School website: <http://artanddesign.wvu.edu/academics> (<http://artanddesign.wvu.edu/academics/>) or phone the School office at (304) 293-2552.

BFA ENTRANCE PORTFOLIO

The School of Art and Design requires a portfolio review for all applicants to the Bachelor of Fine Arts programs including the Art Education major. This evaluation is conducted by the art faculty and is designed to ensure that all students entering the studio program have certain basic competencies and skills. Students are encouraged to apply and complete the portfolio review at the earliest possible date. Applicants should visit the School website: <http://artanddesign.wvu.edu/academics> (<http://artanddesign.wvu.edu/academics/>) or phone the School office at (304) 293-2552 to receive detailed instructions and portfolio review application material.

TRANSFER

Transfer applicants in studio art must undergo a portfolio review to gain admittance in the program. Evaluation for advanced standing or transfer credit in studio subjects is not made solely upon the presentation of a transcript but may also depend on the evaluation of a portfolio of artwork.

Policies

- Advising (p. 533)
- Audit, Credit by Examination, Pass/Fail, and Non-Art Major Courses (p. 533)
- Grade Point Average (p. 533)
- Student Work (p. 533)
- Art Supplies (p. 533)
- Graphic Design Portfolio (p. 533)

ADVISING

The College of Creative Arts requires all art majors to confer each semester with an academic advisor in order to maintain the correct distribution of coursework, to plan schedules for future semesters, and to prepare for graduation. BFA students will find it difficult to carry more than three studio art classes in one semester. Ultimately, it is the student's responsibility to ensure that all requirements for graduation are met.

AUDIT, CREDIT BY EXAMINATION, PASS/FAIL, AND NON-ART MAJOR COURSES

No studio or art history courses are available on an audit or credit by examination basis for degree-seeking students. Students enrolled in the School of Art and Design may not take art or art history classes on a pass/fail basis. Courses designated for non-art majors may not be substituted for art degree requirements unless approved in advance by the director of the School of Art and Design.

GRADE POINT AVERAGE

A degree candidate in the School of Art and Design must maintain a minimum GPA of 2.0 (C); admission to the teacher certification program requires a 2.5 GPA. Students must earn a grade of C- or higher in art studio and/or art history and/or art education classes in order for the course to fulfill degree requirements. In addition, students may be requested to present a portfolio of selected works for examination and evaluation by a faculty committee. The committee is empowered to make recommendations regarding the student's status as a major in the School and their continuation toward a degree in art.

STUDENT WORK

Every effort is made to protect student work and property. Work displayed in the Mesaros Galleries is insured for the exhibition period. The School of Art and Design and the College of Creative Arts does not accept responsibility for damage or losses under any other circumstances. The School of Art and Design reserves the right to retain examples of student work for reproduction and exhibition purposes and NASAD accreditation reviews.

ART SUPPLIES

The School of Art and Design orders in advance some necessary supplies for course projects. Students will also need to purchase materials for individual or specialized projects.

GRAPHIC DESIGN PORTFOLIO

Following completion of the Foundation Core along with ART 223 Introduction to Graphic Design and ART 224 Graphic Design 2, students wishing to pursue the graphic design major must submit a portfolio for review in the spring, normally during the second semester of the sophomore year. Contact the area coordinator for information regarding the portfolio review for graphic design.

Art Education, B.F.A.

Degree Offered

- Bachelor of Fine Arts
 - Certification in PreK–Adult, with a studio emphasis in Ceramics, Graphic Design, Intermedia/Photography, Painting, Printmaking, or Sculpture

Nature of the Program

This unique program allows students to earn teacher certification while emphasizing a content area within the B.F.A. curriculum. Typically, the student's schedule is reviewed with a studio-emphasis coordinator and the art education faculty member. Because the art education student also has a full emphasis in a B.F.A. studio area, it normally takes four-and-a-half to five years to complete requirements.

These requirements are designed by the certifying agency of the state of West Virginia and WVU. Education requirements are maintained by the state. Undergraduate art students who desire certification should consult with the art education coordinator to be certain of compliance with certification criteria. Students wanting certification to teach PreK–adult must complete competency requirements established by the state (including passing PRAXIS I and II) in addition to School of Art and Design B.F.A. degree requirements. (PRAXIS CORE must be waived or attempted before taking ART 365. PRAXIS ART CONTENT must be completed no later than the semester before taking ART 491D.)

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

ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

B.F.A. with Teacher Certification Curriculum

This variation of the regular B.F.A. program begins after the completion of the freshman year and requires careful selection of both studio and academic courses. With the additional education course requirements, four-and-a-half to five years of schoolwork should be anticipated. Students wishing certification to teach PreK–adult in West Virginia must complete competency requirements established by the state in addition to School of Art and Design B.F.A. degree requirements. Admission to the teacher certification program requires a 2.5 GPA overall.

The School of Art and Design values and supports written communication abilities and critical thinking skills developed through iterative writing experiences across the curriculum and within the discipline. To meet this goal students must pass with a B- or better a writing portfolio requirement that includes examples of academic, professional, and reflective writing they have produced in their regular courses. Please contact your advisor for more information.

Degree Requirements

GEF 1, 2, 3, 5, 7, 8		25
Grade C- or higher required in all ART and ARHS courses		
ARHS 120	Survey of Art History 1 (May fulfill GEF 6)	3
ARHS 160	Survey of Art History 2 (May fulfill GEF 8)	3
ART 191	First-Year Seminar	2
SPED 304	Special Education in Contemporary Society (May fulfill GEF 4)	3
Studio Foundations Core		
ART 111	Drawing 1	3
ART 112	Drawing 2	3
ART 121	Visual Foundations 1	3
ART 122	Visual Foundations 2	3
ART 211	Figure Drawing	3
ART 212	Multi Media	3
Art Education		
ART 264	Introduction to Art Education	3
ART 265	Art Education: Elementary	3
ART 266	Art Education: Secondary	3
ART 365	Pre-Student Teaching	3
ART 367	Technology Methods in Art Education	3
Education		
EDUC 301	Learning in Educational Settings	3
SPED 360	Differentiation of Instruction for Students with Special Needs	3
ARHS 389	Contemporary	3
Professional Practice (Student Teaching)		
ART 491D	Professional Field Experience	16
Studio Emphasis Coursework (In correspondence with selected Area of Emphasis) **		27
Ceramics		

Art History ***

Art History 200-level or above course

Art Studio Non-Emphasis Areas

Choose four courses from the following:

ART 213 or ART 214	Painting 1 Painting 2
ART 223 or ART 224	Introduction to Graphic Design Graphic Design 2
ART 226 or ART 227	Introduction to Sculpture Sculpture
ART 230 or ART 231	Printmaking - Intaglio and Relief Printmaking - Lithography
ART 232 or ART 234	Photography Digital Photography
ART 270 or ART 271	Introduction to Electronic Media 1 Introduction to Electronic Media 2

Ceramics 200-level Coursework

ART 240	Ceramics
ART 241 or ART 242	Ceramics Life Modeling

Senior Project

ART 440	Senior Projects in Ceramics
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Graphic Design **

ARHS 406	Graphic Design History
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Art Studio Non-Emphasis Areas

Choose three courses from the following:

ART 213 or ART 214	Painting 1 Painting 2
ART 226 or ART 227	Introduction to Sculpture Sculpture
ART 230 or ART 231	Printmaking - Intaglio and Relief Printmaking - Lithography
ART 240 or ART 241 or ART 242	Ceramics Ceramics Life Modeling
ART 270 or ART 271	Introduction to Electronic Media 1 Introduction to Electronic Media 2

Graphic Design 200-level Coursework

ART 223	Introduction to Graphic Design
ART 224	Graphic Design 2
ART 232	Photography
ART 234	Digital Photography

Senior Project

ART 425	Graphic Design: Senior Project
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Intermedia and Photography**Art History *****

Art History 200-level or above course

Art Studio Non-Emphasis Areas

Choose four courses from the following:

ART 213 or ART 214	Painting 1 Painting 2
ART 223	Introduction to Graphic Design

or ART 224	Graphic Design 2
ART 226	Introduction to Sculpture
or ART 227	Sculpture
ART 230	Printmaking - Intaglio and Relief
or ART 231	Printmaking - Lithography
ART 240	Ceramics
or ART 241	Ceramics
or ART 242	Life Modeling

Intermedia/Photography 200-level Coursework

Select one of the following pairings:

ART 232 & ART 234	Photography and Digital Photography
ART 270 & ART 271	Introduction to Electronic Media 1 and Introduction to Electronic Media 2

Senior Project

ART 435 or ART 470	Senior Projects in Photography Senior Projects in Intermedia
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Painting

Art History

Art History 200-level or above course

Art Studio Non-Emphasis Areas

Choose four courses from the following:

ART 223 or ART 224	Introduction to Graphic Design Graphic Design 2
ART 226 or ART 227	Introduction to Sculpture Sculpture
ART 230 or ART 231	Printmaking - Intaglio and Relief Printmaking - Lithography
ART 232 or ART 234	Photography Digital Photography
ART 240 or ART 241 or ART 242	Ceramics Ceramics Life Modeling
ART 270 or ART 271	Introduction to Electronic Media 1 Introduction to Electronic Media 2

Painting 200-level Coursework

ART 213	Painting 1
ART 214	Painting 2

Senior Project

ART 413	Senior Projects in Painting
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Printmaking

Art History

Art History 200-level or above course

Art Studio Non-Emphasis Areas

Choose four courses from the following:

ART 240 or ART 241 or ART 242	Ceramics Ceramics Life Modeling
ART 223 or ART 224	Introduction to Graphic Design Graphic Design 2
ART 270 or ART 271	Introduction to Electronic Media 1 Introduction to Electronic Media 2

ART 232 or ART 234	Photography Digital Photography
ART 226 or ART 227	Introduction to Sculpture Sculpture
ART 213 or ART 214	Painting 1 Painting 2
Printmaking 200-level Coursework	
ART 230	Printmaking - Intaglio and Relief
ART 231	Printmaking - Lithography
Senior Project	
ART 430	Senior Projects in Printmaking
Sculpture	
Art History ***	
Art History 200-level or above course	
Art Studio Non-Emphasis Areas	
Choose four courses from the following:	
ART 240 or ART 241 or ART 242	Ceramics Ceramics Life Modeling
ART 223 or ART 224	Introduction to Graphic Design Graphic Design 2
ART 270 or ART 271	Introduction to Electronic Media 1 Introduction to Electronic Media 2
ART 232 or ART 234	Photography Digital Photography
ART 230 or ART 231	Printmaking - Intaglio and Relief Printmaking - Lithography
ART 213 or ART 214	Painting 1 Painting 2
Sculpture 200-level Coursework	
ART 226	Introduction to Sculpture
ART 227	Sculpture
Senior Project	
ART 426	Senior Projects in Sculpture
Area of Emphasis	
18	
Writing Portfolio Requirement* *	
Total Hours	139

* Please see your advisor for details on this requirement.

** Graphic Design Area of Emphasis requires 30 hours of Studio Emphasis Coursework. All others (Ceramics, Intermedia and Photography, Painting, Printmaking, and Sculpture) require 27 hours of Studio Emphasis Coursework.

*** The following courses may not be used to fulfill this requirement: ARHS 401 (<http://catalog.wvu.edu/search/?P=ARHS%20401>), ARHS 492 (<http://catalog.wvu.edu/search/?P=ARHS%20492>), ARHS 496 (<http://catalog.wvu.edu/search/?P=ARHS%20496>), ARHS 497 (<http://catalog.wvu.edu/search/?P=ARHS%20497>), ARHS 498 (<http://catalog.wvu.edu/search/?P=ARHS%20498>), ARHS 490 (<http://catalog.wvu.edu/search/?P=ARHS%20490>), and ARHS 491 (<http://catalog.wvu.edu/search/?P=ARHS%20491>).

Areas of Emphasis

Click the appropriate link below to view the corresponding Area of Emphasis (AOE) Requirements and Suggested Plans of Study.

- Ceramics (p. 538)
- Graphic Design (p. 539)
- Intermedia and Photography (p. 540)
- Painting (p. 541)

- Printmaking (p. 542)
- Sculpture (p. 542)

Studio Emphasis: Ceramics Area of Emphasis Requirements

Art 300-level Studio Emphasis Area		18
ART 340	Ceramics	
ART 341	Ceramic Production Methods	
Total Hours		18

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ART 111		3 ART 112	3
ART 121		3 ART 122	3
ARHS 120 (GEF 6)		3 ARHS 160 (GEF 8)	3
ENGL 101 (GEF 1)		3 GEF 3	3
ART 191		2 GEF 7	3
GEF 5		3	
		17	15

Second Year

Fall	Hours	Spring	Hours
ART 211		3 ART 212	3
ART 213 or 214		3 ART 226 or 227	3
ART 240		3 ART 264	3
ENGL 102 (GEF 1)		3 ART 241	3
GEF 2		4 SPED 304 (GEF 4)	3
		16	15

Third Year

Fall	Hours	Spring	Hours
ART 340		3 ART 340	6
ART 341		3 ART 266	3
Select one of the following:		3 GEF 8	3
ART 223		ART 230 or 231	3
ART 224			
ART 232			
ART 270			
ART 265		3	
EDUC 301		3	
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ART 340		6 ARHS 389 (fulfills requirement for Art History 200-level or above, and replaces RDNG 422 for major requirements)	3
ARHS 200-Level or higher		3 ART 440	6
GEF 8		3 ART 365	3
ART 367		3 SPED 360	3
		15	15

Fifth Year

Fall	Hours
C&I 491	4

ART 491D	12
	16

Total credit hours: 139

Studio Emphasis: Graphic Design Area of Emphasis Requirements

ART 323	Graphic Design 3	6
ART 324	Graphic Design 4	6
or ART 425	Graphic Design: Senior Project	
ART 325	Design for Web and Screen	3
ART 328	Advanced Typography	3
Total Hours		18

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ART 111		3 ART 112	3
ART 121		3 ART 122	3
ART 191 (University Requirement)		2 ARHS 160 (GEF 8)	3
ARHS 120 (GEF 6)		3 GEF 3	3
ENGL 101 (GEF 1)		3 GEF 7	3
GEF 5		3	
		17	15

Second Year

Fall	Hours	Spring	Hours
ART 211		3 ART 212	3
ART 223		3 ART 224	3
ENGL 102 (GEF 1)		3 ART 264	3
Art Studio Non-Emphasis Area		3 SPED 304 (GEF 4)	3
GEF 2		4 Art Studio Non-Emphasis Area	3
		16	15

Third Year

Fall	Hours	Spring	Hours
ART 232		3 ART 266	3
ART 265		3 ART 323	3
ART 323		3 ART 325	3
ART 328		3 Art Studio Non-Emphasis Area	3
EDUC 301		3 GEF 8	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ART 234		3 ART 324	3
ART 367		3 ART 365	3
ART 324		3 ART 425	3
ART 425		3 ARHS 389	3
ARHS 406		3 SPED 360	3
GEF 8		3	
		18	15

Fifth Year

Fall	Hours
ART 491D	12

C&I 491	4
	16

Total credit hours: 142

Studio Emphasis: Intermedia and Photography Area of Emphasis Requirements

Art 300-level Studio Emphasis Area

18

Select 1 of the following groupings:

ART 332	Intermediate Photography
or ART 333	Alternative Photography
or ART 335	Advanced Photography
ART 370	Intermediate Electronic Media
or ART 371	Interactive Art
or ART 372	Interactive Design

Total Hours

18

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ART 111		3 ART 112	3
ART 121		3 ART 122	3
ART 191 (University Requirement)		2 ARHS 160 (GEF 8)	3
ARHS 120 (GEF 6)		3 GEF 3	3
ENGL 101 (GEF 1)		3 GEF 7	3
GEF 5		3	
		17	15

Second Year

Fall	Hours	Spring	Hours
ART 211		3 ART 212	3
Art Studio Non-Emphasis Area		3 ART 264	3
Art 200-Level Studio Emphasis Area		3 Art Studio Non-Emphasis Area	3
ENGL 102 (GEF 1)		3 Art 200-Level Studio Emphasis Area	3
GEF 2		4 SPED 304 (GEF 4)	3
		16	15

Third Year

Fall	Hours	Spring	Hours
ART 265		3 ART 266	3
EDUC 301		3 GEF 8	3
Art Studio Non-Emphasis Area		3 Art Studio Non-Emphasis Area	3
Art 300-Level Studio Emphasis Area		6 Art 300-Level Studio Emphasis Area	6
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ART 335		6 ARHS 389	3
ART 367		3 ART 365	3
ARHS 200-Level or higher		3 SPED 360	3
GEF 8		3 Senior Project Course	6
		15	15

Fifth Year

Fall	Hours
ART 491D	12

C&I 491 4

16

Total credit hours: 139

Studio Emphasis: Painting Area of Emphasis Requirements

Art 300-level Studio Emphasis Area 18

ART 313 Painting 3

Total Hours 18

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ART 111		3 ART 112	3
ART 121		3 ART 122	3
ART 191		2 ARHS 160 (GEF 8)	3
ARHS 120 (GEF 6)		3 GEF 3	3
ENGL 101 (GEF 1)		3 GEF 7	3
GEF 5		3	
		17	15

Second Year

Fall	Hours	Spring	Hours
ART 211		3 ART 212	3
ART 213		3 ART 214	3
ENGL 102 (GEF 1)		3 ART 264	3
Art Studio Non-Emphasis Area		3 SPED 304 (GEF 4)	3
GEF 2		4 Art Studio Non-Emphasis Area	3
		16	15

Third Year

Fall	Hours	Spring	Hours
ART 265		3 ART 266	3
ART 313		6 ART 313	6
EDUC 301		3 Art Studio Non-Emphasis Area	3
Art Studio Non-Emphasis Area		3 GEF 8	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ART 313		6 ART 365	3
ART 367		3 ART 413	6
ARHS 200-Level or Higher		3 ARHS 389	3
GEF 8		3 SPED 360	3
		15	15

Fifth Year

Fall	Hours		
ART 491D		12	
C&I 491		4	
		16	

Total credit hours: 139

Studio Emphasis: Printmaking Area of Emphasis Requirements

Art 300-level Studio Emphasis Area		18
ART 330	Printmaking	
Total Hours		18

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ART 111		3 ART 112	3
ART 121		3 ART 122	3
ART 191		2 ARHS 160 (GEF 8)	3
ARHS 120 (GEF 6)		3 GEF 3	3
ENGL 101 (GEF 1)		3 GEF 7	3
GEF 5		3	
		17	15

Second Year

Fall	Hours	Spring	Hours
ART 211		3 ART 212	3
ART 230		3 ART 231	3
ENGL 102 (GEF 1)		3 ART 264	3
Art Studio Non-Emphasis Area		3 SPED 304 (GEF 4)	3
GEF 2		4 Art Studio Non-Emphasis Area	3
		16	15

Third Year

Fall	Hours	Spring	Hours
ART 265		3 ART 266	3
ART 330		6 ART 330	6
EDUC 301		3 Art Studio Non-Emphasis Area	3
Art Studio Non-Emphasis Area		3 GEF 8	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ART 330		6 ART 365	3
ART 367		3 ART 430	6
ARHS 200-Level or Higher		3 ARHS 389	3
GEF 8		3 SPED 360	3
		15	15

Fifth Year

Fall	Hours		
ART 491D		12	
C&I 491		4	
		16	

Total credit hours: 139

Studio Emphasis: Sculpture Area of Emphasis Requirements

Art 300-level Studio Emphasis Area		18
ART 326	Sculpture	
Total Hours		18

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ART 111		3 ART 112	3
ART 121		3 ART 122	3
ART 191		2 ARHS 160 (GEF 8)	3
ARHS 120 (GEF 6)		3 GEF 3	3
ENGL 101 (GEF 1)		3 GEF 7	3
GEF 5		3	
		17	15

Second Year

Fall	Hours	Spring	Hours
ART 211		3 ART 212	3
ART 226		3 ART 227	3
ENGL 102 (GEF 1)		3 ART 264	3
Art Studio Non-Emphasis Area		3 SPED 304 (GEF 4)	3
GEF 2		4 Art Studio Non-Emphasis Area	3
		16	15

Third Year

Fall	Hours	Spring	Hours
ART 265		3 ART 266	3
ART 326		6 ART 326	6
EDUC 301		3 Art Studio Non-Emphasis Area	3
Art Studio Non-Emphasis Area		3 GEF 8	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ART 326		6 ART 365	3
ART 367		3 ART 426	6
ARHS 200-Level or Higher		3 ARHS 389	3
GEF 8		3 SPED 360	3
		15	15

Fifth Year

Fall	Hours		
ART 491D		12	
C&I 491		4	
		16	

Total credit hours: 139

Major Learning Outcomes

ART EDUCATION

The Bachelor of Fine Arts (B.F.A.) is a professional degree with an intensive focus on an area of the Arts supported by a program in general studies. The intent of the B.F.A. is to prepare for professional practice in the area of the degree.

- The ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency and rhetorical force.
- An informed acquaintance with the mathematical and experimental methods of the physical and biological sciences, and with the main forms of analysis of the historical and quantitative techniques needed for investigating the workings and developments of modern society.
- An ability to address culture and history from a variety of perspectives.
- Understanding of, and experience in thinking about, moral and ethical problems.
- The ability to respect, understand and evaluate work in a variety of disciplines.
- The capacity to explain and defend views effectively and rationally.

Additional specific goals related to the art education major:

- Studio Art-The prospective art teacher must be familiar with the basic expressive, technical, procedural and organizational skills, and conceptual insights which can be developed through studio art and design experiences.
- Art History and Analysis-The prospective art teacher must have an understanding of: (1) The major styles and periods of art history, analytical methods, and theories of criticism. (2) The development of past and contemporary art forms. (3) Contending philosophies of art. (4) The fundamental and integral relationships of all these to the making of art.
- Teaching Competencies-The artist-teacher must be able to connect an understanding of educational processes and structures with an understanding of relationships among the arts, sciences, and humanities, in order to apply art competencies in teaching situations and to integrate art/design instruction into the total process of education. Specific competencies include:
 - a. An understanding of child development and the identification and understanding of psychological principles of learning as they relate to art education.
 - b. An understanding of the philosophical and social foundation underlying art in education and the ability to express a rationale for personal attitudes and beliefs.
 - c. Ability to assess aptitudes, experiential backgrounds, and interests of individuals and groups of students, and to devise learning experiences to meet assessed needs.
 - d. Knowledge of current methods and materials available in all fields and levels of art education.
 - e. Basic understanding of the principles and methods of developing curricula and the short- and long-term instructional units that comprise them.
 - f. The ability to accept, amend, or reject methods and materials based on personal assessment of specific teaching situations.
 - g. An understanding of evaluative techniques and the ability to apply them in assessing both the progress of students and the objectives and procedures of the curriculum.
 - h. Ability to organize continuing study and to incorporate knowledge gained into self-evaluation and professional growth.

Art History, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

Art history is an interdisciplinary field, drawing upon philosophy, history, literature, religion, and mythology to examine works of art and their contexts.

The Bachelor of Arts in Art History provides a foundation in the history of art and architecture in its cultural and theoretical context. Aesthetic and historical issues have become increasingly central to the creation, display, and reception of art. School of Art and Design courses in Art History introduce tools for the making and analysis of art, including the history of works of art, the language of art, and the cultural context for works of art. In the final semester, the student will complete a senior research project on a topic selected by the student with the approval of the art history faculty.

Each semester, art history field trips travel to study works in regional museums. The Art Museum of West Virginia University provides first-hand experience with works of significant aesthetic and cultural value, and introduces students to curatorial and museum practice. Guest artist and art historian lectures and exhibitions in the Mesaros Galleries are scheduled each semester.

Majors are encouraged to study abroad through several field study and study abroad programs. Art History courses are offered abroad in the Disegno Italia program, 18th Century Painting and Photography in France, and Medieval Stained Glass in France GPS Programs.

Art history majors are required to complete four semesters of a language other than English, or two semesters of Latin, or pass a written translation competency exam.

Click here to view the Suggested Plan of Study (p. 546)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

ART 191	First-Year Seminar	2
GEF 1, 2, 3, 4, and 5		19
Studio (Any ART course)		6
Art History Core		
ARHS 120	Survey of Art History 1 (fulfills GEF 6)	3
ARHS 160	Survey of Art History 2	3
Classics: Select 1 from the following		3
ARHS 320	Greek and Roman	
ARHS 325	Ancient Roman Art and Architecture	
ARHS 331	Medieval	
ARHS 333	Medieval Architecture	
Western European Traditions: Select 1 from the following		3
ARHS 350	Northern Renaissance	
ARHS 354	Italian Renaissance	
ARHS 360	Baroque	
ARHS Semester in Italy		
Modern and Contemporary Studies: Select 1 from the following		3
ARHS 370	American	
ARHS 375	Nineteenth Century	
ARHS 380	Modern	
ARHS 381	Modern Architecture	
ARHS 389	Contemporary	
Art History Major Courses		
ARHS 240	Art Theory	3
ARHS 345	Modern Art Theory	3
ARHS 494	Seminar	3
ARHS 401	Senior Project-Capstone	3
ARHS Electives (200 level or higher; excluding Special Topics courses)		9
Foreign Language (fulfills GEFs 7 and 8) *		12
Cognate Areas **		
Cognate 1		9
Cognate 2		6
Cognate 3		6
Writing Portfolio Requirement ***		

Electives (electives will vary based on GEF courses chosen; students must earn 120 credits to graduate)	24
Total Hours	120

- * The foreign language requirement typically completes GEF areas 7 and 8. Students who elect to complete six hours of Latin (CLAS) coursework will complete GEF 5 and contribute three hours to GEF 8.
- ** Recommended Cognate/GEF Depth/Minor Areas include: Art History Specializations; Chemistry/Physics/Forensics; Art Administration; Historic Presentation; History/Humanities/Classics/Archaeology/Anthropology; Literature; Museum/Curatorial; Native American/African Studies; Philosophy/Religion/Women's Studies; Studio Art/Theater/Music; Study Abroad/Off Campus; World Architecture
- *** The School of Art and Design values and supports written communication abilities and critical thinking skills developed through iterative writing experiences across the curriculum and within the discipline. To meet this goal students must pass with a B- or better a writing portfolio requirement that includes examples of academic, professional, and reflective writing they have produced in their regular courses. Please contact your advisor for more information.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
Studio Arts		3 Cognate 1 Course	3
ARHS 120 (GEF 6)		3 ARHS 160	3
Foreign Language (GEF 7)		3 Foreign Language (GEF 8)	3
ENGL 101 (GEF 1)		3 Elective	3
ART 191 (University Requirement)		2 GEF 2	4
GEF 4		3	
		17	16

Second Year

Fall	Hours	Spring	Hours
Art History Core course		3 ARHS 240	3
Cognate 2 Course		3 Art History Core course	3
Foreign Language (GEF 8)		3 GEF 3	3
ENGL 102 (GEF 1)		3 Foreign Language (GEF 8)	3
Elective		3 Cognate 3 Course	3
		15	15

Third Year

Fall	Hours	Spring	Hours
ARHS 345		3 Art History Core course	3
Cognate 1 Course		3 ARHS Elective	3
ARHS Elective		3 GEF 5	3
Elective		3 Cognate 2 Course	3
Studio Art		3 Cognate 3 Course	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ARHS 494		3 ARHS Elective	3
Cognate 1 Course		3 ARHS 401	3
Elective		3 Elective	3
Elective		3 Elective	3
Elective		3	
		15	12

Total credit hours: 120

Major Learning Outcomes

ART HISTORY

The Bachelor of Arts (B.A.) degree is based on a breadth of general, liberal arts studies (humanities, natural and physical sciences, and social sciences) with a specialized focus in one area of the Arts.

- The ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency and rhetorical force.
- An informed acquaintance with the mathematical and experimental methods of the physical and biological sciences, and with the main forms of analysis of the historical and quantitative techniques needed for investigating the workings and developments of modern society.
- An ability to address culture and history from a variety of perspectives.
- Understanding of, and experience in thinking about, moral and ethical problems.
- The ability to respect, understand and evaluate work in a variety of disciplines.
- The capacity to explain and defend views effectively and rationally.

Additional specific goals related to the art history degree:

- A general knowledge of the monuments and principal artists of all major art periods of the past, including a broad understanding of the art of the contemporary and modern periods and acquaintance with the art history of non-Western cultures.
- A general knowledge of the theory, modes of analysis, and criticism relevant to the discipline of art history.
- A general knowledge of world history.
- Knowledge of the tools and techniques of scholarship.
- Functional knowledge of the creative process.
- Adequate mastery of at least one foreign language to support research through the reading of primary source materials.

Ceramics, B.F.A.

Degree Offered

- Bachelor of Fine Arts

Nature of the Program

Development of technical expertise, design and conceptual approaches as a means to expand the student's aesthetic vocabulary. Our goal is to help students gain insight into their professional approach to art-making and commitment in their active pursuit of process and self-discovery as ceramic artists.

Students can study ceramics abroad in summer and fall Ceramics in China courses in Jingdezhen, China as part of their regular degree requirements.

Through a unique partnership with the Pottery Workshop in Jingdezhen, students can travel and study with some of China's most prominent teachers and ceramics artists. The Ceramics in China courses offer access to the Ceramics Technology Global Research Center, which promotes creative exploration at the intersection of advanced technology and ceramics.

WVU is one of only a few schools left in the nation with a ceramics production line, bringing student productions to the general public through semi-annual ceramics sales that help fund further field study and educational opportunities for students.

Click here to view the Suggested Plan of Study (p. 549)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

A grade of C- or higher must be earned in all ART and ARHS courses.

GEF 1, 2, 3, 4, 5, 7, and 8	28
ART 191 First-Year Seminar	2
ARHS 120 Survey of Art History 1 (may fulfill GEF 6)	3
ARHS 160 Survey of Art History 2 (may fulfill GEF 8)	3
ART 111 Drawing 1	3
ART 112 Drawing 2	3
ART 121 Visual Foundations 1	3
ART 122 Visual Foundations 2	3
ART 211 Figure Drawing	3
ART 212 Multi Media	3
ART 240 Ceramics	3
ART 241 Ceramics	3
or ART 242 Life Modeling	
Choose from the following:	18
ART 340 Ceramics	
ART 341 Ceramic Production Methods	
ART 440 Senior Projects in Ceramics	6
ART or ARHS 200/300/400 level	18
Choose two of the following Art 200-level electives:	6
ART 223 Introduction to Graphic Design	
or ART 224 Graphic Design 2	
ART 270 Introduction to Electronic Media 1	
or ART 271 Introduction to Electronic Media 2	
ART 213 Painting 1	
or ART 214 Painting 2	
ART 232 Photography	
or ART 234 Digital Photography	
ART 230 Printmaking - Intaglio and Relief	
or ART 231 Printmaking - Lithography	
ART 226 Introduction to Sculpture	
or ART 227 Sculpture	
ARHS 200/300/400 level	6
Writing Portfolio Requirement *	
Electives	6
Total Hours	120

* The School of Art and Design values and supports written communication abilities and critical thinking skills developed through iterative writing experiences across the curriculum and within the discipline. To meet this goal students must pass with a B- or better a writing portfolio requirement that includes examples of academic, professional, and reflective writing they have produced in their regular courses. The writing portfolio replaces the Writing Intensive "W" credit for all incoming students beginning Fall 2016. Students graduating Spring or Summer 2016 must complete a "W" course. Please contact the School of Art and Design undergraduate major advisor, Professor Kristina Olson, for more information.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ART 111		3 ART 112	3
ART 121		3 ART 122	3
ARHS 120 (GEF 6)		3 ARHS 160 (GEF 8)	3
ART 191 (University Requirement)		2 GEF 2	4
ENGL 101 (GEF 1)		3 GEF 5	3
GEF 4		3	
		17	16

Second Year

Fall	Hours	Spring	Hours
ART 211		3 ART 212	3
ART 240		3 ART 241	3
ART 200-Level Elective		3 ART 200-Level Elective	3
ENGL 102 (GEF 1)		3 GEF 3	3
ARHS 200/300/400 level		3 ARHS 200/300/400 level	3
		15	15

Third Year

Fall	Hours	Spring	Hours
ART 340		3 ART 340	6
ART 341		3 ART or ARHS 200/300/400 level	6
GEF 7		3 Elective	3
Elective		3	
		12	15

Fourth Year

Fall	Hours	Spring	Hours
ART 340		6 ART 440	6
ART or ARHS 200/300/400 level		6 ART or ARHS 200/300/400 level	6
GEF 8		3 GEF 8	3
		15	15

Total credit hours: 120

Major Learning Outcomes

CERAMICS

The Bachelor of Fine Arts (B.F.A.) is a professional degree with an intensive focus on an area of the Arts supported by a program in general studies. The intent of the B.F.A. is to prepare for professional practice in the area of the degree.

- The ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency and rhetorical force.
- An informed acquaintance with the mathematical and experimental methods of the physical and biological sciences, and with the main forms of analysis of the historical and quantitative techniques needed for investigating the workings and developments of modern society.
- An ability to address culture and history from a variety of perspectives.
- Understanding of, and experience in thinking about, moral and ethical problems.
- The ability to respect, understand and evaluate work in a variety of disciplines.
- The capacity to explain and defend views effectively and rationally.

Additional specific goals related to the ceramics degree:

- Understanding of basic design principles, particularly as related to ceramics. Advanced work in three-dimensional design.
- Knowledge and skills in the use of basic tools, techniques, and processes sufficient to produce work from concept to finished object. This includes knowledge of raw materials and technical procedures such as clays, glazes, and firing.
- Understanding of the place of ceramics within the history of art, design, and culture.

- Preparation of clay bodies and glazes, kiln stacking procedures, and firing processes.
- Completion of a final project related to the exhibition of original work.

Graphic Design, B.F.A.

Degree Offered

- Bachelor of Fine Arts

Nature of the Program

The Graphic Design program aims to capture one definition of design: improvement of a situation, be it for health, efficiency, user experience, aesthetics, or entertainment. Our design studio approaches problems by researching on-site to understand the environment and culture for which we are designing.

The program begins with learning a foundation in typography, color, symbolic drawings, design for small and large formats, and design thinking. Tactical elements of design are explored hands-on through paper engineering, book arts courses, and access to a letterpress studio.

Graphic Design Portfolio: Following completion of the Foundation Core, along with ART 223 and ART 224, students wishing to pursue the graphic design major must submit a portfolio for review in the spring, normally during the second semester of the sophomore year. Contact the area coordinator for information regarding the portfolio review for graphic design.

We run a model design studio, Studio 2453, that serves up to 30 clients per year. Students work as project directors with clients to produce design that often benefits a particular place and population. A portfolio class also prepares seniors for a design career where they present their work in Pittsburgh or Cleveland at AIGA Portfolio Days to gain feedback from industry professionals.

Click here to view the Suggested Plan of Study (p. 551)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

A grade of C- or higher must be earned in all ART or ARHS courses

GEF 1, 2, 3, 4, 5, 7, and 8		28
ART 191	First-Year Seminar	2
ARHS 120	Survey of Art History 1 (GEF 6)	3
ARHS 160	Survey of Art History 2 (GEF 8)	3
ARHS 200/300/400 level		3
ARHS 406	Graphic Design History	3
ART 111	Drawing 1	3

ART 112	Drawing 2	3
ART 121	Visual Foundations 1	3
ART 122	Visual Foundations 2	3
ART 211	Figure Drawing	3
ART 212	Multi Media	3
ART 223	Introduction to Graphic Design	3
ART 224	Graphic Design 2	3
ART 325	Design for Web and Screen	3
ART 328	Advanced Typography	3
ART 323	Graphic Design 3	6
Choose one of the following:		6
ART 324	Graphic Design 4	
or ART 425	Graphic Design: Senior Project	
Graphic Design: Senior Project		6
ART 425	Graphic Design: Senior Project	
ART or ARHS 200/300/400		15
ART 232	Photography	3
ART 234	Digital Photography	3
Choose one from the following ART 200-level electives:		3
ART 213	Painting 1	
ART 214	Painting 2	
ART 226	Introduction to Sculpture	
ART 227	Sculpture	
ART 230	Printmaking - Intaglio and Relief	
ART 231	Printmaking - Lithography	
ART 240	Ceramics	
ART 241	Ceramics	
ART 242	Life Modeling	
ART 270	Introduction to Electronic Media 1	
ART 271	Introduction to Electronic Media 2	
Writing Portfolio Requirement *		
Electives		6
Total Hours		120

* The School of Art and Design values and supports written communication abilities and critical thinking skills developed through iterative writing experiences across the curriculum and within the discipline. To meet this goal students must pass with a B- or better a writing portfolio requirement that includes examples of academic, professional, and reflective writing they have produced in their regular courses. The writing portfolio replaces the Writing Intensive "W" credit for all incoming students beginning Fall 2016. Students graduating Spring or Summer 2016 must complete a "W" course. Please contact the School of Art and Design undergraduate major advisor, Professor Kristina Olson, for more information.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ART 111		3 ART 112	3
ART 121		3 ART 122	3
ARHS 120 (GEF 6)		3 ARHS 160 (GEF 8)	3
ART 191 (University Requirement)		2 GEF 2	4
ENGL 101 (GEF 1)		3 GEF 5	3
GEF 4		3	
		17	16

Second Year

Fall	Hours	Spring	Hours
ART 211		3 ART 212	3
ART 223		3 ART 224	3
ART 232		3 ART 234	3
ENGL 102 (GEF 1)		3 GEF 3	3
ARHS 406		3 ARHS 200/300/400 level	3
		15	15

Third Year

Fall	Hours	Spring	Hours
ART 323		3 ART 323	3
ART 328		3 ART 325	3
ART 200-level Elective		3 ART or ARHS 200/300/400 level	6
GEF 7		3 Elective	3
Elective		3	
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ART 324 or 425		3 ART 324 or 425	3
ART 425		3 ART 425	3
ART or ARHS 200/300/400 level		6 ART or ARHS 200/300/400 level	3
GEF 8		3 GEF 8	3
		15	12

Total credit hours: 120

Major Learning Outcomes

GRAPHIC DESIGN

The Bachelor of Fine Arts (B.F.A.) is a professional degree with an intensive focus on an area of the Arts supported by a program in general studies. The intent of the B.F.A. is to prepare for professional practice in the area of the degree.

- The ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency and rhetorical force.
- An informed acquaintance with the mathematical and experimental methods of the physical and biological sciences, and with the main forms of analysis of the historical and quantitative techniques needed for investigating the workings and developments of modern society.
- An ability to address culture and history from a variety of perspectives.
- Understanding of, and experience in thinking about, moral and ethical problems.
- The ability to respect, understand and evaluate work in a variety of disciplines.
- The capacity to explain and defend views effectively and rationally.

Additional specific goals related to the graphic design degree:

- Understanding of and ability to develop strategies for planning, producing, and disseminating visual communications.
- Functional knowledge of creative approaches, and the analytical ability to make appropriate, purpose-based choices among them, and to use such approaches to identify communication opportunities and generate alternative solutions.
- Fluency in the use of the formal vocabulary and concepts of design—including content, elements, structure, style, and technology—in response to visual communication problems.
- Ability to use typography, images, diagrams, motion, sequencing, color, and other such elements effectively in the contexts of specific design projects.
- Ability to incorporate research and findings regarding people and contexts into communication design decision-making.
- Understanding of design at different scales, ranging from components to systems and from artifacts to experiences.
- Ability to exercise critical judgment about the student's own design and the design of others with regard to usefulness, usability, desirability, technological feasibility, economic viability, and sustainability in terms of long-term consequences.
- Acquisition of collaborative skills and the ability to work effectively in interdisciplinary or multidisciplinary teams to solve complex problems.
- Understanding of and the ability to use technology, including but not limited to: (1) Functional understanding of how to continue learning technology, recognizing that technological change is constant. (2) Ability to conduct critical evaluations of different technologies in specific design problem

contexts, including the placement of technical issues in the service of human-centered priorities and matching relationships between technologies and the people expected to use them. (3) Functional capability to shape and create technological tools and systems to address communication problems and further communication goals. (4) Ability to recognize and analyze the social, cultural, and economic implications of technology on message creation and production and on human behavior, and to incorporate results into design decisions.

- Functional knowledge of professional design practices and processes.

Interactive Design for Media, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The Interactive Design for Media major is a hybrid program of the College of Creative Arts and Reed College of Media. The major combines two core foundational areas of study: one focused on media and delivered by the Reed College of Media; the other focused on art and design, delivered by the College of Creative Arts. As such, course work exposes students to the history, guiding principles, ethics, diversity and cultural issues as related to design, technology and interactive media. The colleges' skills-based courses provide students with ample hands-on opportunities in the technologies and design thinking germane to digital, interactive platforms.

The program begins with foundational skills in design, production, and editing using digital tools and software. These classes provide the skill sets to create interactive experiences including websites, mobile apps, immersive environments, video games, and virtual and augmented reality. Courses offered in the School of Art and Design provide skill building and theory in audiovisual design and motion graphics, while courses offered in the Reed College of Media provide theoretical exploration and applied implementation of those skills in emergent media experiences. Students are concurrently oriented to innovation and design thinking methodologies and project management skills to create expertise in coordinating a team of diverse thinkers, from computer programmers to visual designers.

Admissions

The WVU Reed College of Media uses the same undergraduate admission standards for first-time freshmen as West Virginia University (WVU). Visit the WVU undergraduate admissions page for details on general WVU admission.

Students not meeting the above requirements will be admitted to WVU as either a pre-Art or pre-Media student through CLASS.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Interactive Design for Media (<https://admissions.wvu.edu/academics/majors/interactive-design-for-media/>) major.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Major Requirements

A minimum grade of C- or better is required in all major coursework.

First-Year Seminar

MDIA 191	First-Year Seminar	2
or ART 191	First-Year Seminar	

General Education Requirements

GEF 1, 2, 3, 5, 7, 8		25
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Art Requirements

ART 121	Visual Foundations 1	3
ART 122	Visual Foundations 2	3
ART 223	Introduction to Graphic Design	3
ART 234	Digital Photography	3
ART 270	Introduction to Electronic Media 1	3
ART 271	Introduction to Electronic Media 2	3
ART 272	Designing for Multimedia	3
ART 285	Interactive Audio Design	3
ART 325	Design for Web and Screen	3
ART 372	Interactive Design	3
ART 472	Advanced Interactive Design	3
ART 485	Experiments in Interactivity	3
ARHS 160	Survey of Art History 2 (GEF 6)	3
ARHS 406	Graphic Design History	3

Media Requirements

ADV 215	Principles of Advertising (GEF 8)	3
MDIA 101	Media and Society (GEF 4)	3
MDIA 215	Media Writing	3
MDIA 225	Media Tools & Applications	3
JRL 210	Visual Journalism and New Media	3
JRL 262	Coding for Media Applications	3
JRL 322	Gaming Design and Digital Narrative	3
JRL 362	User Experience Design for Media Applications	3
JRL 328	Media Law and Ethics	3
JRL 431	Multimedia Storytelling	3
or JRL 440	Visual Storytelling for the Media	
JRL 458	Interactive Media and Audience Building	3

Electives*

18

Total Hours

120

* General Education and Elective Credits can vary - students must have a minimum of 120 credit hours total to complete the degree.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ART 122	3
MDIA 101 (GEF 4)		3 ARHS 160 (GEF 6)	3
MDIA 191 or ART 191		2 MDIA 215	3
ART 121		3 GEF 2	4
Elective		3 Elective	3
		14	16

Second Year

Fall	Hours	Spring	Hours
ART 223		3 ENGL 102 (GEF 1)	3

ART 234		3 ADV 215 (GEF 8)	3
JRL 210		3 ART 272	3
MDIA 225		3 ART 285	3
GEF 3		3 JRL 262	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
ART 270		3 ART 271	3
ART 372		3 ART 325	3
JRL 322		3 ARHS 406	3
GEF 5		3 JRL 362	3
GEF 7		3 Elective	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
ART 485		3 ART 472	3
JRL 328		3 JRL 458	3
JRL 431 or 440		3 GEF 8	3
GEF 8		3 Elective	3
Elective		3 Elective	3
		15	15

Total credit hours: 120

Major Learning Outcomes

INTERACTIVE DESIGN FOR MEDIA

The School of Art and Design and all its degrees and majors are accredited by the National Association of the Schools of Art and Design (NASAD). The Interactive Design for Media major will undergo the accreditation through NASAD process as a new program. The following criteria are from NASAD and provide the basis of assessment for course and programmatic Student Learning Outcomes.

Upon completion of the Interactive Design for Media major, graduates must have attained the following:

1. Knowledge of the concepts related to the visual, spatial, sound, motion, interactive, and temporal elements/features of digital technology and principles for their use in the creation and application of digital media-based work.
2. Understanding of narrative and other information/language structures for organizing content in time-based or interactive media; the ability to organize and represent content structures in ways that are responsive to technological, social, and cultural systems.
3. Understanding of the characteristics and capabilities of various technologies (hardware and software); their appropriateness for particular expressive, functional, and strategic applications; their positions within larger contexts and systems; and their influences on individuals and society.
4. Knowledge of the processes for the development and coordination of digitally-based art and design strategies (for example, storyboarding, concept mapping, and the use of scenarios and personas).
5. Ability to analyze and synthesize relevant aspects of human interaction in various contexts (physical, cognitive, cultural, social, political, and economic) and with respect to technologically-mediated communication, objects, and environments.
6. Understanding of what is useful, usable, effective, and desirable with respect to user/ audience-centered digitally-based communication, objects, and environments.
7. Knowledge of history, theory, and criticism with respect to such areas as film, video, technology, and digital art and design.
8. Ability to work in teams and to organize collaborations among people from different disciplines.
9. Ability to use the above competencies in the creation and development of professional quality digital media productions.

Intermedia/Photography, B.F.A.

Degree Offered

- Bachelor of Fine Arts

Nature of the Program

The intermedia/photography program at West Virginia University provides an environment that fosters creative exploration and critical inquiry in the production of contemporary art. Through a variety of media explorations, including digital and traditional photographic processes, digital video, animation, installation, interactivity and sound design, students are encouraged to develop unique and compelling forms of expression. A state-of-the-art facility for analog and digital imaging, a diverse and sequenced curriculum, and a supportive and challenging faculty all aid students in their individual journeys as artists. In both our undergraduate and graduate programs, we encourage spirited interaction with the other programs of the College of Creative Arts and the university at large.

In the classroom, frequent critiques of student work become an important activity providing feedback on techniques and subject matter and a chance to discuss project ideas and interpretation. In addition, professional artists are frequently invited as guest lecturers to stimulate dialogue about current issues with the medium. These visiting artists share their experiences so that they may help prepare students for the workplace. Students also learn about the role of the artist beyond the university by attending exhibitions at museums and galleries, and by participating in regular art exhibitions in the community.

Click here to view the Suggested Plan of Study (p. 557)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

A grade of C- or higher must be earned in all ART and ARHS courses.

GEF 1, 2, 3, 4, 5, 7, and 8		28
ART 191	First-Year Seminar	2
ARHS 120	Survey of Art History 1 (may fulfill GEF 6)	3
ARHS 160	Survey of Art History 2 (may fulfill GEF 8)	3
ART 111	Drawing 1	3
ART 112	Drawing 2	3
ART 121	Visual Foundations 1	3
ART 122	Visual Foundations 2	3
ART 211	Figure Drawing	3
ART 212	Multi Media	3
Choose one of the following pairs:		6
ART 232 & ART 234	Photography and Digital Photography	
ART 270 & ART 271	Introduction to Electronic Media 1 and Introduction to Electronic Media 2	

Studio Non-Emphasis Courses

Choose two of the following ART 200-level electives:	6	
ART 213 or ART 214	Painting 1 Painting 2	
ART 223 or ART 224	Introduction to Graphic Design Graphic Design 2	
ART 226 or ART 227	Introduction to Sculpture Sculpture	
ART 230 or ART 231	Printmaking - Intaglio and Relief Printmaking - Lithography	
ART 240 or ART 241 or ART 242	Ceramics Ceramics Life Modeling	
If not completed above:		
ART 232 or ART 234	Photography Digital Photography	
ART 270 or ART 271	Introduction to Electronic Media 1 Introduction to Electronic Media 2	
Choose from the following:	18	
ART 332	Intermediate Photography	
ART 333	Alternative Photography	
ART 335	Advanced Photography	
ART 370	Intermediate Electronic Media	
ART 371	Interactive Art	
ART 470 or ART 435	Senior Projects in Intermedia Senior Projects in Photography	6
ARHS 200/300/400 level		6
ART or ARHS 200/300/400 level		18
Writing Portfolio Requirement *		
Electives		6
Total Hours		120

* The School of Art and Design values and supports written communication abilities and critical thinking skills developed through iterative writing experiences across the curriculum and within the discipline. To meet this goal students must pass with a B- or better a writing portfolio requirement that includes examples of academic, professional, and reflective writing they have produced in their regular courses. The writing portfolio replaces the Writing Intensive "W" credit for all incoming students beginning Fall 2016. Students graduating Spring or Summer 2016 must complete a "W" course. Please contact the School of Art and Design undergraduate major advisor, Professor Kristina Olson, for more information.

Suggested Plan of Study**First Year**

Fall	Hours	Spring	Hours
ART 111		3 ART 112	3
ART 121		3 ART 212	3
ARHS 120 (GEF 6)		3 ARHS 160 (GEF 8)	3
ART 191 (University Requirement)		2 GEF 2	4
ENGL 101 (GEF 1)		3 GEF 5	3
GEF 4		3	
		17	16

Second Year

Fall	Hours	Spring	Hours
ART 211		3 ART 212	3
Select one from the following:		3 Select one from the following:	3

ART 232		ART 234	
ART 270		ART 271	
ART 200-level Elective		3 ART 200-level Elective	3
ENGL 102 (GEF 1)		3 GEF 3	3
ARHS 200/300/400 level		3 ARHS 200/300/400 level	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
ART 370 or 333		6 ART 370 or 332	6
GEF 7		3 ART or ARHS 200/300/400 level	6
Elective		3 Elective	3
		12	15
Fourth Year			
Fall	Hours	Spring	Hours
ART 370 or 335		6 ART 470 or 435	6
ART or ARHS 200/300/400 level		6 ART or ARHS 200/300/400 level	6
GEF 8		3 GEF 8	3
		15	15

Total credit hours: 120

Major Learning Outcomes

INTERMEDIA/PHOTOGRAPHY

The Bachelor of Fine Arts (B.F.A.) is a professional degree with an intensive focus on an area of the Arts supported by a program in general studies. The intent of the B.F.A. is to prepare for professional practice in the area of the degree.

- The ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency and rhetorical force.
- An informed acquaintance with the mathematical and experimental methods of the physical and biological sciences, and with the main forms of analysis of the historical and quantitative techniques needed for investigating the workings and developments of modern society.
- An ability to address culture and history from a variety of perspectives.
- Understanding of, and experience in thinking about, moral and ethical problems.
- The ability to respect, understand and evaluate work in a variety of disciplines.
- The capacity to explain and defend views effectively and rationally.

Additional specific goals related to the electronic media emphasis:

- Knowledge of the concepts related to the visual, spatial, sound, motion, interactive, and temporal elements/features of digital technology and principles for their use in the creation and application of digital media-based work.
- Understanding of narrative and other information/language structures for organizing content in time-based or interactive media; the ability to organize and represent content structures in ways that are responsive to technological, social, and cultural systems.
- Understanding of the characteristics and capabilities of various technologies (hardware and software); their appropriateness for particular expressive, functional, and strategic applications; their positions within larger contexts and systems; and their influences on individuals and society.
- Knowledge of history, theory, and criticism with respect to such areas as film, video, technology, and digital art and design.
- Ability to use the above competencies in the creation and development of professional quality digital media productions.

Additional specific goals related to the photography emphasis:

- Understanding of the visual forms and their aesthetic functions, and basic photographic design principles with attention to such areas as design, color, and lighting.
- Knowledge and skills in the use of basic tools, techniques, technologies, and processes sufficient to work from concept to finished product. This involves a mastery of the materials, equipment, and processes of the discipline, including but not limited to uses of cameras, film, lighting/digital technologies, processing in black and white, and color, printing, and work with nonsilver materials.
- Functional knowledge of photographic history and theory, the relationship of photography to the visual disciplines, and its influence on culture.

Painting, B.F.A.

Degree Offered

- Bachelor of Fine Arts

Nature of the Program

Traditional and experimental oil and acrylic painting in figurative and abstract imagery are explored to their fullest potential for each student. The painting program is designed to introduce students to the historic and contemporary foundations of painting media. Learning is both one-on-one and collaborative, so that personal exploration and wider aesthetic discourse are heightened. The program emphasizes both craft and conceptualization.

A unique Summer Painting Program in China allows students to study landscape painting in the Chinese ink style in Nanjing and Tangka (Tibetan scroll painting) in Tongren with extensive traveling to major historical and artistic sites throughout China. The Painting in NYC Global Positioning Studies course gives students the opportunity to explore the contemporary painting scene in New York City.

Classes encourage open, diverse criteria for critique and evaluation. Students are invited to consider interdisciplinary media and multicultural sources of inspiration in order to find the most fluent and expressive voice for their work. Careful individualized advisement prepares painters to comprehend and engage the gallery market, trends in critical thinking, and reputable graduate programs for further study and other professional opportunities.

Click here to view the Suggested Plan of Study (p. 560)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

A grade of C- or higher must be earned in all ART and ARHS courses.

GEF Requirements		28
Lower-Level Sequence		
ART 191	First-Year Seminar	2
ART 111	Drawing 1	3
ART 112	Drawing 2	3
ART 121	Visual Foundations 1	3
ART 122	Visual Foundations 2	3
ARHS 120	Survey of Art History 1 (may fulfill GEF 6)	3
ARHS 160	Survey of Art History 2 (may fulfill GEF 8)	3
ART 211	Figure Drawing	3
ART 212	Multi Media	3

ARHS 200/300/400 level		6
ART 213	Painting 1	3
ART 214	Painting 2	3
Studio Non-Emphasis Courses		
Choose two of the following ART 200-level electives:		6
ART 240 or ART 241 or ART 242	Ceramics Ceramics Life Modeling	
ART 223 or ART 224	Introduction to Graphic Design Graphic Design 2	
ART 270 or ART 271	Introduction to Electronic Media 1 Introduction to Electronic Media 2	
ART 232 or ART 234	Photography Digital Photography	
ART 230 or ART 231	Printmaking - Intaglio and Relief Printmaking - Lithography	
ART 226 or ART 227	Introduction to Sculpture Sculpture	
Painting		18
ART 313	Painting 3 (Repeated)	
ART 413	Senior Projects in Painting	6
ART 200/300/400 or ARHS 200/300/400 level		18
Writing Portfolio Requirement *		
Electives		6
Total Hours		120

* The School of Art and Design values and supports written communication abilities and critical thinking skills developed through iterative writing experiences across the curriculum and within the discipline. To meet this goal students must pass with a B- or better a writing portfolio requirement that includes examples of academic, professional, and reflective writing they have produced in their regular courses. The writing portfolio replaces the Writing Intensive "W" credit for all incoming students beginning Fall 2016. Students graduating Spring or Summer 2016 must complete a "W" course. Please contact the School of Art and Design undergraduate major advisor, Professor Kristina Olson, for more information.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ART 111		3 ART 112	3
ART 121		3 ART 122	3
ARHS 120 (GEF 6)		3 ARHS 160 (GEF 8)	3
ART 191 (University Requirement)		2 GEF 2	4
ENGL 101 (GEF 1)		3 GEF 5	3
GEF 4		3	
		17	16

Second Year

Fall	Hours	Spring	Hours
ART 211		3 ART 212	3
ART 213		3 ART 214	3
ARHS 200/300/400 level		3 ART 200-level Elective	3
ART 200-level Elective		3 GEF 3	3
ENGL 102 (GEF 1)		3 ARHS 200/300/400 level	3
		15	15

Third Year

Fall	Hours	Spring	Hours
ART 313		6 ART 313	6
Elective		3 ART or ARHS 200/300/400 level	6
GEF 7		3 Elective	3
		12	15

Fourth Year

Fall	Hours	Spring	Hours
ART 313		6 ART 413	6
ART or ARHS 200/300/400 level		6 ART or ARHS 200/300/400 level	6
GEF 8		3 GEF 8	3
		15	15

Total credit hours: 120

Major Learning Outcomes**PAINTING**

The Bachelor of Fine Arts (B.F.A.) is a professional degree with an intensive focus on an area of the Arts supported by a program in general studies. The intent of the B.F.A. is to prepare for professional practice in the area of the degree.

- The ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency and rhetorical force.
- An informed acquaintance with the mathematical and experimental methods of the physical and biological sciences, and with the main forms of analysis of the historical and quantitative techniques needed for investigating the workings and developments of modern society.
- An ability to address culture and history from a variety of perspectives.
- Understanding of, and experience in thinking about, moral and ethical problems.
- The ability to respect, understand and evaluate work in a variety of disciplines.
- The capacity to explain and defend views effectively and rationally.

Additional specific goals related to the painting degree:

- Understanding of basic principles of design and color, concepts, media and formats, and the ability to apply them to a specific aesthetic intent. This includes functional knowledge of the traditions, conventions, and evolution of the discipline as related to issues of representation illusion, and meaning.
- Ability to synthesize the use of drawing, two-dimensional design, and color.
- Knowledge and skills in the use of basic tools, techniques, and processes sufficient to work from concept to finished product, including knowledge of paints and surfaces.
- Exploration of the expressive possibilities of various media, and the diverse conceptual modes available to the painter.

Printmaking, B.F.A.**Degree Offered**

- Bachelor of Fine Arts

Nature of the Program

Particular attention is given to developing personal imagery, while providing a solid foundation in the techniques of lithography and intaglio. Computer-mediated images, monoprinting, relief, silk-screen, and alternative printing processes are all integral to the curriculum. This program provides a cohesive offering of courses that focus upon the students' 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 programs are exciting components of the department, where nationally recognized artists work with us to produce limited edition prints. Whatever the occupation may be (arts administrators, master printers for galleries or museums, educators, or even non-art related professions), the printmaking program is dedicated to preparing students for life as practicing, professional artists.

[Click here to view the Suggested Plan of Study \(p. 563\)](#)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

A grade of C- or higher must be earned in all ART and ARHS courses.

GEF 1, 2, 3, 4, 5, 7, and 8		28
Lower-Level Sequence		
ART 191	First-Year Seminar	2
ART 111	Drawing 1	3
ART 112	Drawing 2	3
ART 121	Visual Foundations 1	3
ART 122	Visual Foundations 2	3
ARHS 120	Survey of Art History 1 (may fulfill GEF 6)	3
ARHS 160	Survey of Art History 2 (may fulfill GEF 8)	3
ART 211	Figure Drawing	3
ART 212	Multi Media	3
Printmaking Emphasis		
ARHS 200/300/400 level		6
ART 230	Printmaking - Intaglio and Relief	3
ART 231	Printmaking - Lithography	3
Studio Non-Emphasis Courses		
Choose two of the following ART 200-level electives:		6
ART 240 or ART 241 or ART 242	Ceramics Ceramics Life Modeling	
ART 223 or ART 224	Introduction to Graphic Design Graphic Design 2	
ART 270 or ART 271	Introduction to Electronic Media 1 Introduction to Electronic Media 2	
ART 213 or ART 214	Painting 1 Painting 2	
ART 232 or ART 234	Photography Digital Photography	

ART 226 or ART 227	Introduction to Sculpture Sculpture	
Major Studio Area Sequence - 300 Level		18
ART 330	Printmaking	
ART 430	Senior Projects in Printmaking	6
ART or ARHS 200/300/400 level		18
Writing Portfolio Requirement *		
Electives		6
Total Hours		120

* The School of Art and Design values and supports written communication abilities and critical thinking skills developed through iterative writing experiences across the curriculum and within the discipline. To meet this goal students must pass with a B- or better a writing portfolio requirement that includes examples of academic, professional, and reflective writing they have produced in their regular courses. The writing portfolio replaces the Writing Intensive "W" credit for all incoming students beginning Fall 2016. Students graduating Spring or Summer 2016 must complete a "W" course. Please contact the School of Art and Design undergraduate major advisor, Professor Kristina Olson, for more information.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ART 111		3 ART 112	3
ART 121		3 ART 122	3
ARHS 120 (GEF 6)		3 ARHS 160 (GEF 8)	3
ART 191 (University Requirement)		2 GEF 5	3
ENGL 101 (GEF 1)		3 GEF 2	4
GEF 4		3	
		17	16

Second Year

Fall	Hours	Spring	Hours
ART 211		3 ART 212	3
ART 230		3 ART 231	3
ART 200-level Elective		3 ART 200-level Elective	3
ENGL 102 (GEF 1)		3 GEF 3	3
ARHS 200/300/400 level		3 ARHS 200/300/400 level	3
		15	15

Third Year

Fall	Hours	Spring	Hours
ART 330		6 ART 330	6
GEF 7		3 ART or ARHS 200/300/400 level	6
Elective		3 Elective	3
		12	15

Fourth Year

Fall	Hours	Spring	Hours
ART 330		6 ART 430	6
ART or ARHS 200/300/400 level		6 ART or ARHS 200/300/400 level	6
GEF 8		3 GEF 8	3
		15	15

Total credit hours: 120

Major Learning Outcomes

PRINTMAKING

The Bachelor of Fine Arts (B.F.A.) is a professional degree with an intensive focus on an area of the Arts supported by a program in general studies. The intent of the B.F.A. is to prepare for professional practice in the area of the degree.

- The ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency and rhetorical force.
- An informed acquaintance with the mathematical and experimental methods of the physical and biological sciences, and with the main forms of analysis of the historical and quantitative techniques needed for investigating the workings and developments of modern society.
- An ability to address culture and history from a variety of perspectives.
- Understanding of, and experience in thinking about, moral and ethical problems.
- The ability to respect, understand and evaluate work in a variety of disciplines.
- The capacity to explain and defend views effectively and rationally.

Additional specific goals related to the printmaking degree:

- Understanding of basic design principles, concepts, media, and formats.
- Knowledge and skills in the use of basic tools, techniques, and processes sufficient to work from concept to finished product. This includes knowledge of basic materials and technical procedures such as intaglio, relief, lithography, silkscreen, and digital processes.
- Mastery of at least one printmaking technique, including the ability both to experiment with technical innovation and to explore and develop personal concepts and imagery.
- Functional knowledge of the history of printmaking.

Sculpture, B.F.A.

Degree Offered

- Bachelor of Fine Arts

Nature of the Program

The sculpture curriculum provides a thorough grounding in many different materials and processes and is structured to enhance the student's ability to solve structural, spatial, formal, and conceptual problems. Initially, students concentrate on basic construction techniques and craftsmanship and then explore various tools and techniques used in the wood and metal shops. Large-scale works are encouraged and may be exhibited on the grounds of the Creative Arts Center.

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.

Click here to view the Suggested Plan of Study (p. 566)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

A grade of C- or higher must be earned in all ART and ARHS courses.

GEF 1, 2, 3, 4, 5, 7, and 8		28
ART 191	First-Year Seminar	2
ART 111	Drawing 1	3
ART 112	Drawing 2	3
ART 121	Visual Foundations 1	3
ART 122	Visual Foundations 2	3
ARHS 120	Survey of Art History 1 (may fulfill GEF 6)	3
ARHS 160	Survey of Art History 2 (may fulfill GEF 8)	3
ART 211	Figure Drawing	3
ART 212	Multi Media	3
ARHS 200/300/400 level		6
ART 226	Introduction to Sculpture	3
ART 227	Sculpture	3
Studio Non-Emphasis Courses		6
Choose two of the following ART 200-level Electives:		
ART 240	Ceramics	
or ART 241	Ceramics	
or ART 242	Life Modeling	
ART 223	Introduction to Graphic Design	
or ART 224	Graphic Design 2	
ART 270	Introduction to Electronic Media 1	
or ART 271	Introduction to Electronic Media 2	
ART 213	Painting 1	
or ART 214	Painting 2	
ART 232	Photography	
or ART 234	Digital Photography	
ART 230	Printmaking - Intaglio and Relief	
or ART 231	Printmaking - Lithography	
Sculpture		18
ART 326	Sculpture (Repeated)	
ART 426	Senior Projects in Sculpture	6
ART or ARHS 200/300/400 level		18
Writing Portfolio Requirement *		
Electives		6
Total Hours		120

* The School of Art and Design values and supports written communication abilities and critical thinking skills developed through iterative writing experiences across the curriculum and within the discipline. To meet this goal students must pass with a B- or better a writing portfolio requirement that includes examples of academic, professional, and reflective writing they have produced in their regular courses. The writing portfolio replaces the Writing Intensive "W" credit for all incoming students beginning Fall 2016. Students graduating Spring or Summer 2016 must complete a "W" course. Please contact the School of Art and Design undergraduate major advisor, Professor Kristina Olson, for more information.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ART 111		3 ART 112	3
ART 121		3 ART 122	3
ARHS 120 (GEF 6)		3 ARHS 160 (GEF 8)	3
ART 191 (University Requirement)		2 GEF 2	4
ENGL 101 (GEF 1)		3 GEF 5	3
GEF 4		3	
		17	16

Second Year

Fall	Hours	Spring	Hours
ART 211		3 ART 212	3
ART 226		3 ART 227	3
ART 200-level Elective		3 ART 200-level Elective	3
ENGL 102 (GEF 1)		3 GEF 3	3
ARHS 200/300/400 level		3 ARHS 200/300/400 level	3
		15	15

Third Year

Fall	Hours	Spring	Hours
ART 326		6 ART 326	6
GEF 7		3 ART or ARHS 200/300/400 level	6
Elective		3 Elective	3
		12	15

Fourth Year

Fall	Hours	Spring	Hours
ART 326		6 ART 426	6
ART or ARHS 200/300/400 level		6 ART or ARHS 200/300/400 level	6
GEF 8		3 GEF 8	3
		15	15

Total credit hours: 120

Major Learning Outcomes

SCULPTURE

The Bachelor of Fine Arts (B.F.A.) is a professional degree with an intensive focus on an area of the Arts supported by a program in general studies. The intent of the B.F.A. is to prepare for professional practice in the area of the degree.

- The ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency and rhetorical force.
- An informed acquaintance with the mathematical and experimental methods of the physical and biological sciences, and with the main forms of analysis of the historical and quantitative techniques needed for investigating the workings and developments of modern society.
- An ability to address culture and history from a variety of perspectives.
- Understanding of, and experience in thinking about, moral and ethical problems.
- The ability to respect, understand and evaluate work in a variety of disciplines.
- The capacity to explain and defend views effectively and rationally.

Additional specific goals related to the sculpture degree:

- Understanding of basic design principles with an emphasis on three-dimensional design, and the ability to apply these principles to a specific aesthetic intent. This includes functional knowledge of the traditions, conceptual modes, and evolution of the discipline.
- Advanced abilities in drawing sufficient to support work in sculpture.
- Understanding of the possibilities and limitations of various materials.
- Knowledge and skills in the use of basic tools, techniques, and processes to work from concept to finished product.
- Mastery in one or more sculptural media.

- Functional knowledge of the history and theory of sculpture.
- The preparation of sculpture using the broadest possible range of techniques and concepts.

Technical Art History, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

Built for the curious and knowledge seekers, the technical art history major emphasizes the scientific study of structures of art and objects, within art historical contexts, and values hands-on experience in preventative art conservation, conservation and restoration of artifacts, and reconstruction techniques. Students will conduct research on the physical nature of art and its making through interdisciplinary studies in art history, art, science, anthropology, and more depending on their areas of interest.

Technical art history majors will graduate well-equipped for a multi-faceted career of collaboration with conservators, scientists and museum professionals. They will enhance the world's ability to care for its art and material culture. Graduates will excel in high-demand careers and be prepared for elite graduate programs including: art and object conservation, ethnographic and archaeological materials conservation, historic preservation, art history, museum studies, art handler, museum technician, library and archival studies, and more.

In the classroom, technical art history majors will: assess the construction and condition of art and artifacts, conduct risk assessments for museum collections, employ preventive care for collections; conduct digital documentation with stereomicroscopy, ultraviolet illumination, and digital photography; examine objects using infrared reflectography, microscopy, and x-rays; participate in disaster recovery exercises, and study with world-renown conservation professionals. They will visually analyze objects, conduct comparative analyses, engage in archival research, and develop broad cultural historical and aesthetic knowledge.

The San Gemini Preservation Studies Global Positioning Studies program (<https://artanddesign.wvu.edu/field-study/gps/san-gemini-preservation-studies/>) is the ideal hands-on study abroad program for a technical art history major. This program is a series of professional place-based field courses in conservation, preservation, and restoration of cultural heritage in San Gemini, Umbria, Italy. The program offers students both theoretical knowledge and hands-on skills on field projects and workshops.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

A minimum grade of C- or better is required in all major coursework.

First-Year Seminar

ART 191	First-Year Seminar	1
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General Education Requirements

GEF 1, 4, 5		12
MATH 126	College Algebra (GEF 3)	3
Foreign Language* (GEF 7)		12
Chemistry Coursework		
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2)	4
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory (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
Studio Coursework		
ART 111	Drawing 1	3
ART 112	Drawing 2	3
ART 122	Visual Foundations 2	3
ART 213	Painting 1	3
or ART 226	Introduction to Sculpture	
or ART 230	Printmaking - Intaglio and Relief	
or ART 240	Ceramics	
or ART 241	Ceramics	
ART 280	Studio Art for Art Historians	3
Art History Core		
ARHS 120	Survey of Art History 1 (GEF 6)	3
ARHS 160	Survey of Art History 2 (GEF 8)	3
Classics: Select one of the following:		3
ARHS 320	Greek and Roman	
ARHS 325	Ancient Roman Art and Architecture	
ARHS 331	Medieval	
ARHS 333	Medieval Architecture	
Western European Traditions: Select one of the following:		3
ARHS 350	Northern Renaissance	
ARHS 354	Italian Renaissance	
ARHS 360	Baroque	
ARHS Semester in Italy		
Modern and Contemporary Studies: Select one from the following:		3
ARHS 370	American	
ARHS 375	Nineteenth Century	
ARHS 380	Modern	
ARHS 381	Modern Architecture	
ARHS 389	Contemporary	
Art History Major Coursework		
ARHS 240	Art Theory (**)	3
ARHS 345	Modern Art Theory	3
ARHS 401	Senior Project-Capstone (fulfills the Writing and Communication Skills Requirement)	3
ARHS 491	Professional Field Experience	3
ARHS 494	Seminar	3
Technical Art History Coursework		
ARHS 411	Conservation Practices: Digital Documentation, Treatment, Condition Assessment	3
ARHS 412	Collections Care and Preservation of Material Objects	3
ARHS 413	Material Objects Investigations 1 (2-D)	3
ARHS 414	Material Objects Investigation 2 (3-D)	3

Electives***	19
Total Hours	120

* All students must complete 6 credit hours of Latin (CLAS) or 12 credit hours of another foreign language. Students who elect to complete Latin (CLAS) courses will fulfill GEF 5.

** ARHS 240 fulfills writing requirement.

*** Recommended GEF Depth/Minor Areas include: Forensic and Investigative Science (FIS), Archaeology/Anthropology (SOCA); Art History electives; Study Abroad/Professional Field Experience; Studio Art

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 CHEM 115 & 115L (GEF 2)	4
MATH 126 (GEF 3)		3 ARHS 160 (GEF 8)	3
ARHS 120 (GEF 6)		3 ARHS 411	3
ART 280		3 ART 111	3
ART 191		1 Foreign Language (GEF 8)	3
Foreign Language (GEF 7)		3	
		16	16

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 ARHS 240	3
CHEM 116 & 116L (GEF 8)		4 ARHS 412	3
ART 112		3 GEF 4	3
Art History Core Course		3 Art History Core Course	3
Foreign Language		3 Foreign Language	3
		16	15

Third Year

Fall	Hours	Spring	Hours
CHEM 233		3 GEF 5	3
CHEM 235		1 ARHS 413	3
ARHS 345		3 Art History Core Course	3
ART 122		3 Elective	3
Elective		3 Elective	3
Elective		3	
		16	15

Fourth Year

Fall	Hours	Spring	Hours
CHEM 234		3 ARHS 401	3
CHEM 236		1 ARHS 491	3
ARHS 414		3 Elective	3
ARHS 494		3 Elective	3
ART 213, 226, 230, 240, or 241		3 Elective	1
		13	13

Total credit hours: 120

Major Learning Outcomes

TECHNICAL ART HISTORY

Upon graduation all Bachelor of Arts students in Technical Art History will be able to:

- communicate effectively in both written and oral forms;
- interpret the documentation of the treatment history of an artwork and put it into context;
- link an analysis of material to the date of inception and other topics relating to its history and artistic production;
- apply digital documentation processes and selected non-destructive analytical/imaging techniques to a material object or work of art;
- demonstrate proper handling of artworks including during storage and transportation and create condition assessment surveys;
- synthesize knowledge and skills from across the fields of art history, chemistry, and studio art and apply them to a material object or art work through reconstruction.

School of Music

- Degrees Offered (p. 570)
- Mission (p. 570)
- Vision (p. 570)
- Statement of Principles (p. 570)
- Music Scholarship Resources (p. 570)
- Performing Ensembles (p. 570)

The School of Music has been an important part of WVU's cultural and academic life since 1897. The University has been an institutional member of the National Association of Schools of Music since 1947. Our active faculty of fifty-two members includes internationally acclaimed artists and scholars who are distinguished teachers as well. The School is part of the College of Creative Arts, the center for visual and performing arts at WVU and in the state of West Virginia.

Degrees Offered

- Bachelor of Arts in Music with **three majors**: Music (Contemporary and Integrative Performance), Music, and Music Industry
- Bachelor of Music with **seven majors**: Music Composition; Music Education; Performance - Instrumental; Performance - Piano with Areas of Emphasis in Traditional, Collaborative Piano, Jazz, and Pedagogy; Performance - Voice; Performance - Jazz Studies; and Music Therapy
- Bachelor of Science with **one major**: Music and Health

Mission

To create an innovative and inclusive musical community that prepares informed, ethical students for meaningful creative lives as performers, educators, composers, conductors, music therapists, entrepreneurs, and scholars.

Vision

The School of Music strives to cultivate a vibrant community of musicians and scholars who engage in research and creative activity in the fields of music performance and improvisation, composition, music-teacher education, theory, musicology, music therapy, technology, and industry. Our rigorous programs and distinguished faculty provide students the opportunity to develop the abilities to become consummate leaders in the musical arts.

Statement of Principles

The West Virginia University School of Music strives to create an inclusive, diverse, equitable, and accessible environment in which students, staff, faculty, and administrators can thrive creatively and personally. We seek to cultivate an environment of trust, respect, and accountability that empowers all members of the WVU School of Music community to contribute their talents and expertise in support of our mission and vision.

Music Scholarship Resources

Information regarding University, College of Creative Arts, and School of Music scholarships can be found at <http://ccarts.wvu.edu/academics/scholarships> (<http://ccarts.wvu.edu/academics/scholarships/>).

Performing Ensembles

One of the hallmarks of the School of Music is its commitment to the study and performance of high-quality and historically significant music from many styles and genres. WVU music faculty continue to present highly-praised performances, both on- and off-campus. Faculty performing groups include the Laureate Wind Quintet, the Faculty Jazz Ensemble, and the WVU Chamber Players.

WVU student performing ensembles include a wide range of opportunities in a variety of musical traditions, styles, and sizes. The student and community performing groups are open to all qualified WVU students by audition. All groups must be taken for credit unless noted. More information about the School of Music ensembles can be found at: <https://www.music.wvu.edu/ensembles> (<https://www.music.wvu.edu/ensembles/>)

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 PROFESSORS

- 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 Conservatory)
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 PROFESSORS

- Hakeem Bilal - M.M. (Carnegie Mellon University)
Trombone
- Ryan Carroll - M.S. (Indiana University - Purdue University Indianapolis)

Music Therapy

- Robert Chafin - M.M. (University of 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 Ferer
- William Haller
- Barton Hudson
- Leo Horacek, Jr.
- Christine B. Kefferstan
- Gerald Lefkoff
- James E. Miltenberger
- Janet Robbins
- William Skidmore
- Connie Arau Sturm
- Robert Thieme
- Virginia Thompson
- Gilbert Trythall
- Molly Weaver
- Don G. Wilcox
- Christopher Wilkinson

ASSOCIATE PROFESSORS EMERITI

- David Bess
- Joyce A. Catalano
- Rose M. Crain
- John E. Crotty
- June D. Swartwout

Admissions

Acceptance into an undergraduate music degree program is contingent upon both admission to WVU as an undergraduate student and a successful performance audition. Auditions are held from late fall through the early spring semester. For maximum scholarship consideration, students are encouraged to complete the application (including audition) before March 1. Dates of and details about auditions are available from the School of Music and on the website (<http://music.wvu.edu/>). Special accommodations may be made by contacting the School of Music at (304) 293-4532 or Music@mail.wvu.edu.

The audition is a preliminary assessment of a student's potential success in the program. Students must audition at a performance level three or above to be admitted to most courses of study in music. For the Bachelor of Arts in Music Industry, students who select the Applied Music track must audition at a level two. An audition is not required for students who select the Multi-Instrumental track of the Bachelor of Arts in Music Industry; admission to this track is based upon the requirements for University admission. For the Bachelor of Arts in Integrative and Contemporary Performance and for the Bachelor of Science in Music and Health, students must audition at a level four. Students must audition at a performance level six or above to be admitted to the B.M. degree programs in performance. If a student is admitted, his or her standing is confirmed or revised after the first semester of study.

Students should own their own instrument under normal circumstances (except for piano) and a portable (folding) music stand.

Music majors can change from one music curriculum to another with faculty approval, particularly during the freshman or sophomore year, without significant loss of course credit. Students are encouraged to explore and follow the curriculum for which they are best qualified and in which they can

achieve the greatest success. Evaluation of students' work by the School of Music faculty aids these decisions. If students wish a broader, liberal arts-oriented, non-professional program, they may pursue a Bachelor of Arts (B.A.) degree.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the School of Music (<https://www.music.wvu.edu/academics/undergraduate-programs/>).

General Requirements for School of Music Bachelor Degrees

- Proficiency Levels (p. 574)
- Jury Policy (p. 574)
- General Education Foundations (p. 574)
- Music Major Core Courses (p. 575)
- Major Ensemble Requirement (p. 575)
- Chamber Music Requirement (p. 575)
- First-Year Seminar, Music Convocation, and Recital Attendance Policies (p. 576)
- Capstone Requirements (p. 576)
- Completion of Degree Requirements (p. 576)
- Music Theory and History Electives (p. 576)
- Academic Progress (p. 577)
- Course Substitutions, Curricular Waivers, or Credit by Examination (p. 577)

With careful planning, it is possible to complete most music curricula in eight regular semesters. Students may elect to take additional courses, lengthening the time spent in the degree program.

PROFICIENCY LEVELS

Before graduation, students must earn a proficiency level (specified for each curriculum) in their principal performance area and in piano (if required in their specific curriculum). In addition to fulfilling the proficiency level requirement in piano indicated in the curriculum, students are required to demonstrate proficiency in keyboard harmony and sight-reading by passing a special examination. Music education majors must satisfy additional instrument and voice proficiency exams.

Students are required to take applied lessons on their principal performance medium each semester until completing the requirements of their specific program. Proficiency levels in their principal performance medium are awarded at juries, which are usually given at the end of each semester. Jury policies for each principal performance area are provided on the School of Music website and are also available from the Director's office or the area coordinator.

JURY POLICY

All music majors, music minors, and non-majors enrolled in Music 121-127, 221-227, 321-327, 328, 421-427, Music 500, or Music 700 in the fall and/or spring semesters must take a jury.

Exceptions will be allowed only in the following cases:

1. When an area jury policy has a provision for a waiver.
2. In the event of illness or injury. Students who miss juries due to illness or injury will receive an incomplete in Applied Study for the semester and must make up the jury prior to mid-term during the subsequent semester.

Students who are unable to make up a missed jury must submit a written petition to the Director of the School of Music by mid-term of the first semester following the semester of the original missed jury. The petition must include a complete justification for missing the make-up jury and a written statement of support from the applied faculty member.

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

ENGL 101
& ENGL 102

Introduction to Composition and Rhetoric
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.

MUSIC MAJOR CORE COURSES

Courses listed below are required for most majors in the School of Music. However, the BA degree in Music Industry, the BA degree in Contemporary and Integrative Performance, and the BM in Music Therapy exclude some of these courses.

MUSC 161	Aural Theory 1	2
MUSC 162	Written Theory 1	2
MUSC 163	Aural Theory 2	2
MUSC 164	Written Theory 2	2
MUSC 189	Music Convocation	0
MUSC 261	Aural Theory 3	2
MUSC 262	Written Theory 3	2
MUSC 263	Aural Theory 4	2
MUSC 264	Written Theory 4	2
MUSC 270	History of Western Musical Traditions 1	3
MUSC 271	History of Western Musical Traditions 2	3
Total Hours		22

MAJOR ENSEMBLE REQUIREMENT

Courses listed below may fulfill the major ensemble requirement; however, some majors and areas of emphasis may exclude or require specific ensembles as part of their requirements.

MUSC 300	Band: Wind Symphony	2
MUSC 300A	Band: Symphonic	2
MUSC 300B	Band: Marching	2
MUSC 302	University Choral Union	1
MUSC 303	Orchestra	2
MUSC 305	University Choir	2
MUSC 305A	University Choir: Concert	2
MUSC 353	Chamber Music: Large Jazz Ensemble 1	1
MUSC 353A	Chamber Music: Large Jazz Ensemble 2	1

If students are scholarship recipients, they may be called upon to render special service (as a participant in particular organizations or ensembles, as a piano accompanist, etc.) as designated by the School Director. Some studios may have additional ensemble requirements; students should consult their applied instructors for further details.

CHAMBER MUSIC REQUIREMENT

Courses listed below may fulfill the chamber music requirement; however, some majors and areas of emphasis may exclude or require specific chamber music courses as part of their requirements.

MUSC 340	Chamber Music: Brass	1
MUSC 341	Chamber Music: Guitar	1
MUSC 342	Chamber Music: Piano-4 Hand	1
MUSC 343	Chamber Music: Strings	1

MUSC 344	Chamber Music: Woodwind	1
MUSC 345	Chamber Music: Vocal	1
MUSC 346	Chamber Music: Mixed Ensemble	1
MUSC 347	Chamber Music: Mountaineer Singers	1
MUSC 348	Chamber Music: New Music	1
MUSC 349	Chamber Music: Other	1
MUSC 351	Chamber Music: Percussion 1	1
MUSC 352	Chamber Music: Percussion 2	1
MUSC 353B	Chamber Music: Jazz Small Group	1
MUSC 353C	Chamber Music: Jazz Small Group 2	1
MUSC 353E	Chamber Music: Jazz and Ethnic	1
MUSC 353G	Chamber Music: Jazz Vocal Ensemble	1
MUSC 353H	Chamber Music: Jazz Other	1
MUSC 354	Chamber Music: Gamelan	1
MUSC 355	Chamber Music: Steel Band 1	1
MUSC 356	Chamber Music: African	1
MUSC 357	Chamber Music: Brazilian	1
MUSC 358	Chamber Music: Ethnic	1
MUSC 359	Chamber Music: Taiko	1

FIRST-YEAR SEMINAR, MUSIC CONVOCATION, AND RECITAL ATTENDANCE POLICIES

Entering freshmen are required to register for First-Year Seminar MUSC 191. Full-time undergraduate music majors beyond first semester freshmen are expected to register for Music Convocation MUSC 189 and attend the specified number of convocation sessions and concerts or recitals each semester until completing the requirements of their specific curriculum. This requirement may be adjusted for transfer students. B.A. students are required to take MUSC 189 for two semesters.

CAPSTONE REQUIREMENTS

Senior-level capstone courses are required for all degree programs in the School of Music. Students should check with their academic advisor for major-specific capstone courses.

COMPLETION OF DEGREE REQUIREMENTS

Students are responsible for being aware of and correctly fulfilling all graduation requirements. Students should review the curriculum requirements both before and after every registration period so that errors or omissions will be detected and corrected immediately. Transfer students must establish transfer credit from other institutions as early as possible in their WVU study—preferably during the first semester of residence. The degree of Bachelor of Music or Bachelor of Arts is conferred if students comply with the general regulations of the University concerning degrees, satisfy School of Music requirements (including expected proficiency levels), and complete an appropriate curriculum with a minimum overall grade point average of 2.0 (C). Music Education majors must attain a 2.75 grade point average for graduation and certification.

Students who receive a grade of A in MUSC 163 may elect to take an honors section of MUSC 263 (offered in the fall) in place of MUSC 261 and MUSC 263. If students achieve a grade of A in MUSC 262, they may elect an upper-division theory analysis course (MUSC 463 or MUSC 464) in place of the MUSC 264 requirement. If they achieve a grade of A in MUSC 261, they may elect an upper-division theory elective in place of the MUSC 263 requirement.

MUSIC THEORY AND HISTORY ELECTIVES

Unless specified as a degree requirement, upper-division theory electives are:

MUSC 265	Instrumentation	2
MUSC 266	Orchestration and Band Arranging	2
MUSC 311	Introduction to Jazz Improvisation	2
MUSC 313	Advanced Jazz Improvisation	2
MUSC 360	Composition	2
MUSC 362	Instrumentation and Orchestration	3
MUSC 461	Counterpoint	2
MUSC 462	Counterpoint	2
MUSC 463	Analysis of Eighteenth and Nineteenth Century Music	3
MUSC 464	Analysis of Twentieth Century Art Music	3

MUSC 465	Electronic Music	2
MUSC 466	Electronic Music-Digital Audio	2
MUSC 468	Jazz Harmony	2
MUSC 480	Arranging for Small Jazz Ensemble	2
MUSC 481	Arranging for Large Jazz Ensemble	2

Unless specified as a degree requirement, upper-division history electives are:

MUSC 470	European Music before 1500	3
MUSC 471	Music of the Sixteenth and Seventeenth Centuries	3
MUSC 472	Music of the Eighteenth Century	3
MUSC 473	Music of the Nineteenth Century	3
MUSC 474	Twentieth and Twenty-First Century Music	3
MUSC 475	History of Jazz	3
MUSC 477	Music of Africa	3

ACADEMIC PROGRESS

If in the judgment of the faculty, Director, and Dean it will be impossible for students to complete graduation requirements in a reasonable amount of time, their enrollment in the School of Music will be terminated. If students are admitted conditionally, they must make up deficiencies as soon as possible. Further information regarding academic progress policies can be obtained from their advisor, the school director's office, or http://music.wvu.edu/current_students/academic_progress_policy (http://music.wvu.edu/current_students/academic_progress_policy).

COURSE SUBSTITUTIONS, CURRICULAR WAIVERS, OR CREDIT BY EXAMINATION

Requests for course substitutions, curricular waivers, or credit by examination must be made in writing to the Director of the School of Music. If the Director endorses the request, it will be forwarded to the Dean of the College of Creative Arts for final approval.

For further information, refer to the undergraduate student resources page on the School of Music website http://music.wvu.edu/current_students (http://music.wvu.edu/current_students) or at the office of the School Director.

Music and Health, B.S.

Music and Health

- Bachelor of Science

Nature of the Program

This Bachelor of Science in Music and Health aims to provide an opportunity for students to pursue concentrated studies in music while also completing the requirements for graduate study in one of several tracks. The major is intended for those who wish to study music as their undergraduate focus and then pursue a career in medicine, dentistry, occupational therapy, physical therapy or as a physician assistant, and/or those who would like to continue practicing music professionally while also enjoying a career in the health sciences.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students must earn and maintain a minimum cumulative GPA of 3.0.

GEF Requirements 18

GEF: Number of credits will vary depending on overlap.

Health Track Electives 32-41

Selection of health electives may be determined by the track a student selects.

A grade of C- or higher must be earned in all Health courses

Medicine (MD) - 32 Credits

Pharmacy (PharmD) - 38 Credits

Physical Therapy (DPT) - 41 Credits

Occupational Therapy (OTD) - 33 Credits

Dentistry (DDS) - 40 Credits

Physicians' Assistant (MHS) - 34 Credits

Applied Music *

Applied Music 100 level (MUSC 121-127D) - 2 semesters 4

Applied Music 200 level (MUSC 221-227D) - 2 semesters 4

Applied Music 300 level (MUSC 321-327D) - 2 semesters 4

Ensemble 10

Major Ensembles **

MUSC 300 Band: Wind Symphony

MUSC 300A Band: Symphonic

MUSC 300B Band: Marching

MUSC 302 University Choral Union

MUSC 303 Orchestra

MUSC 305 University Choir

MUSC 305A University Choir: Concert

MUSC 353 Chamber Music: Large Jazz Ensemble 1

MUSC 353A Chamber Music: Large Jazz Ensemble 2

Other Music Ensembles

MUSC 101 Band: Concert

MUSC 101A Band: Varsity

MUSC 304 Introduction To Opera Theatre

MUSC 340 Chamber Music: Brass

MUSC 341 Chamber Music: Guitar

MUSC 342 Chamber Music: Piano-4 Hand

MUSC 343 Chamber Music: Strings

MUSC 344 Chamber Music: Woodwind

MUSC 345 Chamber Music: Vocal

MUSC 346 Chamber Music: Mixed Ensemble

MUSC 347 Chamber Music: Mountaineer Singers

MUSC 348 Chamber Music: New Music

MUSC 349A Chamber Music: Brass Choir

MUSC 349C Chamber Music: Other-Vocal Accompaniment

MUSC 349Z Collegium Musicum

MUSC 351 Chamber Music: Percussion 1

MUSC 352 Chamber Music: Percussion 2

MUSC 353B	Chamber Music: Jazz Small Group	
MUSC 353C	Chamber Music: Jazz Small Group 2	
MUSC 353E	Chamber Music: Jazz and Ethnic	
MUSC 353G	Chamber Music: Jazz Vocal Ensemble	
MUSC 353H	Chamber Music: Jazz Other	
MUSC 353I	Chamber Music: Jazz Vocal Ensemble	
MUSC 354	Chamber Music: Gamelan	
MUSC 355	Chamber Music: Steel Band 1	
MUSC 356	Chamber Music: African	
MUSC 357	Chamber Music: Brazilian	
MUSC 358	Chamber Music: Ethnic	
MUSC 359	Chamber Music: Taiko	
MUSC 361	Fife and Drum Ensemble	
MUSC 363	Appalachian Music Ensemble	
Additional Music Requirements		
MUSC 161	Aural Theory 1	2
MUSC 162	Written Theory 1	2
MUSC 163	Aural Theory 2	2
MUSC 164	Written Theory 2	2
Select one of the following:		3
MUSC 111	Introduction to Music	
MUSC 113	American Popular Music	
MUSC 114	Music and the Immigrant Experience	
MUSC 115	Introduction to History of Jazz	
MUSC 116	Music in World Cultures	
MUSC 118	Music in Appalachia	
MUSC 189	Music Convocation	0
MUSC 191	First-Year Seminar	2
MUSC 261	Aural Theory 3	2
MUSC 262	Written Theory 3	2
MUSC 263	Aural Theory 4	2
MUSC 264	Written Theory 4	2
MUSC 270	History of Western Musical Traditions 1 (GEF 6)	3
or MUSC 271	History of Western Musical Traditions 2	
MUSC 492	Directed Study	2
MUSC Electives		12
General Electives		10
Number of electives will vary depending on overlap.		
Total Hours		120

* **Applied Music Requirement:** Students must attain a proficiency level suitable for public performance (at least level seven) on their major principal instrument. If the student does not make satisfactory progress in achieving the expected performance proficiency, the student will be dismissed. Students will be admitted with a minimum applied audition level of 4, take six semesters of applied study at 2 credits each, and earn an exit level of 7.

** **Major Ensemble Requirement:** Students are required to participate in a Major Ensemble a minimum of four semesters.

*** Students who do not meet these requirements will be dismissed from the program. All students must complete 10 hours of community service per year.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
MUSC Music Ensemble		1 MUSC Music Ensemble	1
MUSC 121-127D Applied Music		2 MUSC 121-127D Applied Music	2

MUSC 191	2 MUSC 189	0
GEF, Health Track, or General Elective	11 Select one of the following:	3
	MUSC 111	
	MUSC 113	
	MUSC 114	
	MUSC 115	
	MUSC 116	
	MUSC 118	
	ENGL 101 (GEF 1)	3
	GEF, Health Track, or General Elective	8
	16	17

Second Year

Fall	Hours	Spring	Hours
MUSC Music Ensemble		1 MUSC Music Ensemble	1
MUSC 221-227D Applied Music		2 MUSC 221-227D Applied Music	2
MUSC 162		2 MUSC 164	2
ENGL 102 (GEF 1)		3 GEF, Health Track, or General Elective	8
GEF, Health Track, or General Elective		8	
	16		13

Third Year

Fall	Hours	Spring	Hours
MUSC Music Ensemble		1 MUSC Music Ensemble	1
MUSC 321-327D Applied Music		2 MUSC 321-327D Applied Music	2
MUSC 161		2 MUSC 163	2
MUSC 262		2 MUSC 264	2
GEF, Health Track, or General Elective		7 MUSC Elective	3
		GEF, Health Track, or General Elective	3
	14		13

Fourth Year

Fall	Hours	Spring	Hours
MUSC Music Ensembles		2 MUSC Music Ensembles	2
MUSC 261		2 MUSC 189	0
MUSC 270 or 271 (GEF 6)		3 MUSC 263	2
MUSC 492 (Capstone)		2 MUSC Elective	3
MUSC Elective		3 MUSC Elective	3
GEF, Health Track, or General Elective		3 GEF, Health Track, or General Elective	6
	15		16

Total credit hours: 120

Pre-Health Elective Tracks**MEDICINE (MD)**

BIOL 101 & BIOL 103	General Biology and General Biology Laboratory (GEF 2)	4
BIOL 102 & BIOL 104	General Biology and General Biology Laboratory (GEF 8)	4
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 8)	4
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory (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
PHYS 101	Introductory Physics 1	4
PHYS 102	Introductory Physics 2	4
Total Hours		32

PHARMACY (PHARMD)

BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory (GEF 2)	4
BIOL 117 & BIOL 118	Introductory Physiology and Introductory Physiology Laboratory (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
STAT 211 or ECON 225	Elementary Statistical Inference (GEF 3) Elementary Business and Economics Statistics	3
PSIO 241	Elementary Physiology	4
AGBI 410 or BIOC 339	Introductory Biochemistry Introduction to Biochemistry	3
MICB 200	Medical Microbiology	3
WVUE 270	Effective Public Speaking (GEF 4)	3
MATH 150 or MATH 155	Applied Calculus (GEF 8) Calculus 1	3
ECON 201	Principles of Microeconomics (GEF 8)	3
Total Hours		38

PHYSICAL THERAPY (DPT)

BIOL 101 & BIOL 103	General Biology and General Biology Laboratory (GEF 2)	4
BIOL 102 & BIOL 104	General Biology and General Biology Laboratory (GEF 8)	4
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 8)	4
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory (GEF 8)	4
PHYS 101	Introductory Physics 1	4
PHYS 102	Introductory Physics 2	4
STAT 211 or ECON 225	Elementary Statistical Inference (GEF 3) Elementary Business and Economics Statistics	3
PSYC 101	Introduction to Psychology (GEF 4)	3
PSYC 241	Introduction to Human Development	3
PALM 205	Introduction to Human Anatomy	3
PALM 206	Human Anatomy Laboratory	1
PSIO 441 or PSIO 241	Mechanisms of Body Function Elementary Physiology	4
Total Hours		41

OCCUPATIONAL THERAPY (OTD)

PHYS 101	Introductory Physics 1 (GEF 2)	4
STAT 211 or ECON 225	Elementary Statistical Inference (GEF 3) Elementary Business and Economics Statistics	3
PSYC 101	Introduction to Psychology (GEF 4)	3

PSYC 241	Introduction to Human Development (GEF 8)	3
PSYC 281	Introduction to Abnormal Psychology (GEF 7)	3
PSIO 241	Elementary Physiology	4
SOCA 101	Introduction to Sociology (GEF 8)	3
or SOCA 105	Introduction to Anthropology	
OTH 201	Medical Terminology for Occupational Therapy	1
OTH 400	Assistive Technology Practicum	3
PALM 205	Introduction to Human Anatomy	3
PALM 206	Human Anatomy Laboratory	1
ULIB 101	Introduction to Library Research	2
Total Hours		33

DENTISTRY (DDS)

BIOL 101 & BIOL 103	General Biology and General Biology Laboratory (GEF 2)	4
BIOL 102 & BIOL 104	General Biology and General Biology Laboratory (GEF 8)	4
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 8)	4
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory (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
PHYS 101	Introductory Physics 1	4
PHYS 102	Introductory Physics 2	4
PALM 205	Introduction to Human Anatomy	3
PALM 206	Human Anatomy Laboratory	1
BIOC 339 or AGBI 410	Introduction to Biochemistry Introductory Biochemistry	4
Total Hours		40

PHYSICIAN ASSISTANT (PA)

BIOL 101 & BIOL 103	General Biology and General Biology Laboratory (GEF 2)	4
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 8)	4
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory (GEF 8)	4
CHEM 233 & CHEM 235 or BIOC 339	Organic Chemistry and Organic Chemistry Laboratory Introduction to Biochemistry	4
STAT 211 or ECON 225	Elementary Statistical Inference (GEF 3) Elementary Business and Economics Statistics	3
PSYC 101	Introduction to Psychology (GEF 4)	3
PALM 205	Introduction to Human Anatomy	3
PALM 206	Human Anatomy Laboratory	1
PSIO 241	Elementary Physiology	4
MICB 200	Medical Microbiology	3
OTH 201	Medical Terminology for Occupational Therapy	1
Total Hours		34

Major Learning Outcomes

MUSIC AND HEALTH

Students who earn the Bachelor of Science in Music and Health will:

1. perform as a soloist (vocal or instrumental) and as a member of a variety of ensembles, both traditional band, orchestra, choir as well as chamber, world music, jazz, and non-traditional ensembles that vary both in size and nature,
2. excel through challenging, methodical, and innovative practical training towards a career in a health profession while achieving creative music experiences,
3. provide musical and cultural offerings and promote health and wellness for the citizens of West Virginia, and
4. contribute to 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.

Music (Contemporary and Integrative Performance), B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The Bachelor of Arts in Music (Contemporary and Integrative Performance) is a program in which students focus on the study of contemporary music performance within a curriculum that emphasizes cross-disciplinary study within the arts. Students will engage in studies with the added focus of contemporary music — music post-1970 — and within an integrative curriculum with coursework tailored to include electives from the areas of art, theatre, dance, industry, and philosophy. Such integration aims to develop skills, advance understanding, develop further interpretive performance, and support creativity as a holistic means to growth. This specialization serves the mission to develop students' ability to think critically about their role as musicians in today's changing landscape, and to impart a learning experience with outcomes relevant to creative musical practices and professional culture of the 21st century.

Click here to view the Suggested Plan of Study (p. 586)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Minimum grade of C- is required in all MUSC courses

Minimum GPA of 2.5 in all MUSC courses

GEF Requirements

Foreign Language Requirement (In same language - May fulfill GEF 7 & 8)		12
Music Core Courses		
MUSC 191	First-Year Seminar	2
MUSC 161	Aural Theory 1	2
MUSC 162	Written Theory 1	2
MUSC 163	Aural Theory 2	2
MUSC 164	Written Theory 2	2
MUSC 261	Aural Theory 3	2
Select one of the following: *		3
MUSC 111	Introduction to Music (may fulfill GEF 6)	
MUSC 113	American Popular Music (may fulfill GEF 6)	
MUSC 114	Music and the Immigrant Experience (may fulfill GEF 6)	
MUSC 115	Introduction to History of Jazz (may fulfill GEF 6)	
MUSC 116	Music in World Cultures	
MUSC 118	Music in Appalachia (may fulfill GEF 7)	
MUSC 262	Written Theory 3	2
MUSC 263	Aural Theory 4	2
MUSC 264	Written Theory 4	2
MUSC 270	History of Western Musical Traditions 1 (may fulfill GEF 6)	3
MUSC 271	History of Western Musical Traditions 2	3
MUSC 360	Composition	2
Applied or Jazz Lessons		
Applied Music 100 level (MUSC 121-127D) - 2 semesters		4
Applied Music 200 level (MUSC 221-227D) - 2 semesters		4
Applied Music 300 level (MUSC 321-327D) - 2 semesters		4
Applied Music 400 level (MUSC 421-427D) - semester		2
Music Ensembles (at least 1 per semester)		
9		
MUSC 300	Band: Wind Symphony	
MUSC 300A	Band: Symphonic	
MUSC 300B	Band: Marching	
MUSC 302	University Choral Union	
MUSC 303	Orchestra	
MUSC 305	University Choir	
MUSC 305A	University Choir: Concert	
MUSC 353	Chamber Music: Large Jazz Ensemble 1	
MUSC 353A	Chamber Music: Large Jazz Ensemble 2	
ICP Ensemble*		
*May include New Music Ensemble, Jazz Ensemble(s), World Music Ensemble(s), Bluegrass Ensemble, Chamber Ensemble(s), or other approved faculty-guided ensembles of a collaborative, innovative, and/or multi-disciplinary nature.		
Music Convocation (taken five semesters)		
MUSC 189	Music Convocation	
Keyboard Competency		
MUSC 130	Piano Class Level 0	1
MUSC 131	Piano Class Level 1/2	1
MUSC 132	Piano Class Level 1	1
MUSC 133	Piano Class Level 1 1/2	1
Integrative & Contemporary Performance Courses		
16		
ART 111	Drawing 1	
ART 112	Drawing 2	
ART 121	Visual Foundations 1	
ART 122	Visual Foundations 2	
ART 315	Arts Administration	

BUSA 101	Introduction to Business	
BUSA 330	Survey of Marketing	
COUN 230	Life Choices	
COUN 305	Wellness and Self-Care	
DANC 110	Fundamentals of Ballet	
DANC 130	Fundamentals of Jazz	
DANC 140	Fundamentals of Tap	
DANC 170	Introduction to Dance	
DANC 220	Intermediate Modern	
DANC 251	World Dance	
DANC 252	African Dance	
ENTR 300	Creativity and Idea Generation	
ENTR 340	Survey of Entrepreneurship	
ENTR 380	Survey of Business Planning	
JRL 458	Interactive Media and Audience Building	
LDR 201	Principles of Leadership	
LDR 393	Special Topics (Leadership and the Arts)	
MUSC 116	Music in World Cultures	
MUSC 129	Music Technology 1: GarageBand	
MUSC 236	Introduction to Recording Technology	
MUSC 265	Instrumentation	
MUSC 311	Introduction to Jazz Improvisation	
MUSC 313	Advanced Jazz Improvisation	
MUSC 336	Introduction to Digital Audio Workstation	
MUSC 384	Music Arranging for Public School Groups	
MUSC 393A	Special Topics (Electro-Acoustic Sound)	
MUSC 410	Introduction to Music Industry	
MUSC 411	Intellectual Property in Music Industry	
MUSC 464	Analysis of Twentieth Century Art Music	
MUSC 465	Electronic Music	
MUSC 466	Electronic Music-Digital Audio	
MUSC 474	Twentieth and Twenty-First Century Music	
MUSC 475	History of Jazz	
MUSC 477	Music of Africa	
PE 203	Yoga for Health and Wellness	
PHIL 100	Problems of Philosophy	
PHIL 120	Introduction to Ethics	
PHIL 130	Current Moral Problems	
PHIL 170	Introduction to Critical Reasoning	
THET 101	Introduction to the Theatre	
THET 102	Acting	
THET 144	Fundamentals of Acting	
THET 170	World Theatre and Drama	
WVUE 270	Effective Public Speaking	
Independent Study (taken twice)		2
MUSC 495	Independent Study	
Capstone Experience		
MUSC 495	Independent Study (Portfolio)	1
Electives		16
Total Hours		122

* Considered prerequisite for MUSC 270 or MUSC 271.

SUGGESTED PLAN OF STUDY**First Year**

Fall	Hours	Spring	Hours
MUSC 161		2 MUSC 163	2
MUSC 162		2 MUSC 164	2
MUSC 130		1 MUSC 131	1
MUSC 191		2 MUSC 189	0
MUSC 121-127 Applied Lesson		2 Select one of the following:	3
Major Ensemble		1 MUSC 111	
ENGL 101 (GEF 1)		3 MUSC 113	
		MUSC 114	
		MUSC 115	
		MUSC 116	
		MUSC 118	
		MUSC 121-127 Applied Lesson	2
		Major Ensemble	1
		ENGL 102 (GEF 1)	3
		GEF 3	3
		13	17

Second Year

Fall	Hours	Spring	Hours
MUSC 261		2 MUSC 263	2
MUSC 262		2 MUSC 264	2
MUSC 132		1 MUSC 133	1
MUSC 189		0 MUSC 189	0
MUSC 270 (GEF 6)		3 MUSC 271	3
MUSC 221-227 Applied Lesson		2 MUSC 221-227 Applied Lesson	2
Major Ensemble		1 Major Ensemble	1
ICP Ensemble		1 ICP Ensemble	1
GEF 4		3 GEF 2	4
		15	16

Third Year

Fall	Hours	Spring	Hours
MUSC 189		0 MUSC 189	0
MUSC 360		2 MUSC 495	1
MUSC 321-327 Applied Lesson		2 MUSC 321-327 Applied Lesson	2
ICP Ensemble		1 ICP Ensemble	1
ICP Elective		3 ICP Elective	3
ICP Elective		3 Foreign Language (GEF 8)	3
Foreign Language (GEF 7)		3 GEF 5	3
Elective		3 Elective	3
		17	16

Fourth Year

Fall	Hours	Spring	Hours
MUSC 421-427 Applied Lesson		2 MUSC 495 (Portfolio)	1
ICP Ensemble		1 MUSC 495	1
ICP Elective		3 ICP Elective	4
Foreign Language (GEF 8)		3 Foreign Language (GEF 8)	3
Elective		3 Elective	3

Elective	2 Elective	2
	14	14

Total credit hours: 122

Major Learning Outcomes

BACHELOR OF ARTS IN MUSIC (CONTEMPORARY AND INTEGRATIVE PERFORMANCE)

Students who earn the Bachelor of Arts in Music (Contemporary and Integrative Performance) will develop:

- an understanding of compositional processes, aesthetic properties of style, and the ways these shape and are shaped by artistic and cultural forces,
- an acquaintance with a wide selection of musical literature, the principal eras, genres, and cultural sources, and
- the ability to develop and defend musical judgments.

Music, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The Bachelor of Arts in Music provides students with the opportunity to major in music while pursuing a broad liberal arts education. Depending upon the courses taken beyond those required for the major, students may prepare for a variety of careers, not just those associated with music. To enter this program, in addition to being admitted to WVU, students must meet audition requirements on one of the following: a band or orchestral instrument, guitar, piano, or voice. Unless otherwise specified, general College of Creative Arts and WVU regulations apply.

Click here to view the Suggested Plan of Study (p. 588)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

A minimum GPA of 2.0 is required in all courses

GEF Requirements		19
MUSC 191	First-Year Seminar	2
Music Core Courses		
MUSC 161	Aural Theory 1	2
MUSC 162	Written Theory 1	2

MUSC 163	Aural Theory 2	2
MUSC 164	Written Theory 2	2
MUSC 189	Music Convocation (Two semesters)	0
Select one of the following:		3
MUSC 111	Introduction to Music	
MUSC 113	American Popular Music	
MUSC 114	Music and the Immigrant Experience	
MUSC 115	Introduction to History of Jazz	
MUSC 116	Music in World Cultures	
MUSC 118	Music in Appalachia	
MUSC 261	Aural Theory 3	2
MUSC 262	Written Theory 3	2
MUSC 263	Aural Theory 4	2
MUSC 264	Written Theory 4	2
MUSC 270	History of Western Musical Traditions 1	3
MUSC 271	History of Western Musical Traditions 2 (May be used to fulfill GEF 6)	3
MUSC 492	Directed Study (Capstone)	2
Foreign Language (May be used to fulfill GEF 7 & 8) *		12
Electives **		34
Upper-Level Music Electives (in Music Theory or Music History)		4
8 semesters of Major Ensemble, selected from the following: ***		8
MUSC 300	Band: Wind Symphony	
MUSC 300A	Band: Symphonic	
MUSC 300B	Band: Marching	
MUSC 302	University Choral Union	
MUSC 303	Orchestra	
MUSC 305	University Choir	
MUSC 305A	University Choir: Concert	
MUSC 353	Chamber Music: Large Jazz Ensemble 1	
MUSC 353A	Chamber Music: Large Jazz Ensemble 2	
Major Performance Area (MUSC 121-127, 221-227, 321-327, 421-427)		16
Proficiency Level		
Total Hours		122

* Foreign language study, consisting of 12 credits in a single language, may be used to fulfill GEF 7 and 8 coursework.

** Electives must be courses that go beyond the GEF and foreign language requirements. Students may use up to 15 credits of MUSC courses as electives.

*** Credits may vary. Refer to the School of Music Requirements (p. 570) for policies related to fulfilling the Major Ensemble requirement.

Performance Proficiency

Students must attain a proficiency in their major performance area suitable for public performance (at least level seven). Secondary piano proficiency is not required. Two solo upper-level appearances and two semesters of Music Convocation are required. If the student does not make satisfactory progress in achieving the expected performance proficiency, the student will be discontinued.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 121-127D Applied Music		2 MUSC 121-127D Applied Music	2
MUSC 161		2 MUSC 163	2
MUSC 162		2 GEF	3
MUSC 191		2 Electives	3
ENGL 101 (GEF 1)		3 MUSC 164	2

GEF	3 MUSC 189	0
Electives	3 Select one of the following:	3
	MUSC 111	
	MUSC 113	
	MUSC 114	
	MUSC 115	
	MUSC 116	
	MUSC 118	
	18	16

Second Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 221-227D Applied Music		2 MUSC 221-227D Applied Music	2
MUSC 261		2 MUSC 263	2
MUSC 262		2 MUSC 264	2
MUSC 270		3 MUSC 271 (GEF 6)	3
MUSC 189		0 GEF	3
ENGL 102 (GEF 1)		3 Foreign Language 1 (GEF 7)	3
Electives	3		
	16		16

Third Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 321-327D Applied Music		2 MUSC 321-327D Applied Music	2
MUSC History or Theory Electives		2 MUSC History or Theory Electives	2
GEF 2		4 Foreign Language 3 (GEF 8)	3
Foreign Language 2 (GEF 8)		3 Electives	6
Electives	3		
	15		14

Fourth Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 421-427D Applied Music		2 MUSC 421-427D Applied Music	2
Electives		8 Electives	8
Foreign Language 4 (GEF 8)		3 MUSC 492	2
	14		13

Total credit hours: 122

Major Learning Outcomes**MUSIC - BA**

Students graduating with the Bachelor of Arts degree in Music will develop:

1. the ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency, and rhetorical force,
2. an informed acquaintance with the mathematical and experimental methods of the physical and biological sciences; with the main forms of analysis and the historical and quantitative techniques needed for investigating the workings and developments of modern society,
3. an ability to address culture and history from a variety of perspectives,
4. an understanding of, and experience in thinking about, moral and ethical problems,
5. the ability to respect, understand, and evaluate work in a variety of disciplines, and
6. the capacity to explain and defend views effectively and rationally.

Music Composition, B.M.

Degree Offered

- Bachelor of Music

Nature of the Program

The composition curriculum is especially designed for students wishing to prepare themselves as composers in both acoustic and electronic styles. The increased interest of society today in the arts is creating many new opportunities for the professional composer and teacher.

Click here to view the Suggested Plan of Study (p. 592)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

A minimum GPA of 2.0 is required in all major courses

GEF Requirements	19	
MUSC 191	First-Year Seminar	2
Music Core Courses		
MUSC 161	Aural Theory 1 (Minimum grade of B-)	2
MUSC 162	Written Theory 1 (Minimum grade of B-)	2
MUSC 163	Aural Theory 2 (Minimum grade of B-)	2
MUSC 164	Written Theory 2 (Minimum grade of B-)	2
MUSC 189	Music Convocation (Five Semesters)	0
Select one of the following:		3
MUSC 111	Introduction to Music	
MUSC 113	American Popular Music	
MUSC 114	Music and the Immigrant Experience	
MUSC 115	Introduction to History of Jazz	
MUSC 116	Music in World Cultures	
MUSC 118	Music in Appalachia	
MUSC 261	Aural Theory 3 (Minimum grade of B-)	2
MUSC 262	Written Theory 3 (Minimum grade of B-)	2
MUSC 263	Aural Theory 4 (Minimum grade of B-)	2

MUSC 264	Written Theory 4 (Minimum grade of B-)	2
MUSC 270	History of Western Musical Traditions 1 (May fulfill GEF 8)	3
MUSC 271	History of Western Musical Traditions 2 (May fulfill GEF 6)	3
MUSC 488	Recital (Capstone)	2
Composition Courses		
Music Composition		4
MUSC 160	Introduction to Music Composition (Repeated)	
MUSC 362	Instrumentation and Orchestration	3
Upper Division Composition		8
MUSC 460	Upper Division Composition (Repeated)	
MUSC 461	Counterpoint	2
MUSC 462	Counterpoint	2
Select one of the following:		3
MUSC 463	Analysis of Eighteenth and Nineteenth Century Music	
MUSC 464	Analysis of Twentieth Century Art Music	
Choose six hours from the following:		6
MUSC 460A	Electronic Music Composition	
MUSC 465	Electronic Music	
MUSC 466	Electronic Music-Digital Audio	
Music Supportive Courses		
MUSC 200	Fundamentals of Conducting	2
If piano is not principal instrument		4
MUSC 130	Piano Class Level 0	
MUSC 131	Piano Class Level 1/2	
MUSC 132	Piano Class Level 1	
MUSC 133	Piano Class Level 1 1/2	
MUSC 134	Piano Class Level 2-2 1/2	
8 semesters of Major Ensemble, selected from the following: *		8
MUSC 300	Band: Wind Symphony	
MUSC 300A	Band: Symphonic	
MUSC 300B	Band: Marching	
MUSC 302	University Choral Union	
MUSC 303	Orchestra	
MUSC 305	University Choir	
MUSC 305A	University Choir: Concert	
MUSC 353	Chamber Music: Large Jazz Ensemble 1	
MUSC 353A	Chamber Music: Large Jazz Ensemble 2	
4 semesters of Chamber Music, selected form the following: *		4
MUSC 340	Chamber Music: Brass	
MUSC 341	Chamber Music: Guitar	
MUSC 342	Chamber Music: Piano-4 Hand	
MUSC 343	Chamber Music: Strings	
MUSC 344	Chamber Music: Woodwind	
MUSC 345	Chamber Music: Vocal	
MUSC 346	Chamber Music: Mixed Ensemble	
MUSC 347	Chamber Music: Mountaineer Singers	
MUSC 348	Chamber Music: New Music	
MUSC 349	Chamber Music: Other	
MUSC 353	Chamber Music: Large Jazz Ensemble 1	
MUSC 353A	Chamber Music: Large Jazz Ensemble 2	
MUSC 353B	Chamber Music: Jazz Small Group	
MUSC 353C	Chamber Music: Jazz Small Group 2	

MUSC 353E	Chamber Music: Jazz and Ethnic	
MUSC 353G	Chamber Music: Jazz Vocal Ensemble	
MUSC 353H	Chamber Music: Jazz Other	
MUSC 353I	Chamber Music: Jazz Vocal Ensemble	
Principal Performance Studies		
Select sixteen hours from the following:		
Applied Music 100 level (MUSC 121-127) - 2 semesters		4
Applied Music 200 level (MUSC 221-227) - 2 semesters		4
Applied Music 300 level (MUSC 321-327) - 2 semesters		4
Applied Music 400 level (MUSC 421-427) - 2 semesters		4
Foreign Language (in one language - May fulfill GEF 7 & 8)		6
MUSC 474	Twentieth and Twenty-First Century Music	3
Music History Elective - selected from the following:		3
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 475	History of Jazz (May fulfill GEF 8)	
Proficiency Level Piano		
Proficiency Level		
Total Hours		122

* Credits may vary. Refer to the School of Music Requirements (p. 570) for policies related to fulfilling the Major and Chamber Ensemble requirements.

** Foreign language courses may also be used towards satisfying GEF 7 & 8 requirements.

Performance Proficiency

A music major with an emphasis in composition should enter as a freshman having achieved proficiency level four on the major instrument, and must complete proficiency level eight on that instrument before graduation. If piano is not the major instrument, the student must achieve a level four on piano. The student must reach level four before earning four credits: the remaining credits are treated as free electives. Piano majors reduce total curricular credits by four.

Solo Performance Requirement

Majors in this curriculum must present two solo performances on the major instrument in upper-level recitals before graduation.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 122-127D Applied Music		2 MUSC 121-127D Applied Music	2
MUSC 160		2 MUSC 160	2
Select one of the following:		1 Select one of the following:	1
MUSC 130		MUSC 130	
MUSC 131		MUSC 131	
MUSC 132		MUSC 132	
MUSC 133		MUSC 133	
MUSC 134		MUSC 134	
MUSC 161		2 MUSC 163	2
MUSC 162		2 MUSC 164	2
MUSC 191		2 MUSC 189	0
ENGL 101 (GEF 1)		3 Select one of the following:	3
		MUSC 111	
		MUSC 113	

		MUSC 114		
		MUSC 115		
		MUSC 116		
		MUSC 118		
		GEF 2		4
		GEF		3
		<hr/>		
		15		20
Second Year				
Fall	Hours	Spring		Hours
MUSC Major Ensemble		1 MUSC Major Ensemble		1
MUSC 221-227D Applied Music		2 MUSC 221-227D Applied Music		2
MUSC 460		2 MUSC 460		2
Select one of the following:		1 Select one of the following:		1
MUSC 130		MUSC 130		
MUSC 131		MUSC 131		
MUSC 132		MUSC 132		
MUSC 133		MUSC 133		
MUSC 134		MUSC 134		
MUSC 261		2 MUSC 263		2
MUSC 262		2 MUSC 264		2
MUSC 270 (GEF 8)		3 MUSC 271 (GEF 6)		3
MUSC 189		0 MUSC 189		0
ENGL 102 (GEF 1)		3 GEF		3
		<hr/>		
		16		16
Third Year				
Fall	Hours	Spring		Hours
MUSC Major Ensemble		1 MUSC Major Ensemble		1
MUSC Chamber Ensemble		1 MUSC 321-327D Applied Music		2
MUSC 321-327D Applied Music		2 MUSC Chamber Ensemble		1
MUSC 465		2 MUSC 466		2
MUSC 189		0 MUSC 474		3
MUSC 461		2 MUSC 189		0
GEF		3 MUSC 462		2
Foreign Language (GEF 7)		3 Foreign Language (GEF 8)		3
		<hr/>		
		14		14
Fourth Year				
Fall	Hours	Spring		Hours
MUSC Major Ensemble		1 MUSC Major Ensemble		1
MUSC Chamber Ensemble		1 MUSC Chamber Ensemble		1
MUSC 421-427D Applied Music		2 MUSC 421-427D Applied Music		2
MUSC 200		2 MUSC 362		3
MUSC 460		2 MUSC 460		2
MUSC 460A		2 MUSC 475 (MUSC History - GEF 8)		3
Select one of the following:		3 MUSC 488		2
MUSC 463				
MUSC 464				
		<hr/>		
		13		14
<hr/>				
Total credit hours: 122				

Major Learning Outcomes

MUSIC COMPOSITION

Students who earn the Bachelor of Music in Composition will develop:

- the highest possible level of skill in the use of basic concepts, tools, techniques, and procedures to develop a composition from concept to finished product. This involves the competency to work with both electronic and acoustic media, work with a variety of forms, styles, and notations, and to apply principles of scoring appropriate to particular compositions,
- fluency in the use of tools needed by composers. This includes keyboard skills, spoken and written language, conducting and rehearsal skills, analytical techniques, and applicable technologies, and
- opportunities to hear fully realized performances of the student's original compositions. Public presentation and critical assessment are essential experiences.

Music Education, B.M.

Degree Offered

- Bachelor of Music

Nature of the Program

Students who successfully complete the music education curriculum and all certification exams required by the West Virginia Department of Education will be qualified for a professional certificate, grades birth through adult. This certification allows teaching of instrumental, vocal, and general music in West Virginia public schools.

Click here to view the Suggested Plan of Study (p. 597)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

A cumulative GPA of 2.75 is required.

GEF Requirements		25
A minimum GPA of 2.75 is required in all major requirements.		
MUSC 191	First-Year Seminar	2
MUSC 189	Music Convocation (Five Semesters)	0
Music Core Courses		

Minimum GPA of 2.75

Select one of the following: **3**

MUSC 111	Introduction to Music	
MUSC 113	American Popular Music	
MUSC 114	Music and the Immigrant Experience	
MUSC 115	Introduction to History of Jazz	
MUSC 116	Music in World Cultures	
MUSC 118	Music in Appalachia	
MUSC 161	Aural Theory 1	2
MUSC 162	Written Theory 1	2
MUSC 163	Aural Theory 2	2
MUSC 164	Written Theory 2	2
MUSC 200	Fundamentals of Conducting	2
MUSC 201	Conducting and Score Interpretation	2
MUSC 202	Conducting and Rehearsing	2
MUSC 261	Aural Theory 3	2
MUSC 262	Written Theory 3	2
MUSC 263	Aural Theory 4	2
MUSC 264	Written Theory 4	2
MUSC 270	History of Western Musical Traditions 1 (GEF 8)	3
MUSC 271	History of Western Musical Traditions 2 (GEF 6)	3

Professional Education Courses

Minimum Grade of C- required. Minimum GPA of 2.75.

MUSC 138	Voice Class 1 (Taken if voice is not principal instrument)	2
MUSC 180	Introduction to Music Education	1
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 384	Music Arranging for Public School Groups	2
EDP 301	Learning in PreK-Adult Educational Settings	3
SPED 304	Special Education in Contemporary Society (GEF 4)	3
SPED 360	Differentiation of Instruction for Students with Special Needs	3
RDNG 422	Reading in the Content Areas	3
MUSC 487	Student Teaching Seminar (Capstone)	2
MUSC 491	Professional Field Experience	14

Studies in Music

Class Piano (if piano is not principal)

MUSC 130	Piano Class Level 0	1
MUSC 131	Piano Class Level 1/2	1
MUSC 132	Piano Class Level 1	1
MUSC 133	Piano Class Level 1 1/2	1

7 semesters of Major Ensemble, selected from the following: ** **7**

MUSC 300	Band: Wind Symphony	
MUSC 300A	Band: Symphonic	
MUSC 300B	Band: Marching	
MUSC 302	University Choral Union	
MUSC 303	Orchestra	

MUSC 305	University Choir	
MUSC 305A	University Choir: Concert	
MUSC 353	Chamber Music: Large Jazz Ensemble 1	
MUSC 353A	Chamber Music: Large Jazz Ensemble 2	
1 semester of Chamber Music, selected from the following: **		1
MUSC 340	Chamber Music: Brass	
MUSC 341	Chamber Music: Guitar	
MUSC 342	Chamber Music: Piano-4 Hand	
MUSC 343	Chamber Music: Strings	
MUSC 344	Chamber Music: Woodwind	
MUSC 345	Chamber Music: Vocal	
MUSC 346	Chamber Music: Mixed Ensemble	
MUSC 347	Chamber Music: Mountaineer Singers	
MUSC 348	Chamber Music: New Music	
MUSC 349	Chamber Music: Other	
MUSC 351	Chamber Music: Percussion 1	
MUSC 352	Chamber Music: Percussion 2	
MUSC 353B	Chamber Music: Jazz Small Group	
MUSC 353C	Chamber Music: Jazz Small Group 2	
MUSC 353E	Chamber Music: Jazz and Ethnic	
MUSC 353G	Chamber Music: Jazz Vocal Ensemble	
MUSC 353H	Chamber Music: Jazz Other	
MUSC 354	Chamber Music: Gamelan	
MUSC 355	Chamber Music: Steel Band 1	
MUSC 356	Chamber Music: African	
MUSC 357	Chamber Music: Brazilian	
MUSC 358	Chamber Music: Ethnic	
MUSC 359	Chamber Music: Taiko	
MUSC 361	Fife and Drum Ensemble	
MUSC 363	Appalachian Music Ensemble	
Select 14 hours from the following:		
Applied Music 100 level (MUSC 121-127D) - 2 semesters		4
Applied Music 200 level (MUSC 221-227D) - 2 semesters		4
Applied Music 300 level (MUSC 321-327D) - 2 semesters		4
Applied Music 400 level (MUSC 421-427D) - 1 semester		2
Proficiency Level Piano (min. level 2 required)		
Proficiency Level (min. level 7 required)		
Recital		
Total Hours		136

- * Prior to enrolling in MUSC 380, MUSC 381, and MUSC 382, students must pass the Praxis I Core Academic Skills for Educators, pass MUSC 133 or its equivalent (level 2 on piano), satisfy secondary instrument proficiency requirements (below), and meet the following GPA requirements:
1. An overall GPA of 2.75 in all courses taken at WVU and at any other institution (this includes courses taken at other institutions that are not accepted by WVU)
 2. A GPA of 2.75 in all music core courses
 3. A GPA of 2.75 in professional education courses and meeting the minimum grade requirements noted above.
 4. A cumulative GPA of 2.75 is required

** Credits may vary. Refer to the School of Music Requirements (p. 570) for policies related to fulfilling the Major and Chamber Ensemble requirements.

Proficiency Level

Music education students should begin as freshmen at proficiency level three on their principal performance medium (instrument or voice) and must complete proficiency level seven on the medium to be eligible for student teaching. Students must present two solo performances on the major instrument or voice in upper-level recitals before the semester in which they student teach.

Secondary Instrument Requirements

In addition to the general pre-professional requirements indicated above, secondary instrument requirements for specific music education methods courses are:

- MUSC 380: MUSC 280 (minimum of two woodwind instrument proficiencies) and recorder proficiency, and MUSC 281 (minimum of two brass instrument proficiencies) and guitar proficiency
- MUSC 381: MUSC 284 and at least one of the following: MUSC 280 (minimum of two woodwind instrument proficiencies) and recorder proficiency; or MUSC 281 (minimum of two brass instrument proficiencies) and guitar proficiency
- MUSC 382: MUSC 280 (minimum of two woodwind instrument proficiencies) and recorder proficiency, and MUSC 281 (minimum of two brass instrument proficiencies) and guitar proficiency

Student Teaching

Students must pass all secondary instrument proficiency examinations no later than mid-term in the semester prior to that in which they student teach. In addition to the piano, recorder, world music, and guitar proficiencies listed above, students must pass proficiencies on voice and selected woodwind, brass, string, and percussion instruments. For the piano proficiency, all undergraduate music education majors (non-piano principals) are required to successfully complete MUSC 133 or its equivalent (level two) as a minimum proficiency in piano. All music education students, including piano principals, must pass a proficiency examination in keyboard harmony and sight-reading.

To be eligible to student teach, students must pass the Praxis Series subject area test in music (Music: Content Knowledge [0113]) and meet the following GPA requirements

- An overall GPA of 2.75 in all courses taken at WVU and at any other institution (this includes courses taken at other institutions that are not accepted by WVU);
- A GPA of 2.75 in all music (content area) courses
- A GPA of 2.75 in professional education courses and music education methods courses with no D's or F's in these courses:

Certification

To be recommended for certification, students must take and pass one of the three following professional education tests prior to graduation: Principles of Learning and Teaching K–6, Principles of Learning and Teaching 5-9, or Principles of Learning and Teaching 7–12.

Combined Performance/Music Education Curriculum

An optional program can be arranged for outstanding students who desire to meet the requirements of majors in both performance and music education. Admission to this rigorous program is by written consent of the coordinator of the appropriate performance area and the coordinator of music education after the student has completed two semesters. This curriculum satisfies the course requirements of the professional certificate for birth through adult. The numerous possible combinations of performance with music education cannot be listed separately here. When students become a candidate for this degree, their advisors designate the specific courses that must be taken to satisfy the requirements for both a bachelor's in performance and a bachelor's in music education. By attending summer sessions, if appropriate courses are available, it may be possible to complete the combined curriculum in four calendar years, although it usually takes longer.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 121-127D Applied Music		2 MUSC 121-127D Applied Music	2
Select one of the following:		1 Select one of the following:	1
MUSC 130		MUSC 130	
MUSC 131		MUSC 131	
MUSC 132		MUSC 132	
MUSC 133		MUSC 133	
MUSC 138		2 MUSC 163	2
MUSC 161		2 MUSC 164	2

MUSC 162	2 MUSC 180	1
ENGL 101 (GEF 1)	3 Select one of the following	3
MUSC 191	2 MUSC 111	
GEF	3 MUSC 113	
	MUSC 114	
	MUSC 115	
	MUSC 116	
	MUSC 118	
	MUSC 189	0
	Select one of the following:	2
	MUSC 280	
	MUSC 281	
	MUSC 284	
	MUSC Chamber Music	1
	GEF	3
	<hr/>	
	18	18

Second Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 221-227D Applied Music		2 MUSC 221-227D Applied Music	2
Select one of the following:		1 Select one of the following:	1
MUSC 130		MUSC 130	
MUSC 131		MUSC 131	
MUSC 132		MUSC 132	
MUSC 133		MUSC 133	
MUSC 189		0 MUSC 189	0
MUSC 200		2 MUSC 201	2
MUSC 261		2 MUSC 263	2
MUSC 262		2 MUSC 264	2
MUSC 270 (GEF 8)		3 MUSC 271 (GEF 6)	3
Select one of the following:		2 Select one of the following:	2
MUSC 280		MUSC 280	
MUSC 281		MUSC 281	
MUSC 284		MUSC 284	
ENGL 102 (GEF 1)		3 SPED 304 (GEF 4)	3
	<hr/>		
	18	18	

Third Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 321-327D Applied Music		2 MUSC 321-327D Applied Music	2
MUSC 189		0 MUSC 189	0
MUSC 202		2 Select one of the following:	2
Select one of the following:		2 MUSC 282	
MUSC 282		MUSC 283	
MUSC 283		Select one of the following:	3
Select one of the following:		3 MUSC 380	
MUSC 380		MUSC 381	
MUSC 381		MUSC 382	
MUSC 382		GEF	3
EDP 301		3 SPED 360	3
GEF 2		4	
	<hr/>		
	17	14	

Fourth Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC 491	14
MUSC 421-427D Applied Music		2 MUSC 487	2
Select one of the following:		3	
MUSC 380			
MUSC 381			
MUSC 382			
MUSC 384		2	
GEF		3	
GEF		3	
RDNG 422		3	
		17	16

Total credit hours: 136

Major Learning Outcomes

MUSIC EDUCATION

In addition to the common core of musicianship and general studies, the musician electing a career in school-based teaching will develop competencies in professional education and in specific areas of musicianship. Professional education components will be learned in a practical context, relating the learning of educational principles to the student's day-to-day work in music. Students are provided opportunities for various types of observation and teaching.

Within the curricular guidelines, attention is given to breadth in general studies, attitudes relating to human, personal considerations, and social, economic, and cultural components that give individual communities their identity.

Students who earn the Bachelor of Music in Music Education will develop musical abilities in:

- Conducting and Musical Leadership,
- Arranging,
- Functional Performance, and
- Analysis/History/Literature.

Students who earn the Bachelor of Music in Music Education will be able to

- teach beginning students on instruments and/or in voice as appropriate to the chosen areas of specialization,
- synthesize and apply content, methodologies, philosophies, materials, technologies, and curriculum development in order to develop instructional plans music education,
- perform as a soloist (vocal or instrumental)
- perform as a member of a variety of ensemble, both traditional band, orchestra, choir as well as chamber, world music, and non-traditional ensembles that vary both in size and nature,
- lead performance-based instruction in a variety of settings, and
- teach in a variety of specializations

Music Industry, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

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 BA in Music Industry offers two tracks (areas of emphasis) students may select: applied music (which includes private instrument or voice lessons) or multi-instrumental (where students are engaged in group instrumental/vocal lessons).

The Music Industry program provides 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 full course of study that includes courses in music, music industry, and business, combined with the University's General Education Foundations curriculum, is designed in line with the College of Creative Arts' mission of educating artists, teachers, and scholars through an experiential, student-centered approach to learning. The Music Industry program includes courses in intellectual property in music industry, music publishing, live music industry, recording industry, music product development and placement, and recording technology.

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Music Industry (<https://admissions.wvu.edu/academics/majors/music-industry/>) major.

BA IN MUSIC INDUSTRY PROGRAM / AREA OF EMPHASIS: APPLIED MUSIC

ENTRANCE REQUIREMENTS

Acceptance into the Bachelor of Arts in Music Industry degree program is contingent upon admission to WVU as an undergraduate student and a successful interview. Each student applying for the BA in Music Industry program will complete an interview process with one or more representatives from the Music Industry program. Other School of Music staff may be present as well. The interview process covers information about the student's educational history, preparation for the music industry degree program, interest in music industry as a career, and any other information the student would like to share with the interviewer.

MUSIC PERFORMANCE AUDITION REQUIREMENT

All the prospective majors who wish to enroll in the program's Area of Emphasis: Applied Music will be required to pass a successful instrumental/vocal performance audition in order to be admitted into the program. Students who pursue this area emphasis must audition at a performance level 2, or above, on their principal instrument/voice to be admitted to the BA in Music Industry program. Auditions for such incoming majors are held principally in November, February, and March in Morgantown. Dates for auditions and details concerning them are available from the School of Music and on the website (<http://music.wvu.edu/>). Special accommodations may be made by contacting the School of Music at (304) 293-5511 or Music@mail.wvu.edu. If a student is admitted, their standing is confirmed or revised after the first semester of study.

All admitted students should own their own instrument under normal circumstances (except for piano) and a portable (folding) music stand.

ADDITIONAL REQUIREMENTS:

High school graduates from West Virginia and non-residents are eligible to be considered for admission to the program with a 2.5 grade point average and either a composite ACT score of 19 or a combined math and critical reading SAT score of 910. If space is available and the required high school units, GPA, and test scores are met, the student will be admitted. Therefore, we encourage eligible students to apply as soon as possible after September 15 of their senior year. If one of the requirements is not met, students may still apply, and the Music Industry Program Director will review the application. If appropriate, students should submit a written statement explaining any extenuating circumstances that might have affected their academic performance.

BA IN MUSIC INDUSTRY PROGRAM / AREA OF EMPHASIS: MULTI-INSTRUMENTAL

ENTRANCE REQUIREMENTS

Acceptance into the Bachelor of Arts in Music Industry degree program is contingent upon admission to WVU as an undergraduate student and a successful interview. Each student applying for the BA in Music Industry program will complete an interview process with one or more representatives from the Music Industry program. Other School of Music staff may be present as well. The interview process covers information about the student's educational history, preparation for the music industry degree program, interest in music industry as a career, and any other information the student would like to share with the interviewer.

MUSIC PERFORMANCE AUDITION REQUIREMENT

Music performance audition is not required for this Area of Emphasis.

ADDITIONAL REQUIREMENTS:

High school graduates from West Virginia and non-residents are eligible to be considered for admission to the program with a 2.5 grade point average and either a composite ACT score of 19 or a combined math and critical reading SAT score of 910. If space is available and the required high school units, GPA, and test scores are met, the student will be admitted. Therefore, we encourage eligible students to apply as soon as possible after September 15 of their senior year. If one of the requirements is not met, students may still apply, and the Music Industry Program Director will review the application. If appropriate, students should submit a written statement explaining any extenuating circumstances that might have affected their academic performance.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Minimum grade of C- is required in all Music Industry courses *

Minimum GPA of 2.5 in all MUSC courses *

GEF Requirements		16
Foreign Language Requirement **		12
Business Courses		
ECON 200	Survey of Economics	3
ACCT 200	Survey of Accounting	3
BCOR 350	Principles of Marketing	3
BCOR 370 or BCOR 340	Managing Individuals & Teams Principles of Finance	3
Music Courses		
MUSC 191	First-Year Seminar	2
MUSC 161	Aural Theory 1	2
MUSC 162	Written Theory 1	2
MUSC 163	Aural Theory 2	2
MUSC 164	Written Theory 2	2
Select one of the following:		3
MUSC 111	Introduction to Music	
MUSC 113	American Popular Music	
MUSC 114	Music and the Immigrant Experience	
MUSC 115	Introduction to History of Jazz	
MUSC 116	Music in World Cultures	
MUSC 118	Music in Appalachia	
MUSC 261	Aural Theory 3	2
MUSC 262	Written Theory 3	2
MUSC 270 or MUSC 271	History of Western Musical Traditions 1 (GEF 6) History of Western Musical Traditions 2	3
Music Convocation		
MUSC 189	Music Convocation (2 semesters)	0

Music Industry Courses		
MUSC 410	Introduction to Music Industry	3
MUSC 411	Intellectual Property in Music Industry	3
MUSC 412	Music Product Development and Placement	3
MUSC 413	Live Music Industry	3
MUSC 414	Recording Industry	3
MUSC 415	Music Publishing	3
MUSC 491	Professional Field Experience	3
Music Industry Electives:		6
MUSC 236	Introduction to Recording Technology	
MUSC 336	Introduction to Digital Audio Workstation	
MUSC 460A	Electronic Music Composition	
MUSC 466	Electronic Music-Digital Audio	
MUSC 495	Independent Study	
Required Area of Emphasis		20
Applied Music		
Multi-Instrumental		
Capstone		
MUSC 492	Directed Study	3
Free Electives		12
Total Hours		122

* This does not supersede or replace the University's D/F repeat policy.

** Foreign language study, consisting of 12 credits in a single language, may be used to fulfill GEF 7 and 8 coursework

Applied Music Area of Emphasis Requirements

A minimum grade of C- is required in all music industry courses.

A minimum GPA of 2.5 in all MUSC courses.

Applied Lessons

Applied Music 100 Level (MUSC 121-127)	4
Applied Music 200 Level (MUSC 221-227)	4
Applied Music 300 Level (MUSC 321-327)	4

Music Ensemble (4 semesters) 4

MUSC 300	Band: Wind Symphony
MUSC 300A	Band: Symphonic
MUSC 300B	Band: Marching
MUSC 302	University Choral Union
MUSC 303	Orchestra
MUSC 305	University Choir
MUSC 305A	University Choir: Concert
MUSC 353	Chamber Music: Large Jazz Ensemble 1
MUSC 353A	Chamber Music: Large Jazz Ensemble 2

Music Electives (any MUSC courses) 4

Total Hours	20
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SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
MUSC 161		2 MUSC 121-127 Applied Lesson	2
MUSC 162		2 MUSC 163	2
MUSC 191		2 MUSC 164	2
MUSC 121-127 Applied Lesson		2 MUSC 189	0

MUSC 411	3 Foreign Language (GEF 8)	3
ENGL 101 (GEF 1)	3 GEF 3	3
Foreign Language (GEF 7)	3 Select one of the following:	3
	MUSC 111	
	MUSC 113	
	MUSC 114	
	MUSC 115	
	MUSC 116	
	MUSC 118	

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Second Year

Fall	Hours	Spring	Hours
MUSC 221-227 Applied Lesson		2 MUSC 189	0
MUSC 261		2 MUSC 415	3
MUSC 262		2 MUSC 221-227 Applied Lesson	2
Music Ensemble		1 Music Ensemble	1
MUSC 410		3 ACCT 200	3
ECON 200		3 Foreign Language (GEF 8)	3
Foreign Language (GEF 8)		3 GEF 2	4
ENGL 102 (GEF 1)		3	3

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Third Year

Fall	Hours	Spring	Hours
MUSC 270 or 271 (GEF 6)		3 MUSC 414	3
MUSC 413		3 MUSC 321-327 Applied Lesson	2
MUSC 321-327 Applied Lesson		2 Music Ensemble	1
Music Ensemble		1 Music Industry Elective	2
Music Elective		2 GEF 5	3
BCOR 350		3 Electives	3

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Fourth Year

Fall	Hours	Spring	Hours
MUSC 412		3 MUSC 491	3
BCOR 370		3 MUSC 492 (Capstone)	3
Music Industry Elective		2 Music Industry Elective	2
Electives		6 Music Elective	2
		Electives	3

14 13

Total credit hours: 122

Multi-Instrumental Area of Emphasis Requirements

A minimum grade of C- is required in all music industry courses.

A minimum GPA of 2.5 in all MUSC courses.

MUSC 100	Fundamentals of Music Theory	1
or MUSC 110	Fundamentals of Music	

Group Instrumental Lessons * 6-7

Four credits minimum in piano and two credits minimum in another instrument (i.e. guitar)

MUSC 130	Piano Class Level 0
MUSC 131	Piano Class Level 1/2
MUSC 132	Piano Class Level 1
MUSC 133	Piano Class Level 1 1/2
MUSC 134	Piano Class Level 2-2 1/2

MUSC 136	Guitar Class 1	
MUSC 137 or MUSC 237	Music Therapy Class Guitar 1 Music Therapy Class Guitar 2	
And any other group instrumental/vocal classes available.		
Music Ensemble **		5
MUSC 101	Band: Concert (Section 001)	
MUSC 302	University Choral Union	
MUSC 305	University Choir (Sections 001 or 002)	
MUSC 354	Chamber Music: Gamelan	
MUSC 355	Chamber Music: Steel Band 1	
MUSC 356	Chamber Music: African	
MUSC 357	Chamber Music: Brazilian	
MUSC 358	Chamber Music: Ethnic	
MUSC 359	Chamber Music: Taiko	
And any ensemble available that does not require audition, or for which a student passes the audition.		
Music Electives (any MUSC courses)		8
Total Hours		20

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
MUSC 100 or 110		1-3 MUSC 131	1
MUSC 130		1 MUSC 189	0
MUSC 191		2 Select one of the following:	3
MUSC 411		3 MUSC 111	
ECON 200		3 MUSC 113	
ENGL 101 (GEF 1)		3 MUSC 114	
Foreign Language (GEF 7)		3 MUSC 115	
		MUSC 116	
		MUSC 118	
		Music Elective	2
		Foreign Language (GEF 8)	3
		GEF 2	4
		GEF 3	3
		16	16

Second Year

Fall	Hours	Spring	Hours
MUSC 132		1 MUSC 133	1
MUSC 161		2 MUSC 163	2
MUSC 162		2 MUSC 164	2
MUSC 189		0 MUSC 415	3
MUSC 410		3 Music Ensemble	1
Music Ensemble		1 Music Elective	2
ENGL 102 (GEF 1)		3 ACCT 200	3
Foreign Language (GEF 8)		3 Foreign Language (GEF 8)	3
		15	17

Third Year

Fall	Hours	Spring	Hours
MUSC 137		1 MUSC 237	1
MUSC 261		2 MUSC 414	3
MUSC 262		2 Music Ensemble	1
MUSC 270 or 271 (GEF 6)		3 Music Industry Elective	2

MUSC 413	3 GEF 5	3
Music Ensemble	1 Electives	3
Music Industry Elective	2	
BCOR 350	3	
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	17	13

Fourth Year

Fall	Hours	Spring	Hours
MUSC 412		3 MUSC 491	3
Music Ensemble		1 MUSC 492 (Capstone)	3
Music Elective		2 Music Industry Elective	2
BCOR 370 or 340		3 Music Elective	2
Electives		6 Electives	3
<hr/>			
	15		13

Total credit hours: 122

Major Learning Outcomes

B.A. - MUSIC INDUSTRY

Students who earn the Bachelor of Arts in Music Industry will develop:

- The ability to integrate knowledge and skills in music, music industry, and business, to address issues, projects, and problems in the music industry.
- Make independent, logical evaluations and judgements associated with the work of one or more sectors of the music industry.
- The capacity to pose, analyze, and solve problems with an understanding of the interrelationships and interdependencies of various interests and influences on the music industry.
- Knowledge and skills in various aspects of the music industry and business more generally through study and personal experience.

Music Performance: Instrumental, B.M.

Degree Offered

- Bachelor of Music

Nature of the Program

The performance curricula are especially designed for students wishing to prepare themselves as performers or as teachers of a particular instrument or voice. The increased interest of society today in the arts is creating many new opportunities for the professional musician and for the private music teacher.

Instruments include:

- Flute
- Oboe
- Clarinet
- Saxophone
- Bassoon
- Horn
- Trumpet
- Trombone
- Euphonium
- Tuba
- Percussion
- Violin
- Viola
- Cello
- Double Bass

- Harp
- Guitar

In addition to presentation of a senior recital, performance majors also must make three solo appearances on the principal instrument in upper-level student recitals or convocations. Proficiency level of ten is required for graduation.

Click here to view the Suggested Plan of Study (p. 608)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

GEF Requirements		28
MUSC 191	First-Year Seminar	2
Music Core Courses		
MUSC 161	Aural Theory 1	2
MUSC 162	Written Theory 1	2
MUSC 163	Aural Theory 2	2
MUSC 164	Written Theory 2	2
MUSC 189	Music Convocation (Five Semesters)	0
Select one of the following: **		3
MUSC 111	Introduction to Music	
MUSC 113	American Popular Music	
MUSC 114	Music and the Immigrant Experience	
MUSC 115	Introduction to History of Jazz	
MUSC 116	Music in World Cultures	
MUSC 118	Music in Appalachia	
MUSC 261	Aural Theory 3	2
MUSC 262	Written Theory 3	2
MUSC 263	Aural Theory 4	2
MUSC 264	Written Theory 4	2
MUSC 270	History of Western Musical Traditions 1 (GEF 8)	3
MUSC 271	History of Western Musical Traditions 2 (GEF 6)	3
MUSC 121-127, 221-227, 321-327, 421-427	Applied Music in a band, orchestra instrument, or guitar	32

MUSC 432 & MUSC 433	Methods and Pedagogy and Methods and Pedagogy	4
MUSC 488	Recital (Capstone)	2
8 Semesters of Major Ensemble, selected from the following: *		8
MUSC 300	Band: Wind Symphony	
MUSC 300A	Band: Symphonic	
MUSC 300B	Band: Marching	
MUSC 303	Orchestra	
MUSC 353	Chamber Music: Large Jazz Ensemble 1	
MUSC 353A	Chamber Music: Large Jazz Ensemble 2	
4 Semesters of Chamber Music, selected from the following: *		4
MUSC 340	Chamber Music: Brass	
MUSC 341	Chamber Music: Guitar	
MUSC 342	Chamber Music: Piano-4 Hand	
MUSC 343	Chamber Music: Strings	
MUSC 344	Chamber Music: Woodwind	
MUSC 348	Chamber Music: New Music	
MUSC 349	Chamber Music: Other	
MUSC 351	Chamber Music: Percussion 1	
MUSC 352	Chamber Music: Percussion 2	
MUSC 353B	Chamber Music: Jazz Small Group	
MUSC 353C	Chamber Music: Jazz Small Group 2	
MUSC 353E	Chamber Music: Jazz and Ethnic	
MUSC 353G	Chamber Music: Jazz Vocal Ensemble	
MUSC 353H	Chamber Music: Jazz Other	
MUSC 354	Chamber Music: Gamelan	
MUSC 355	Chamber Music: Steel Band 1	
MUSC 356	Chamber Music: African	
MUSC 357	Chamber Music: Brazilian	
MUSC 358	Chamber Music: Ethnic	
MUSC 359	Chamber Music: Taiko	
MUSC 361	Fife and Drum Ensemble	
MUSC 363	Appalachian Music Ensemble	
Music Supportive Courses		
MUSC 200	Fundamentals of Conducting	2
MUSC 130	Piano Class Level 0	1
MUSC 131	Piano Class Level 1/2	1
MUSC 132	Piano Class Level 1	1
MUSC 133	Piano Class Level 1 1/2	1
Music Electives		
Music Electives (any area)		4
Music Theory		5
Selected from the following:		
MUSC 265	Instrumentation	
MUSC 266	Orchestration and Band Arranging	
MUSC 311	Introduction to Jazz Improvisation	
MUSC 313	Advanced Jazz Improvisation	
MUSC 360	Composition	
MUSC 362	Instrumentation and Orchestration (Instrumentation and Orchestration)	
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 480	Arranging for Small Jazz Ensemble	
MUSC 481	Arranging for Large Jazz Ensemble	
Music History		3
Selected 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	
Select one of the following:		2
MUSC 236	Introduction to Recording Technology	
MUSC 410	Introduction to Music Industry	
Proficiency Level Piano		
Proficiency Level		
Total Hours		125

* Credits may vary. Refer to the School of Music Requirements (p. 570) for policies related to fulfilling the Major Ensemble and Chamber Ensemble requirements.

** Prerequisite for MUSC 270 or MUSC 271.

Proficiency Level

A student in a performance curriculum, if entering as a freshman, should achieve proficiency level six in the principal performance area at the time of audition, and must complete proficiency level ten in that area to be eligible for graduation. In addition to presentation of a senior recital, performance majors also must make three solo appearances on the major instrument in upper-level student recitals or convocations.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 121-127D Applied Music		4 MUSC 121-127D Applied Music	4
Select one of the following:		1 Select one of the following:	1
MUSC 130		MUSC 130	
MUSC 131		MUSC 131	
MUSC 132		MUSC 132	
MUSC 133		MUSC 133	
MUSC 161		2 MUSC 163	2
MUSC 162		2 MUSC 164	2
MUSC 191		2 MUSC 189	0
ENGL 101 (GEF 1)		3 Select one of the following:	3
GEF		3 MUSC 111	
		MUSC 113	
		MUSC 114	
		MUSC 115	
		MUSC 116	
		MUSC 118	
		GEF	3

Second Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 221-227D Applied Music		4 MUSC 221-227D Applied Music	4
Select one of the following:		1 Select one of the following:	1
MUSC 130		MUSC 130	
MUSC 131		MUSC 131	
MUSC 132		MUSC 132	
MUSC 133		MUSC 133	
MUSC 261		2 MUSC 263	2
MUSC 262		2 MUSC 264	2
MUSC 270 (GEF 8)		3 MUSC 271 (GEF 6)	3
MUSC 189		0 MUSC 189	0
MUSC Chamber Music		1 GEF	3
ENGL 102 (GEF 1)		3	
		<hr/>	
		17	16

Third Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 321-327D Applied Music		4 MUSC 321-327D Applied Music	4
MUSC 189		0 MUSC 189	0
MUSC Chamber Music		1 MUSC Chamber Music	1
MUSC 432		2 MUSC 433	2
MUSC History or Theory Electives		2 MUSC History or Theory Electives	3
GEF 2		4 GEF	3
MUSC Elective		1 MUSC Elective	1
		<hr/>	
		15	15

Fourth Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 421-427D Applied Music		4 MUSC 421-427D Applied Music	4
MUSC Chamber Music		1 MUSC History or Theory Electives	3
MUSC 200		2 GEF	3
GEF		3 MUSC Electives	1
MUSC Elective		1 MUSC 488	2
MUSC 236 or 410		2	
		<hr/>	
		14	14

Total credit hours: 125

Major Learning Outcomes**MUSIC PERFORMANCE: INSTRUMENTAL**

Students who earn the Bachelor of Music in Performance: Instrumental will develop:

- Comprehensive capabilities in the major performing medium including the ability to work independently to prepare performances at the highest possible level; knowledge of applicable solo and ensemble literature; and orientation to and experience with the fundamentals of pedagogy.
- Solo and ensemble performance abilities in a variety of formal and informal settings.

Music Performance: Jazz Studies, B.M.**Degree Offered**

- Bachelor of Music

Nature of the Program

The performance curricula are especially designed for students wishing to prepare themselves as performers or as teachers of a particular instrument or voice. The increased interest of society today in the arts is creating many new opportunities for the professional musician and for the private music teacher.

The Bachelor of Music in Jazz Studies encourages study, training, and performance in all forms of creative improvised music, jazz & world music. The Jazz Studies major at WVU enables you to expand your creative vision and gain a global perspective.

Click here to view the Suggested Plan of Study (p. 612)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

A minimum GPA of 2.0 is required in all MUSC courses

GEF Requirements		28
MUSC 191	First-Year Seminar	2
Music Core Courses		
MUSC 161	Aural Theory 1	2
MUSC 162	Written Theory 1	2
MUSC 163	Aural Theory 2	2
MUSC 164	Written Theory 2	2
MUSC 189	Music Convocation (One Semester)	0
Select one of the following:		3
MUSC 111	Introduction to Music	
MUSC 113	American Popular Music	
MUSC 114	Music and the Immigrant Experience	
MUSC 115	Introduction to History of Jazz	
MUSC 116	Music in World Cultures	
MUSC 118	Music in Appalachia	
MUSC 261	Aural Theory 3	2
MUSC 262	Written Theory 3	2
MUSC 263	Aural Theory 4	2
MUSC 264	Written Theory 4	2
MUSC 270	History of Western Musical Traditions 1 (GEF 8)	3

MUSC 271	History of Western Musical Traditions 2 (GEF 6)	3
Jazz Studies		
Select 32 hours from the following:		
Applied Music 100 level (MUSC 121-127D) - 2 semesters		8
Applied Music 200 level (MUSC 221-227D) - 2 semesters		8
Applied Music 300 level (MUSC 321-327D) - 2 semesters		8
Applied Music 400 level (MUSC 421-427D) - 2 semesters		8
MUSC 129	Music Technology 1: GarageBand	1
MUSC 236	Introduction to Recording Technology	2
MUSC 311	Introduction to Jazz Improvisation	2
MUSC 313	Advanced Jazz Improvisation	2
MUSC 468	Jazz Harmony	2
MUSC 475	History of Jazz	3
MUSC 480	Arranging for Small Jazz Ensemble	2
MUSC 481	Arranging for Large Jazz Ensemble	2
MUSC 488	Recital (Capstone)	2
Select 8 hours from the following (A minimum of 3 credits must be from Major Ensemble): *		8
MUSC 300	Band: Wind Symphony	
MUSC 300A	Band: Symphonic	
MUSC 300B	Band: Marching	
MUSC 302	University Choral Union	
MUSC 303	Orchestra	
MUSC 305	University Choir	
MUSC 305A	University Choir: Concert	
MUSC 353	Chamber Music: Large Jazz Ensemble 1	
MUSC 353A	Chamber Music: Large Jazz Ensemble 2	
MUSC 353B	Chamber Music: Jazz Small Group	
MUSC 353C	Chamber Music: Jazz Small Group 2	
MUSC 353E	Chamber Music: Jazz and Ethnic	
MUSC 353H	Chamber Music: Jazz Other	
MUSC 353I	Chamber Music: Jazz Vocal Ensemble	
Music Supportive Courses		
MUSC 200	Fundamentals of Conducting	2
MUSC 410	Introduction to Music Industry	3
Not required for keyboard performers (proficiency level 1 required)		1
MUSC 130	Piano Class Level 0	
MUSC 131	Piano Class Level 1/2	
MUSC 132	Piano Class Level 1	
MUSC 133	Piano Class Level 1 1/2	
Music Electives (in any area)		5
Proficiency Level Piano		
Proficiency Level		
Proficiency Level Applied Jazz		
Total Hours		124

* Credits may vary. Refer to the School of Music Requirements (p. 570) for policies related to fulfilling the Major Ensemble and Chamber Ensemble requirement.

Proficiency Level

A student in a performance curriculum, if entering as a freshman, should achieve proficiency level six in the principal performance area at the time of audition, and must complete proficiency level ten in that area to be eligible for graduation. In addition to presentation of a senior recital, performance

majors also must make three solo appearances on the major instrument in upper-level student recitals or convocations. Proficiency level ten in jazz performance and level five in classical performance are required for graduation. Proficiency level one is required in piano.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 121-127D Applied Music		4 MUSC 121-127D Applied Music	4
MUSC 161		2 MUSC 129	1
MUSC 162		2 Select one of the following:	1
MUSC 189		0 MUSC 130	
MUSC 191		2 MUSC 131	
ENGL 101 (GEF 1)		3 MUSC 132	
MUSC Elective		1 MUSC 133	
		MUSC 163	2
		MUSC 164	2
		MUSC 189	0
		Select one of the following: ^{prerequisite to MUSC 270 or MUSC 271}	3
		MUSC 111	
		MUSC 113	
		MUSC 114	
		MUSC 115	
		MUSC 116	
		MUSC 118	
		GEF	3
	15		17

Second Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 221-227D Applied Music		4 MUSC 221-227D Applied Music	4
MUSC 261		2 MUSC 263	2
MUSC 262		2 MUSC 264	2
MUSC 270 (GEF 8)		3 MUSC 271 (GEF 6)	3
MUSC 189		0 MUSC 189	0
ENGL 102 (GEF 1)		3 GEF	3
	15		15

Third Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 321-327D Applied Music		4 MUSC 321-327D Applied Music	4
MUSC 189		0 MUSC 313	2
MUSC 236		2 MUSC 480	2
MUSC 311		2 GEF	3
GEF		3 GEF	3
GEF 2		4	
	16		15

Fourth Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 421-427D Applied Music		4 MUSC 421-427D Applied Music	4
MUSC 200		2 MUSC 475	3
MUSC 410		3 GEF	3

MUSC 468	2 MUSC Elective	3
MUSC 481	2 MUSC 488	2
MUSC Elective	1	
<hr/>		
15		16

Total credit hours: 124

Major Learning Outcomes

MUSIC PERFORMANCE: JAZZ STUDIES

Students who earn the Bachelor of Music in Performance: Jazz Studies will develop:

- comprehensive capabilities in various jazz idioms, including the ability to perform, improvise, compose, arrange, and score; and knowledge of jazz history and literature, including the cultural sources and influences of jazz,
- the ability to work as a performer and composer/arranger with a variety of jazz and studio music idioms in various settings and with various sizes and types of ensembles, including the ability to produce the appropriate expressive style of the music being created or presented. Independent studies, internships, field work, and similar experiences are strongly encouraged.
- opportunities to hear fully realized performances of the student's original compositions and/or arrangements; public presentation is an essential experience, and
- solo and ensemble abilities in a variety of settings.

Music Performance: Piano, B.M.

Degree Offered

- Bachelor of Music

Nature of the Program

The performance curricula are especially designed for students wishing to prepare themselves as performers or as teachers of a particular instrument or voice. The increased interest of society today in the arts is creating many new opportunities for the professional musician and for the private music teacher.

Areas of Emphasis Include:

- Traditional
- Collaborative Piano
- Jazz
- Pedagogy

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

GEF Requirements		28
MUSC 191	First-Year Seminar	2
Music Core Courses		
MUSC 161	Aural Theory 1	2
MUSC 162	Written Theory 1	2
MUSC 163	Aural Theory 2	2
MUSC 164	Written Theory 2	2
MUSC 189	Music Convocation (Five Semesters)	0
Select one of the following:		3
MUSC 111	Introduction to Music	
MUSC 113	American Popular Music	
MUSC 114	Music and the Immigrant Experience	
MUSC 115	Introduction to History of Jazz	
MUSC 116	Music in World Cultures	
MUSC 118	Music in Appalachia	
MUSC 261	Aural Theory 3	2
MUSC 262	Written Theory 3	2
MUSC 263	Aural Theory 4	2
MUSC 264	Written Theory 4	2
MUSC 270	History of Western Musical Traditions 1 (GEF 8)	3
MUSC 271	History of Western Musical Traditions 2 (GEF 6)	3
Major Courses		
MUSC 200	Fundamentals of Conducting	2
Applied Piano		32
If selecting the Coaching/Accompanying, Pedagogy, or Traditional AOE, complete 32 credits from the following:		
MUSC 123B	Applied Music: Piano	
MUSC 223B	Applied Music: Piano	
MUSC 323B	Applied Music: Piano	
MUSC 423B	Applied Music: Piano	
If selecting the Jazz AOE, complete 24 credits from those above and 8 credits from the following:		
MUSC 122	Applied Music: Jazz	
MUSC 222	Applied Music: Jazz	
MUSC 322	Applied Music: Jazz	
MUSC 422	Applied Music: Jazz	
MUSC 488	Recital	2
Select 1 Area of Emphasis		29
Electives (To reach minimum 120 credits for degree)		2
Proficiency Level		
Total Hours		122

Proficiency Levels

A student in a performance curriculum, if entering as a freshman, should achieve proficiency level six in the principal performance area at the time of audition, and must complete proficiency level ten in that area to be eligible for graduation. Students in the Jazz Emphasis must reach level 10 in applied piano and 9 in applied jazz. In addition to presentation of a senior recital, performance majors also must make three solo appearances on the major instrument in upper-level student recitals or convocations.

Areas of Emphasis

Click the link below to view the corresponding AOE requirements and Suggested Plans of Study.

- Collaborative Piano (p. 615)
- Jazz (p. 617)
- Pedagogy (p. 619)
- Traditional (p. 621)

COLLABORATIVE PIANO AREA OF EMPHASIS REQUIREMENTS

MUSC 432 & MUSC 433	Methods and Pedagogy and Methods and Pedagogy	4
MUSC 434 & MUSC 435A	Repertoire and Repertoire: Piano	4
Opera Theatre (taken twice in separate semesters):		2
MUSC 304	Introduction To Opera Theatre	
MUSC 269A & MUSC 269B	Diction for Singers: English and Italian and Diction for Singers: German and French	6
2 Semesters of Major Ensemble *		2
MUSC 300	Band: Wind Symphony	
MUSC 300A	Band: Symphonic	
MUSC 300B	Band: Marching	
MUSC 302	University Choral Union	
MUSC 303	Orchestra	
MUSC 305	University Choir	
MUSC 305A	University Choir: Concert	
MUSC 353	Chamber Music: Large Jazz Ensemble 1	
MUSC 353A	Chamber Music: Large Jazz Ensemble 2	
Chamber Music (must be performed on a keyboard instrument.) *		6
Complete 4 semesters as an accompanist and 2 semesters from the following:		
MUSC 342	Chamber Music: Piano-4 Hand	
MUSC 343	Chamber Music: Strings	
MUSC 344	Chamber Music: Woodwind	
MUSC 346	Chamber Music: Mixed Ensemble	
MUSC 348	Chamber Music: New Music	
MUSC 349	Chamber Music: Other	
MUSC 353B	Chamber Music: Jazz Small Group	
MUSC 353C	Chamber Music: Jazz Small Group 2	
MUSC 353E	Chamber Music: Jazz and Ethnic	
MUSC 353G	Chamber Music: Jazz Vocal Ensemble	
MUSC 353H	Chamber Music: Jazz Other	
MUSC 357	Chamber Music: Brazilian	
Music Theory Electives, selected from the following:		5
MUSC 265	Instrumentation	
MUSC 266	Orchestration and Band Arranging	
MUSC 311	Introduction to Jazz Improvisation	
MUSC 313	Advanced Jazz Improvisation	
MUSC 360	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 480	Arranging for Small Jazz Ensemble	

MUSC 481	Arranging for Large Jazz Ensemble	
Music History Elective, selected from the following:		3
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	
Total Hours		32

* Credits may vary. Refer to the School of Music Requirements (p. 570) for policies related to fulfilling the Major Ensemble requirement.

ADDITIONAL GRADUATION REQUIREMENTS:

- Coach and accompany under supervision, two full voice recitals, one string recital, and one recital of another instrument (clarinet, flute, oboe, horn, etc.).
- Coach, prepare musically, and accompany in performance two scenes from standard-repertory operas in their original languages (scenes should involve a minimum of two people and have some dramatic development).

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 123B Applied Music		4 MUSC 123B Applied Music	4
MUSC 161		2 MUSC 163	2
MUSC 162		2 MUSC 164	2
MUSC 191		2 MUSC 189	0
ENGL 101 (GEF 1)		3 Select one of the following: <small>prerequisite to MUSC 270 or MUSC 271</small>	3
GEF		3 MUSC 111 MUSC 113 MUSC 114 MUSC 115 MUSC 116 MUSC 118 GEF	3
		17	15

Second Year

Fall	Hours	Spring	Hours
MUSC 223B Applied Music		4 MUSC 223B Applied Music	4
MUSC 261		2 MUSC 263	2
MUSC 262		2 MUSC 264	2
MUSC 270 (GEF 8)		3 MUSC 271 (GEF 6)	3
MUSC 189		0 MUSC 189	0
MUSC Chamber Music		1 MUSC Chamber Music	1
ENGL 102 (GEF 1)		3 GEF	3
		15	15

Third Year

Fall	Hours	Spring	Hours
MUSC 323B Applied Music		4 MUSC 323B Applied Music	4
MUSC 269A		3 MUSC 269B	3
MUSC 189		0 MUSC 189	0
MUSC Chamber Music		1 MUSC Chamber Music	1
MUSC 432		2 MUSC 433	2
GEF 2		4 MUSC Theory Electives	3

GEF		3 GEF	3
		17	16
Fourth Year			
Fall	Hours	Spring	Hours
MUSC 423B Applied Music		4 MUSC 423B Applied Music	4
MUSC Chamber Music		1 MUSC Chamber Music	1
MUSC 200		2 MUSC History Electives	3
MUSC Theory Electives		2 MUSC 304	1
MUSC 304		1 MUSC 435	2
MUSC 434		2 MUSC 488	2
		GEF	3
		12	16

Total credit hours: 123

JAZZ AREA OF EMPHASIS REQUIREMENTS

MUSC 311	Introduction to Jazz Improvisation	2
MUSC 313	Advanced Jazz Improvisation	2
MUSC 468	Jazz Harmony	2
MUSC 475	History of Jazz	3
MUSC 480	Arranging for Small Jazz Ensemble	2
MUSC 481	Arranging for Large Jazz Ensemble	2
Select 8 hours from the following:		8
Major Ensemble, selected from the following: *		
MUSC 300	Band: Wind Symphony	
MUSC 300A	Band: Symphonic	
MUSC 300B	Band: Marching	
MUSC 302	University Choral Union	
MUSC 303	Orchestra	
MUSC 305	University Choir	
MUSC 305A	University Choir: Concert	
MUSC 353	Chamber Music: Large Jazz Ensemble 1	
MUSC 353A	Chamber Music: Large Jazz Ensemble 2	
Chamber Music, selected from the following: *		
MUSC 340	Chamber Music: Brass	
MUSC 341	Chamber Music: Guitar	
MUSC 342	Chamber Music: Piano-4 Hand	
MUSC 343	Chamber Music: Strings	
MUSC 344	Chamber Music: Woodwind	
MUSC 345	Chamber Music: Vocal	
MUSC 346	Chamber Music: Mixed Ensemble	
MUSC 347	Chamber Music: Mountaineer Singers	
MUSC 348	Chamber Music: New Music	
MUSC 349	Chamber Music: Other	
MUSC 351	Chamber Music: Percussion 1	
MUSC 352	Chamber Music: Percussion 2	
MUSC 353B	Chamber Music: Jazz Small Group	
MUSC 353C	Chamber Music: Jazz Small Group 2	
MUSC 353E	Chamber Music: Jazz and Ethnic	
MUSC 353G	Chamber Music: Jazz Vocal Ensemble	
MUSC 353H	Chamber Music: Jazz Other	
MUSC 354	Chamber Music: Gamelan	

MUSC 355	Chamber Music: Steel Band 1	
MUSC 356	Chamber Music: African	
MUSC 357	Chamber Music: Brazilian	
MUSC 358	Chamber Music: Ethnic	
MUSC 359	Chamber Music: Taiko	
Music Electives (in any area)		8
Proficiency Level - Applied Jazz		
Total Hours		29

* Credits may vary. Refer to the School of Music Requirements (p. 570) for policies related to fulfilling the Major Ensemble requirement.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 123B Applied Music		4 MUSC 123B Applied Music	4
MUSC 161		2 MUSC 163	2
MUSC 162		2 MUSC 164	2
MUSC 191		2 MUSC 189	0
ENGL 101 (GEF 1)		3 Select one of the following: prerequisite to MUSC 270 or MUSC 271	3
GEF		3 MUSC 111	
		MUSC 113	
		MUSC 114	
		MUSC 115	
		MUSC 116	
		MUSC 118	
		GEF	3
		MUSC Elective	1
		17	16

Second Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 223B Applied Music		4 MUSC 223B Applied Music	4
MUSC 261		2 MUSC 263	2
MUSC 262		2 MUSC 264	2
MUSC 270 (GEF 8)		3 MUSC 271 (GEF 6)	3
MUSC 189		0 MUSC 189	0
ENGL 102 (GEF 1)		3 GEF	3
		15	15

Third Year

Fall	Hours	Spring	Hours
MUSC Chamber Music		1 MUSC Chamber Music	1
MUSC 323B Applied Music		4 MUSC 323B Applied Music	4
MUSC 189		0 MUSC 189	0
MUSC 311		2 MUSC 313	2
MUSC Elective		2 GEF	3
GEF 2		4 GEF	3
GEF		3 MUSC Elective	2
		16	15

Fourth Year

Fall	Hours	Spring	Hours
MUSC Chamber Music		1 MUSC Chamber Music	1

MUSC 423B Applied Music	4 MUSC 423B Applied Music	4
MUSC 200	2 MUSC 475	3
MUSC 468	2 MUSC 481	2
MUSC 480	2 MUSC 488	2
MUSC Elective	3 Elective	2
	14	14

Total credit hours: 122

PEDAGOGY AREA OF EMPHASIS REQUIREMENTS

2 Semesters of Major Ensemble *		2
MUSC 300	Band: Wind Symphony	
MUSC 300A	Band: Symphonic	
MUSC 300B	Band: Marching	
MUSC 302	University Choral Union	
MUSC 303	Orchestra	
MUSC 305	University Choir	
MUSC 305A	University Choir: Concert	
MUSC 353	Chamber Music: Large Jazz Ensemble 1	
MUSC 353A	Chamber Music: Large Jazz Ensemble 2	
6 Semesters of Chamber Music, at least 2 semesters performed on a keyboard instrument. Select from the following:		6
MUSC 342	Chamber Music: Piano-4 Hand	
MUSC 343	Chamber Music: Strings	
MUSC 344	Chamber Music: Woodwind	
MUSC 346	Chamber Music: Mixed Ensemble	
MUSC 348	Chamber Music: New Music	
MUSC 349	Chamber Music: Other	
MUSC 353B	Chamber Music: Jazz Small Group	
MUSC 353C	Chamber Music: Jazz Small Group 2	
MUSC 353E	Chamber Music: Jazz and Ethnic	
MUSC 353G	Chamber Music: Jazz Vocal Ensemble	
MUSC 353H	Chamber Music: Jazz Other	
MUSC 357	Chamber Music: Brazilian	
MUSC 430	Piano Class Methods and Materials	3
MUSC 431	Survey of Keyboard Technique	3
MUSC 432 & MUSC 433	Methods and Pedagogy and Methods and Pedagogy	4
MUSC 434 & MUSC 435A	Repertoire and Repertoire: Piano	4
MUSC 492	Directed Study	2
Music Theory Electives, selected from the following:		5
MUSC 265	Instrumentation	
MUSC 266	Orchestration and Band Arranging	
MUSC 311	Introduction to Jazz Improvisation	
MUSC 313	Advanced Jazz Improvisation	
MUSC 360	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 480	Arranging for Small Jazz Ensemble	
MUSC 481	Arranging for Large Jazz Ensemble	
Music History Elective, selected from the following:		3
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	
Total Hours		32

* Credits may vary. Refer to the School of Music Requirements (p. 570) for policies related to fulfilling the Major and Chamber Ensemble requirements.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 123B Applied Music		4 MUSC 123B Applied Music	4
MUSC 161		2 MUSC 163	2
MUSC 162		2 MUSC 164	2
MUSC 191		2 MUSC 189	0
ENGL 101 (GEF 1)		3 Select one of the following: prerequisite to MUSC 270 or MUSC 271	3
GEF		3 MUSC 111 MUSC 113 MUSC 114 MUSC 115 MUSC 116 MUSC 118	
		GEF	3
		17	15

Second Year

Fall	Hours	Spring	Hours
MUSC 223B Applied Music		4 MUSC 223B Applied Music	4
MUSC 261		2 MUSC 263	2
MUSC 262		2 MUSC 264	2
MUSC 270 (GEF 8)		3 MUSC 271 (GEF 6)	3
MUSC 189		0 MUSC 189	0
MUSC Chamber Music		1 MUSC Chamber Music	1
ENGL 102 (GEF 1)		3 GEF	3
		15	15

Third Year

Fall	Hours	Spring	Hours
MUSC 323B Applied Music		4 MUSC 323B Applied Music	4
MUSC 189		0 MUSC 189	0
MUSC Chamber Music		1 MUSC Chamber Music	1
MUSC 432		2 MUSC 433	2
GEF 2		4 MUSC History Electives	3
GEF		3 GEF	3
		GEF	3
		14	16

Fourth Year

Fall	Hours	Spring	Hours
MUSC 423B Applied Music		4 MUSC 423B Applied Music	4
MUSC Chamber Music		1 MUSC Chamber Music	1
MUSC 200		2 MUSC Theory Electives	2
MUSC Theory Electives		3 MUSC 431	3
MUSC 430		3 MUSC 435A	2
MUSC 434		2 MUSC 488	2
		MUSC 492	2
		15	16

Total credit hours: 123

TRADITIONAL AREA OF EMPHASIS REQUIREMENTS

MUSC 432 & MUSC 433	Methods and Pedagogy and Methods and Pedagogy		4
MUSC 434 & MUSC 435A	Repertoire and Repertoire: Piano		4
4 Semesters of Major Ensemble, selected from the following: *			6
MUSC 300	Band: Wind Symphony		
MUSC 300A	Band: Symphonic		
MUSC 300B	Band: Marching		
MUSC 302	University Choral Union		
MUSC 303	Orchestra		
MUSC 305	University Choir		
MUSC 305A	University Choir: Concert		
MUSC 353	Chamber Music: Large Jazz Ensemble 1		
MUSC 353A	Chamber Music: Large Jazz Ensemble 2 *		
4 Semesters of Chamber Music - must be performed on a keyboard instrument. Selected from the following: *			7
MUSC 342	Chamber Music: Piano-4 Hand		
MUSC 343	Chamber Music: Strings		
MUSC 344	Chamber Music: Woodwind		
MUSC 346	Chamber Music: Mixed Ensemble		
MUSC 348	Chamber Music: New Music		
MUSC 349	Chamber Music: Other		
MUSC 353B	Chamber Music: Jazz Small Group		
MUSC 353C	Chamber Music: Jazz Small Group 2		
MUSC 353E	Chamber Music: Jazz and Ethnic		
MUSC 353G	Chamber Music: Jazz Vocal Ensemble		
MUSC 353H	Chamber Music: Jazz Other		
MUSC 357	Chamber Music: Brazilian		
Electives			
MUSC History or Theory Electives, selected from the following:			8
Music Theory:			
MUSC 265	Instrumentation		
MUSC 266	Orchestration and Band Arranging		
MUSC 311	Introduction to Jazz Improvisation		
MUSC 313	Advanced Jazz Improvisation		
MUSC 360	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 480	Arranging for Small Jazz Ensemble	
MUSC 481	Arranging for Large Jazz Ensemble	
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	
Music Electives (from any area)		6
Total Hours		35

* Credits may vary. Refer to the School of Music Requirements (p. 570) for policies regarding fulfilling the Major and Chamber Ensemble requirements.

** Students whose major performance medium is piano: traditional have flexibility fulfilling the major ensemble and chamber music requirements: 8 total credits are needed (2-4 major ensemble and 4-6 chamber music).

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		2 MUSC Major Ensemble	2
MUSC 123B Applied Music		4 MUSC 123B Applied Music	4
MUSC 161		2 MUSC 163	2
MUSC 162		2 MUSC 164	2
MUSC 191		2 MUSC 189	0
ENGL 101 (GEF 1)		3 Select one of the following: ^{prerequisite to MUSC 270 or MUSC 271}	3
GEF		3 MUSC 111	
		MUSC 113	
		MUSC 114	
		MUSC 115	
		MUSC 116	
		MUSC 118	
		MUSC Elective	1
		GEF	3
			18
			17

Second Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 223B Applied Music		4 MUSC 223B Applied Music	4
MUSC 261		2 MUSC 263	2
MUSC 262		2 MUSC 264	2
MUSC 270 (GEF 8)		3 MUSC 271 (GEF 6)	3
MUSC 189		0 MUSC 189	0
ENGL 102 (GEF 1)		3 GEF	3
			15
			15

Third Year

Fall	Hours	Spring	Hours
MUSC 323B Applied Music		4 MUSC 323B Applied Music	4
MUSC 189		0 MUSC 189	0
MUSC Chamber Music		2 MUSC Chamber Music	2

MUSC 432	2 MUSC 433	2
GEF 2	4 MUSC History or Theory Electives	3
GEF	3 GEF	3
<hr/>		
	15	14

Fourth Year

Fall	Hours	Spring	Hours
MUSC 423B Applied Music		4 MUSC 423B Applied Music	4
MUSC Chamber Music		1 MUSC Chamber Music	2
MUSC 200		2 MUSC History or Theory Electives	2
MUSC History or Theory Electives		3 MUSC 435A Repertoire: Piano	2
MUSC 434		2 MUSC Elective	3
GEF		3 MUSC 488	2
MUSC Elective		2	
<hr/>			
	17		15

Total credit hours: 126

Major Learning Outcomes

MUSIC PERFORMANCE: PIANO

Students who earn the Bachelor of Music in Performance: Piano will develop:

- comprehensive capabilities in the major performing medium including the ability to work independently to prepare performances at the highest possible level; knowledge of applicable solo and ensemble literature; and orientation to and experience with the fundamentals of pedagogy, and
- solo and ensemble performance abilities in a variety of formal and informal settings.

Music Performance: Voice, B.M.

Degree Offered

- Bachelor of Music

Nature of the Program

The performance curricula are especially designed for students wishing to prepare themselves as performers or as teachers of a particular instrument or voice. The increased interest of society today in the arts is creating many new opportunities for the professional musician and for the private music teacher.

Proficiency level of ten and three solo appearances on upper-level recitals are required for graduation.

Click here to view the Suggested Plan of Study (p. 626)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

A minimum GPA of 2.0 is required in all major requirements

GEF Requirements 22

MUSC 191	First-Year Seminar	2
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Foreign Language (May fulfill GEF 8) 6

Select one of the following:

FRCH 101 & FRCH 102	Elementary French 1 and Elementary French 2	
GER 101 & GER 102	Introduction to German Language and Culture 1 and Introduction to German Language and Culture 2	
ITAL 101 & ITAL 102	Elementary Italian 1 and Elementary Italian 2	

Music Core Courses

MUSC 161	Aural Theory 1	2
MUSC 162	Written Theory 1	2
MUSC 163	Aural Theory 2	2
MUSC 164	Written Theory 2	2
MUSC 189	Music Convocation (Five Semesters)	0

Select one of the following: 3

MUSC 111	Introduction to Music	
MUSC 113	American Popular Music	
MUSC 114	Music and the Immigrant Experience	
MUSC 115	Introduction to History of Jazz	
MUSC 116	Music in World Cultures	
MUSC 118	Music in Appalachia	
MUSC 261	Aural Theory 3	2
MUSC 262	Written Theory 3	2
MUSC 263	Aural Theory 4	2
MUSC 264	Written Theory 4	2
MUSC 270	History of Western Musical Traditions 1 (May fulfill GEF 8)	3
MUSC 271	History of Western Musical Traditions 2 (May fulfill GEF 6)	3

Voice

Complete the following: 16

MUSC 126	Applied Music: Voice	
MUSC 226	Applied Music: Voice	
MUSC 326	Applied Music: Voice	
MUSC 426	Applied Music: Voice	
MUSC 269A	Diction for Singers: English and Italian	3
MUSC 269B	Diction for Singers: German and French	3
Opera Practicum		4
MUSC 404	Opera Practicum (Opera Practicum)	
MUSC 432	Methods and Pedagogy	2
MUSC 433	Methods and Pedagogy	2
MUSC 434	Repertoire (Capstone)	2
MUSC 438	Operatic Styles and Repertory (Operatic Styles and Repertory)	3
Coaching		4
MUSC 478	Coaching for Singers (Coaching for Singers)	

MUSC 488	Recital	2
Music Supportive Courses		
MUSC 200	Fundamentals of Conducting	2
Select 4 semesters from the following:		4
MUSC 130	Piano Class Level 0	
MUSC 131	Piano Class Level 1/2	
MUSC 132	Piano Class Level 1	
MUSC 133	Piano Class Level 1 1/2	
MUSC History or Theory Electives, selected from the following:		
Music Theory:		5
MUSC 265	Instrumentation	
MUSC 266	Orchestration and Band Arranging	
MUSC 311	Introduction to Jazz Improvisation	
MUSC 313	Advanced Jazz Improvisation	
MUSC 360	Composition	
MUSC 362	Instrumentation and Orchestration	
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 480	Arranging for Small Jazz Ensemble	
MUSC 481	Arranging for Large Jazz Ensemble	
Music History:		3
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	
Select 8 hours from the following:		8
Major Ensemble *		
MUSC 302	University Choral Union	
MUSC 305	University Choir	
Opera Theatre Requirement		2
MUSC 304	Introduction To Opera Theatre	
Choose one of the following:		2
MUSC 236	Introduction to Recording Technology	
MUSC 410	Introduction to Music Industry	
Proficiency Level		
Proficiency Level Piano		
Total Hours		122

* Credits may vary. Refer to the School of Music Requirements (p. 570) for policies related to fulfilling the Major Ensemble and Chamber Ensemble requirements.

Proficiency Level & Additional Requirements

A student in a performance curriculum, if entering as a freshman, should achieve proficiency level six in the principal performance area at the time of audition, and must complete proficiency level ten in that area to be eligible for graduation. In addition to presentation of a senior recital, performance majors also must make three solo appearances on the major instrument in upper-level student recitals or convocations.

In addition to the required proficiency level ten in voice, a student completing this curriculum must also achieve proficiency level three in piano before graduation. Three solo upper-level recitals are required. Students can take Opera Theatre for credit only during the junior and senior years. Other policies related to this degree program can be found in the *Vocal Student Handbook*.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 126		2 MUSC 126	2
Select one of the following:		1 Select one of the following:	1
MUSC 130		MUSC 130	
MUSC 131		MUSC 131	
MUSC 132		MUSC 132	
MUSC 133		MUSC 133	
MUSC 161		2 MUSC 163	2
MUSC 162		2 MUSC 164	2
MUSC 191		2 MUSC 189	0
ENGL 101 (GEF 1)		3 Select one of the following: <small>prerequisite to MUSC 270 or MUSC 271</small>	3
		MUSC 111	
		MUSC 113	
		MUSC 114	
		MUSC 115	
		MUSC 116	
		MUSC 118	
		GEF	3
	13		14

Second Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 226		2 MUSC 226	2
Select one of the following:		1 Select one of the following:	1
MUSC 130		MUSC 130	
MUSC 131		MUSC 131	
MUSC 132		MUSC 132	
MUSC 133		MUSC 133	
MUSC 261		2 MUSC 263	2
MUSC 262		2 MUSC 264	2
MUSC 270 (GEF 8)		3 MUSC 269A	3
MUSC 189		0 MUSC 271 (GEF 6)	3
ENGL 102 (GEF 1)		3 MUSC 189	0
	14		14

Third Year

Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 189		0 MUSC 189	0
MUSC 269B		3 MUSC 304	1
MUSC 304		1 MUSC 326	2
MUSC 326		2 MUSC 404	1
MUSC 404		1 MUSC 433	2
MUSC 432		2 MUSC 478	1
MUSC 478		1 MUSC History or Theory Electives	3
GEF 2		4 GEF	3

Foreign Language (GEF 8)		3 Foreign Language (GEF 8)	3
		18	17
Fourth Year			
Fall	Hours	Spring	Hours
MUSC Major Ensemble		1 MUSC Major Ensemble	1
MUSC 404		1 MUSC 404	1
MUSC 426		2 MUSC 426	2
MUSC 200		2 MUSC 438	3
MUSC 434		2 MUSC 478	1
MUSC 478		1 MUSC 488	2
MUSC History or Theory Electives		3 MUSC 236 or 410	2
GEF		3 MUSC History or Theory Electives	2
		GEF	3
		15	17

Total credit hours: 122

Major Learning Outcomes

MUSIC PERFORMANCE: VOICE

Students who earn the Bachelor of Music in Performance: Voice will develop:

- comprehensive abilities in the major performing medium including the ability to work independently to prepare performances at the highest possible level; knowledge of applicable solo and ensemble literature; and orientation to and experience with the fundamentals of pedagogy,
- the ability to sing in foreign languages with proper diction, and
- solo and ensemble performance abilities in a variety of formal and informal settings.

Music Therapy, B.M.

Degree Offered

- Bachelor of Music

Nature of the Program

Music Therapy is the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program. Through a course of study focused on the disciplines of music, human development, and music therapy combined with the University's General Education Foundations, the BM in Music Therapy imparts essential competencies in three main areas: musical foundations, clinical foundations, and music therapy foundations.

Upon successful completion of the bachelor's degree, graduates are eligible to take the national board certification exam in order to obtain the credential MT-BC (Music Therapist Board Certified), which is required for professional practice in the United States.

Click here to view the Suggested Plan of Study (p. 629)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum Requirements

GPA of 2.75 is required each semester and cumulatively.

Minimum GPA of 2.75 is required in all MUSC and clinical foundations courses.

Minimum grade of C- is required in all MUSC and clinical foundations courses.

GEF Requirements		9
MUSC 191	First-Year Seminar	2
Applied Lessons		
Major Instrument		12
Applied Music 100 Level (MUSC 121-127)		
Applied Music 200 Level (MUSC 221-227)		
Applied Music 300 Level (MUSC 321-327)		
Class Piano (MUSC 130-132)	Piano principals must pass the Keyboard Harmonization and Sightreading Exam	3
MUSC 137	Music Therapy Class Guitar 1	1
MUSC 237	Music Therapy Class Guitar 2	1
8 Semesters of Music Ensemble (at least 6 major ensembles; 1 vocal & 1 chamber or world music required)		8
Major Ensembles		
MUSC 300	Band: Wind Symphony	
MUSC 300A	Band: Symphonic	
MUSC 300B	Band: Marching	
MUSC 302	University Choral Union	
MUSC 303	Orchestra	
MUSC 305	University Choir	
MUSC 305A	University Choir: Concert	
MUSC 353	Chamber Music: Large Jazz Ensemble 1	
MUSC 353A	Chamber Music: Large Jazz Ensemble 2	
Small/World Ensembles		
MUSC 353B	Chamber Music: Jazz Small Group	
MUSC 353C	Chamber Music: Jazz Small Group 2	
MUSC 353E	Chamber Music: Jazz and Ethnic	
MUSC 353G	Chamber Music: Jazz Vocal Ensemble	
MUSC 353H	Chamber Music: Jazz Other	
MUSC 353I	Chamber Music: Jazz Vocal Ensemble	
MUSC 354	Chamber Music: Gamelan	
MUSC 355	Chamber Music: Steel Band 1	
MUSC 356	Chamber Music: African	
MUSC 357	Chamber Music: Brazilian	
MUSC 358	Chamber Music: Ethnic	
MUSC 359	Chamber Music: Taiko	
MUSC 361	Fife and Drum Ensemble	
Music Convocation		
MUSC 189	Music Convocation (Four Semesters)	
Musical Foundations		
MUSC 113	American Popular Music <small>pre-requisite for MUSC 270 and/or MUSC 271</small>	3
or MUSC 116	Music in World Cultures	

MUSC 129	Music Technology 1: GarageBand	1
MUSC 138	Voice Class 1	2
MUSC 161	Aural Theory 1	2
MUSC 162	Written Theory 1	2
MUSC 163	Aural Theory 2	2
MUSC 164	Written Theory 2	2
MUSC 200	Fundamentals of Conducting	2
MUSC 261	Aural Theory 3	2
MUSC 262	Written Theory 3	2
MUSC 263	Aural Theory 4	2
MUSC 264	Written Theory 4	2
MUSC 270	History of Western Musical Traditions 1 (May fulfill GEF 6)	3
or MUSC 271	History of Western Musical Traditions 2	
MUSC 432	Methods and Pedagogy (voice pedagogy)	2
Music Therapy Courses		
MUSC 185	Introduction to Music Therapy	3
MUSC 205	Clinical Foundations of Music Therapy	3
MUSC 230	Music Therapy Interventions for Children	2
MUSC 231	Music Therapy Interventions for Adults	2
MUSC 330	Principles and Practices of Music Therapy	3
MUSC 331	Advanced Principles and Practices of Music Therapy	3
MUSC 444	Psychological Foundation of Music	3
MUSC 445	Evidence Based Practice in Music Therapy	3
MUSC 239	Music Therapy Practicum 1	1
MUSC 239A	Music Therapy Practicum 2	1
MUSC 339	Music Therapy Practicum 3	1
MUSC 339A	Music Therapy Practicum 4	1
MUSC 440	Music Therapy Practicum 5	2
MUSC 440A	Music Therapy Practicum 6	2
MUSC 485	Music Therapy Internship	9
Clinical Foundations		
BIOL 102	General Biology (May fulfill GEF 2)	3
BIOL 104	General Biology Laboratory	1
PALM 205	Introduction to Human Anatomy	3
PALM 206	Human Anatomy Laboratory	1
PSYC 101	Introduction to Psychology (May fulfill GEF 8)	3
PSYC 241	Introduction to Human Development (May fulfill GEF 8)	3
PSYC 281	Introduction to Abnormal Psychology (May fulfill GEF 8)	3
SOWK 147	Human Diversity (May fulfill GEF 7)	3
SPED 304	Special Education in Contemporary Society (May fulfill GEF 4)	3
STAT 111	Understanding Statistics (May fulfill GEF 3)	3
or STAT 211	Elementary Statistical Inference	
MUSC Electives		2
Total Hours		132

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
Ensemble		1 Vocal Ensemble	1
MUSC 121-127 Applied Lesson		2 MUSC 121-127 Applied Lesson	2
MUSC 129		1 MUSC 131	1

MUSC 130		1 MUSC 138		2	
MUSC 161		2 MUSC 163		2	
MUSC 162		2 MUSC 164		2	
MUSC 185		3 MUSC 189		0	
MUSC 191		2 MUSC 205		3	
ENGL 101 (GEF 1)		3 PSYC 101		3	
		17			16
Second Year					
Fall	Hours	Spring	Hours		
World Music Ensemble		1 Small Ensemble		1	
MUSC 221-227 Applied Lesson		2 MUSC 116 or 113 ^{pre-} prerequisite for MUSC 270 and/or MUSC 271		3	
MUSC 132		1 MUSC 221-227 Applied Lesson		2	
MUSC 137		1 MUSC 189		0	
MUSC 261		2 MUSC 231		2	
MUSC 262		2 MUSC 237		1	
MUSC 189		0 MUSC 239A		1	
MUSC 230		2 MUSC 263		2	
MUSC 239		1 MUSC 264		2	
ENGL 102		3 PSYC 241 (GEF 8)		3	
		15			17
Third Year					
Fall	Hours	Spring	Hours		
Ensemble		1 World Music Ensemble Elective		1	
MUSC 321-327 Applied Lesson		2 MUSC 321-327 Applied Lesson		2	
MUSC 189		0 MUSC 331		3	
MUSC 200		2 MUSC 339A		1	
MUSC 270 or 271 (GEF 6)		3 SPED 304 (GEF 4)		3	
MUSC 330		3 SOWK 147 (GEF 7)		3	
MUSC 339		1			
PSYC 281 (GEF 8)		3			
		15			13
Fourth Year					
Fall	Hours	Spring	Hours	Summer	Hours
Ensemble		1 Ensemble		1 MUSC 485	9
MUSC 440		2 MUSC 440A		2	
MUSC 432		2 MUSC 445		3	
MUSC 444		3 BIOL 102 & BIOL 104 (GEF 2)		4	
PALM 205 & PALM 206		4 STAT 111 or 211 (GEF 3)		3	
GEF 5		3 MUSC Elective		2	
		15			15
					9
Total credit hours: 132					

Major Learning Outcomes

MUSIC THERAPY

Learning outcomes for this degree are directly related to the essential competencies, experiences, and opportunities stated by the National Association of Schools of Music and the American Music Therapy Association. They include:

- Advanced keyboard skills, including the ability to play at sight, accompany, transpose, and improvise.
- Ability to sight-sing and take aural dictation.
- Skills in voice, especially as related to group singing. Ability to communicate using a basic repertory of traditional, folk, and popular songs.
- Guitar skills sufficient to accompany self and ensembles. Ability to perform a basic repertory of traditional, folk, and popular songs in several keys, with or without printed music.
- Knowledge of and performance ability on percussion and other instruments sufficient to facilitate rhythm-based musical experiences for individuals and groups.
- Conducting skills adequate to the therapist's needs in providing repertory and leadership to small and large vocal/instrumental ensembles.
- Composition and arranging skills sufficient to compose songs with simple accompaniment; and to arrange, transpose, and simplify music compositions for small vocal and non-symphonic instrumental ensembles.
- Movement skills to direct and move expressively in structured rhythmic and improvisatory movement experiences.
- Knowledge of the basic principles of normal human development, exceptionality and psychopathology, principles of therapy, and the therapeutic relationship.
- Knowledge of the basic foundations and principles of music therapy, including history and philosophy; the psychological, physiological, and sociological bases for the use of music as therapy; music therapy methods, techniques and materials with their appropriate applications to various client populations.
- Knowledge of various client populations; client assessment; treatment planning; therapy implementation and evaluation; clinical documentation (both oral and written) and termination/discharge planning.
- Knowledge of professional standards of clinical practice; professional role and ethics; interdisciplinary collaboration in designing and implementing treatment programs; supervision and administration.
- Knowledge of research methods to be able to interpret information, demonstrate basic knowledge of historical, quantitative, and qualitative research, and to apply research findings to clinical practice in music therapy.

School of Theatre and Dance

- Degrees Offered (p. 631)
- Accreditation (p. 632)
- Nature of the Program (p. 632)
- Mission Statement (p. 632)
- Performances (p. 632)
- Career Opportunities (p. 632)
- Scholarships (p. 632)

Degrees Offered

BACHELOR OF ARTS

- Dance
- Theatre

BACHELOR OF FINE ARTS

- Acting
- Musical Theatre
- Puppetry
- Theatre Design & Technology

MINORS

- Theatre
- Technical Production
- Dance

Accreditation

All theatre degree programs at West Virginia University are accredited by the National Association of Schools of Theatre (NAST).

Nature of the Program

The School of Theatre & Dance offers a competitive training program for the student who seeks artistic growth and development. The School trains students in modern, state-of-the-art facilities with an emphasis on experiential learning in either a B.A. or B.F.A. degree program. We offer intensive training by industry professionals with small classes and one-on-one mentoring.

Mission Statement

We, the faculty and staff, educate students in the diverse traditions and practices of theatre and dance. We challenge each student to engage and confront—vigorously, honestly, and innovatively—the many processes of collaborative theatre and dance. We exemplify to our students the role of creative artists to develop, to explore, and to contribute meaningfully to the world they inhabit.

Performances

The School annually produces five to seven major productions in three major performance spaces: the Gladys G. Davis Theatre, Lyell B. Clay Concert Theatre, and the Vivien Davis Michael Laboratory Theatre, all in the Creative Arts Center. The School also occasionally produces in the historic Metropolitan Theatre in downtown Morgantown. These productions provide practical experience for all theatre and dance students and serve the community audience with a balance of classic and contemporary drama, dance, opera, and musical theatre.

Career Opportunities

Graduates of the School of Theatre & Dance are employed in professional theatre, radio, television, and film. Others have chosen careers in fashion design, commercial sales, makeup, lighting design and installation, law, and positions in the public arena. Undergraduates are frequently offered graduate student positions with leading university training programs offering M.F.A. study.

Scholarships

The College of Creative Arts offers a limited number of special College-based scholarship awards for freshman and current students enrolled in its programs. College-based awards are granted on the demonstration of outstanding talent, academic achievement, and the demonstration of potential success in the Theatre & Dance program.

Information regarding both University, College of Creative Arts, and Theatre & Dance scholarships can be found at <http://ccarts.wvu.edu/academics/scholarships> (<http://ccarts.wvu.edu/academics/scholarships/>)

ADMINISTRATION

DIRECTOR

- Joshua Williamson, ETCP - M.F.A. (University of Wisconsin–Madison)
Professor of Lighting Design

FACULTY

DIRECTOR

- Joshua B. Williamson - M.F.A. (University of Wisconsin - Madison)
Professor of Lighting Design

PROFESSORS

- Robert Klingelhofer
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)
Introduction to Theatre, Acting

ASSOCIATE PROFESSORS

- 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 Sirtautas - M.F.A. (Carnegie Mellon University)
Production & Stage Management

TEACHING ASSISTANT PROFESSOR

- Irene Alby - M.F.A. (Columbia University)
Acting
- Maureen Kaddar - MFA (University of Wisconsin - Milwaukee)
Dance

PROFESSORS EMERITI

- Joann Spencer Siegrist - M.F.A.
Puppetry
- M. Kathryn Weidebusch
Dance

ASSOCIATE PROFESSORS EMERITI

- James D. Held - M.F.A. (University of Washington)
Theatre History, World Drama

Admissions

Auditions or interviews are required for admission into the B.F.A. theatre programs and the B.A. dance program. Additionally, all students must meet the University's criteria for undergraduate admission. Auditions are required for acting, musical theatre, and dance. Interviews and portfolio reviews are required for theatre design and technology and puppetry. The B.A. in theatre does not require an audition/interview but applicants must still meet undergraduate admissions requirements.

Upon entrance, students must comply with the general regulations of the University concerning degrees, satisfy all entrance and divisional requirements, and complete one of the curricula of the School of Theatre & Dance with a 2.0 (C) grade point average. Students are required to successfully complete a semesterly review with the faculty which may include an interview, scene work, audition piece, or other type of jury.

For admission to the junior year of the School of Theatre & Dance, a student must have established an overall 2.0 (C) grade point average. Transfer students must establish transfer credit from other institutions during the first semester in which they are enrolled in the School of Theatre & Dance.

Students are responsible for correctly fulfilling all requirements. Each student should review the course requirements both before and after every registration period so that errors or omissions will be detected immediately.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the School of Theatre & Dance (<https://theatre.wvu.edu/>).

Dance, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The Dance program offers a four-year undergraduate program leading to a Bachelor of Arts (B.A.) degree. Students have the opportunity to develop and hone dance technique that offers both experiential and theoretical dance education. A variety of dance genres and subjects are at the core of the degree, presenting students with the opportunity to study Ballet, Modern, Jazz, and Tap as well as World Dance, Choreography, Dance History, and Dance Criticism.

While emphasis is on technique and theory, performance and production opportunities, on and off campus, allow students to fully immerse themselves and experience the creative process that Dance has to offer.

The program works to enrich the overall dance education of the student instilling the importance and contributions that Dance has to offer and its place within our culture and society.

Performance Opportunities

The School of Theatre & Dance presents a dance concert at the end of each semester that showcases student work. Participation/casting in these recitals is by audition.

The School also presents a fully produced annual dance concert, *Dance Now!*, in the spring semester. Featuring a blend of professional and student dancers and choreographers, *Dance Now!* is the School's premier dance concert for the year.

The Dance Program also participates annually in the Morgantown Dance Festival, West Virginia Dance Festival, and the American College Dance Associations' Festival.

Students may receive credit through Dance 200/300/400 for participating in these performance opportunities.

Admission into Program

Students must meet all WVU Undergraduate Admissions entrance requirements. Prior to admission into the program, applicants must successfully pass an audition. The School of Theatre & Dance will administer auditions each semester for entrance into the program. Applicants must contact the School of Theatre & Dance at 304-293-2020 or visit the office in room 3065 in the Creative Arts Center to schedule an audition. Typically, auditions will be held in November and early spring semester in Morgantown. Additional auditions may also be scheduled. For more information about auditions, please visit our website (<https://ccarts.wvu.edu/academics/audition-and-portfolio-review-day/>).

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Dance (<https://admissions.wvu.edu/academics/majors/dance/>) major.

Click here to view the Suggested Plan of Study (p. 636)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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**DANCE STUDIES****24**

THET 191	First-Year Seminar	
PASS 319	Basic Human Anatomy	
DANC 170	Introduction to Dance (Fulfills GEF 6)	
DANC 260	Fundamentals of Choreography	
DANC 370	Dance History (Fulfills Writing and Communication Skills Requirement)	
HN&F 200	Nutrition/Activity/Health	
MUSC 111 or MUSC 112	Introduction to Music Great Composers in Performance	
THET 401	Capstone Experience (Capstone)	

PRODUCTION (one of the following):**3**

THET 103 & THET 104	Stagecraft and Stagecraft Lab	
THET 105 & THET 106	Costuming and Costuming Lab	
THET 220	Fundamentals of Lighting	
THET 221	Theatre Makeup	

DANCE TECHNIQUE (16 credits from the following):**16**

Note: The level and frequency of repeated courses shall be determined by the student's advisor and the section's instructor to ensure satisfactory progression of technique.

Fundamental Technique Courses:

DANC 100	Fundamentals of Dance Techniques	
DANC 110	Fundamentals of Ballet (may be repeated 2 times)	
DANC 130	Fundamentals of Jazz (may be repeated 2 times)	

Intermediate Technique Courses:

DANC 210	Intermediate Ballet (may be repeated 2 times)	
DANC 220	Intermediate Modern (may be repeated 3 times)	
DANC 230	Intermediate Jazz (may be repeated 3 times)	

Advanced Technique Courses:

DANC 310	Advanced Ballet (may be repeated 4 times)	
DANC 320	Advanced Modern (may be repeated 3 times)	
DANC 330	Advanced Jazz (may be repeated 3 times)	

PRACTICUM (4 credits from the following):**4**

DANC 200	Dance Practicum (may be repeated 2 times)	
DANC 300	Dance Practicum (may be repeated 2 times)	

DANC 400	Choreography Practicum	
THET 200	Production Practicum (may be repeated 2 times)	
THET 213	Stage Management Practicum	
DANC ELECTIVES		16
Non-DANC Electives		12
REQUIRED MINOR		15
WORLD LANGUAGES		12
FRCH 101	Elementary French 1 (Fulfills GEF 7)	
FRCH 102	Elementary French 2	
Additional 6 credits in any 1 additional language		
Skills Assessment		
University GEF Requirements		19
Total Hours		121

SKILLS ASSESSMENT

Each student dance major shall successfully complete a skills assessment/review at the end of each semester of their sophomore, junior, and senior years. These reviews serve to monitor and record the student's progress toward the completion of the degree. The reviews will be administered by the Director of Dance and shall include feedback from the entire dance faculty. At the discretion of the Director of Dance, students who do not successfully pass the skills assessment/review will be either put on probationary status or removed from the program.

MINOR REQUIREMENT

Students are also required to complete a minor (fifteen credit hours) for the degree. Please see the following link for a full list of minors (<http://catalog.wvu.edu/undergraduate/minors/>). Students are encouraged to meet with their academic advisors prior to declaring a minor. (Students who complete a second major or dual degree are not required to complete a minor.)

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
THET 191		2 DANC 210	2
DANC 170 (GEF 6)		3 DANC 220	2
DANC 110		2 FRCH 102	3
GEF 3		3 ENGL 101 (GEF 1)	3
MUSC 111 or 112		3 Minor course	3
FRCH 101 (GEF 7)		3 Production Course	3
		16	16

Second Year

Fall	Hours	Spring	Hours
DANC 260		3 PASS 319	4
DANC 230		2 DANC 200	1
Dance Technique course		2 World Language course	3
ENGL 102 (GEF 1)		3 DANC Elective	2
World Language course		3 GEF 2B Science	4
		Minor course	3
		13	17

Third Year

Fall	Hours	Spring	Hours
HN&F 200		3 DANC 370	3
Dance Technique courses		4 DANC 300	1
DANC Elective		3 DANC Elective	2
Minor course		3 Non-DANC Electives	6
GEF 4		3 Minor Course	3
		16	15

Fourth Year

Fall	Hours	Spring	Hours
DANC 310		2 THET 401	3
DANC 400		2 Non-DANC Elective	3
Minor Course		3 Non-DANC Elective	3
DANC Electives		4 DANC Elective	3
GEF 5		3 DANC Elective	2
		14	14

Total credit hours: 121

Major Learning Outcomes**DANCE**

Upon completion of the BA in Dance, students will be able to:

- Identify and work conceptually with the elements of dance in a variety of dance genres
- Understand the choreographic processes, aesthetic properties of style, and the ways these shape and are shaped by artistic and cultural ideas and contexts
- Appreciate a wide selection of dance repertory, the principal eras, genres, and cultural sources
- Develop and defend critical evaluations
- Demonstrate a fundamental knowledge of the body and of kinesiology as applicable to work in dance
- Show an understanding of procedures for realizing a variety of dance styles
- Perform basic through advanced dance techniques within the student's area of interest
- Exhibit knowledge and/or skills in one or more areas of dance beyond basic coursework and performance appropriate to the individual's needs and interests, and be consistent with the goals and objectives of the specific liberal arts degree program being followed
- Understand the place of dance as an art form and educational tool within a social context, globally and on the national level

Theatre**Degrees Offered**

- Bachelor of Arts
- Bachelor of Fine Arts

Minors Offered

- Theatre
- Theatre Production

Admissions

Auditions or interviews are required for admission into the B.F.A. programs. Additionally, all students must meet the University's criteria for undergraduate admission. Auditions are required for acting and musical theatre. Interviews and portfolio reviews are required for theatre design and technology and puppetry. The B.A. in theatre does not require an audition/interview but applicants must still meet undergraduate admissions requirements (<https://ccarts.wvu.edu/academics/audition-and-portfolio-review-day/>).

Upon entrance, students must comply with the general regulations of the University concerning degrees, satisfy all entrance and divisional requirements, and complete one of the curricula of the School of Theatre & Dance with a 2.0 (C) grade point average. Students are required to successfully complete a semesterly review with the faculty which may include an interview, scene work, audition piece, or other type of jury.

For admission to the junior year of the School of Theatre & Dance, a student must have established an overall 2.0 (C) grade point average. Transfer students must establish transfer credit from other institutions during the first semester in which they are enrolled in the School of Theatre & Dance.

Students are responsible for correctly fulfilling all requirements. Each student should review the course requirements both before and after every registration period so that errors or omissions will be detected immediately.

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Acting, B.F.A

Degree Offered

- Bachelor of Fine Arts

Nature of the Program

The Bachelor of Fine Arts in Acting (BFA) program in the School of Theatre & Dance is competitive with the best university acting programs in the country, both in intensity and in class time devoted to professional training. Throughout four years of study, students will progress through a well-coordinated series of core theatre studies covering theatre history, dramatic theory, text analysis, directing, stagecraft, costuming and special topics as well as their performance studies in acting, musical theatre and audition techniques.

Freshmen and sophomore students receive four to six hours of acting instruction per week. Beginning in the sophomore year, students also receive an additional four hours per week in stage movement and in voice and speech. These first two years are set against the backdrop of a rigorous and wide range of liberal arts course work.

Acting Studio Program

The junior and senior years for the BFA in Acting are known as the Studio Acting Program and continue work in movement, voice and speech, and acting with twenty hours a week dedicated to actor training. This conservatory-style training within an academic setting allows the Studio faculty to elevate and intensify the actor training with a select group of students (*see Student Assessment below*). The Studio Acting Program also includes graduate students in the Master of Fine Arts Acting degree program.

The junior year is grounded in contemporary American realism, early Modern realism and non-realistic European drama with method study primarily in Meisner Technique. The senior year is dedicated to classical work in Shakespeare and Comedic Styles (Commedia, Restoration, Comedy of Manners) as well as Acting for the Camera and Musical Theatre. Other topics of study include Suzuki, movement composition, Laban efforts, stage combat, fencing, masks, Fitzmaurice, Linklater, Roy Hart, dialects, voice-overs, performance art, improvisation, clowning and audition techniques.

The BFA Acting students along with our MFA Acting students and the BFA students in the Musical Theatre Studio are the core of the School's casting pool for five to six main stage productions as well as 10-12 workshop and second stage opportunities per year.

STUDENT ASSESSMENT

Routine assessment is vital to the continued growth and success of the Studio Acting Program. This assessment includes and occurs with daily in-class critiques, faculty reviews, end-of-semester evaluations as well as rehearsals and public performances. These types of assessment, both formal and informal, monitor the development of the BFA student's technique and process development, their artistic growth and commitment, and application of the craft and study of Acting to the other liberal arts.

Examples of student assessment and progress within the BFA in Acting include:

- Audition for entry into the program
 - Requirements for auditioning and specific dates for our Audition/Portfolio Days may be found on the College of Creative Arts website (<https://ccarts.wvu.edu/academics/audition-and-portfolio-review-day> (<https://ccarts.wvu.edu/academics/audition-and-portfolio-review-day/>)).
- Auditions for credit-bearing performance opportunities (THET 200/300/400)
 - Acting majors will participate in a number of opportunities designed to incorporate classroom and process skills into public performance.
 - At the completion of each of these productions, the students will receive an evaluation of their participation.
- End-of-sophomore year assessment for continuation in the BFA in Acting and advancement to the Studio Acting Program
 - After two years of actor training and study, there is an assessment process for students to move on to the Studio Acting Program and their junior year of study. This process allows the Studio faculty to ascertain a student's potential for professional development as an actor. This assessment includes review of a student's GPA, credit hours, an essay of professional goals, attendance, class participation as well as an audition of material and genres covered within the first two years of study.
 - Students seen as having professional potential and a good academic standing will proceed into their junior year and the Studio Acting Program.
 - Students seen within this assessment as not having professional potential or with academic issues are not invited to continue to the Studio Acting Program. These students may be advised to consider different degree programs within or outside the School of Theatre & Dance. They may also be advised to continue their studies in Theatre and Acting, improve their academic standing and re-audition for the Studio Acting program in the following year.
- End-of-semester evaluations for students in the Studio Acting Program.
 - At the end of each semester, each Studio Acting student will take part in an evaluation that consists of a discussion of the student's progress in the areas of talent, trainability, demeanor, professional discipline and potential as well as the demonstrated acquisition of the identified learning goals.

- These evaluations serve to monitor and record the student's progress toward the completion of the degree.
- The evaluations will be administered by the Area Coordinator of Performance and shall include participation and feedback from Studio Acting Program faculty.
- Written evaluation forms will be used to indicate areas of strength and weakness. The written evaluation form will be shared with each student, and a copy will be placed in the student's advising file to be used as part of the ongoing assessment of the student's progress in the Studio Acting Program.
- At the discretion of the Area Coordinator of Performance, students who do not successfully pass this evaluative review will be either put on probationary status or removed from the Studio Acting Program.

Click here to view the Suggested Plan of Study (p. 640)

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.

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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

Theatre Studies

THET 191	First-Year Seminar	2
THET 103 & THET 104	Stagecraft and Stagecraft Lab	4
THET 105 & THET 106	Costuming and Costuming Lab	4
THET 160	Theatre Fundamentals	3
THET 170	World Theatre and Drama (GEF 8)	3
THET 221	Theatre Makeup	3
THET 230	Text Analysis	3
THET 301	History of Western Theatre (GEF 8)	3
THET 302	Directing	3
THET 365	Traditions of Dramatic Literature (Fulfills Writing and Communication Skills Requirement)	3
THET 460	Contemporary Drama	3

Acting

DANC 100	Fundamentals of Dance Techniques	2
THET 143	Actor/Director Collaboration	1
THET 144	Fundamentals of Acting (GEF 6)	3
THET 240	Fundamental Vocal Techniques	2
THET 242	Fundamentals of Movement	2

THET 244	Intermediate Acting	3
THET 340	Intermediate Vocal Techniques 1	2
THET 341	Intermediate Vocal Techniques 2	2
THET 342	Stage Movement 1	2
THET 343	Stage Movement 2	2
THET 344	Acting Studio	3
THET 345	Acting Studio	3
THET 440	Advanced Vocal Techniques	2
THET 441	Advanced Vocal Techniques 2	2
THET 442	Advanced Stage Movement 1	2
THET 443	Advanced Stage Movement 2	2
THET 444	Advanced Acting Studio	3
THET 445	Advanced Acting Studio	3
Studio Scene Study		4
THET 348	Studio Scene Study 1 (Repeat twice for a total of 2 credit hours)	
THET 447	Studio Scene Study 2 (Repeat twice for a total of 2 credit hours)	
Practicum Courses		4
THET 200	Production Practicum (Repeat twice for a total of 2 credit hours)	
THET 400	Advanced Production Practicum (Repeat twice for a total of 2 credit hours)	
THET 401	Capstone Experience	3
Open Electives		9
University GEF Requirements		25
Total Hours		120

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
THET 191		2 THET 105 & THET 106	4
THET 160		3 ENGL 101 (GEF 1)	3
THET 103 & THET 104		4 THET 143 & DANC 100	3
THET 144 (GEF 6)		3 GEF 3	3
THET 170 (GEF 8)		3 GEF 4	3
		15	16

Second Year

Fall	Hours	Spring	Hours
THET 200		1 THET 200	1
THET 240 & THET 242		4 THET 244	3
THET 230		3 THET 221	3
ENGL 102 (GEF 1)		3 THET 301 (GEF 8)	3
GEF 2		4 GEF 5 Elective	3 3
		15	16

Third Year

Fall	Hours	Spring	Hours
THET 340		2 THET 341	2
THET 342		2 THET 343	2
THET 344		3 THET 345	3
THET 348		1 THET 348	1
THET 400		1 THET 365	3

GEF 7	3 THET 400	1
Elective	3 GEF 8	3
		15

Fourth Year

Fall	Hours	Spring	Hours
THET 460		3 THET 302	3
THET 401		3 THET 441	2
THET 440		2 THET 443	2
THET 442		2 THET 445	3
THET 444		3 THET 447	1
THET 447		1 Elective	3
		14	14

Total credit hours: 120

Major Learning Outcomes

ACTING

Common Body of Knowledge and Skills for B.F.A. Theatre students

Students must acquire:

Technical skills requisite for artistic self-expression in at least one major area of production (for example, acting, design/technology, playwriting, musical theatre) and those skills must be progressively developed to the highest level appropriate to the particular area of concentration.

1. An overview understanding of the major aspects, techniques, and directions in the area of concentration.
2. Fundamental, comprehensive understanding of the various elements and basic interrelated processes of creation, interpretation, performance, and production.
3. Fundamental, conceptual understanding of the expressive possibilities of theatre.
4. Knowledge and skills sufficient to work in both collaborative and individual roles in matters of theatre interpretation.
5. Growth in artistry, technical skills, collaborative competence, and knowledge of repertory through regular performance and production experiences. Students must have such experiences throughout the degree program.
6. Repertory. Students must acquire:
 - a. Familiarity with theatre literature of various historical periods, cultural sources, and modes of presentation.
 - b. Experience with specific repertories and comparative standards of production quality through performance, academic study, and attendance at productions.
7. Theoretical and Historical Studies
 - a. Students must acquire:
 - i. The ability to analyze plays perceptively and to evaluate them critically.
 - ii. An understanding of the common elements and vocabulary of theatre and of the interaction of these elements, and be able to employ this knowledge in analysis, including analyses of their productions.
 - iii. The ability to place works of theatre in historical and stylistic contexts and have some understanding of the cultural milieu in which they were created.
 - iv. The ability to develop and defend informed judgments about theatre.
 - b. Technology. Students must acquire a working knowledge of technologies and equipment applicable to their area(s) of specialization.
8. Synthesis. While synthesis is a lifetime process, by the end of undergraduate studies students should be able to work independently on a variety of professional problems by combining, as appropriate to the issue, their capabilities in performance, repertory, theory, history, and technology, as well as other fields they have studied.

Upon completion of any B.F.A. professional undergraduate degree program:

1. Students must demonstrate achievement of professional, entry-level competence in the area of specialization including significant technical mastery, the capability to produce work and solve professional problems independently, and a coherent set of artistic/intellectual goals that are evident in their work.
2. Students must demonstrate their competence by developing a body of work for evaluation in the major area of study. A senior project or presentation in the major area is required in many concentrations, and strongly recommended for all others.
3. Students must have the ability to communicate ideas, concepts, and requirements to theatre professionals and laypersons related to the practice of the major field. Such communication may involve oral, written, visual, and musical media.

Bachelor of Fine Arts in Acting

Essential Competencies, Experiences, and Opportunities:

1. Demonstrated ability to act (i.e., to project one's self believably in word and action into imaginary circumstances, evoked through improvisation or text).
2. Demonstrated ability to engage effectively in improvisations both by oneself and in an ensemble.
3. Demonstrated ability to create characters convincingly from plays drawn from different genres and styles in an ensemble relationship with other actors.
4. A developed technique for analyzing the specific tasks required in performing varied characters from written plays.
5. Understanding of the specific demands of the acting styles for major periods and genres of dramatic literature.
6. Clear, articulate, and expressive speech, normally with demonstrated ability to use appropriate tools and systems to learn and perform dialects, and the ability to perform effectively in verse plays.
7. A flexible, strong, and controlled voice with trained breath support; appropriate vocal range and freedom from vocal and postural tension in rehearsal and performance; demonstrated ability to use the voice effectively as an instrument for characterization together with the ability to project the voice effectively in theatre spaces of varying sizes and in media productions.
8. A flexible, relaxed, and controlled body trained in basic stage movement disciplines, including dance and mime; demonstrated ability to use the body effectively on stage as an instrument for characterization and to be responsive to changing time/rhythm demands and spatial relationships.
9. An overview understanding of makeup materials and techniques.
10. Demonstrated comprehension of the basic business procedures of the actor's profession, including audition procedures, résumés, agents, and so forth.
11. Solo and ensemble performance experience in a variety of formal and informal settings shall be provided throughout the degree program including the opportunity for a significant role in a major production no later than the senior year.

Musical Theatre, B.F.A

Degree Offered

- Bachelor of Fine Arts

Nature of the Program

The School of Theatre & Dance and the School of Music offer a Bachelor of Fine Arts (BFA) in Musical Theatre with the goal to train students for successful careers in musical and stage performance in the competitive entertainment industry. Over the four-year course of study, musical theatre majors will take classes in acting, voice, dance, choreography, theatre history, stage production, music theory, musical theatre literature, and other special topics.

Freshmen and sophomore students receive four to six hours of acting instruction per week as well as beginning work in music, voice and dance. In the sophomore year, students receive an additional four hours per week in stage movement and in voice and speech. These first two years of performance study coincide with a rigorous and wide-ranging liberal arts course work.

Musical Theatre Studio

The junior and senior years for the BFA in Musical Theatre are known as the Musical Theatre Studio and continue the student's work in voice, dance and acting with twenty hours a week dedicated to actor training.

This conservatory-style training within an academic setting allows the Musical Theatre Studio faculty to elevate and intensify the training with a select group of students (*see Student Assessment below*). The students in Musical Theatre Studio will also have opportunities to train with faculty within our Studio Acting Program with potential classes in Meisner training, Shakespeare, Comedic Styles and Auditioning.

The BFA students in the Musical Theatre Studio along with our MFA Acting students and the BFA students in the Studio Acting Program are the core of the School's casting pool. Students will have the opportunity to perform in one to two major musical or opera productions along with four to five other main stage offerings as well as 10-12 workshop and second stage opportunities per year.

Student Assessment

Routine assessment is vital to the continued growth and success of the BFA in Musical Theatre. This assessment includes and occurs with daily in-class critiques, faculty reviews, end-of-semester evaluations as well as rehearsals and public performances. These types of assessment, both formal and informal, monitor the development of the BFA student's technique and process development, their artistic growth and commitment, and application of the craft and study of Musical Theatre to the other liberal arts.

Examples of student assessment and progress within the BFA in Musical Theatre include:

1. Audition for entry into the program.
 - Requirements for auditioning and specific dates for our Audition/Portfolio Days may be found on the College of Creative Arts website (<https://ccarts.wvu.edu/academics/audition-and-portfolio-review-day/>).
2. Auditions for credit-bearing performance opportunities (THET 200/300/400):
 - Musical Theatre majors will participate in a number of opportunities designed to incorporate classroom and process skills into a public performance.
 - At the completion of each of these productions, the students will receive an evaluation of their participation.
3. End-of-sophomore year assessment for continuation in the BFA in Musical Theatre and advancement to the Musical Theatre Studio.
 - After two years of actor training and study, there is an assessment process for students to move on to the Musical Theatre Studio and their junior year of study. This process allows the Musical Theatre faculty to ascertain a student's potential for professional development as an actor. This assessment includes review of a student's GPA, credit hours, an essay of professional goals, attendance, class participation as well as an audition of material and genres covered within the first two years of study.
 - Students seen as having professional potential and a good academic standing will proceed into their junior year and the Musical Theatre Studio.
 - Students seen within this assessment as not having professional potential or with academic issues are not invited to continue to the Musical Theatre Studio. These students may be advised to consider different degree programs within or outside the School of Theatre & Dance. They may also be advised to continue their studies in Theatre and Acting, improve their academic standing and re-audition for the Musical Theatre Studio in the following year.
4. End-of-semester jury reviews for continuation in the program:
 - At the end of each semester, each Musical Theatre Studio student will take part in an evaluation that consists of a discussion of the student's progress in the areas of talent, trainability, demeanor, professional discipline and potential as well as the demonstrated acquisition of the identified learning goals.
 - These evaluations serve to monitor and record the student's progress toward the completion of the degree.
 - The reviews will be administered by the Area Coordinator for Performance and shall include participation and feedback from theatre, music, and dance faculty.
 - Evaluation of the students in the Musical Theatre Studio include voice juries (a requirement in the curriculum for Voice) and consultation with the Dance faculty on student proficiency.
 - Written evaluations will be used to indicate areas of strength and weakness. The written evaluation will be shared with each student, and a copy will be placed in the student's advising file to be used as part of the on-going assessment of the student's progress in the program.
5. At the discretion of the Area Coordinator for Performance, students who do not successfully pass the evaluation will be either put on probationary status or removed from the program.

Admissions

Prior to admission into the program, applicants must successfully pass an audition to assess their talent level and potential for success in the major.

- The School of Theatre & Dance in conjunction with the School of Music will administer auditions each semester for entrance into the program.
- Applicants must schedule their audition directly with the School of Theatre & Dance. Typically, auditions will be held in November and early spring semester in the Creative Arts Center. Additional auditions may also be scheduled.
- Audition information can be found on the College's website (<https://ccarts.wvu.edu/academics/audition-and-portfolio-review-day/>).

Prior to beginning their course of study, all musical theatre students will be assessed to determine their proficiency in the area of piano and music theory.

- Students who do not score a "Level 1" or higher on a juried piano exam will be required to complete remedial piano studies in addition to the stated coursework in the curriculum.
- Students who do not achieve a minimum passing score on a basic music theory exam will be required to complete and pass a remedial music theory course in addition to the stated coursework in the curriculum.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Fine Arts in Musical Theatre (<https://admissions.wvu.edu/academics/majors/musical-theatre/>) major.

Click here to view the Suggested Plan of Study (p. 645)

Bachelor of Fine Arts in Musical Theatre

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

THET 191	First-Year Seminar	2
History/Literature Courses		
THET 160	Theatre Fundamentals	3
THET 301	History of Western Theatre (Fulfills GEF 8)	3
THET 365	Traditions of Dramatic Literature (Fulfills Writing and Communication Skills Requirement)	3
MUSC 120	History of Musical Theatre (Fulfills GEF 8)	3
Production		
THET 221	Theatre Makeup	7
Select 1 of the following pairs:		
THET 103 & THET 104	Stagecraft and Stagecraft Lab	
THET 105 & THET 106	Costuming and Costuming Lab	
Theatre Performance		
THET 144	Fundamentals of Acting (Fulfills GEF 6)	3
THET 240	Fundamental Vocal Techniques	2
THET 242	Fundamentals of Movement	2
THET 244	Intermediate Acting	3
THET 348	Studio Scene Study 1 (Repeated twice for a total of 2 credits)	1

THET 348	Studio Scene Study 1	1
THET 447	Studio Scene Study 2 (Repeated twice for a total of 2 credits)	1
THET 447	Studio Scene Study 2	1
Studio Courses		
THET 355	Musical Theatre Studio (Repeated twice for a total of 6 credits)	3
THET 355	Musical Theatre Studio	3
THET 455	Advanced Musical Theatre Studio	3
THET 455	Advanced Musical Theatre Studio (Repeated twice for a total of 6 credits)	3
Dance		
10		
DANC 110	Fundamentals of Ballet *	
or DANC 210	Intermediate Ballet	
DANC 130	Fundamentals of Jazz *	
or DANC 230	Intermediate Jazz	
DANC 140	Fundamentals of Tap *	
or DANC 240	Intermediate Tap	
DANC 255	Dance Styles for Musical Theatre (Repeated twice for 1 hour each)	
Select one of the following:		
DANC 210	Intermediate Ballet *	
or DANC 310	Advanced Ballet	
DANC 220	Intermediate Modern *	
or DANC 320	Advanced Modern	
DANC 230	Intermediate Jazz *	
or DANC 330	Advanced Jazz	
DANC 240	Intermediate Tap *	
Music Performance		
18		
MUSC 139	Voice Class 2 (Repeated twice for 1 hour each)	
MUSC 166	Theory for Music Theatre 1	
MUSC 167	Theory for Music Theatre 2	
MUSC 226	Applied Music: Voice (Repeated twice for 2 hours each)	
MUSC 326	Applied Music: Voice (Repeated twice for 2 hours each)	
MUSC 426	Applied Music: Voice (Repeated twice for 2 hours each)	
Practicum		
4		
THET 200	Production Practicum	
THET 400	Advanced Production Practicum (Repeated twice for a total of 2 credits)	
Capstone		
THET 401	Capstone Experience	3
or THET 450	The Complete Performer	
Electives		
14		
University Requirements		
GEF Requirements		
25		
Total Hours		
121		

* Courses listed as the secondary option are by permission only.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
THET 191		2 THET 144 (GEF 6)	3
MUSC 166		2 MUSC 139	1
MUSC 139		1 MUSC 167	2
THET 160		3 ENGL 101 (GEF 1)	3

THET 103 & THET 104		4 DANC 130		2
DANC 110		2 GEF 3		3
		14		14
Second Year				
Fall	Hours	Spring		Hours
MUSC 226		2 THET 221		3
THET 200		1 THET 240		2
THET 242		2 THET 301 (GEF 8)		3
THET 244		3 MUSC 120 (GEF 8)		3
DANC 140		2 MUSC 226		2
ENGL 102 (GEF 1)		3 GEF 5		3
GEF 4		3		
		16		16
Third Year				
Fall	Hours	Spring		Hours
THET 355		3 THET 400		1
THET 348		1 THET 355		3
MUSC 326		2 THET 348		1
DANC 255		1 MUSC 326		2
THET 365		3 DANC 210, 220, 230, or 240		2
GEF 2B Science		4 Elective		6
GEF 7		3		
		17		15
Fourth Year				
Fall	Hours	Spring		Hours
THET 455		3 MUSC 426		2
THET 447		1 THET 455		3
DANC 255		1 THET 447		1
THET 400		1 THET 401 or 450		3
MUSC 426		2 Electives		6
GEF 8		3		
Elective		3		
		14		15

Total credit hours: 121

Major Learning Outcomes

MUSICAL THEATRE

Common Body of Knowledge and Skills for B.F.A. Theatre students

Students must acquire:

Technical skills requisite for artistic self-expression in at least one major area of production (for example, acting, design/technology, playwriting, musical theatre) and those skills must be progressively developed to the highest level appropriate to the particular area of concentration.

1. An overview understanding of the major aspects, techniques, and directions in the area of concentration.
2. Fundamental, comprehensive understanding of the various elements and basic interrelated processes of creation, interpretation, performance, and production.
3. Fundamental, conceptual understanding of the expressive possibilities of theatre.
4. Knowledge and skills sufficient to work in both collaborative and individual roles in matters of theatre interpretation.

5. Growth in artistry, technical skills, collaborative competence, and knowledge of repertory through regular performance and production experiences. Students must have such experiences throughout the degree program.
6. Repertory. Students must acquire:
 - a. Familiarity with theatre literature of various historical periods, cultural sources, and modes of presentation.
 - b. Experience with specific repertories and comparative standards of production quality through performance, academic study, and attendance at productions.
7. Theoretical and Historical Studies
 - a. Students must acquire:
 - i. The ability to analyze plays perceptively and to evaluate them critically.
 - ii. An understanding of the common elements and vocabulary of theatre and of the interaction of these elements, and be able to employ this knowledge in analysis, including analyses of their productions.
 - iii. The ability to place works of theatre in historical and stylistic contexts and have some understanding of the cultural milieu in which they were created.
 - iv. The ability to develop and defend informed judgments about theatre.
 - b. Technology. Students must acquire a working knowledge of technologies and equipment applicable to their area(s) of specialization.
8. Synthesis. While synthesis is a lifetime process, by the end of undergraduate studies students should be able to work independently on a variety of professional problems by combining, as appropriate to the issue, their capabilities in performance, repertory, theory, history, and technology, as well as other fields they have studied.

Upon completion of any B.F.A. professional undergraduate degree program:

1. Students must demonstrate achievement of professional, entry-level competence in the area of specialization including significant technical mastery, the capability to produce work and solve professional problems independently, and a coherent set of artistic/intellectual goals that are evident in their work.
2. Students must demonstrate their competence by developing a body of work for evaluation in the major area of study. A senior project or presentation in the major area is required in many concentrations, and strongly recommended for all others.
3. Students must have the ability to communicate ideas, concepts, and requirements to theatre professionals and laypersons related to the practice of the major field. Such communication may involve oral, written, visual, and musical media.

Bachelor of Fine Arts in Musical Theatre

1. Essential Competencies, Experiences, and Opportunities (in addition to those stated for all B.F.A. degree programs above)
 - a. Achievement of the highest possible level of performance as an actor-singer. Studies in acting shall continue throughout the entire degree program.
 - b. Thorough development of skills in acting and skills in dance as appropriate to musical theatre.
 - c. Thorough development in basic musical skills including voice performance, musicianship, and music theory. Studies in voice should continue throughout the degree program.
 - d. Opportunities to develop a high level of skill in sight-singing.
 - e. Opportunities for performance in workshops and full productions of musical theatre in a variety of formal and informal settings. Performance of a significant role in at least one full production during advanced study is regarded as an essential experience.
 - f. Opportunities for developing repertory and techniques for auditions.

Puppetry, B.F.A

Degree Offered

- Bachelor of Fine Arts

Nature of the Program

This B.F.A. course work includes intensive study in children's theatre, the practice of puppetry as a theatrical art form, and educational and creative dramatic activity as methods of learning and self-development for children. In addition to a broad-based curriculum in theatre studies, students work under the direction of a faculty member to operate a complete puppetry theatre with comprehensive study in a variety of construction, manipulation, historical study, and performance techniques. The School's Puppet Mobile tours the region while children's theatre productions provide hands-on experience and performance opportunities.

Puppetry graduates work for the following prestigious companies: Walt Disney, Grey Seal Puppet Company, Little Who Productions, Puppet Pizzazz, Houston Children's Festival, Theatre West Virginia, The Pittsburgh Children's Museum, Holden Puppets, Kids on the Block, and Nashville Sesame Street Live Touring.

Click here to view the Suggested Plan of Study (p. 649)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Theatre Studies

THET 191	First-Year Seminar	2
THET 160	Theatre Fundamentals	3
THET 170	World Theatre and Drama (GEF 8)	3
THET 230	Text Analysis	3
THET 301	History of Western Theatre (GEF 8)	3
THET 302	Directing	3
THET 365	Traditions of Dramatic Literature (Fulfills Writing and Communication Skills Requirement)	3
THET 404	Playwriting	3
THET 460	Contemporary Drama	3

Design & Technical

THET 103	Stagecraft	3
THET 104	Stagecraft Lab	1

THET 105	Costuming	3
THET 106	Costuming Lab	1
THET 113	Stage Management Principles	1
THET 220	Fundamentals of Lighting	3
THET 221	Theatre Makeup	3
THET 225	Introduction to Stage Design 1	3
THET 226	Introduction to Stage Design 2	3
THET 321	Stage Properties	3
THET 422	Advanced Stage Makeup	3
THET 423	Costume Crafts	3
Puppetry and Performance		
THET 144	Fundamentals of Acting (GEF 6)	3
THET 240	Fundamental Vocal Techniques	2
THET 242	Fundamentals of Movement	2
THET 375	Puppet Construction	3
THET 461	Creative Dramatics	3
THET 462	Puppetry	3
THET 464	Children's Theatre	3
Practicum		
THET 200	Production Practicum (Repeat two times for 2 credit hours total)	
THET 400	Advanced Production Practicum (Repeat three times for 3 credit hours total)	
Capstone		
THET 401	Capstone Experience	3
Open Electives		12
University GEF Requirements		25
Total Hours		120

* Actual number of credits will be determined by the number and level of the elected GEF courses.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
THET 191		2 THET 144 (GEF 6)	3
THET 103 & THET 104		4 THET 105 & THET 106	4
THET 160		3 ENGL 101 (GEF 1)	3
THET 113		1 THET 220	3
THET 170 (GEF 8)		3 GEF 4	3
GEF 3		3	
		16	16

Second Year

Fall	Hours	Spring	Hours
THET 200		1 THET 200	1
THET 240		2 THET 242	2
THET 225		3 THET 226	3
THET 230		3 THET 221	3
ENGL 102 (GEF 1)		3 THET 301 (GEF 8)	3
GEF 2		4 GEF 5	3
		16	15

Third Year

Fall	Hours	Spring	Hours
THET 302		3 THET 375	3

THET 365		3 THET 462	3
THET 461		3 THET 404	3
THET 400		1 THET 400	1
Elective		3 Elective	3
		GEF 7	3
		13	16
Fourth Year			
Fall	Hours	Spring	Hours
THET 400		1 THET 321	3
THET 423		3 THET 401	3
THET 460		3 THET 464	3
Electives		6 THET 422	3
		GEF 8	3
		13	15

Total credit hours: 120

Major Learning Outcomes

PUPPETRY

Common Body of Knowledge and Skills for B.F.A. Theatre students

Students must acquire:

Technical skills requisite for artistic self-expression in at least one major area of production (for example, acting, design/technology, playwriting, musical theatre) and those skills must be progressively developed to the highest level appropriate to the particular area of concentration.

1. An overview understanding of the major aspects, techniques, and directions in the area of concentration.
2. Fundamental, comprehensive understanding of the various elements and basic interrelated processes of creation, interpretation, performance, and production.
3. Fundamental, conceptual understanding of the expressive possibilities of theatre.
4. Knowledge and skills sufficient to work in both collaborative and individual roles in matters of theatre interpretation.
5. Growth in artistry, technical skills, collaborative competence, and knowledge of repertory through regular performance and production experiences. Students must have such experiences throughout the degree program.
6. Repertory. Students must acquire:
 - a. Familiarity with theatre literature of various historical periods, cultural sources, and modes of presentation.
 - b. Experience with specific repertories and comparative standards of production quality through performance, academic study, and attendance at productions.
7. Theoretical and Historical Studies
 - a. Students must acquire:
 - i. The ability to analyze plays perceptively and to evaluate them critically.
 - ii. An understanding of the common elements and vocabulary of theatre and of the interaction of these elements, and be able to employ this knowledge in analysis, including analyses of their productions.
 - iii. The ability to place works of theatre in historical and stylistic contexts and have some understanding of the cultural milieu in which they were created.
 - iv. The ability to develop and defend informed judgments about theatre.
 - b. Technology. Students must acquire a working knowledge of technologies and equipment applicable to their area(s) of specialization.

8. Synthesis. While synthesis is a lifetime process, by the end of undergraduate studies students should be able to work independently on a variety of professional problems by combining, as appropriate to the issue, their capabilities in performance, repertory, theory, history, and technology, as well as other fields they have studied.

Upon completion of any B.F.A. professional undergraduate degree program:

1. Students must demonstrate achievement of professional, entry-level competence in the area of specialization including significant technical mastery, the capability to produce work and solve professional problems independently, and a coherent set of artistic/intellectual goals that are evident in their work.
2. Students must demonstrate their competence by developing a body of work for evaluation in the major area of study. A senior project or presentation in the major area is required in many concentrations, and strongly recommended for all others.
3. Students must have the ability to communicate ideas, concepts, and requirements to theatre professionals and laypersons related to the practice of the major field. Such communication may involve oral, written, visual, and musical media.

Theatre, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The Bachelor of Arts degree offers a broad-based program of study combining a liberal arts education with a general theatre curriculum.

The B.A. meshes perfectly with minors, and especially double majors, potentially increasing interest from future graduate schools or employers. Typically, the B.A. student in Theatre is one who chooses not to specialize in any one area of the art form, but prefers instead to keep as many educational and career options open as possible. The B.A. program is also well-suited for students looking to explore multiple areas of study within the theatre discipline, such as stage management, directing, or producing.

Click here to view the Suggested Plan of Study (p. 652)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Theatre Studies:

THET 191	First-Year Seminar	2
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THET 113	Stage Management Principles	1
THET 160	Theatre Fundamentals	3
THET 230	Text Analysis	3
THET 302	Directing	3
THET 401	Capstone Experience	3
Theatre History:		
THET 170	World Theatre and Drama (Fulfills GEF 8)	3
THET 301	History of Western Theatre	3
THET 365	Traditions of Dramatic Literature (Fulfills Writing and Communication Skills Requirement)	3
THET 460	Contemporary Drama	3
Production:		
Select one of the following sequences:		4
THET 103 & THET 104	Stagecraft and Stagecraft Lab	
THET 105 & THET 106	Costuming and Costuming Lab	
Performance:		
DANC 100	Fundamentals of Dance Techniques	2
THET 144	Fundamentals of Acting (Fulfills GEF 6)	3
Select one of the following:		3
THET 461	Creative Dramatics	
THET 462	Puppetry	
Practicum:		
Select 5 credits from the following:		5
THET 200	Production Practicum (may be repeated up to two credits)	
THET 213	Stage Management Practicum	
THET 300	Practicum (may be repeated up to two credits)	
THET 400	Advanced Production Practicum (may be repeated up to three credits)	
Theatre Electives (THET)		18
Non-THET Electives		18
Foreign Language Courses (up to 2 languages)		12
University GEF Requirements		28
Total Hours		120

SUGGESTED PLAN OF STUDY BA IN THEATRE

First Year

Fall	Hours	Spring	Hours
Select one of the following:		4 THET 144 (GEF 6)	3
THET 103 & THET 104		DANC 100	2
THET 105 & THET 106		ENGL 101 (GEF 1)	3
THET 160		3 GEF 3	3
THET 113		1 GEF 5	3
THET 191		2	
THET 170 (GEF 8)		3	
GEF 4		3	
		16	14

Second Year

Fall	Hours	Spring	Hours
THET 200		1 THET 200	1
THET 230		3 THET 301	3
ENGL 102 (GEF 1)		3 World Language	3

World Language		3 THET Elective		3
GEF 2		4 GEF 7		3
Non-THET Elective		3		
		17		13
Third Year				
Fall	Hours	Spring		Hours
THET 302		3 THET 365		3
THET 400		1 THET 400		1
THET 461 or 462		3 THET Electives		6
THET Elective		3 GEF 8		3
World Language		3 Non-THET Elective		3
GEF 8		3		
		16		16
Fourth Year				
Fall	Hours	Spring		Hours
THET 460		3 THET 401		3
THET 400		1 Non-THET Electives		9
Non-THET Elective		3 THET Elective		3
World Language		3		
THET Elective		3		
		13		15

Total credit hours: 120

Major Learning Outcomes

B.A. THEATRE

ESSENTIAL CONTENT AND COMPETENCIES

General Education

1. Competencies. Specific competency expectations are determined by the institution. Normally, students graduating with liberal arts degrees have:
2. The ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency, and rhetorical force.
3. An informed acquaintance with the mathematical and experimental methods of the physical and biological sciences, and the historical and quantitative techniques needed for investigating the workings and developments of modern society.
4. An ability to address culture and history from a variety of perspectives.
5. Understanding of, and experience in thinking about, moral and ethical problems.
6. The ability to respect, understand, and evaluate work in a variety of disciplines.
7. The capacity to explain and defend views effectively and rationally.
8. Understanding of and experience in one or more art forms other than theatre.

2. Operational Guidelines. These competencies are usually developed through studies in English composition and literature; foreign languages; history, social studies, and philosophy; visual and performing arts; natural science; technology; and mathematics. Precollegiate study, regular testing and counseling, and flexibility in course requirements are elements in achieving these competencies.

Theatre Studies

1. Competencies. Students holding undergraduate liberal arts degrees must have:
 - The ability to develop and defend informed judgments about theatre.
 - An acquaintance with a wide selection of theatre repertory including the principal eras, genres, and cultural sources.
 - An understanding of playwriting and production processes, aesthetic properties of style, and the way these shape and are shaped by artistic and cultural forces.
 - The ability to think conceptually and critically about text, performance, and production.
2. Operational Guidelines. Objectives of this type are ordinarily emphasized in courses such as acting, speech, play analysis, design technology, history and literature of the theatre, and through regular practical and intimate contact with living theatre.

Performance and Theatre Electives

1. Competencies. Students holding undergraduate liberal arts degrees must have:
2. Ability in areas of performance and production or playwriting appropriate to individual needs and interests, consistent with the goals and objectives of the specific liberal arts degree program being followed.
3. An understanding of procedures and approaches for realizing a variety of theatrical styles.
4. Intermediate to advanced competence in one or more theatre specializations in creation, performance, scholarship, or teaching.

2. Operational Guidelines:

- The work in this area includes acting, design/technology, other aspects of participation in theatre productions, and studies in scholarly or pedagogical aspects of theatre.
- In addition to electives in general education, further studies in theatre, including performance, should be possible through a selection of additional courses.
- Institutions have various policies concerning the granting of credit for performance and production in liberal arts curricula, including the relegation of performance to extracurricular activity. Such policies are taken into account when curricular proportions are considered.

Theatre Design and Technology, B.F.A

Degree Offered

- Bachelor of Fine Arts

Nature of the Program

The B.F.A. in Theatre Design & Technology introduces the student to all aspects of theatre and is coupled with an extensive breadth of liberal arts requirements drawing from many other disciplines throughout the University. The program is designed for the student who intends to pursue a professional theatre career, graduate study in theatre, or who may choose to enter a related profession where design and technology skills are highly desirable.

The core curriculum in this B.F.A. program allows the student to learn all facets of theatre design and technology. Through upper level courses and elective options students can hone their skills in a specified career path such as costumes, lighting, scenery, sound, or technical direction. Throughout the course of study, students must demonstrate a talent and ability in more than one area of the art form. Training also involves active participation in the production program and the opportunity to design fully-produced mainstage productions. Emphasis on hands-on learning in the theatre and laboratories with state-of-the-art equipment is at the core of the Design & Technology Program.

In addition to completing the required coursework, students enrolled in the design and technology program must participate in a portfolio review at the end of each semester beginning with their sophomore year. Furthermore, additional mid-term assessments may be required at the discretion of the Director or the Design & Technology Program Director. Students must successfully complete these assessments to be allowed to continue in the program.

[Click here to view the Suggested Plan of Study \(p. 656\)](#)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Theatre Studies

THET 191	First-Year Seminar	2
THET 144	Fundamentals of Acting (Fulfills GEF 6)	3
or THET 102	Acting	
THET 160	Theatre Fundamentals	3
THET 170	World Theatre and Drama (Fulfills GEF 8)	3
THET 301	History of Western Theatre (Fulfills GEF 8)	3
THET 302	Directing	3
THET 327	History of Costume and Decoration 1	3
THET 328	History of Costume and Decoration 2	3
THET 365	Traditions of Dramatic Literature (Fulfills Writing and Communication Skills Requirement)	3

Design & Technology

Foundation

THET 103	Stagecraft	3
THET 104	Stagecraft Lab	1
THET 105	Costuming	3
THET 106	Costuming Lab	1
THET 113	Stage Management Principles	1
THET 220	Fundamentals of Lighting	3
THET 222	Drafting for the Stage	3
THET 225	Introduction to Stage Design 1	3
THET 226	Introduction to Stage Design 2	3
THET 315	Portfolio Development	3

Intermediate Technical

Select three from the following:		9
THET 219	Intermediate Costume Construction	
THET 221	Theatre Makeup	
THET 310	Stagecraft 2	
THET 312	Theatrical Rigging	
THET 321	Stage Properties	
THET 329	Computer Assisted Design for the Stage	
THET 330	Rendering Techniques	
THET 375	Puppet Construction	
THET 433	Model Building	

Advanced Technical

Select three of the following:		9
THET 422	Advanced Stage Makeup	
THET 423	Costume Crafts	
THET 424	Advanced Technical Production	
THET 425	Advanced Costume Construction	
THET 426	Automation	
THET 427	Lighting Technology	
THET 428	Scene Painting	
THET 429	Sound Seminar	
THET 435	Theatre Health and Safety	

Design

Select three of the following:		9
THET 322	Scene Design	
THET 323	Advanced Scene Design	
THET 324	Costume Design 1	
THET 325	Lighting Design	
THET 326	Advanced Costume Design	
THET 421	Lighting Design 2	
Practicum		
Practicum Courses		5
THET 200	Production Practicum (Repeat twice for 2 credit hours total)	
THET 400	Advanced Production Practicum (Repeat three times for 3 credits hours total)	
Capstone		
THET 401	Capstone Experience	3
Open Electives		12
University GEF Requirements		25
Total Hours		122

* Actual number of credits will be determined by the number and level of the elected GEF courses.

SUGGESTED PLAN OF STUDY DESIGN/TECHNOLOGY EMPHASIS

First Year

Fall	Hours	Spring	Hours
THET 103 & THET 104		4 THET 105 & THET 106	4
THET 160		3 ENGL 101 (GEF 1)	3
THET 113		1 GEF 3	3
THET 191		2 GEF 5	3
THET 170 (GEF 8)		3 THET 144 or 102 (GEF 6)	3
GEF 4		3	
		16	16

Second Year

Fall	Hours	Spring	Hours
THET 200		1 THET 200	1
THET 220		3 THET 226	3
THET 222		3 THET 301 (GEF 8)	3
THET 225		3 Intermediate Tech Course 2	3
ENGL 102 (GEF 1)		3 GEF 2	4
Intermediate Tech Course 1		3 Elective	3
		16	17

Third Year

Fall	Hours	Spring	Hours
THET 302		3 Select one of the following:	3
Intermediate Tech Course 3		3 THET 323	
Select one of the following:		3 THET 326	
THET 322		THET 421	
THET 324		THET 400	1
THET 325		THET 328	3
THET 327		3 Advanced Tech Course 1	3
THET 400		1 Elective	3
GEF 7		3	
		16	13

Fourth Year

Fall	Hours	Spring	Hours
THET 365		3 THET 315	3
Advanced Tech Course 2		3 Advanced Tech Course 3	3
THET 400		1 THET 401	3
Select one of the following:		3 Elective	3
THET 322		GEF 8	3
THET 323			
THET 325			
Elective		3	
		13	15

Total credit hours: 122

Major Learning Outcomes**THEATRE DESIGN AND TECHNOLOGY****Common Body of Knowledge and Skills for B.F.A. Theatre students**

Students must acquire:

Technical skills requisite for artistic self-expression in at least one major area of production (for example, acting, design/technology, playwriting, musical theatre) and those skills must be progressively developed to the highest level appropriate to the particular area of concentration.

1. An overview understanding of the major aspects, techniques, and directions in the area of concentration.
2. Fundamental, comprehensive understanding of the various elements and basic interrelated processes of creation, interpretation, performance, and production.
3. Fundamental, conceptual understanding of the expressive possibilities of theatre.
4. Knowledge and skills sufficient to work in both collaborative and individual roles in matters of theatre interpretation.
5. Growth in artistry, technical skills, collaborative competence, and knowledge of repertory through regular performance and production experiences. Students must have such experiences throughout the degree program.
6. Repertory. Students must acquire:
 - a. Familiarity with theatre literature of various historical periods, cultural sources, and modes of presentation.
 - b. Experience with specific repertories and comparative standards of production quality through performance, academic study, and attendance at productions.
7. Theoretical and Historical Studies
 - a. Students must acquire:
 - i. The ability to analyze plays perceptively and to evaluate them critically.
 - ii. An understanding of the common elements and vocabulary of theatre and of the interaction of these elements, and be able to employ this knowledge in analysis, including analyses of their productions.
 - iii. The ability to place works of theatre in historical and stylistic contexts and have some understanding of the cultural milieu in which they were created.
 - iv. The ability to develop and defend informed judgments about theatre.
 - b. Technology. Students must acquire a working knowledge of technologies and equipment applicable to their area(s) of specialization.
8. Synthesis. While synthesis is a lifetime process, by the end of undergraduate studies students should be able to work independently on a variety of professional problems by combining, as appropriate to the issue, their capabilities in performance, repertory, theory, history, and technology, as well as other fields they have studied.

Upon completion of any B.F.A. professional undergraduate degree program:

1. Students must demonstrate achievement of professional, entry-level competence in the area of specialization including significant technical mastery, the capability to produce work and solve professional problems independently, and a coherent set of artistic/intellectual goals that are evident in their work.
2. Students must demonstrate their competence by developing a body of work for evaluation in the major area of study. A senior project or presentation in the major area is required in many concentrations, and strongly recommended for all others.
3. Students must have the ability to communicate ideas, concepts, and requirements to theatre professionals and laypersons related to the practice of the major field. Such communication may involve oral, written, visual, and musical media.

Bachelor of Fine Arts in Design & Technology

Essential Competencies, Experiences, and Opportunities (in addition to those stated for all degree programs above)

1. Ability to conceptualize and realize a design aesthetic consistent with the overall artistic concepts of a production.
2. Ability to understand and articulate basic elements and principles of design theory.
3. Ability to understand and articulate basic elements and principles of composition related to line, shape, color, texture, and sound
4. Understanding of the aesthetic use of color.
5. Understanding of the aesthetic use of sound.
6. Ability to communicate design ideas and realities to other personnel involved in the production, including directors, other designers, stage managers, and actors.
7. Ability to produce and communicate design ideas with freehand drawings.
8. Ability to provide formalized, accurate production models and drawings by hand and/or through the use of current industry standard software programs.
9. Fundamental knowledge of the total design process, including the progression of raw materials through multiple design “shops” and the roles that various craftspeople play in the creation of a finished product.
10. Fundamental knowledge of décor, architecture, furniture, dress, crafts, and art as they relate to various historical periods.
11. Ability to demonstrate an understanding of basic engineering principles (electrical, mechanical, and/or structural) as they relate to chosen design specializations.
12. Knowledge of federal, state, and local health and safety codes, best practices, and industry standards as they relate to theatrical venues and production elements.
13. Preparation and presentation of a professional résumé and a portfolio of design- and technology-related work that demonstrate one’s abilities, strengths, processes, and experiences.
14. Opportunities for experience in the design/technology aspects of theatre in a variety of formal and informal settings throughout the entire degree program, including an opportunity to design and/or create the technology for at least one fully realized production that will be presented before an audience prior to graduation.

Bachelor of Multidisciplinary Studies, B.MdS.

Degree Offered

- Bachelor of Multidisciplinary Studies

Nature of the Program

The College of Creative Arts' Multidisciplinary Studies (MDS) program enables students to earn a Bachelor of Multidisciplinary Studies (B.MdS.) degree by following an individualized course of study based on their own academic interests and goals in the Arts. Combined with the University's General Education Foundations, the degree allows students to choose three different academic minors to create their own educational plan. At least two of the three minors must be from programs within the College of Creative Arts. The third minor can be from the College of Creative Arts or from one of the other minor programs available at West Virginia University. Students who decide to have all three minors from the College of Creative Arts can only have two from the same area (art, dance, music, or theatre).

Each MDS course of study culminates with a “capstone” project where MDS students demonstrate what they have learned during their time at West Virginia University. The capstone must be selected from one of the capstone opportunities offered by the College of Creative Arts where the student has completed a minor.

As a member of the College's MDS program, students are welcome to participate in the many performance, exhibition, internship and study-abroad opportunities offered by the College. Participation may require the completion of certain coursework and/or a successful audition/review process.

Scholarships and Financial Aid

The College of Creative Arts offers a limited number of special College-based scholarship awards for freshman and current students enrolled in its programs. College-based awards are granted on the demonstration of outstanding talent, academic achievement, and the demonstration of potential success in the MDS program.

Information regarding both University and College of Creative Arts Scholarships can be found at <http://ccarts.wvu.edu/academics/scholarships> (<http://ccarts.wvu.edu/academics/scholarships/>).

For more information about the College of Creative Arts MDS program, please contact:

James Froemel, Recruitment Coordinator
College of Creative Arts
West Virginia University
P.O. Box 6111
Morgantown, WV 26506-6111
Phone: (304) 293-4339
Email: ccarecruitment@mail.wvu.edu

Admission into Program

Acceptance into the College of Creative Arts' MDS program is contingent upon admission to WVU as an undergraduate student. Some minors require that the student must also complete a successful audition/review process in order to enroll and/or complete the course of study. When required, the audition/review is a preliminary assessment of a student's potential success in the program.

Students should check the requirements for each minor. Minor requirements are listed under the individual programs in this catalog.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the CCA Bachelor of Multidisciplinary Studies (<https://admissions.wvu.edu/academics/majors/multidisciplinary-studies-creative-arts/>) major.

[Click here to view the Suggested Plan of Study \(p. 660\)](#)

Program Requirements

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

BACHELOR OF MULTIDISCIPLINARY STUDIES DEGREE REQUIREMENTS

Minimum GPA of 2.0

GEF Requirements *		34
Select 1 of the following:		2
ART 191	First-Year Seminar	
MUSC 191	First-Year Seminar	
THET 191	First-Year Seminar	
Minor Requirements		
A grade of C- or better is required in all minor coursework		
Minimum GPA of 2.0 in each minor or the GPA required for the specific minor (whichever is higher)		
None of the courses required in the minors can be used to satisfy GEF requirements		
If a course fulfills a requirement in more than one minor, an additional course from one of the minor's list of recommended electives or advanced study courses must be completed.		
At least 60 credit hours of 200-400 level coursework is required		
College of Creative Arts Minor 1		18
College of Creative Arts Minor 2		18
Minor 3 (any University minor)		18
College of Creative Arts Capstone		2-3
To be chosen from a School in the College of Creative Arts where a minor is completed		
Grade of C- or higher is required		
School of Arts and Design Capstone Courses:		
ARHS 401	Senior Project-Capstone	
ART 413	Senior Projects in Painting	
ART 425	Graphic Design: Senior Project	
ART 426	Senior Projects in Sculpture	
ART 430	Senior Projects in Printmaking	
ART 440	Senior Projects in Ceramics	
ART 470	Senior Projects in Intermedia	
School of Music Capstone Courses:		
MUSC 435	Repertoire:Voice	
MUSC 467	Major Project in Theory, Composition, or Music History	
MUSC 487	Student Teaching Seminar	
MUSC 488	Recital	
MUSC 492	Directed Study	
MUSC 435A	Repertoire: Piano	
School of Theatre & Dance Capstone Courses:		
THET 401	Capstone Experience	
THET 450	The Complete Performer	
Electives (including a University Writing course) *		28
Total Hours		120

* Used to reach 120 minimum credit hours for the degree. The total credit hours for the degree may vary depending upon the requirements of the individual minors selected, as well as courses selected in the GEF.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 GEF 3	3
Select one of the following:		2 Minor 1 Course	3
ART 191		Minor 2 Course	3
MUSC 191		Minor 3 Course	3
THET 191		Elective	3

Minor 1 Course		3		
Minor 2 Course		3		
Elective		3		
		14		15
Second Year				
Fall	Hours	Spring		Hours
ENGL 102 (GEF 1)		3 GEF 5		3
GEF 4		3 GEF 2		4
Minor 1 Course		3 Minor 2 Course		3
Minor 3 Course		3 Minor 3 Course		3
Elective		3 Elective		3
		15		16
Third Year				
Fall	Hours	Spring		Hours
GEF 6		3 GEF 7		3
Minor 1 Course		3 GEF 8		3
Minor 2 Course		3 Minor 1 Course		3
Minor 3 Courses		3 Minor 2 Course		3
Elective		3 Elective		3
		15		15
Fourth Year				
Fall	Hours	Spring		Hours
GEF 8		3 GEF 8		3
Elective		3 Elective		3
Capstone Course		3 Minor 2 Course		3
Minor 1 Course		3 Minor 3 Course		3
Minor 3 Course		3 Elective		3
		15		15

Total credit hours: 120

Major Learning Outcomes

MULTIDISCIPLINARY STUDIES

The Bachelor of Multidisciplinary Studies in the Arts (BMdS) allows students to follow an individualized course of study based on their own academic interests in the Arts.

- Demonstration of knowledge and/or skills in two or more areas of study (minors) within the College beyond basic coursework and performance appropriate to the individual's needs and interests.
- The ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency, and rhetorical force.
- An informed acquaintance with the mathematical and experimental methods of the physical and biological sciences, and with the main forms of analysis of the historical and quantitative techniques needed for investigating the workings and developments of modern society.
- An ability to address culture and history from a variety of perspectives.
- Understanding of, and experience in thinking about, moral and ethical problems.
- The ability to respect, understand and evaluate work in a variety of disciplines and particularly in one or more aspects of the Arts.
- The capacity to explain and defend views effectively and rationally.
- The ability to conceive, create and practice one or more specific areas of the Arts.
- Understanding the similarities, differences and relationships among the various forms of Art.
- A demonstration of the conceptual and practical relationship between at least two areas of the Arts combined with a third area related to the student's specific academic and personal interests and goals.

Dentistry

Degrees Offered

- Bachelor of Science in Dental Hygiene
- Master of Science in Dental Hygiene

Nature of the Program

The establishment of the integrated baccalaureate degree program in dental hygiene at West Virginia University in September 1961 was a milestone in dental hygiene education. The program stands out as one of the top dental hygiene programs nationally as shown by the students' commitment to excellence. With the addition of the degree completion program in 1987 and the master of science program in 1989, the Department of Dental Hygiene provides graduates the opportunity to further their education. The integrated curriculum in dental hygiene combines the advantages of both liberal arts and the professional aspects of education. Graduates from the program are awarded a bachelor of science degree in dental hygiene, with the option to obtain a master of science degree with the completion of a minimum of one additional year.

The dental hygiene curriculum is rigorous and provides excellent preparation for the practice of dental hygiene in numerous practice settings. The curriculum requires successful completion of a total of 133-34 hours and was constructed in accordance with the standards specified for a school of dental hygiene by the American Dental Association Commission on Dental Accreditation. The program has been fully accredited by this organization since 1965.

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 125 hours of service learning and clinical care courses. 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 are required to provide direct patient care for the citizens of West Virginia at a rural site during the summer session between their junior and senior year.

The WVU 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 Dental Hygiene Excellence and Distinction (<https://dentistry.hsc.wvu.edu/students/bachelor-of-science/excellence-and-distinction/>) for more information.

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; 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 (<https://dentistry.hsc.wvu.edu/students/bachelor-of-science/career-possibilities/>). For an overview of the profession, please visit the undergraduate Dental Hygiene website (<https://dentistry.hsc.wvu.edu/students/bachelor-of-science/>).

Academic and Professional Standards

Students enrolled in the Dental Hygiene Program are held to high Academic and Professional Standards throughout their time in the Program. Please visit the Dental Hygiene Student Resources page (<https://dentistry.hsc.wvu.edu/students/bachelor-of-science/dental-hygiene-student-resources/>) for the Dental Hygiene Academic and Professional Standards, Student Rights and Responsibilities, additional policies, and guidelines.

FACULTY

CHAIR

- Amy D. Funk - MSDH (WVU)

ASSOCIATE PROFESSORS

- M. Suann Gaydos - MSDH, NCTTP (WVU)
- Ashlee Sowards - BSDH, MSDH, TTS

(WVU)

- Alcinda K. T. Shockey - DHSc, MA, BSDH, RDH, CHS-IV, CTTS, CNTA
(NOVA Southeastern University)

ASSISTANT PROFESSORS

- Lisa E. Lisauckis - BSDH, MSDH
(WVU)
- Marlana R. Thomas - RDH, MS, CDA
(Old Dominion University)

CLINICAL INSTRUCTOR

- Julie A. Teter - RDH, BS, MEd
(Frostburg State University)

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements at the Bachelor of Science in Dental Hygiene (<https://admissions.wvu.edu/academics/majors/dental-hygiene/>) page.

To apply to the program, please go to the Bachelor of Science in Dental Hygiene Apply Now (<https://dentistry.hsc.wvu.edu/apply-now/bachelor-of-science-in-dental-hygiene/>) page and follow the directions provided. You do not need to complete a separate application for WVU, but you must choose Dental Hygiene in the WVU on-line application to be considered for the Program. Additionally, all applicants, regardless of admission type, must complete the following before your application will be reviewed by the Dental Hygiene Admissions Committee. Please send the documents electronically to Ms. Lori Groover (lgroover@hsc.wvu.edu).

1. Shadowing forms (<https://dentistry.hsc.wvu.edu/media/1673/dental-hygiene-applicant-shadowing-form.pdf>) (minimum of eight hours, although more are recommended - shadowing forms must be saved and upload as one single PDF document)
2. Shadowing essay – describe what you experienced, watched, learned, etc. while shadowing a dental hygienist
3. Personal essay – one page essay outlining why you want to be a dental hygienist

The Dental Hygiene Admissions committee reviews all applications and pays particular attention to scholastic achievement in science courses as well as overall grade point average and involvement in community service activities. Physical strength with the ability to sit and stand is required, fine precision bilateral manipulative hand/motor skills, adequate visual acuity, eye/hand/foot coordination, and emotional stability are essential characteristics for individuals who wish to enter and continue in the dental hygiene program. Applicants must meet other medical qualifications as required. Reasonable accommodations will be considered for students with special needs.

Competition for admission is intense. If you are among the most qualified, you will be invited to the campus for a personal interview. The personal interview with the Dental Hygiene Admissions Committee will be conducted in a question / answer format. After the interview, if for any reason the Committee does not feel you will be an acceptable candidate in the Program, you will not be offered admission to the Program. Prior to the interview, you must confirm via email (lgroover@hsc.wvu.edu), your receipt of the email message from the Department of Dental Hygiene that you will be attending your scheduled interview session. If you do not respond within 10 working days from the aforementioned email, you will forfeit your provisional admission and will not be considered for the incoming class.

Following the interview with the Dental Hygiene Admissions Committee, students who have been offered provisional acceptance will receive an email via their MIX account from the Dental Hygiene Admissions Committee which outlines the New Student Requirements (<https://dentistry.hsc.wvu.edu/students/bachelor-of-science/new-student-requirements/>). Final acceptance to the Department of Dental Hygiene at West Virginia University is contingent on successful completion of new student requirements and of the following:

1. Successful completion of all courses currently enrolled and submit all final transcripts.
2. Complete the Criminal Background document. Scan and email this document to Ms. Lori Groover (lgroover@hsc.wvu.edu) as soon as possible to ensure the Committee will have your report prior to the interview.
3. Complete required health evaluation forms by August 1 of the year that you enter the program.
4. Attend WVU New Student Orientation on one of the dates provided by the Dental Hygiene program.
5. Attend the Dental Hygiene Orientation picnic.

If you are not offered a position in the Dental Hygiene Program, you may still be accepted into WVU.

DIRECT ADMISSION (FIRST TIME FRESHMAN ENTRY)

Applicants that will be first time freshman are considered for direct admission. As an integrated four year program, there are no prerequisite college courses required for first time freshman entry, but additional science courses on the high school level are recommended. Applications for the 2021 fall semester are available from July 1, 2020 to February 1, 2021. Direct admission is based on the above mentioned criteria plus a minimum high school grade point average of 3.7 and a composite score on ACT 24 (minimum math score of 22) or SAT EBRW and Math 1180 (minimum math score of 540).

Additionally, applicants must meet all the University admission requirements (<https://admissions.wvu.edu/how-to-apply/first-time-freshmen/admission-requirements/>). To be eligible for enrollment, the applicant must be a graduate of an accredited high school or preparatory school that is acceptable for college entrance.

If you do not meet the minimum requirements for direct admission, you will be placed in Undergraduate Studies/Pre-Dental Hygiene in the Center for Learning, Advising and Student Success (<https://advisingcenter.wvu.edu/home/>). Applicants in Undergraduate Studies still may be considered for admission into the Dental Hygiene Program (first time freshman entry) provided there are remaining openings in the class.

ADVANCED STANDING ADMISSION

Applicants may be eligible to enter the program as a spring semester freshman or an advanced standing sophomore. Admission is limited by class size and successful completion of college courses **does not guarantee** advanced standing admission. You **must contact the Department** directly to request consideration and be granted approval to apply for either spring or advanced standing sophomore admission.

Spring admission:

To be considered for Spring admission, Freshman year, applications are due by October 1st of the preceding fall semester. Admission is based on a minimum cumulative and science grade point average of 3.0 and successful completion (with a grade of C or better) of Chemistry 111 or a higher level Chemistry course and additional courses as prescribed in the first semester of the Dental Hygiene Curriculum Plan.

Advanced standing sophomore admission:

To be considered as an advanced standing sophomore, applications are due by February 1st of the preceding spring semester. Admission is based on a minimum cumulative and science grade point average of 3.0 and successful completion (with a grade of C or better) of all science courses prescribed in the first semester of the Dental Hygiene Curriculum Plan.

DEGREE COMPLETION PROGRAM

If you are a registered dental hygienist, you can be admitted directly to the Division of Dental Hygiene as a full-time or a part-time student. You **must contact the Department** directly to request consideration and be granted approval to apply for the degree completion program. **Admission is limited by class size** and successful completion of a certificate or associate's degree from an accredited dental hygiene program in the United States or Canada does not guarantee entrance into the Program. You can transfer lower-division credits (see "Suggested Dental Hygiene Curriculum"). In addition to your application, to be considered for the program, you must have successfully completed both national and clinical board exams, have a minimum of 3.0 overall and science grade point averages, and a personal essay on why you want to complete your baccalaureate degree in Dental Hygiene.

When you apply, we ask you to include complete records of previous study. An official transcript needs to be mailed to us by the registrar of your previous school. Include catalog descriptions of the courses taken. If you are currently enrolled in a certificate or associate's degree program, include your program of study. You are responsible for the submission of a complete record package. Applications can be obtained after July 1st of the year preceding application to the program. Please contact the Dental Hygiene office (Igroover@hsc.wvu.edu) for complete information about this program in dental hygiene.

Accreditation

The Bachelor of Science in Dental Hygiene program within the School of Dentistry has specialized accreditation through the Commission on Dental Accreditation of the American Dental Association. Since the beginning of the program, it has held full accreditation status.

[Click here to view the Suggested Plan of Study \(p. 666\)](#)

Bachelor of Science in Dental Hygiene

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Program Requirements

A minimum GPA of 2.5 is required

GEF Requirements 1, 6 & 7	12	
BIOL 102	General Biology	3
BIOL 104	General Biology Laboratory	1
CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 - Laboratory (GEF 2B)	4
CHEM 112 & 112L	Survey of Chemistry 2 and Survey of Chemistry 2 - Laboratory	4
COMM 104	Public Communication (GEF 5)	3
HN&F 171	Introduction to Human Nutrition (GEF 8)	3
MATH 124	Algebra with Applications (GEF 3)	3
MICB 200	Medical Microbiology	3
PALM 107	Introduction to Human Anatomy and Physiology	4
PALM 207	Human Anatomy and Physiology 2	4
PALM 309	Oral Histology	2
PALM 300	Introduction to Pathology	3
PALM 302	Oral Pathology	3
PCOL 260	Pharmacology	3
PSYC 101	Introduction to Psychology (GEF 4)	3
PSYC 241	Introduction to Human Development (GEF 8)	3
SOCA 101	Introduction to Sociology (GEF 8)	3
DTHY 191	First-Year Seminar	1
DTHY 101	Introduction to Dental Hygiene	2
DTHY 185	Oral Anatomy	2
DTHY 186	Dental Anatomy	2
DTHY 205	Theory and Practice of Prevention	2
DTHY 210	Dental Radiology	2
DTHY 211	Dental Radiology	1
DTHY 220	Dental Nursing Techniques	2
DTHY 225	Dental Hygiene Techniques	4
DTHY 226	Clinical Dental Hygiene	1
DTHY 300	Anesthesia for Dental Hygiene	1
DTHY 350	Public Health	2
DTHY 351	Dental Health Education I (Fulfills Writing and Communication Skills Requirement)	3
DTHY 360	Dental Materials	3
DTHY 361	Expanded Functions	2
DTHY 363	Periodontics 1	1
DTHY 364	Periodontics 2	2
DTHY 366	Technical Expression and Dental Literature	1
DTHY 370	Dental Hygiene Clinical Methods	2
DTHY 372	Clinical Dental Hygiene 1	2
DTHY 374	Clinical Dental Hygiene 2	3

DTHY 378	Dental Hygiene Teaching Methods	2
DTHY 402	Dental Hygiene Ethics and Practice	1
DTHY 405	Advanced Clinical Dental Hygiene 1	4
DTHY 406	Advanced Clinical Dental Hygiene 2	3
DTHY 407	Advanced Dental Hygiene Methods 2	2
DTHY 440	Senior Integration Seminar	1
DTHY 445	Applied Pharmacology	1
DTHY 450	Dental Health Education 2	2
DTHY 451	Dental Health Education 3	2
DTHY 478	Clinical Evaluation	1
DTHY 490	Teaching Practicum	2
DTHY 491	Professional Field Experience	4
DTHY 495	Independent Study	2
Community Service Requirement (Please see advisor)		
Total Hours		132

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
CHEM 111 & 111L (GEF 2B)		4 BIOL 102	3
COMM 104 (GEF 5)		3 BIOL 104	1
DTHY 191		1 CHEM 112 & 112L	4
HN&F 171 (GEF 8)		3 DTHY 101	2
MATH 124 (GEF 3)		3 ENGL 101 (GEF 1)	3
PSYC 101 (GEF 4)		3 PALM 107	4
		17	17

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
DTHY 185		2 DTHY 186		2 DTHY 226	1
DTHY 205		2 DTHY 211		1 PCOL 260 (Web)	3
DTHY 210		2 DTHY 220		2	
PALM 207		4 DTHY 225		4	
MICB 200		3 ENGL 102 (GEF 1)		3	
PSYC 241 (GEF 8)		3 SOCA 101 (GEF 8)		3	
		PALM 309		2	
		16		17	4

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
DTHY 350		2 DTHY 300		1 DTHY 491	4
DTHY 360		3 DTHY 351		3	
DTHY 363		1 DTHY 361		2	
DTHY 366		1 DTHY 364		2	
DTHY 370		2 DTHY 374		3	
DTHY 372		2 DTHY 378		2	
PALM 300		3 PALM 302		3	
GEF		3			
		17		16	4

Fourth Year

Fall	Hours	Spring	Hours
DTHY 402		1 DTHY 406	3

DTHY 405	4 DTHY 407	2
DTHY 440	1 DTHY 451	2
DTHY 445	1 DTHY 490	2
DTHY 450	2 or DTHY Elective	
DTHY 478	1 GEF	3
DTHY 495	2	
<hr/>		
	12	12

Total credit hours: 132

Degree Designation Learning Outcomes

BACHELOR OF SCIENCE IN DENTAL HYGIENE (BSDH)

Program Goals:

1. Provide a high quality program of instruction that prepares dental hygienists to:
 - Possess a heightened awareness of social and cultural diversity, ethics and professionalism.
 - Apply critical thinking to integrate current scientific principles/technology with the provision of evidenced-based, comprehensive health care.
 - Perform to the level of clinical competency those legally approved oral health services as defined by the West Virginia State Board of Dental Examiners and the WVU School of Dentistry.
 - Perform to the level of laboratory competency those legally approved oral health services (beyond the scope of the West Virginia practice act) stipulated in the practice acts of other states, districts, or territories of the United States.
 - Coordinate and administer oral health services for a variety of populations in diverse settings (public health agencies, hospitals, school systems, etc.).
 - Engage in intra and interprofessional collaborative activities with community leaders and health care professionals to manage the oral health needs of rural West Virginia.
 - Provide didactic and clinical instruction in allied dental education programs.
 - Pursue professional development through self-study, continuing education, research and advanced studies at the masters and doctoral levels.
2. Recruit, admit and retain students with the potential to succeed within the dental hygiene program.
3. Create an environment conducive to faculty promotion, retention, and satisfaction.

Program Competencies:

1. Apply the concepts of professionalism, ethics, law, and regulation to the provision and/or support of oral health care services.
2. Demonstrate an awareness of social/cultural diversity issues.
3. Apply basic, dental hygiene, and dental science concepts to the provision and/or support of oral health care services.
4. Provide the dental hygiene process of care which includes assessment, planning, implementation, and evaluation components that are both evidence-based and patient-centered.
5. Provide dental hygiene care to children, adolescents, adults, geriatrics, special needs patients, and persons with medically compromising conditions.
6. Implement evidence-based tobacco cessation strategies utilizing the 5 A's (Ask, Advise, Assess, Assist, & Arrange) for all tobacco using patients.
7. Provide dental hygiene care for all types of classifications of periodontal disease, including patients who exhibit moderate to severe periodontal disease.
8. Provide dental hygiene/dental supportive treatment that is both evidence-based and patient-centered.
9. Provide appropriate life support measures for any medical emergencies that may be encountered in dental hygiene practice.
10. Assess, plan, implement, and evaluate community-based oral health programs to promote health and prevent disease among a variety of population groups in diverse settings.
11. Demonstrate interpersonal and group communications skills to effectively interact with diverse population groups.
12. Apply biostatistical principles in the analysis of scientific literature and the design and interpretation of a student-based research project.
13. Design courses, provide didactic and clinical instruction, and implement evaluation strategies in allied dental education programs.
14. Identify career options within the dental hygiene profession.
15. Participate in activities that promote life long learning and professional growth.
16. Engage in intra and interprofessional team building activities that foster collaborative learning.

Education and Human Services

Degrees Offered

- Bachelor of Arts
 - Elementary Education
- Bachelor of Science
 - Child Development and Family Studies, with an emphasis in birth through pre-kindergarten
 - Child Development and Family Studies, with an emphasis in youth and families
 - Communication Sciences and Disorders
- Bachelor of Multidisciplinary Studies

Nature of the Programs

Students in the College of Education and Human Services (CEHS) choose undergraduate majors offered by the Communication Sciences and Disorders, the Curriculum and Instruction/Literacy Studies, and the Learning Sciences and Human Development departments or by the College. These degrees prepare students to become knowledgeable professionals in the fields of education and human services. Through diverse field and clinical placements in centers and schools, and research in faculty and college laboratories, students are equipped with the skills they need for fulfilling futures.

Graduates of CEHS are qualified to seek employment in public or private institutions related to advocacy, public policy, and educationally related professions. Many graduates are employed by schools, child care settings, and other social service agencies. All of the undergraduate programs prepare students for admittance into graduate school in related fields.

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.

History of the College

At its inception in 1927, the College of Education was based in iconic Woodburn Hall and offered degrees in seven divisions: agricultural education; industrial education; home economics; rural education; visual education; professional teacher training; and the University High School, which served as the "laboratory school" for the new College of Education. In 1947, twenty years after it was established, the College of Education extended its program offerings beyond secondary education when it began preparing primary school teachers. The College went on to grant its first undergraduate degree in elementary education in 1950. The College of Education expanded substantially in the mid-1960s, when it became known as the College of Human Resources and Education.

In 2012, the WVU Board of Governors approved a change of name to the College of Education and Human Services to better represent its programs and educational goals. With a rich history of serving West Virginia, the mission and specific goals of CEHS continue to evolve, as do its programs. Now, over ninety years after it was established, CEHS continues to meet the changing needs of the community that it serves. The College is proud of the degree opportunities that it offers, its student body, its alumni and its dedicated faculty and staff. While recognizing its distinguished past, CEHS remains ever-focused on the future.

Our Mission and Values

The College of Education and Human Services promotes knowledge and prosperity for the individuals, families, and communities we serve by fostering self-determination, curiosity, and active citizenship.

- OPPORTUNITY - CEHS fosters inclusivity by offering equitable access to academic programs and outreach services.
- INQUIRY - CEHS works to create an innovative, research-based environment to investigate problems and seek solutions.
- COLLABORATION - CEHS collaborates in respectful and ethical partnerships to develop and deliver education and human services.
- ENGAGEMENT - CEHS organizes and participates in a wide range of community efforts and initiatives.
- RESPONSIBILITY - CEHS leads by developing solutions to societal and educational challenges.

Accreditation

West Virginia University is fully accredited for the preparation of teachers by the National Council for the Accreditation of Teacher Education (NCATE, now CAEP), and programs are approved by the West Virginia State Department of Education. The Ed.D. and Ph.D. are the highest degrees approved and offered. Students in elementary and secondary education must meet University requirements for admission, retention, and graduation, and West Virginia Department of Education requirements for teacher certification in West Virginia.

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

BACHELOR OF ARTS (BA) IN TEACHER EDUCATION

Students in the Bachelor of Arts degree program in Teacher Education will acquire:

- Skills in assessing classroom dynamics and finding solutions to classroom issues from diverse perspectives
- Ability to construct an effective learning environment, in which all children have opportunities to learn
- Knowledge of current, best practices in education
- Ability to reflect on one's own actions and how those actions affect others
- Practice-based research skills that inform the teacher about student learning
- Knowledge of how to incorporate inquiry-informed instructional design into teaching practice

BACHELOR OF SCIENCE (BS) IN CHILD DEVELOPMENT AND FAMILY STUDIES, BIRTH THROUGH PRE-KINDERGARTEN EMPHASIS

Students in the Bachelor of Science degree program in Child Development and Family Studies, with an emphasis on birth through pre-kindergarten will acquire:

- Knowledge of the social, emotional, intellectual, and physical development of young children in the family and preschool contexts.
- Skills in implementing appropriate curricula as well as developmental and performance assessments.
- Ability to construct positive and enriched early childhood environments where the young have the opportunity to develop skills for lifelong learning.
- Knowledge of current best practices that prepare young children to be competent, independent learners.
- Ability to reflect on one's knowledge and skills of teaching and interacting with young children.
- Knowledge of how young children learn in order to prepare educational activities in inclusive environments.
- Extensive field experiences with various ages of young children--infants, toddlers and preschoolers and young school age.

BACHELOR OF SCIENCE (BS) IN CHILD DEVELOPMENT AND FAMILY STUDIES, YOUTH AND FAMILIES EMPHASIS

Students in the Bachelor of Science degree program in Child Development and Family Studies, with an emphasis on youth and families will acquire:

- Knowledge in human growth and development, adolescent development, human sexuality, family issues and interaction, youth concerns and issues, and related topics.
- Understanding of the various social contextual influences on adolescent development and family functioning and the interactive relationships between families and other societal institutions such as schools.
- Various strategies for working with adolescents and families in various social service and community-based context.
- Hands-on experience working with children, adolescents, and/or families at community agencies.
- Awareness of the multiple career paths for students in this area of study along with options and opportunities for graduate studies.

BACHELOR OF SCIENCE (BS) IN COMMUNICATION SCIENCES AND DISORDERS

Students in the Bachelor of Science degree program in Communication Sciences and Disorders will acquire:

- Knowledge and skills of central principles, practices, facts, concepts, theories, and tools within discipline of Communication Sciences and Disorders
- Skills in communication in a variety of modalities including writing, speaking, reading, listening, and viewing
- Practice in analyzing problems, proposing alternatives, drawing inferences, developing imaginative approaches, constructing predictions, and making reasoned decisions using appropriate information resources and analytical tools

- Application of scientific and statistical principles to problem solving
- Opportunities for defining relationships between the student's degree program and future professional goals

BACHELOR OF MULTIDISCIPLINARY STUDIES (BMDS) IN EDUCATION AND HUMAN SERVICES

Students in the Bachelor of Multidisciplinary Studies degree program in Education and Human Services will acquire:

- Knowledge of and aptitude with principles, practices, facts, concepts, theories and tools in three minor areas of concentration, two of which must be from CEHS
- Breadth of knowledge and cross-disciplinary communication
- Flexibility and problem solving.
- Analysis of problems from divergent perspectives.
- Application of multidisciplinary techniques to communicate the strengths of their self-chosen course of study.C
- Practices derived from specialized knowledge in individual disciplines to analyze problems from divergent perspectives, recognize ambiguities, propose alternatives, draw inferences, develop imaginative approaches, construct predictions, and make reasoned decisions using appropriate information resources and analytical tools
- Multidisciplinary techniques fostering students' ability to communicate strengths of their self-chosen course of study
- Opportunities for defining relationships between the student's degree program and post-baccalaureate goals

Admissions

Students interested in pursuing the degree of Bachelor of Arts, Bachelor of Science, or Bachelor of Multidisciplinary Studies are encouraged to apply to the University online at <http://apply.wvu.edu/>.

BACHELOR OF ARTS: ELEMENTARY EDUCATION

Incoming freshman who are admitted as Pre-Elementary Education students must successfully complete the following before being admitted into the Bachelor of Arts in Elementary Education program: pass EDUC 191 with a grade of "B" or better, have a cumulative GPA of 2.75 or higher, and pass all three sections (Reading, Writing, Math) of the Praxis CORE Exam by April 1 of Freshman year. Current WVU students and students transferring from another institution must complete the Elementary Education Program Application Form, have at least a 2.75 collegiate GPA, and must meet or exceed one of the following: a 26 on the ACT, a 1170 (old) or 1240 (new) on the SAT, or passing scores on all three sections of the Praxis CORE Exam. Application deadlines are December 1 (spring semester start) and April 1 (fall semester start).

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Elementary Education (<https://admissions.wvu.edu/academics/majors/elementary-education/>) major.

BACHELOR OF SCIENCE: CHILD DEVELOPMENT AND FAMILY STUDIES

Direct admission into the Bachelor of Science in Child Development and Family Studies (CDFS) requires incoming freshmen students to have a cumulative high school GPA of 2.5. Transfer students must have an overall collegiate GPA of 2.5. Students who wish to major in CDFS but who do not meet the current admissions requirements, may enroll in Pre-CDFS. Pre-CDFS students may also need to meet additional requirements prior to enrolling in CDFS, which are outlined in the CDFS Handbook.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Child Development and Family Studies (<https://admissions.wvu.edu/academics/majors/child-development-and-family-studies/>) major.

BACHELOR OF SCIENCE: COMMUNICATION SCIENCES AND DISORDERS

Students are first admitted to the Pre-Communication Sciences and Disorders (Pre-CSD) program during which time they will complete the pre-requisite coursework to apply for admittance into the Bachelor of Science program in Communication Sciences and Disorders (BS-CSD). All Pre-CSD students are assigned an advisor. After completing the necessary Pre-CSD Requirements, a student may apply for admission to the Bachelor of Science (B.S.) degree program in Communication Sciences and Disorders. Following admission to the degree program, each student must continue to maintain a 3.0 overall GPA as well as in the major (i.e., CSD courses) to continue as a CSD major and graduate with a Bachelor of Science degree in Communication Sciences and Disorders. Students enrolled in the pre-CSD and BS-CSD are strongly encouraged to review the Undergraduate Handbook for the students enrolled in the program to understand the policies and expectations.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Communication Sciences and Disorders (<https://admissions.wvu.edu/academics/majors/communication-sciences-and-disorders/>) major.

BACHELOR OF MULTIDISCIPLINARY STUDIES: EDUCATION AND HUMAN SERVICES

Students who wish to pursue an Multidisciplinary Studies (MDS) degree in Education and Human Services will minor in three areas, at least two of which are from the College of Education and Human Services (CEHS). For example, a student interested in a career working with home/community services for children and adults might choose minors in disability studies, special education, and family and youth studies. Students are required to have a GPA of 2.5, to maintain a minimum 2.5 cumulative GPA once admitted to the major, to earn grades of "C" or better in all minor courses, and to pass the Capstone course with a minimum grade of "C."

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the CEHS Bachelor of Multidisciplinary Studies (<https://admissions.wvu.edu/academics/majors/multidisciplinary-studies-education-and-human-services/>) major.

Scholarships

The College of Education and Human Services offers a number of scholarships each year to eligible students in addition to financial aid from West Virginia University. All students applying for scholarships must file a FAFSA form by the deadline, even if they are not eligible for need-based aid. Awards are generally based on academic performance, extracurricular activities, and/or financial need.

Certificate Programs

- Early Childhood Development (p. 62)
- Infant/Toddler Education (p. 73)

College of Education and Human Services Minors

The College of Education and Human Services (CEHS) offers ten minors, some of which offer online options. Students interested in pursuing a CEHS minor should visit the college website for more information.

- Addiction Studies (http://catalog.wvu.edu/undergraduate/minors/addiction_studies/)
- Child Development and Family Studies (http://catalog.wvu.edu/undergraduate/minors/child_development__family_studies/)
- Communication Disorders (http://catalog.wvu.edu/undergraduate/minors/communication_disorders/)
- Communication Sciences (http://catalog.wvu.edu/undergraduate/minors/communication_sciences/)
- Disability Studies (http://catalog.wvu.edu/undergraduate/minors/disability_studies/)
- Early Intervention (<http://catalog.wvu.edu/undergraduate/minors/earlyintervention/>)
- Family and Youth (http://catalog.wvu.edu/undergraduate/minors/family__youth/)
- Human Services (http://catalog.wvu.edu/undergraduate/minors/human_services/)
- Infant and Toddler (http://catalog.wvu.edu/undergraduate/minors/infant__toddler/)
- Special Education (<http://catalog.wvu.edu/undergraduate/minors/specialeducationminor/>)

Accreditation

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.

Child Development & Family Studies, Preschool Special Needs

Child Development & Family Studies, Birth through Age 5

Elementary Education

General Requirements for Professional Teacher Certification

Individual candidates must be recommended to the State of West Virginia Department of Education for professional certification by the Certification Officer. To be eligible to receive a professional license, the student must have met the University and College program degree requirements, the State requirements, complied with the West Virginia Board of Education regulations for teacher certification, and be recommended by the Certification Officer in the College of Education and Human Services. West Virginia, at the time of this publication, has reciprocal agreements with most other states for teacher certification. Inquiries about reciprocity should be directed to the Certification Officer.

The teacher education program uses the West Virginia State Department of Education system of calculating grade point averages only for admission to teacher education programs and professional internships, and for assessing teaching field and education averages. Academic performance and eligibility for graduation are assessed by the system used by WVU and other institutions governed by the West Virginia Higher Education Policy Commission. It is the responsibility of students to take steps to insure that they are properly informed of the degree requirements and/or the certification standards of the degrees being sought. Since certification requirements are changed periodically by the West Virginia Department of Education, the

fulfillment of certification requirements as presented in this catalog cannot guarantee compliance with the most recent requirements. 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 Communication Sciences and Disorders, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

The undergraduate program in Communication Sciences and Disorders is committed to the preparation of students interested in understanding the foundations of communication for typical and disordered speech, language and hearing across the lifespan. Leading to the Bachelor of Science (B.S.) degree, this undergraduate program emphasizes education in liberal studies; anatomy and physiology of the speech and hearing mechanisms; development of speech and language skills; awareness of cultural diversity and its relationship to communication; phonetics; and a broad introduction to communication sciences and disorders.

Undergraduates with a B.S. in Communication Sciences and Disorders can work to pursue graduate school in speech-language pathology, audiology, public health care, public policy, education, and special education. Other options after the B.S. program include jobs as speech-language pathology or audiology assistants, hearing aid sales, in communications, in public affairs and policy for persons with disabilities, and other education and health-related jobs related to advocacy and communication for persons with disabilities. The demand for certified practitioners is continually increasing; consequently, job prospects remain very good. The undergraduate program and subsequent options in graduate study enable graduates to seek employment in a variety of settings and work with individuals of all ages as well as to pursue academic and research careers in the discipline of communication sciences and disorders.

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 J. Donai - Ph.D. (Texas Tech University)
Audiology, Psychoacoustics, Amplification, Hearing aids
- Michelle W. Moore - Ph.D. (University of Pittsburgh)
Speech-language pathology, Child language disorders, Literacy, Phonological disorders

ASSISTANT PROFESSORS

- Alexandra Hollo - Ph.D. (Vanderbilt University)
Behavior Analyst; emotional and behavioral disorders, advanced language disorders, learning disabilities
- Kimberly M. Meigh - Ph.D. (University of Pittsburgh)
Speech-language pathology; Motor speech disorders, Motor learning, Diagnostics, Adult neurogenic communication disorders

TEACHING ASSOCIATE PROFESSORS

- Ashleigh J. Callahan - Ph.D. (James Madison University)
Audiology; Vestibular evaluation/rehabilitation, Hearing conservation
- Leslie C. Graebe - M.S. (West Virginia University)
Speech-language pathology; Clinical supervisor

TEACHING ASSISTANT PROFESSOR

- Tori Gilbert - M.S. (West Virginia University)
Speech-language pathology; Online Program Coordinator

TEACHING INSTRUCTOR

- Janet J. Petite - M.S. (West Virginia University)
Audiology; Clinical supervisor

SERVICE INSTRUCTOR

- Tracy Toman - M.S. (West Virginia University)
Speech-language pathology; Clinical supervisor

VISITING SERVICE INSTRUCTOR

- Tracie Evans - M.S. (West Virginia University)
Speech-language pathology; Clinical supervisor

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.

ASSOCIATE PROFESSOR EMERITUS

- Conrad Lundeen - Ph.D.

ASSOCIATE PROFESSORS EMERITI

- Lynn R. Cartwright - Ed.D.
- Cheryl L. Prichard - Ed.D.

TEACHING ASSOCIATE PROFESSOR EMERITI

- Karen B. Haines - M.S.
- Gayle B. Neldon - Ed.D.

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Communication Sciences and Disorders (<https://admissions.wvu.edu/academics/majors/communication-sciences-and-disorders/>) major.

PRE-COMMUNICATION SCIENCES AND DISORDERS

ADMISSION

Normally, students are first admitted to the pre-Communication Sciences and Disorders (Pre-CSD) program of study and matriculate as such during their freshman and sophomore years. Pre-CSD students are advised in the College of Education and Human Services. To qualify for Pre-CSD admission, incoming freshmen must present an overall high school GPA of 3.0 or higher, 1050 or higher on the SAT, or 23 on the ACT.

Students who transfer into pre-CSD during the freshman or sophomore year from either another major at WVU or from another university, must present a grade point average of 3.0 for all undergraduate coursework taken prior to the time of transfer.

REQUIREMENTS

Students are considered Pre-CSD until they have met the requirements specified below and have applied and been accepted into the CSD degree program. The following are the minimum requirements for all Pre-CSD students applying for the CSD major:

1. A minimum overall GPA of 3.0;
2. Completion of at least 58 academic hours, including a letter grade of C or better in each of the following courses:
 - GEF Requirements (15 hours completed)
 - GEF 1: English 101
 - GEF 1: English 102
 - GEF 8 Focus: Linguistics 101
 - GEF 8 Focus: WVUE 270
 - Required Supporting Courses (9 hours completed)
3. And a minimum overall GPA of 3.0 in the CSAD courses listed below (elective CSAD courses will not be included in the calculation of the major GPA required for admission):
 - CSAD 200: Introduction to Communication Disorders;
 - CSAD 222: Phonetics and Phonology;

- CSAD 234: Anatomy and Physiology of the Speech and Hearing Mechanism;
- CSAD 236: Language Science.

These requirements are subject to change. Interested students should contact the Department of Communication Sciences and Disorders or <http://csd.wvu.edu> for information on current requirements.

B.S. DEGREE PROGRAM IN COMMUNICATION SCIENCES AND DISORDERS

ADMISSION

After completing all pre-CSD requirements listed above, a student may apply for admission to the degree program by completing an online application form accessed at <http://csd.wvu.edu/undergrad/pre-spa>. Students who are in the pre-CSD program will be reviewed at the end of the fall and spring semesters to determine if they are eligible for the B.S. degree in Communication Sciences and Disorders (CSD). All students who meet the admission requirements (i.e., 58 credits with a C- or better and a 3.0 in the required 200 level CSAD courses) will be offered admission to the B.S. CSD program.

Following admission to the degree program, the student must continue to meet GPA standards set by the department in order to continue in the program and graduate with a degree in Communication Sciences and Disorders.

[Click here to view the Suggested Plan of Study \(p. 677\)](#)

Communication Sciences and Disorders

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum Requirements

A minimum grade of C- is required for all courses counting toward the major, except where noted. A minimum cumulative GPA of 3.0 is required.

A minimum grade of C- is required for GEF courses, except where noted.

GEF Requirements 5, 6 & 7		9
CSAD 191	First-Year Seminar	1
ENGL 101 & ENGL 102	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1)	6
Select one of the following (GEF 2):		4
BIOL 101 & BIOL 103	General Biology and General Biology Laboratory	
BIOL 102 & BIOL 104	General Biology and General Biology Laboratory	

BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	
Select one of the following (GEF 8):		3
STAT 211	Elementary Statistical Inference	
ECON 225	Elementary Business and Economics Statistics	
PSYC 101	Introduction to Psychology (GEF 4)	3
CS 101	Intro to Computer Applications (GEF 8)	4
MATH 124	Algebra with Applications (GEF 3; or higher (prerequisite for STAT 211 or ECON 225))	3
WVUE 270	Effective Public Speaking (GEF 8)	3
Chemistry or Physics (select one of the following):		3
PHYS 101	Introductory Physics 1	
PHYS 102	Introductory Physics 2	
PHYS 105	Conceptual Physics	
PHYS 111	General Physics	
PHYS 112	General Physics	
CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 - Laboratory	
CHEM 112 & 112L	Survey of Chemistry 2 and Survey of Chemistry 2 - Laboratory	
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory	
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	
CHEM 117 & 117L	Principles of Chemistry 1 and Principles of Chemistry 1 - Laboratory	
CHEM 118 & 118L	Principles of Chemistry 2 and Principles of Chemistry 2 - Laboratory	
Normal Human Development (select two from the following):		6
CDFS 110	Families Across the Life Span	
CDFS 210	Introduction to Parenting	
CDFS 211	Infant Development	
CDFS 212	Development in Early and Middle Childhood	
CDFS 412	Adolescent Development	
CDFS 413	Stress in Families	
CDFS 414	Adolescent Problems and Disorders	
CDFS 415	Family Interaction and Communication	
CDFS 430	Best Practices in Pre-K Movement	
COUN 303	Introduction to Helping Professions	
LING 411	Phonology	
LING 412	Syntax	
OTH 201	Medical Terminology for Occupational Therapy	
PSYC 241	Introduction to Human Development	
PSYC 332	Multiculturalism in Psychology	
PSYC 342	Prenatal and Infant Development	
PSYC 343	Child and Adolescent Development	
PSYC 345	Adulthood and Aging	
SOCA 101	Introduction to Sociology	
SOCA 221	Families and Society	
SOCA 223	Death and Dying	
SOWK 330	Human Behavior in the Social Environment 1	
SOWK 350	Human Behavior in the Social Environment 2	
Abnormal Human Development (select one of the following):		3
CHPR 170	Health of the Individual	

COMM 308	Nonverbal Communication	
COMM 317	Communication and Aging	
DISB 380	Disability and the Family	
DISB 385	Disability and Society	
HLSC 172	First Aid and Emergency Care	
PHIL 331	Health Care Ethics	
PSYC 202	Research Methods in Psychology	
PSYC 232	Sex Roles and Behavior	
PSYC 251	Introduction to Social Psychology	
PSYC 281	Introduction to Abnormal Psychology	
PSYC 302	Behavior Principles	
PSYC 351	Topics in Social Psychology	
PSYC 364	Psychology of Adjustment	
PSYC 382	Exceptional Children	
PSYC 423	Cognition and Memory	
PSYC 424	Learning and Behavior Theory	
PSYC 425	Perception	
PSYC 474	Applied Behavior Analysis	
SOWK 147	Human Diversity	
SOWK 151	Introduction to Social Work	
SOWK 300	Social Welfare Policy and Services 1	
SOCA 360	Women and Men in Society	
SPED 304	Special Education in Contemporary Society	
Major Area Courses		
CSAD 200	Introduction to Communication Disorders	3
CSAD 222	Phonetics and Phonology	3
CSAD 234	Anatomy and Physiology of Speech and Hearing	4
CSAD 236	Language Science	3
CSAD 320	Speech Science	3
CSAD 336	Language Acquisition 1	3
CSAD 340	Hearing Science	3
CSAD 426	Introduction to Speech Disorders	3
CSAD 442	Aural Rehabilitation	3
CSAD 342	Introduction To Audiology	3
CSAD 485	Professional Applications in Communication Sciences and Disorders	3
or CSAD 496	Senior Thesis	
Content/Practica Electives		9
CSAD 274	Manual Communication	
CSAD 276	Intermed Manual Communication	
CSAD 280	Communication Disorder in Film	
CSAD 424	Language Disorders	
CSAD 436	Language Acquisition 2	
CSAD 440	Audiological Assessment	
CSAD 480	Speech and Language Assisting	
CSAD 482	Speech and Language Practicum	
CSAD 483	Audiology Practicum	
Electives		29
Total Hours		120

Students must complete minimum requirements.

SENIOR CAPSTONE

All students in the B.S. in Communication Sciences and Disorders program must complete a capstone experience before graduation. Majors will engage in a variety of written, oral, and analytical activities related to the field and will develop an oral/PowerPoint presentation which will be graded by faculty members.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
CSAD 191		1 CSAD 200	3
ENGL 101 (GEF 1)		3 CS 101 (GEF 8)	4
MATH 124 (GEF 3)		3 GEF 6	3
PSYC 101 (GEF 4)		3 Normal Human Development 2	3
BIOL Requirement (GEF 2)		4 Elective	3
Normal Human Development 1		3	
		17	16

Second Year

Fall	Hours	Spring	Hours
CSAD 236		3 CSAD 234	4
STAT 211 or ECON 225 (GEF 8)		3 CSAD 222	3
ENGL 102 (GEF 1)		3 Abnormal Human Development	3
WVUE 270 (GEF 8)		3 GEF 5	3
CHEM, PHYS, or PHY SCI		3 GEF 7	3
		15	16

Third Year

Fall	Hours	Spring	Hours
CSAD 320		3 CSAD 336	3
CSAD 342		3 CSAD 340	3
Elective		3 Elective	3
Elective		3 Elective	3
Elective		3 Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
CSAD 426		3 CSAD 442	3
CSAD 485		3 Elective	3
Elective		3 Elective	3
Elective		3 Elective	3
Elective		2	
		14	12

Total credit hours: 120

Major Learning Outcomes

COMMUNICATION SCIENCES AND DISORDERS

The Department of Communication Sciences and Disorders is committed to the preparation of students interested in graduate study and eventual careers as a speech-language pathologist, audiologist, or as a researcher/teacher-scholar within the discipline of communication sciences and disorders. Upon completion of the Bachelor of Science in Communication Sciences and Disorders at West Virginia University, the student will be able to:

- Identify anatomical structure/function that support speech, language, and hearing.
- Explain acoustic and psychoacoustic principles of speech and hearing.
- Classify English speech sounds and develop the perceptual skills necessary to transcribe normal speech using the International Phonetic Alphabet.
- Differentiate stages of typical speech and language development (oral and written) from birth through adolescence.
- Apply information about communication and communication disorders in oral and written format.

- Identify characteristics of common speech and language disorders across the lifespan.
- Describe basic concepts related to evaluation and treatment of speech and language disorders.
- Compare and contrast clinical practice utilizing principles of evidence-based practice.

Department of Curriculum and Instruction

Degree Offered

- Bachelor of Arts in Elementary Education

The Department of Curriculum & Instruction/Literacy Studies offers opportunities for undergraduate study, leading to a degree in Elementary Education. The program is designed for aspiring educators and supports teacher candidates as they build knowledge, practice skills, conduct classroom research, and develop professional competencies for teacher certification, grades K-6. Faculty in the department work with national accreditation standards for this program, and contribute to the profession at university, state, and national levels. The experiences available through this program involve extensive, supported practice in local classrooms and exploration of technology, diversity, social emotional learning, and culturally responsive teaching, facilitated by faculty who are leaders in research, teaching, and service.

General Requirements for Professional Certification

To teach in the public schools of West Virginia, one must hold a professional teaching license issued by the West Virginia Department of Education. Individual candidates must be recommended by the College of Education and Human Services to the West Virginia Department of Education for a professional teaching license. To be eligible for recommendation, teacher candidates must do the following:

- Meet the minimum State requirements.
- Meet the University degree requirements.
- Successfully complete program coursework.
- Achieve a grade point average of at least 2.75 GPA on the total of college credits earned and earn a grade of "C" or better in all professional education courses required by the academic program.
- Demonstrate competence in supervised practicum and internship.
- Comply with the West Virginia Board of Education regulations for teacher certification.
- Be recommended for certification by the Dean of the College of Education and Human Services.

Calculation of Grade Point Averages

The West Virginia State Department of Education system of calculating grade point averages for certification purposes differs in some respects from the WVU system. For certification, all coursework attempted at WVU and at other institutions of collegiate rank will be considered. If a student earns a grade of D, F, or U in any course taken no later than the term when they have attempted a total of sixty hours, and the student repeats this course, the second grade earned will be used in determining the grade point average. The first grade will be disregarded.

The teacher education program uses the West Virginia State Department of Education system of calculating grade point averages only for admission to teacher education programs and professional internships, and for assessing teaching field and education averages. Academic performance and eligibility for graduation are assessed by the system used by WVU and other institutions governed by the West Virginia Higher Education Policy Commission.

FACULTY

CHAIR

- Nathan Sorber - Ph.D. (Pennsylvania State University)
Higher Education

PROFESSORS

- Dale S. Niederhauser - Ph.D. (University of Utah)
Foundations of Education, Educational Technology, Elementary Education: Early Childhood
- Samuel F. Stack, Jr. - Ph.D. (University of South Carolina)
Social Foundations of Education
- Allison Swan Dagen - Ph.D. (University of Pittsburgh)
Instructional and Learning Reading

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
- Aimee L. Morewood - Ph.D. (University of Pittsburgh)
Reading Education, Professional Development, Effective Teaching Strategies
- Sarah Selmer - Ed.D. (West Virginia University)
Mathematics Education
- Melissa Sherfinski - Ph.D. (University of Wisconsin-Madison)
Curriculum Theory and Research, Research Methodology
- Nathan Sorber - Ph.D. (Pennsylvania State University)
Higher Education

ASSISTANT PROFESSORS

- Mathew P. Campbell - Ph.D. (Oregon State University)
Mathematics Education
- Rodney Hughes - Ph.D. (Pennsylvania State University)
Higher Education and Economics
- Denise Lindstrom - Ph.D. (Iowa State University)
Technology and Teacher Education, New Literacies Studies, Digital Media
- Melissa Luna - Ph.D. (Northwestern University)
Learning Sciences, Environmental Education, Science Education, Elementary Education
- Erin McHenry Sorber - Ph.D. (Pennsylvania State University)
Educational Policy Studies, Administrative, Planning, and Social Policy
- 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
- Audra Slocum - Ph.D. (Ohio State University)
Appalachian Education, Multicultural Teacher Education, Adolescent Literacies
- Keri D. Valentine - Ph.D. (University of Georgia)
STEM Education (Mathematics), Learning, Design, & Technology, Science Education

CLINICAL ASSOCIATE PROFESSOR

- Stephanie Morris Lorenze - Ed.D. (West Virginia University)
Secondary Education

TEACHING ASSISTANT PROFESSORS

- Beth B. Satterfield - M.S. (West Virginia University)
Early Childhood Education, Child Development

PROFESSORS EMERITI

- John L. Carline - Ph.D.
- Helen Hazi - Ph.D.
- Boyd D. Holtan - Ed.D.
- Ronald V. Iannone - Ed.D.
- C. Kenneth Murray - Ph.D.
- James Rye - Ph.D.
- Patricia K. Smith - Ed.D.

ASSOCIATE PROFESSORS EMERITI

- Ardeth M. Deay - Ph.D.

ASSISTANT PROFESSORS EMERITI

- Jane S. Cardi - Ed.D.
- Michael A. Caruso - M.A.
- Barbara Mertins - M.S.L.S.

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Elementary Education (<https://admissions.wvu.edu/academics/majors/elementary-education/>) major.

INCOMING FRESHMEN

Incoming freshmen may apply for admission to the pre-elementary education program at any time prior to their first semester at West Virginia University with the following requirements:

2.75 overall GPA (High School)
AND
20 ACT (Superscore) or 1050 SAT

Once admitted as a Pre-Elementary Education student, successful completion of the following will allow the student to advance to the professional preparation portion of the Bachelor of Arts in Elementary Education program.

- Earn a grade of at least "C-" in EDUC 191
- Cumulative GPA of 2.75
- Pass all three sections (Reading, Writing, Math) of Praxis CORE Exam by April 1 of Freshman year

CURRENT WVU STUDENTS AND STUDENTS TRANSFERRING FROM ANOTHER INSTITUTION

2.75 overall GPA (Collegiate)
AND
26 ACT OR 1170 SAT (old) OR 1240 SAT (new) OR passing scores on all 3 sections of the Praxis CORE Exam

AND

Successful Completion of the Elementary Education Program Application Form (<https://wvucehs.wufoo.com/forms/mvdzoui00s1u0g/>)

- **April 1** – Application deadline for admission into the fall semester.
- **December 1** – Application deadline for admission into the spring semester.

4-Year Elementary Education, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The BA in Elementary Education program is a traditional, 4 year program on-campus at West Virginia University that prepares students to earn a teaching certification in multi-subjects grades K-6 upon graduation. As part of the program, students complete work in local, public school placements for 4 semesters before the final, student teaching semester. This field and clinical experience totals over 600 hours in the classroom. The BA in Elementary Education program values the learning that happens not only in the WVU classrooms, but also in the application of these lessons in the field. This is why students graduate with hundreds of hours of practice and experience teaching.

In addition to an emphasis on experience in local schools, the BA in Elementary Education program is committed to high academic standards at the state and national levels. Program faculty work with national accreditation standards and contribute to the profession at university, state, and national levels. This work involves exploration of technology, diversity, global initiatives, and culturally responsive teaching, facilitated by faculty who are leaders in research, teaching, and service.

The BA in Elementary Education program also allows the space for students to find their individual areas of interest, for which many pursue a Master's degree. Students in the BA in Elementary Education program can begin working as a classroom teacher after graduation and go on to earn graduate degrees.

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Elementary Education (<https://admissions.wvu.edu/academics/majors/elementary-education/>) major.

High school and other students interested in a career in elementary education can apply and be directly admitted to the BA Elementary Education program. As part of this program, students complete course work that makes them eligible for West Virginia teacher certification, multi-subjects grades K-6. By the time students graduate, they will have spent over 600 hours in the field.

ADMISSION REQUIREMENTS

INCOMING FRESHMEN

Direct Admission

3.0 GPA (High school)

AND

26 ACT

OR

SAT Evidence Based Reading/Writing and Math Section 1240 (post-March 2016 test sitting)

OR

Passing scores on all three sections of the Praxis CORE test.

More information about the Praxis CORE can be found at the ETS Praxis Core website (<https://www.ets.org/praxis/about/core/>). Any student seeking teacher licensure is required to take this test.

Pre-Elementary Education Admission

If you do not meet the direct admission requirements, above, you can begin applicable course work as a Pre-Elementary Education student, if you meet the following requirements:

2.75 GPA (High School)

AND

20 ACT

OR

SAT Evidence based Reading/Writing and Math Section 1020 (post-March 2016 test sitting)

Once admitted as a Pre-Elementary Education student, successful completion of the following will allow the student to advance into the Bachelor of Arts in Elementary Education program.

- Pass the EDUC 191 course with a grade of "B" or better; and
- Cumulative GPA of 2.75; and
- Pass all three sections (Reading, Writing, Math) of Praxis CORE by April 1 of Freshman year.

CURRENT WVU UNDERGRADUATE STUDENTS AND STUDENTS TRANSFERRING FROM ANOTHER COLLEGE/UNIVERSITY

This population includes transfers from outside of WVU as well as major transfers from within WVU.

2.75 GPA (Undergraduate)

AND

26 ACT

OR

SAT Evidence Based Reading/Writing and Math Section 1240 (post-March 2016 test sitting)

OR

Passing scores on all three sections of the Praxis CORE test.

ADMISSION PROCEDURES

NEW FRESHMEN AND TRANSFER STUDENTS

New freshmen and students transferring from another college or university must complete West Virginia University's online undergraduate admission application (<https://admissions.wvu.edu/how-to-apply/>).

TRANSFER STUDENTS

Once you have applied and been accepted to West Virginia University, please complete and submit the program application (<https://wvucehs.wufoo.com/forms/mvdzoui00s1u0g/>) form*.

CURRENT WVU UNDERGRADUATE STUDENTS

Current WVU undergraduate students may apply to the program by completing the program application (<https://wvucehs.wufoo.com/forms/mvdzoui00s1u0g/>).

*If you are having trouble submitting the form online, feel free to download and print our mail-in program application form (https://cils.wvu.edu/files/d/3f0ed648-f537-468a-849c-0c61f38e5ddb/fillin4yr_print_application-form.pdf).

APPLICATION DEADLINES

Incoming freshmen are welcome to apply at any time prior to their first semester at WVU.

For current WVU undergraduate students and transfer students, program applications will be reviewed twice annually and will be accepted based on admissions criteria as well as available spaces.

April 1 – Application deadline for admission into Fall semester.

December 1 – Application deadline for admission into Spring Semester.

[Click here to view the Suggested Plan of Study \(p. 684\)](#)

Bachelor of Arts in Elementary Education

GENERAL EDUCATION FOUNDATIONS

Please use this link to view a list of courses that meet each GEF requirement. (<https://registrar.wvu.edu/curriculum-catalog/general-education-foundations-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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	
F2A/F2B - Science & Technology		4-6
F3 - Math & Quantitative Skills		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

CURRICULUM REQUIREMENTS

UNIVERSITY REQUIREMENTS

EDUC 191	First-Year Seminar	1
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GENERAL EDUCATION FOUNDATIONS CURRICULUM REQUIREMENTS

Choose one of the following (GEF 1):		6
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ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	
GEF 2B Science & Technology (choose one of the following biology courses with laboratory):		4
BIOL 101 & BIOL 103	General Biology and General Biology Laboratory	
BIOL 102 & BIOL 104	General Biology and General Biology Laboratory	
BIOL 105 & BIOL 106	Environmental Biology and Environmental Biology Laboratory	
MATH 124	Algebra with Applications (GEF 3)	3
PSYC 101	Introduction to Psychology (GEF 4)	3

Choose one of the following (GEF 5):		3
HIST 152	Growth of the American Nation to 1865	
HIST 153	Making of Modern America: 1865 to the Present	
GEF 6 ENGL course in World Literature		3
Choose one of the following (GEF 7):		3
SOCA 105	Introduction to Anthropology (GEF 7)	
POLS 103	Global Political Issues	
GEF 8 Focus Coursework (three courses, including):		11
Choose one of the following:		
HIST 179	World History to 1500	
HIST 180	World History Since 1500	
And choose two of the following:		
ASTR 106 & ASTR 107	Descriptive Astronomy and Descriptive Astronomy Laboratory	
CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 - Laboratory	
GEOL 101 & GEOL 102	Planet Earth and Planet Earth Laboratory	
PHYS 105	Conceptual Physics	
CERTIFICATION REQUIREMENTS		
CDFS 110 or PSYC 241	Families Across the Life Span Introduction to Human Development	3
GEOG 102	World Regions	3
C&I 230	Mathematics for Elementary Teachers 1	3
C&I 231	Mathematics for Elementary Teachers 2	3
SHED 300	Health Education for Elementary School Teachers	2
Choose two of the following courses:		4
ART 103	Materials and Procedures	
MUSC 182	Music in the Elementary School	
C&I 365	Dance and Movement in PK-12 Schools	
PROFESSIONAL EDUCATION REQUIREMENTS		
EDUC 200	Professional Inquiry in Education (fulfills Writing and Communication Skills requirement)	3
EDUC 301	Learning in Educational Settings	3
EDUC 311	Practicum 1/Technology Application	1
EDUC 312	Practicum 2/Technology Application	1
EDUC 400	Instructional Design and Evaluation	3
EDUC 401	Managing and Organizing Learning Environments	3
EDUC 410	Practicum 3/Technology Application	2
EDUC 411	Practicum 4: Technology Application	4
EDUC 430	Mathematical Methods - Elementary Teacher	3
EDUC 440	Elementary-Early Childhood Science Methods	3
EDUC 450	Issues and Methods for Teaching Elementary Social Studies	3
EDUC 460	Foundations of Language and Literacy	3
EDUC 461	Promoting Literacy Connections	3
C&I 414	Creative Experiences in Early Childhood	3
C&I 491	Professional Field Experience	9
C&I 497	Research	6
RDNG 422	Reading in the Content Areas	3
RDNG 403	Literature for Children	3
SPED 304	Special Education in Contemporary Society	3
SPED 460	Differential Elementary Instruction	3
Total Hours		120

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
EDUC 191		1 CDFS 110	3
ENGL 101 (GEF 1)		3 GEOG 102	3
MATH 124 (GEF 3)		3 GEOL 101 & GEOL 102 (GEF 8)	4
PHYS 105 (GEF 8)		4 HIST 179	3
PSYC 101 (GEF 4)		3 GEF 6	3
SOCA 105 or POLS 103 (GEF 7)		3	
		17	16

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 ART 103, MUSC 182, or CI 365	2
HIST 152 or 153 (GEF 5)		3 C&I 231	3
C&I 230		3 EDUC 200	3
EDUC 301		3 EDUC 311	1
BIOL Requirement (GEF 2)		4 RDNG 403 SHED 300	3 2
		16	14

Third Year

Fall	Hours	Spring	Hours
ART 103, MUSC 182, or CI 365		2 EDUC 401	3
C&I 414		3 EDUC 410	2
EDUC 312		1 EDUC 440	3
EDUC 400		3 EDUC 450	3
EDUC 430		3 EDUC 460	3
SPED 304		3	
		15	14

Fourth Year

Fall	Hours	Spring	Hours
EDUC 411		4 C&I 497	3
EDUC 461		3 C&I 491	9
RDNG 422		3	
SPED 460		3	
C&I 497		3	
		16	12

Total credit hours: 120

TESTING REQUIREMENTS:

WV State Certification Requirements:

- Praxis Core [NOTE: Praxis Core tests are waived if you have already completed a master's degree OR if you scored 26 on the ACT OR if you scored 1240 on the SAT (Evidence-based reading/writing and Math).]
- Praxis II/Elementary Education test [NOTE: Successful completion of this assessment is required prior to student teaching; scores must be received prior to the first day of the internship.]
- edTPA, Teacher Performance Assessment: Required as part of the Student Teaching semester. [NOTE: Successful completion of this assessment is required prior to applying for a WV teaching license and for WVU program completion.]

Disclaimer: State Board of Education requirements may change testing and program requirements.

Major Learning Outcomes

4-YEAR ELEMENTARY EDUCATION

The learning goals for the WVU Four-Year Elementary Teacher Education Program are to prepare students who:

- Have a 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 and advocate 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.

Policies

MATRICULATION POLICIES

- Students must earn at least a grade of "C-" in all professional education courses to remain in the BA Elementary Education program. Earning a grade less than a "C-" may result in the student being removed from the program. In this event, the student must contact an advisor immediately.
- Students who arrange to receive a grade of "I" (incomplete) must complete all requirements to change the incomplete to a grade prior to the beginning of the next semester. If the student does NOT get the grade of "I" changed to a passing grade, the student will NOT be able to matriculate to the next semester of courses. In this event, the student must contact an advisor immediately.
- Students must maintain at least a 2.75 grade point average in order to remain in the BA Elementary Education program. If the GPA falls below 2.75, the student will be permitted to continue on a probationary status for ONE semester. At the end of that semester of probation, the student's overall GPA must be at least a 2.75 in order to be eligible to continue in the program. A student is permitted only one probationary semester in the program. Should the student's GPA fall below a 2.75 a second time, that student will not be eligible to matriculate. In this event, the student must contact an advisor immediately.

TESTING BENCHMARKS

WV STATE CERTIFICATION REQUIREMENTS

- Praxis Core [NOTE: Praxis Core tests are waived if you have already completed a master's degree OR if you scored 26 on the ACT OR if you scored 1240 on the SAT (Evidence-based reading/writing and Math).]
- Praxis II/Elementary Education test [NOTE: Successful completion of this assessment is required prior to student teaching; scores must be received prior to the first day of the internship.]
- edTPA, Teacher Performance Assessment: Required as part of the Student Teaching semester. [NOTE: Successful completion of this assessment is required prior to applying for a WV teaching license and for WVU program completion.]

Disclaimer: State Board of Education requirements may change testing and program requirements.

Department of Learning Sciences and Human Development

Degree Offered

- Bachelor of Science

The Department of Learning Sciences and Human Development offers an undergraduate major, three minors, two certificates, and one credential in Child Development and Family Studies (CDFS). Students enrolled in the undergraduate program in Child Development and Family Studies (CDFS) take coursework to earn a Bachelor of Science. Students choose from four curriculum options:

- Birth through 5/Pre-K certification (online only)
 - Birth through 5/Pre-K certification, with an endorsement in Pre-K special needs (online only)
 - Birth through 5/Pre-K non-certification (online or on campus)
 - Family and Youth studies (on campus)
-

FACULTY

CHAIR & PROFESSOR

- Reagan Curtis - Ph.D. (University of California, Santa Barbara)
Educational Psychology, Interdisciplinary Human Development, Cognitive Science, Program Evaluation, and Research Methodologies

ASSOCIATE CHAIR & ASSOCIATE PROFESSOR

- Amy Root - Ph.D. (University of 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

PROFESSORS EMERITI

- Neal Shambaugh - Ph.D. (Virginia Tech)
- Carol Markstrom - Ph.D. (Utah State University)
- Paul W. DeVore - Ph.D.
- David L. McCrory - Ph.D. (Case Western Reserve University)
- Edward C. Pytlík - Ph.D. (Iowa 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

- Kimberly Floyd - Ph.D. (Old Dominion University)
Special Education
- Ugur Kale - Ph.D. (Indiana University, Bloomington)
IDT Program (Coordinator); Instructional Design, Computational Thinking, Technology Integration, Online Learning, Professional Development, Teacher Education
- 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, Influence of Social Media on Relationships

ASSISTANT PROFESSORS

- 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
- Melissa M. 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
- Abhik Roy - Ph.D. (Western Michigan University)
Program Evaluation, Unification and Evaluation Practice and Theory (Grand Theory), Research on Evaluation (ROE), Evaluation of Non-Academic Units Within Academia
- 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

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

Child Development and Family Studies, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

The undergraduate program in Child Development and Family Studies (CDFS) offers a Bachelor of Science degree option. Students choose from four curriculum options:

- Birth through 5/Pre-K certification (online only)
- Birth through 5/Pre-K certification, with an endorsement in Pre-K special needs (online only)
- Birth through 5/Pre-K non-certification (online or on campus)
- Family and Youth studies (on campus)

BIRTH THROUGH 5/PRE-K OPTIONS (CERTIFICATION)

Students who pursue the certification option will complete coursework that allows them to apply for licensure in Preschool Education from the West Virginia Department of Education; this coursework includes field experiences and student teaching in PreK classrooms. Students must pass the Core Academic Skills for Educators test (Praxis Core) to be enrolled in either certification option. Beginning in Fall 2019, students may only complete one certification option via our online program. The certification options are best suited for students interested in working in public school programs as a certified Pre-K teacher.

EARLY CHILDHOOD OPTION (NON-CERTIFICATION)

The Birth through 5/Pre-K non-certification option focuses on development from birth through age eight, with an emphasis on preparing students to work with young children and families. Students will also complete field experiences and internships in early childhood settings, including Pre-K classrooms, the West Virginia University Nursery School, and childcare centers. The Early Childhood option is best suited for students interested working with young children and their families, including careers as a developmental specialist, parent educator, and early childhood resiliency specialist.

FAMILY AND YOUTH STUDIES

The Family and Youth Studies option is designed for students who are interested in adolescents and families. Students complete coursework related to family issues, family interaction, human growth and development, human sexuality, and youth and family concerns. All students are required to complete field experiences at agencies focused on youth and families. The Family and Youth studies option is best suited for students interested in working with older children, adolescents, and/or families in youth development, including careers as a family advocate, youth crisis coordinator, case manager working with youth and families, and a program manager for a facility serving adolescents.

FACULTY

CHAIR & PROFESSOR

- Reagan Curtis - Ph.D. (University of California, Santa Barbara)

ASSOCIATE CHAIR & ASSOCIATE PROFESSOR

- Amy E. Root - Ph.D. (University of Maryland, College Park)
Parenting, Early Childhood, Development of Emotion, Temperament

WVU NURSERY SCHOOL DIRECTORS & INSTRUCTORS

- Melissa Workman - M.A. (West Virginia University)
Early Childhood Education
- Keri Law - M.A. (West Virginia University)
Early Childhood Education

ASSOCIATE PROFESSORS

- Kristin Moilanen - Ph.D. (University of Nebraska)
Adolescent Development, Self Regulation, Risk Behavior, Family Relationships
- Jessical Troilo - Ph.D. (University of Missouri)
Cultural Conceptions of Fathers, Divorced Fatherhood, Influence of Social Media on Relationships

SERVICE ASSISTANT PROFESSOR

- Ashley Martucci - Ed.D. (West Virginia University)
Arts Integration in the Classroom Setting; Early Childhood Education From a Global Perspective

ASSISTANT PROFESSORS

- Jonathon Beckmeyer - Ph.D. (University of Missouri)
Adolescent Development, Emerging Adulthood, Family Structure, Romantic Development, Sexual Health
- Gabrielle Kline - M.S. (University of Missouri)
Adolescence, Young Adulthood, Sibling Relationships

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Child Development and Family Studies (<https://admissions.wvu.edu/academics/majors/child-development-and-family-studies/>) major.

ADMISSION REQUIREMENTS: ON CAMPUS AND ONLINE PROGRAMS

CDFS OFFERS FOUR DEGREE OPTIONS FOR THE BACHELOR OF SCIENCE. THE ADMISSIONS REQUIREMENTS FOR EACH OPTION ARE OUTLINED BELOW:

Birth through Age 5/Pre-K Certification

- Birth through Age 5/Pre-K
- Birth through Age 5/Pre-K, Pre-School Special Needs Pre-K-K Endorsement Certification Track

Both certification options require students to:

- Enter with a 2.75 overall GPA
- Earn a C or better in all CDFS or SPED coursework
- Pass all parts of the PRAXIS Core. Students who wish to be admitted to the certification track and have not taken or passed the Praxis CORE will be admitted to the non-certification track. They may be admitted to the certification track once they pass all subjects of the Praxis CORE, which must be done prior to enrollment in CDFS 316
- Comply with field and major professional and dispositional standards for early childhood educators

Birth through 5/PreK - Non-Certification

This option requires students to:

- Enter with a 2.5 overall GPA
- Earn a C or better in all CDFS or SPED coursework
- Comply with field and major professional and dispositional standards

Family and Youth Studies

This option requires students to:

- Enter with a 2.5 overall GPA
- Earn a C or better in all CDFS or SPED coursework
- Comply with field and major professional and dispositional standards

Pre-CDFS Admission

If you do not meet the direct admission requirements above, you can still begin applicable course work as a Pre-CDFS student. You must meet the following requirements:

- Meet all other WVU admission criteria (e.g., ACT, SAT)

AND

- Have obtained a 2.25 GPA (High School)
- Have obtained a 2.25 GPA (0-59 earned college credit hours)

Once admitted as a Pre-CDFS student, successful completion of the following degree option-specific requirements will allow the student to advance into the Bachelor of Science.

Pre-CDFS Admission: Birth through Age 5/Pre-K Certification

- A cumulative WVU GPA of 2.75
- Pass the Praxis CORE. Students who wish to be admitted to the certification track and have not taken or passed the Praxis CORE will be admitted to the non-certification track. They may be admitted to the certification track once they pass all subjects of the Praxis CORE, which must be done and prior to enrollment in CDFS 316
- Pass CDFS 110 and 112, with a grade of B or better
- Pass CDFS 210, 211, or 212, with a grade of B or better
- Earn a grade of C or better in all other CDFS coursework, and grade of B or better in all SPED coursework
- Comply with field and major professional and dispositional standards

Pre-CDFS Admission: Birth through 5/PreK-Non-Certification Track and Family and Youth Studies

- Enter with a cumulative WVU GPA of 2.50
- Pass CDFS 110 and 112, with a grade of B or better
- Pass CDFS 210, 211, or 212, with a grade of B or better
- Earn a grade of C or better in all other CDFS coursework
- Comply with field and major professional and dispositional standards

Click here to view the Suggested Plan of Study (p. 690)

Child Development and Family Studies

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

UNIVERSITY REQUIREMENTS

FIRST YEAR SEMINAR

CDFS 191	First-Year Seminar *	1
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GENERAL EDUCATION FOUNDATIONS CURRICULUM REQUIREMENTS

ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1) Accelerated Academic Writing	6
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GEF 2B		4
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GEF 3 Mathematics & Quantitative Skills (choose one MATH course from the following):		3-4
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MATH 121	Intro Concepts Of Mathematics	
MATH 124	Algebra with Applications	
MATH 126	College Algebra	
MATH 129	Pre-Calculus Mathematics	
MATH 150	Applied Calculus	
MATH 155	Calculus 1	
MATH 156	Calculus 2	

CDFS 110	Families Across the Life Span (Fulfills GEF 4; minimum grade of C- required)	3
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GEF 5 Human Inquiry and the Past		3
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GEF 6 The Arts and Creativity		3
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GEF 7 Global Studies and Diversity		3
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GEF 8 Focus Coursework (choose 3 approved GEF courses)		9
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DEPARTMENTAL REQUIREMENTS

MAJOR AREA COURSES

A minimum grade of C- required for all courses with a CDFS designator

CDFS 112	Introduction to Marriage and Family	3
CDFS 210	Introduction to Parenting	3
CDFS 212	Development in Early and Middle Childhood	3
CDFS 250	Research Methods (fulfills Writing and Communication Skills requirement)	3
CDFS 413	Stress in Families	3
SPED 304	Special Education in Contemporary Society (minimum grade of C- required)	3

AREA OF EMPHASIS 24-49

ELECTIVES (number of electives may vary depending on Area of Emphasis and GEF overlap; students must earn minimum 120 credits to graduate)		43-17
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Total Hours		120
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Note: Students must earn grades of C- or better in all courses with the CDFS course designator required in the major and associated areas of emphasis. If a student's overall GPA drops below 2.5, they may be subject to academic probation and potentially dismissal from the program.

* CDFS 191 is not required for students with transfer work (of at least 29 hours) or students who have previously taken an approved WVU orientation course.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
MATH 121 (GEF 3)		3 CDFS 110 (GEF 4)	3
CDFS 191		1 CDFS 112	3
GEF 5		3 GEF 6	3
GEF 8		3 GEF 7	3
Elective		3	
	16		15

Second Year

Fall	Hours	Spring	Hours
CDFS 210		3 CDFS 250	3
CDFS 212		3 GEF 8	3
GEF 2		4 AOE Courses	9
GEF 8		3	
Elective		3	
			15

Third Year

Fall	Hours	Spring	Hours
AOE Courses		9 AOE Courses	9
Electives		6 Electives	7
			15

Fourth Year

Fall	Hours	Spring	Hours
CDFS 413		3 SPED 304	3
AOE Courses		9 AOE Courses	6
Elective		3 CDFS 491 or 491A	3-6
			15

Total credit hours: 120

CHILD DEVELOPMENT AREA OF EMPHASIS**Child Development Area of Emphasis**

A minimum GPA of 2.5 is required in all emphasis courses

CHILD DEVELOPMENT REQUIREMENTS

CDFS 211	Infant Development	4
CDFS 316	Child Development Practicum	3-4
CDFS 431	Infant Toddler Language and Literacy	3
CDFS 432	Early Socio-Emotional Development	3
CDFS 491	Professional Field Experience	3
CDFS 491A	Professional Field Experience	3

ADDITIONAL REQUIREMENTS

C&I 410	Early Childhood Education 1	3
C&I 411	Early Childhood Education 2	3
HLSC 172	First Aid and Emergency Care	2
RDNG 423	Literacy and the Young Child	3
SPED 311	Developmental Assessment for Young Children with Special Needs	3
or SPED 312	Differentiated Instruction for Young Children	
or SPED 317	Technology for Young Children with/without Special Needs	

KINDERSKILLS

CDFS 430	Best Practices in Pre-K Movement	3
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CLASSROOM CREATIVENESS

2

Choose one of the following courses:

ART 103	Materials and Procedures
C&I 414	Creative Experiences in Early Childhood
MUSC 182	Music in the Elementary School
THET 461	Creative Dramatics

THE BUSINESS OF CHILD CARE AND EDUCATION

6

Choose two of the following courses:

BUSA 320	Survey of Management
BUSA 330	Survey of Marketing
CDFS 420	Leadership in Early Childhood

CDFS 421	Child Care Center Administration	
CDFS 422	The Business of Child Care Management and Financial Strategies	
CDFS 423	External Funding: Early Childhood Programs	
ENTR 340	Survey of Entrepreneurship	
Total Hours		44-45

FAMILY AND YOUTH STUDIES AREA OF EMPHASIS

Family and Youth Studies Area of Emphasis

A minimum GPA of 2.5 is required in all emphasis courses

Child Development Courses

CDFS 412	Adolescent Development	3
CDFS 414	Adolescent Problems and Disorders	3
CDFS 415	Family Interaction and Communication	3
CDFS 491A	Professional Field Experience	6

Additional Requirements

AGEE 220	Group Organization and Leadership	3
BIOL 122	Human Sexuality	3
CHPR 170	Health of the Individual	3
COMM 112	Small Group Communication	3
HN&F 171	Introduction to Human Nutrition	3
PSYC 101	Introduction to Psychology	3
SOCA 303	Juvenile Delinquency	3
SOWK 105	Social Welfare Institutions	3
WGST 170	Introduction to Women's and Gender Studies	3
WVUE 270	Effective Public Speaking	3

Total Hours 45

PRE-SCHOOL EDUCATION, BIRTH-AGE 4 AREA OF EMPHASIS

Birth Through Pre-K CD&FS Area of Emphasis:

A minimum GPA of 2.5 is required in all emphasis courses

CHILD DEVELOPMENT COURSES

CDFS 211	Infant Development	4
CDFS 316	Child Development Practicum	3
CDFS 431	Infant Toddler Language and Literacy	3
CDFS 432	Early Socio-Emotional Development	3

INTERNSHIP REQUIREMENTS

CDFS 491	Professional Field Experience	3
CDFS 491A	Professional Field Experience	3

ADDITIONAL REQUIREMENTS

HLSC 172	First Aid and Emergency Care	2
C&I 410	Early Childhood Education 1	3
C&I 411	Early Childhood Education 2	3
RDNG 423	Literacy and the Young Child	3
SPED 312	Differentiated Instruction for Young Children	3
SPED 317	Technology for Young Children with/without Special Needs	3

KINDERSKILLS

CDFS 430	Best Practices in Pre-K Movement	3
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CLASSROOM CREATIVENESS

Choose one of the following courses:

ART 103	Materials and Procedures	
C&I 414	Creative Experiences in Early Childhood	
MUSC 182	Music in the Elementary School	

THET 461 Creative Dramatics

BUSINESS OF CHILD CARE AND EDUCATION

Choose two of the following courses:

6

BUSA 320	Survey of Management
BUSA 330	Survey of Marketing
CDFS 420	Leadership in Early Childhood
CDFS 421	Child Care Center Administration
CDFS 422	The Business of Child Care Management and Financial Strategies
ENTR 340	Survey of Entrepreneurship

Director's Credential (Optional)

CDFS 420	Leadership in Early Childhood
CDFS 421	Child Care Center Administration
CDFS 422	The Business of Child Care Management and Financial Strategies
CDFS 423	External Funding: Early Childhood Programs

Praxis I *

Total Hours

47

* The Core Academic Skills Test may be waived with an ACT or SAT score that meets state requirements.

Preschool Special Needs, PreK-K Area of Emphasis**Special Needs Pre-K Endorsement Area of Emphasis**

A minimum GPA of 3.0 is required in all emphasis courses

SPED 304	Special Education in Contemporary Society	3
SPED 311	Developmental Assessment for Young Children with Special Needs	3
SPED 312	Differentiated Instruction for Young Children	3
SPED 314	Center-Based Programs Early Intervention	3
SPED 315	Home-Based Programs Early Intervention	3
SPED 316	Behavior Support Young Children Special Needs	3
SPED 317	Technology for Young Children with/without Special Needs	3
SPED 419	Internship: Preschool Special Needs	6

Praxis II **

Praxis I *

Total Hours

27

* The Core Academic Skills Test may be waived with an ACT or SAT score that meets state requirements.

** Students must have passed the Core Academic Skills for Educators test (Praxis I) within their first 30 undergraduate credits to be enrolled in this certification track. Students who do not pass the Core test will be placed in the non-certification CDFS track.

Major Learning Outcomes**BACHELOR OF SCIENCE (BS) IN CHILD DEVELOPMENT AND FAMILY STUDIES**

The BS degree in Child Development and Family Studies offers two curriculum options: Birth through 5/Pre-Kindergarten and Family and Youth Studies.

Students in the Birth through 5/Pre-Kindergarten option of Child Development and Family Studies will acquire:

- Knowledge of the social, emotional, intellectual, and physical development of young children in the family and preschool contexts.
- Skills in implementing appropriate curricula as well as developmental and performance assessments.
- Ability to construct positive and enriched early childhood environments where the young have the opportunity to develop skills for lifelong learning.
- Knowledge of current best practices that prepare young children to be competent, independent learners.
- Ability to reflect on one's knowledge and skills of teaching and interacting with young children.
- Knowledge of how young children learn in order to prepare educational activities in inclusive environments.
- Extensive field experiences with various ages of young children--infants, toddlers and preschoolers and young school age.

Students in the family and youth option of Child Development and Family Studies will acquire:

- Knowledge in human growth and development, adolescent development, human sexuality, family issues and interaction, youth concerns and issues, and related topics.
- Understanding of the various social contextual influences on adolescent development and family functioning and the interactive relationships between families and other societal institutions such as schools.
- Various strategies for working with adolescents and families in various social service and community-based context.
- Hands-on experience working with children, adolescents, and/or families at community agencies.
- Awareness of the multiple career paths for students in this area of study along with options and opportunities for graduate studies.

Multidisciplinary Studies, B.MdS.

Degree Offered

- Bachelor of Multidisciplinary Studies

Nature of the Program

The Multidisciplinary Studies (MDS) in Education and Human Services (EDHS) degree program in the College of Education and Human Services (CEHS) is designed to provide undergraduates with a broad understanding of their chosen education and human service areas, and a set of skills to help them become employable after graduation in careers in education and human services. Some students may organize the major in preparation for graduate work in specific disciplines such as Counseling, Education, Human Development and Family Sciences, or Special Education. Other students may select minor areas that will qualify them to specific career opportunities, such as a perinatal educator, youth worker, child/family advocate, early childhood intervention specialist, and residential counselor. This program does not confer any professional certification or licensure.

The Bachelor of Multidisciplinary Studies (EDHS) is comprised of three minors. Two minors must be from within the College of Education and Human Services; the third minor may be taken in this college or from another college or school, but it should be selected to complement the EDHS minors.

The current minors in the College include:

- Addiction Studies
- Child Development and Family Studies*
- Disability Studies+
- Early Intervention
- Family and Youth*
- Human Services
- Infants and Toddlers*
- Special Education
- Communication Sciences
- Communication Disorders

*Students are not permitted to complete all three of these minors.

+Students may not complete both the minor in Disability Studies and the undergraduate certificate in Disability Studies.

The EDHS/MDS program provides a list of career tracks illustrating how the minors can be combined to provide students with knowledge, skills, and experiences that will enhance their qualifications for specific careers in education or human services occupations. However, a student may also propose a combination of minors but they must demonstrate how the three chosen fields of study work together toward his/her educational and/or career goals. For example, one student may choose the areas of Family and Youth, Human Services, and Business Administration with the goal of a career in the administrative side of an agency that serves a diverse client base. Another student may choose the areas of Disability Studies, Early Intervention, and Infants and Toddlers, to prepare for a career as a Developmental Specialist in Birth to Three Services. The combinations and career options provide multiple pathways to a meaningful and satisfying career working with children or adults in education and human services.

Students who earn a degree in the Multidisciplinary Studies Program in Education and Human Services in the College of Education and Human Services must complete University requirements for an undergraduate degree, College requirements for this MDS program, and the requirements for each of the three minors. At the end of the program, students complete a capstone project that incorporates content from the three minor areas.

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the CEHS Bachelor of Multidisciplinary Studies (<https://admissions.wvu.edu/academics/majors/multidisciplinary-studies-education-and-human-services/>) major.

Admission to the MDS program in Education and Human Services is approved for several groups of students:

- incoming freshmen who meet the high school GPA and test score criteria for residents or non-residents for regular admission to WVU.
- transfer students from another college or university upon regular admission to WVU, if they have a minimum cumulative undergraduate GPA of at least 2.0.
- transfer students from another school or college within WVU, if they have a minimum cumulative undergraduate GPA of at least 2.0.
- transfer students from within the College of Education and Human Services, if they have a minimum cumulative undergraduate GPA of at least 2.0.

Once students are admitted to the MDS program, they will be assigned an advisor who will work with them to declare their three minors and plan a program of study.

[Click here to view the Suggested Plan of Study \(p. 696\)](#)

Degree Requirements for Multidisciplinary Studies in Education/Human Services (BMDS)

Students who earn a degree in the undergraduate program in Multidisciplinary Studies in Education and Human Services in the College of Education and Human Services must complete University requirements, College requirements for their specific degree program, and their three minor requirements. A minimum grade of C- is required in all minor area courses and in the capstone course.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

NOTE: Minor course requirements may not be used to fulfill GEF requirements.

Curriculum Requirements

UNIVERSITY REQUIREMENTS

FIRST YEAR SEMINAR

EDHS 191	First-Year Seminar	1
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GENERAL EDUCATION FOUNDATIONS CURRICULUM REQUIREMENTS

ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF1) Accelerated Academic Writing	6
GEF 2A/B Science and Technology		4-6
GEF 3 Mathematics & Quantitative Skills		3
GEF 4 Society & Connections		3
GEF 5 Human Inquiry & The Past		3
GEF 6 The Arts & Creativity		3
GEF 7 Global Studies & Diversity		3

GEF 8 Focus Coursework (choose any three additional GEF courses) 9

MAJOR REQUIREMENTS

A minimum cumulative GPA of 2.0 required

EDHS 100	Orientation to Multidisciplinary Studies in Education and Human Services	1
EDHS 200	Professional Inquiry in Education and Human Services	3
EDHS 489	Capstone Project: Multidisciplinary Studies in Education and Human Services (fulfills Writing and Communication Skills requirement)	3

A minimum grade of C- in all minor courses required

CEHS MINOR 1 15-19

CEHS MINOR 2 15-18

CEHS MINOR 3 OR MINOR OUTSIDE OF CEHS 15-18

ELECTIVES (number of electives may vary depending on GEF overlap with minors selected) * 33-21

Total Hours 120

* A minimum of 30 hours of coursework for the degree must be at the 300 level or higher.

Suggested Plan of Study**First Year**

Fall	Hours	Spring	Hours
EDHS 191		1 ENGL 102 (GEF 1)	3
ENGL 101 (GEF 1)		3 Minor 1 Course 2	3
GEF 5		3 GEF 4	3
GEF 7		3 GEF 6	3
Minor 1 Course 1		3 General Elective	3
General Elective		3 EDHS 100	1
		16	16

Second Year

Fall	Hours	Spring	Hours
MATH 121 or higher (GEF 3)		3 Minor 2 Course 2	3
GEF 2		4 Minor 2 Course 3	3
Minor 1 Course 3		3 GEF 8	3
Minor 2 Course 1		3 General Elective	3
Minor 3 Course 1		3 General Elective	3
		16	15

Third Year

Fall	Hours	Spring	Hours
EDHS 200 or equivalent		3 Minor 3 Course 4	3
Minor 1 Course 4		3 Minor 2 Course 4	3
Minor 3 Course 3		3 Minor 1 Course 5	3
Minor 3 Course 4		3 GEF 8	3
GEF 8		3 General Elective or Minor Course	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
Minor 1 Course 5		3 EDHS 489 Capstone Project	3
Minor 2 Course 5		3 Minor 3 Course 5	3
Minor 3 Course 4		3 General Elective	3
General Elective or Minor Course		3 General Elective	3
General Elective or Minor Course		3	
		15	12

Total credit hours: 120

Major Learning Outcomes

MULTIDISCIPLINARY STUDIES IN EDUCATION/HUMAN SERVICES

This program has been designed so that program graduates can accomplish the following learning goals:

- Develop knowledge and skills related to content in three minor areas in education and human services and related fields of study.
- Integrate content from minor areas to study a problem of practice in education and human services.
- Prepare and present professional products that identify, discuss and propose solutions for a problem of practice in education and human services.
- Identify career options and pathways to future careers related to education and human services.

Youth and Family Sciences, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

The undergraduate program in Youth and Family Science offers a Bachelor of Science degree option.

YOUTH AND FAMILY SCIENCES

The Youth and Family Science major is designed for students who are interested in adolescents and families. Students complete coursework related to family issues, family interaction, human growth and development, human sexuality, and youth and family concerns. All students are required to complete field experiences at agencies focused on youth and families. This major is best suited for students interested in working with older children, adolescents, and/or families in youth development or family development programs in community agencies.

Admissions

High school and other students interested in a career in youth and family sciences can apply and be directly admitted to the Youth and Family Science program. If they meet the following criteria:

INCOMING FRESHMEN

DIRECT ADMISSION

- Enter with a 2.5 GPA (High school)
- Earn a C or better in all CDFS or SPED coursework
- Comply with field and major professional and dispositional standards

CURRENT WVU UNDERGRADUATE STUDENTS AND STUDENTS TRANSFERRING FROM ANOTHER COLLEGE/UNIVERSITY

This population includes transfers from outside of WVU as well as major transfers from within WVU.

This option requires students to

- Enter with a 2.5 overall GPA
- Earn a C or better in all CDFS or SPED coursework
- Comply with field and major professional and dispositional standards

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

University Requirements

General Education Foundation Requirements (2, 5, 6, and 7)	13	
ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1) Accelerated Academic Writing	6
Select one of the following (GEF 3):		3
MATH 121	Intro Concepts Of Mathematics	
MATH 124	Algebra with Applications	
MATH 126	College Algebra	
MATH 129	Pre-Calculus Mathematics	
MATH 150	Applied Calculus	
MATH 155	Calculus 1	
MATH 156	Calculus 2	

Major Area Coursework

A minimum GPA of 2.5 is required in all major courses.

A minimum grade of C- required in all CDFS courses.

CDFS 191	First-Year Seminar	1
CDFS 110	Families Across the Life Span (GEF 4)	3
CDFS 112	Introduction to Marriage and Family (GEF 8)	3
CDFS 172	Health, Safety, & Nutrition in Early Childhood	3
CDFS 210	Introduction to Parenting	3
CDFS 212	Development in Early and Middle Childhood	3
CDFS 250	Research Methods	3
CDFS 412	Adolescent Development	3
CDFS 413	Stress in Families	3
CDFS 414	Adolescent Problems and Disorders	3
CDFS 415	Family Interaction and Communication	3
CDFS 491A	Professional Field Experience	6

Additional Requirements

Minimum Grade of C- required in all Additional Requirements Courses

Select three of the following (GEF 8):		9
PSYC 101	Introduction to Psychology	
PUBH 101	Introduction to Public and Community Health	
SOCA 101	Introduction to Sociology	
WGST 170	Introduction to Women's and Gender Studies	
Select one of the following:		3
DISB 381	Lifespan Disability Policy	
DISB 385	Disability and Society	
SPED 304	Special Education in Contemporary Society	
Select two of the following:		6
COMM 102	Fundamentals of Interpersonal Communication	

COMM 112	Small Group Communication	
COMM 202	Interpersonal Communication	
COMM 212	Gender Communication	
COMM 410	Family Communication	
Select one of the following (GEF 8):		3
HN&F 126	Society and Food	
HN&F 171	Introduction to Human Nutrition	
Select one of the following:		3
COUN 240	Introduction to Addiction Studies	
COUN 303	Introduction to Helping Professions	
Select one of the following:		3
GERO 212	Introduction to Gerontology	
SOCA 312	Death and Dying	
Select one of the following:		3
COMM 103 & COMM 104	Presentational Speaking and Public Communication	
LDR 201	Principles of Leadership	
Select one of the following:		3
ASP 220	Introduction to Africana Studies	
ENGL 252	Appalachian Fiction	
NAS 200	Introduction: Native American Studies	
WGST 225	Women in Appalachia	
WGST 260	Perspectives on Lesbian, Gay, Bisexual, Transgender, and Queer Studies	3
ACCT 200	Survey of Accounting	3
AGEE 440	Principles of Cooperative Extension	2
SOCA 226	Sexuality and Society	3
SOCA 303	Juvenile Delinquency	3
General Electives		14
Total Hours		120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 Select one of the following:	3
MATH 121 (or higher; GEF 3)		3 PSYC 101	
CDFS 191		1 PUBH 101	
CDFS 110 or 112 (GEF 4)		3 SOCA 101	
GEF 2		4 WGST 170	
Elective		2 GEF 5	3
		CDFS 110 or 112 (GEF 8)	3
		CDFS 172	3
		GEF 7	3
			16
			15

Second Year

Fall	Hours	Spring	Hours
CDFS 250		3 CDFS 210	3
CDFS 212		3 Select one of the following:	3
ENGL 102		3 COMM 103	
HN&F 126 or 171 (GEF 8)		3 COMM 104	
Select one of the following:		3 LDR 201	
PSYC 101		GEF 6	3
PUBH 101		Select one of the following:	3

SOCA 101		PSYC 101	
WGST 170		PUBH 101	
		SOCA 101	
		WGST 170	
		Select one of the following:	3
		COMM 102	
		COMM 112	
		COMM 202	
		COMM 212	
		COMM 410	
	15		15
Third Year			
Fall	Hours	Spring	Hours
CDFS 413		3 ACCT 200	3
Select one of the following:		3 Elective	3
COMM 102		Elective	3
COMM 112		Select one of the following:	3
COMM 202		DISB 381	
COMM 212		DISB 385	
COMM 410		SPED 304	
COUN 240 or 303		3 GERO 212 or SOCA 312	3
Select one of the following:		3	
ASP 220			
ENGL 252			
NAS 200			
WGST 225			
WGST 260	3		
	15		15
Fourth Year			
Fall	Hours	Spring	Hours
CDFS 491A		3 CDFS 414	3
CDFS 412		3 CDFS 491A	3
Elective		3 CDFS 415	3
AGEE 440		2 SOCA 303	3
SOCA 226		3 Elective	3
	14		15

Total credit hours: 120

Major Learning Outcomes

YOUTH AND FAMILY SCIENCES

Upon graduation, all Bachelor of Science students in Youth and Family Sciences will be able to:

- Recall, explain, apply, and synthesize knowledge in the following seven content areas:
 1. Families and individuals in societal contexts
 2. Internal dynamics of families
 3. Human growth and development across the lifespan
 4. Human sexuality
 5. Interpersonal relationships
 6. Parent education and guidance
 7. Professional ethics and practice

- Apply knowledge and skills from coursework/content areas to evaluate societal issues and problems that impact families and individuals within families.
- Demonstrate mastery in the scientific process, scientific inquiry, and family theories through:
 - Critically analyzing relevant literature in the field of family science
 - Interpreting and translating knowledge from empirical studies and theory to applied settings and field work
 - Creating and designed solutions to address issues affecting contemporary families and individuals within families.
- Demonstrate mastery of knowledge of the seven content areas and current issues in the field of youth and family science via:
 - Explaining, interpreting, and disseminating knowledge about family science to various stakeholders, including laypersons, families, and youth and family science colleagues.
 - Reflecting on their own professional growth across courses and field experiences.

Engineering and Mineral Resources- Benjamin M. Statler College of

Contact Information

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E-mail: statler-info@mail.wvu.edu

Phone: (304) 293-4821

Degrees Offered

- Bachelor of Science in Aerospace Engineering (B.S.A.E.)*
- Bachelor of Science in Biomedical Engineering (B.S.Bm.E.)*
- Bachelor of Science in Biometric Systems Engineering (B.S.B.S.E.)
- Bachelor of Science in Chemical Engineering (B.S.Ch.E.)*
- Bachelor of Science in Civil Engineering (B.S.C.E.)*
- Bachelor of Science in Computer Engineering (B.S.Cp.E.)*
- Bachelor of Science in Computer Science (B.S.C.S.)[#]
- Bachelor of Science in Cybersecurity (B.S.)
- Bachelor of Science in Electrical Engineering (B.S.E.E.)*
- Bachelor of Science in Industrial Engineering (B.S.I.E.)*
- Bachelor of Science in Mechanical Engineering (B.S.M.E.)*
- Bachelor of Science in Mining Engineering (B.S.Min.E.)*
- Bachelor of Science in Petroleum and Natural Gas Engineering (B.S.P.N.G.E.)*

* Accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>.

[#] Accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>.

Dual Degrees Offered

- Aerospace Engineering and Mechanical Engineering
- Biometric Systems and Computer Engineering
- Biometric Systems and Electrical Engineering
- Civil Engineering and Mining Engineering
- Computer Engineering and Computer Science
- Computer Engineering and Electrical Engineering
- Mining Engineering and Geology

Nature of Program

The Benjamin M. Statler College of Engineering and Mineral Resources (Statler College) undergraduate degree 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

All undergraduate programs are recognized by industry as providing excellent preparation for the engineering profession. They are planned to give students a balanced background in the basic sciences, engineering sciences, engineering analysis, the humanities, and the social sciences. In addition, each curriculum features creative programs in engineering synthesis and design. This blend of science and practice gives students the tools to solve today's problems and the background to develop the expertise needed for their future success in the profession. Our graduates enjoy a multitude of career opportunities in our world's most vital industries.

The Statler College is committed to providing high-quality educational programs for all undergraduate students, so that graduates of the College will:

- Be proficient in their chosen field
- Develop and maintain professional ethics and understand the comprehensive impact of engineering solutions on a diverse, interconnected, and global society
- Continue in their education on a life-long basis through both formal study and self-directed inquiry

The faculty uses modern teaching techniques including programmed material, guest lectures by visiting authorities, team projects, and in-house industrial assignments to provide a breadth of training experiences. Teaching laboratories are equipped with modern instruments, machines, and tools to improve and enrich the student's understanding of engineering principles and problems. Numerous computer laboratories and facilities are available for classroom work.

College programs are geared to provide graduates with a sound background upon which to enter the industrial workforce or to pursue graduate study in engineering, medicine, law, or business. A number of industries in West Virginia and the region provide meaningful and financially rewarding summer employment for students. These training opportunities often lead to professional positions upon graduation.

Accreditation

ABET accredits college and university programs in the disciplines of applied and natural science, computing, engineering and engineering technology at the associate, bachelor and master degree levels. With ABET accreditation, students, employers and society can be confident that a program meets the quality standards that produce graduates prepared to enter a global workforce.

The Bachelor of Science in Computer Science (B.S.C.S.) is accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>.

The Bachelor of Science in Aerospace Engineering (B.S.A.E.), Bachelor of Science in Biomedical Engineering (B.S.Bm.E.), Bachelor of Science in Chemical Engineering (B.S.Ch.E.), Bachelor of Science in Civil Engineering (B.S.C.E.), Bachelor of Science in Computer Engineering (B.S.Cp.E.), Bachelor of Science in Electrical Engineering (B.S.E.E.), Bachelor of Science in Industrial Engineering (B.S.I.E.), Bachelor of Science in Mechanical Engineering (B.S.M.E.), Bachelor of Science in Mining Engineering (B.S.Min.E.), and Bachelor of Science in Petroleum and Natural Gas Engineering (B.S.P.N.G.E.) are accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>.

The Statler College intends to seek ABET accreditation for the Biometric Systems Engineering and Cybersecurity programs.

Curricula

During the first two years, students acquire fundamental knowledge in mathematics, basic sciences, and introductory engineering topics. Engineering design, computer-based experience, and communication skills are integrated throughout the curriculum. In the third and fourth years, the curriculum builds upon the fundamental engineering concepts toward an integrated educational experience, preparing students to pursue a successful professional career and life-long learning. Technical electives allow students to develop depth in a specialty area or breadth among several fields. Study in the humanities and social sciences play an integral part of our programs, enabling students to understand and appreciate the technological, social, and cultural changes that challenge the world and providing the context of our ethical and responsible duties to society.

Time to Completion of Degree

All undergraduate, single degree programs in the college are structured so that they can be completed in eight semesters of full-time study. However, students who are not prepared to enter MATH 155 in their first semester may not be able to complete an engineering degree within eight semesters. Applicants to the college are strongly urged to take the required prerequisites to calculus and chemistry in the summer before entering WVU or plan on attending summer school after their freshman year in order to avoid delays in their graduation.

Degree Requirements

To be eligible to receive a bachelor's degree, a student is required to complete satisfactorily the number of semester hours of work as specified in the program curriculum. Students must achieve a minimum grade point average of 2.25 for all courses taken at WVU, a major grade point average of 2.25 or better in courses completed within the student's major, and a minimum overall grade point average of 2.25. A maximum of one math or science course with a grade of D+, D, or D- may apply toward a Statler College degree. All course attempts are included in the major GPA calculation according to university policy.

Graduating students are expected to complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

Academic Minor

The Statler College offers minors in Biomedical Engineering, Chemical Engineering, Computer Science, Cybersecurity, and Engineering in Society to all undergraduate students. A student must consult with his or her major advisor to develop a scheduling plan for courses that satisfy the requirements for these minors. The completed minor will be recorded on the student's permanent transcript.

Cooperative (Co-op) Education and Internship Programs

The co-op opportunity is available to any qualified student interested in pursuing a degree in any engineering major offered by the college or computer science. The five-year professional development experience combines practical on-the-job experience with the classroom education of a four-year engineering curriculum. Internships are arranged with an employer for various work periods and may involve an academic semester or summer term.

Learning Abroad Programs

Students are strongly encouraged to prepare for their careers through learning abroad. The college participates in numerous international exchange programs for undergraduates, as well as the International Student Exchange Program (ISEP) managed through the WVU International Programs Office. There are short-term classes led by WVU faculty, semester and year-long exchange programs, study abroad programs, and service learning opportunities via Engineers Without Borders. The college strongly encourages students to participate in these unique study abroad opportunities. Individual program details vary, but in general, provide Statler College students the opportunity to take part in a study abroad experience that may be for a summer, semester, or full academic year taking courses that count toward their degree so graduation need not be delayed. The Statler College offers its students the opportunity to earn a Certificate in Global Competency which, if successfully completed, is recorded on the student's transcript. Students are encouraged to visit the International Programs website for more detailed information.

Grand Challenges Scholars Program

Students who want to help change the world while in college may seek to join the Grand Challenges Scholars Program. The GCSP requires students to integrate coursework and experiential learning in five areas of research, multidisciplinary interaction, business or entrepreneurship, multicultural or global awareness, and social consciousness that culminates in a final work addressing one of the National Academy of Engineering's global grand challenges in sustainability, health, security, and joy of living.

Scholarships

FIRST YEAR STUDENTS

The Statler College awards four-year scholarships to incoming first year students based on academic performance in high school and standardized test scores (ACT/SAT). These scholarships are automatic and students do not need to apply. Requirements can be found at <https://www.statler.wvu.edu/undergraduate/paying-for-college> (<https://www.statler.wvu.edu/undergraduate/paying-for-college/>). These scholarships would be awarded in conjunction to any other WVU scholarship a student may be receiving.

CONTINUING STUDENTS

The Statler College and its constituent departments offer numerous competitive scholarships to undergraduate students who have been in the college for at least one year. Scholarships are based on several factors including academic performance, financial need, and research involvement. These scholarships require applications to be completed by the end of the fall semester. More information can be found at <http://www.statler.wvu.edu/undergraduate/paying-for-college/scholarships> (<http://www.statler.wvu.edu/undergraduate/paying-for-college/scholarships/>). These scholarships would be awarded in conjunction to any other WVU scholarship a student may be receiving.

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 OF RESEARCH

- Xingbo Liu - Ph.D. (University of Science & Technology, Beijing)

ASSISTANT DEAN FOR FUNDAMENTALS OF ENGINEERING

- Robin A. M. Hensel - Ed.D. (West Virginia University)

ASSISTANT DEAN FOR ADMINISTRATION

- R. Jason Dean - M.A. (West Virginia University)

Learning Outcomes for Degree Designations

Each degree offered in the Statler College has designated learning outcomes which students should achieve through the respective programs.

BACHELOR OF SCIENCE IN AEROSPACE ENGINEERING (BSAE)

Upon graduation, all Bachelor of Science students in Aerospace Engineering will have the:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

BACHELOR OF SCIENCE IN BIOMEDICAL ENGINEERING (BSBME)

Upon graduation, all Bachelors of Science students in Biomedical Engineering will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

BACHELOR OF SCIENCE IN BIOMETRIC SYSTEMS ENGINEERING (BSBSE)

Upon graduation, all Bachelor of Science students in Biometric Systems Engineering will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING (BSCHE)

Upon graduation, all Bachelors of Science students in Chemical Engineering will:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

BACHELOR OF SCIENCE IN CIVIL ENGINEERING (BSCE)

Upon graduation, all Bachelor of Science students in Civil Engineering will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

BACHELOR OF SCIENCE IN COMPUTER ENGINEERING (BSCPE)

Upon graduation, all Bachelor of Science students in Computer Engineering will have the:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

BACHELOR OF SCIENCE IN COMPUTER SCIENCE (BSCS)

Upon graduation, all Bachelor of Science students in Computer Science will have an ability to:

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply computer science theory and software development fundamentals to produce computing-based solutions.

BACHELOR OF SCIENCE IN CYBERSECURITY (BS)

Upon graduation, all Bachelor of Science students in Cybersecurity will be able to:

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply security principles and practices to maintain operations in the presence of risks and threats.

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING (BSEE)

Upon graduation, all Bachelor of Science students in Electrical Engineering will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors

3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

BACHELOR OF SCIENCE IN INDUSTRIAL ENGINEERING (BSIE)

Upon graduation, all Bachelor of Science students in Industrial Engineering will have acquired the:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING (BSME)

Upon graduation, all Bachelor of Science students in Mechanical Engineering will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

BACHELOR OF SCIENCE IN MINING ENGINEERING (BSMINE)

Upon graduation, all Bachelor of Science students in Mining Engineering will:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

BACHELOR OF SCIENCE IN PETROLEUM AND NATURAL GAS ENGINEERING (BSPNGE)

Upon graduation, all Bachelor of Science students in Petroleum and Natural Gas Engineering will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences

4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Benjamin M. Statler College of Engineering and Mineral Resources (<https://www.statler.wvu.edu/undergraduate/admissions-criteria/>).

The Statler College will admit first year students to study under one of three distinct programs: Engineering Track 1, Engineering Track 2, or Engineering Track 3. Admission is based on high school grade point average and math readiness. The objective of having these individual tracks is to provide a first year curriculum tailored to the level of academic preparation of the student which maximizes the opportunity for success. Each track provides students the coursework necessary to meet the requirements to move into their intended major.

The following summarizes the admission requirements of each track to coincide with placement into the appropriate math, science, and engineering courses. Students must meet all of the criteria listed; these criteria are minimum requirements for admission to the Statler College. Admission to a discipline major is competitive and dependent on enrollment availability. Students must also meet all other WVU admission requirements (<https://admissions.wvu.edu/>).

ENGINEERING TRACK 1

- High School GPA should be at least 3.00
- Math placement of MATH 155
- Students on this track can typically graduate in 4 years

ENGINEERING TRACK 2

- High School GPA should be at least 2.50
- Math placement of MATH 153
- Students on this track can typically graduate in 4 to 4.5 years

ENGINEERING TRACK 3

- High School GPA should be at least 2.50
- Math placement of MATH 126
- Students on this track can typically graduate in 5 years

Transfer Students

TRANSFERRING FROM WITHIN WVU

Students wishing to transfer into any Statler major from another program at WVU must have a GPA of at least a 2.50 in all college coursework attempted. Students with less than 24 credit hours can be admitted based on freshman admissions criteria. Otherwise, students must have completed at least one semester of college coursework and present evidence that they are eligible to enroll in MATH 155. These criteria are minimum requirements for admission into the Statler College, and at times a student's full transcript can be taken into account during the admission process. Students meeting this criteria will be admitted into Engineering Track 2. Admission to a discipline major is competitive and dependent on enrollment availability.

TRANSFERRING FROM OUTSIDE WVU

Students wishing to transfer into any Statler major from outside WVU must have a GPA of at least a 2.75 in all college coursework attempted. Students with less than 24 credit hours can be admitted based on freshman admission criteria (shown in table above). Otherwise, students must have completed at least one semester of college coursework and present evidence that they are eligible to enroll in MATH 155. These criteria are minimum requirements for admission into the Statler College, and at times a student's full transcript can be taken into account during the admission process. Students meeting this criteria will be admitted into Engineering Track 2. Admission to a discipline major is competitive and dependent on enrollment availability.

Students wishing to transfer directly into an engineering discipline must have a GPA of at least a 2.75 and have completed MATH 155, CHEM 115, ENGL 101, ENGR 101, ENGR 102, and ENGR 191 all with a C or better (students transferring in with more than 29 credit hours are exempt from ENGR 191). Students wishing to transfer directly into computer science or cybersecurity must have a GPA of at least 2.75 and have completed MATH 155, CHEM 115 or an approved lab science course, ENGL 101, ENGR 101, CS 110, and ENGR 191 all with a minimum grade of C or better (students transferring in with more than 29 credit hours are exempt from ENGR 191).

If students are sophomore level or above, have earned a C or better in CHEM 115, MATH 155, MATH 156, and PHYS 111, and have completed at least three credit hours in a discipline specific course, then they may take an approved elective (or approved transfer credit) as a substitute for either ENGR 101 or 102. If the combination of multiple engineering courses transferred to WVU matches the content of ENGR 101 and/or 102, those courses may be approved as a course substitution for ENGR 101 and/or 102. Other transfer courses that are not an exact match may be approved as a technical elective to substitute for ENGR 101 or 102 at the discretion of the Assistant Dean for Fundamentals of Engineering. These criteria are minimum requirements for admissions into the Statler College, and a student's full transcript can be taken into account during the admission process. Admission to a discipline major is competitive and dependent on enrollment availability.

Certificate Programs

- Biomedical Engineering (p. 62)
- Global Competency (p. 63)

Benjamin M. Statler College of Engineering and Mineral Resources Minors

- Biomedical Engineering (<http://catalog.wvu.edu/undergraduate/minors/biomedicalengineering/>)
- Chemical Engineering (http://catalog.wvu.edu/undergraduate/minors/chemical_engineering/)
- Computer Science (<http://catalog.wvu.edu/undergraduate/minors/cs/>)
- Cybersecurity (<http://catalog.wvu.edu/undergraduate/minors/cybersecurity/>)
- Engineering in Society (<http://catalog.wvu.edu/undergraduate/minors/engineeringinsociety/>)

Procedures and Guiding Principles for Handling Transfer/Transient Credit

The Statler College strives to manage student transfer/transient credits in a fair, consistent, and uniform manner relative to students in the College who do not seek transfer/transient course credit and to exercise due diligence with meeting ABET prerequisite and curricular requirements for transfer credit. The College has adopted the following procedures/guiding principles to deal with transfer/transient credit issues.

CREDIT TRANSFER PROCEDURE

Chemistry, engineering, geology, math, or physics courses transferred to WVU for consideration of academic credit in the Statler College will be transferred as "Open Credit" (e.g., MATH 000, NOEQ, 1TC, 2TC, etc). The "open credit" will be reviewed to determine if it meets the academic requirements of the College and if so, processed by a course substitution action. The only exceptions to this policy will be if a student is transferring into the College:

- Advanced Placement Program (AP) credit
- International Baccalaureate (IB) credit
- College Level Examination Program (CLEP) credit
- Credit based on an approved Transient Approval Form by the dean or his designee before the course was taken
- Credit from a college or university with which Statler College has an approved articulation agreement

GUIDELINES FOR COLLEGE APPROVAL OF REQUESTS FOR TRANSIENT COURSE CREDIT

Students may request up to nine (9) credits of coursework to be taken in transient for use toward the degree requirements, defined to include mathematics, science, and Statler College courses. Students may request up to eighteen (18) credits of coursework in total, which includes English, Economics, general education elective courses, and free electives. For a request to take required course in transient, the student must present sufficient evidence that a course requested to be taken in transient is equivalent to the specified WVU course and allow for ample time for review.

An Undergraduate Transient Application will typically be approved if:

- The student has met the rank, prerequisite/co-requisite courses, etc., to take the course at WVU
- The prerequisite courses have been completed with a minimum grade of C (C- is not acceptable)
- The requested course has the same number of credit hours and pre or co-requisites as the WVU course or has otherwise been deemed academically equivalent by Statler College

An Undergraduate Transient Application will not be approved if:

- The student has previously earned a D, F, or W in the equivalent course at WVU
- Any online course fails to have proctored exams.
- Any online course includes a laboratory component.
- The student is currently enrolled at WVU to take coursework in the same term/semester in which they are applying to be a transient student at another institution.

Meeting the guidelines for a transient application does not guarantee approval of the transient application. The associate dean for academic affairs has the right to set conditions more stringent than those set forth in these guidelines, as well as the right to limit transient course credit. Transient requests for summer session will be reviewed after April 1.

COURSES TAKEN BY LEARNING ABROAD

Courses taken on an approved learning abroad experience are exempt from the 9/18 credit limit of transient work. Students are encouraged to work with the Statler College Advising Center to develop an appropriate course plan in advance of the learning abroad experience. Courses should be reviewed for content and suitability for a reasonable course substitution to meet program requirements.

COURSE SUBSTITUTION APPROVAL PROCESS

A course designated as "open credit" can be petitioned for specific course credit through the established course substitution approval process. The student must present sufficient evidence that the course is equivalent to the specified WVU course. A course syllabus and transcript showing the student's grade in that course must be presented with the application for the course to be reviewed to determine equivalency. Since this review process may take significant time to complete, credit for courses presented for review within two weeks of the beginning of a semester may not be awarded credit in time for the student to register for a subsequent course for which the transfer course is a prerequisite.

To be approved to apply toward a Statler College degree, courses taken in transient must have an earned grade of C- or better. If a course taken in transient has a grade below C-, it must be completed at WVU.

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.

STATLER COLLEGE DISMISSAL

Academic program dismissal identifies the status of a student who has failed to meet the minimum academic standards of the college and has been transferred to the Center for Learning, Advising, and Student Success or to another WVU college, school, or program. Dismissal from the Statler College means that a student will not be permitted to register for any classes in the college until the student has been officially reinstated to the college. Students are expected to maintain a minimum grade point average of 2.25 in their major coursework, for all WVU courses, and overall. Students whose academic major GPA, WVU-earned GPA or overall GPA continues below the minimum standards outlined in the following table will be subject to dismissal from the Statler College. Students eligible for dismissal may not transfer to another major program in the Statler College. A student who has preregistered for classes and is subsequently dismissed shall have their registration in Statler College courses automatically canceled. The student has

the right to appeal an academic performance dismissal. If a student appeal of dismissal is granted, any subsequent dismissal will be final. Students who have been dismissed from Statler College for academic integrity offenses may not appeal for reinstatement.

A student who has been dismissed for academic performance must complete a contract for performance and petition to be readmitted to the Statler College; the decision to readmit will be on a case-by-case basis. The duration of the dismissal for academic performance from the Statler College is one academic semester. If a student is readmitted to the Statler College and subsequently dismissed a second time, they may not return to the Statler College. A student who has been dismissed from the Statler College, including from the Fundamentals of Engineering program, cannot transfer academic major course work taken at another institution, during the period of dismissal, for credit toward meeting their degree requirements.

The Statler College has established additional requirements for satisfactory academic progress. Failure to meet any of these requirements may lead to dismissal from the Statler College:

1. Students must maintain minimum GPAs (major, WVU, and overall) of 2.25. (Program requirements may be higher.)
2. Students have a maximum of two attempts (course grades of A-F and W) to pass a degree-applicable course; a third attempt may be requested once for approval by the Associate Dean for Academic Affairs.
3. The maximum number of consecutive semesters with an original term GPA less than 2.00 is two. Original term GPA is before any adjustments such as repeated courses.
4. The maximum DFW allowance for courses is 40% of credit hours attempted to be applied to the degree.

MINIMUM MAJOR, WVU, AND OVERALL GPA REQUIREMENTS

A maximum of one math or science course with a grade of D+, D, or D- may apply toward a Statler College degree.

The 2.25 minimum GPA is enforced after 40 credits are attempted. Before then, a sliding scale for minimum GPA is in effect.

Total Hours Attempted*	Minimum cumulative GPA*
0 to 13	N/A
14 to 29	2.00
30 to 39	2.10
40 and more	2.25

* Total hours attempted include transfer work and courses with a grade of W.
Major GPA is for attempted credit hours within a program (e.g., CE or IENG)

Graduation Requirements

To be eligible to receive a bachelor's degree, a student is required to complete satisfactorily the number of semester hours of work as specified in the program curriculum. Students must achieve a minimum grade point average of 2.25 for all courses taken at WVU, a major grade point average of 2.25 or better in courses completed within the student's major, and a minimum overall grade point average of 2.25. A maximum of one math or science course with a grade of D+, D, or D- may apply toward a Statler College degree. All course attempts are included in the major GPA calculation according to university policy.

Graduating students are expected to complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

Accreditation

The Computer Science program is accredited by the Computing Accreditation Committee (CAC) of ABET, <http://www.abet.org>.

The following programs within the Benjamin M. Statler College of Engineering and Mineral Resources are accredited by the Engineering Accreditation Commission (EAC) of ABET, <https://www.abet.org>.

- Aerospace Engineering
- Biomedical Engineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering
- Mining Engineering
- Petroleum & Natural Gas Engineering

The Biometric Systems Engineering and Cybersecurity programs are not accredited. The Statler College intends to seek accreditation of these programs.

Department of Chemical and Biomedical Engineering

E-mail: Statler-CHE@mail.wvu.edu

Degrees Offered

- Bachelor of Science in Biomedical Engineering (B.S.Bm.E.)
- Bachelor of Science in Chemical Engineering (B.S.Ch.E.)

Nature of the Programs

The Department of Chemical and Biomedical Engineering offers undergraduate degrees in chemical engineering (ChE) and biomedical engineering (BMEG). Chemical engineers focus on processes that convert raw materials such as crude oil, biomass, coal and natural gas into value-added finished products such as plastics, paints, detergents and pharmaceuticals. Biomedical engineers are trained to work at the interface of engineering and biomedical sciences, and they focus on developing engineering skills and applying them to materials, processes and procedures used in medicine and biology. Both degree programs require a strong background in chemistry, mathematics, and physics.

The chemical engineering curriculum is structured uniquely with a heavy emphasis on design, beginning in the sophomore year. Graduates with a BSChE degree are prepared for positions in production, product and process development, sales and marketing, management and also research. There is a large concentration of chemical industry in the area, and the ChE program benefits from interactions with industrial practitioners.

The biomedical engineering program offers significant flexibility of study through a variety of electives. With the participation of faculty from several engineering departments, students learn about cells and tissues but also topics such as imaging and mechanics. Students are exposed to both engineering and clinical aspects of the field through interactions with faculty both in engineering and WVU Health Sciences Center. Graduates with a BSBmE degree are prepared for solving the health-related problems and improving the quality of life of the aging population within the state and the nation.

Students in both programs are also prepared for graduate school in engineering and for professional schools in business, law and medicine.

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. Cileto - 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)
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, Environmental remediation

ASSOCIATE PROFESSORS

- 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)
Wide bandgap semiconductor growth and etching, Surface kinetics, Thin films, Electronic materials

ASSISTANT PROFESSORS

- 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, CO₂ 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 Undergraduate Education. Biomaterials, Polypeptides, Drug delivery, Bioengineering and materials science

TEACHING INSTRUCTOR

- Jeremy S. Hardinger - Ph.D. (West Virginia University)

RESEARCH ASSISTANT PROFESSOR

- Nagasree 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 and characterization, Rheology, Nanocomposites, Emulsions, Nanofluids, Suspensions

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)
- Charles M. Jaffee - Ph.D. (University of Colorado)
Theoretical Chemistry, Molecular and Atomic Physics, Nonlinear Dynamics, Astrodynamics
- Mahesh Padmanabhan - Ph.D. (University of Minnesota)
- 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 optimization of energy systems; Computational fluid dynamics (CFD) and process co-simulation; Pulverized coal combustion; Oxy-coal Combustion; Integrated gasification combined cycle (IGCC); Chemical looping; Supercritical CO₂ power cycles; CO₂ capture

ADJUNCT ASSOCIATE PROFESSOR

- Thirimachos Bourlai - Ph.D. (University of Surrey, U.K.)
Electrical and Electronic Engineering
- Valeriya Gritsenko - 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)
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

Biomedical Engineering, B.S.Bm.E.

Degree Offered

- Bachelor of Science in Biomedical Engineering (B.S.Bm.E.)

Nature of the Program

The biomedical engineering discipline is among the fastest growing engineering disciplines due to the rapid advancement of medical technologies and treatment and diagnosis strategies; in fact, many are claiming this century as the one that will revolutionize the biological sciences. These advancements will provide immense benefits for society globally. The biomedical engineering curriculum is designed to give graduates a broad background in the areas of biomedical engineering, including biomaterials, biomechanics and biomedical imaging. Students have the ability to design a set of technical electives based on interest and career aspirations. The goal for these electives is to enhance a student's knowledge in one or more of the focus areas so they can be prepared for graduate school, any professional school, or a job in a specific industry. The biomedical engineering program is accredited by the Engineering Accreditation Commission (EAC) of ABET, <http://www.abet.org>.

Program Educational Objectives

- Graduates will be engaged in their professional careers and/or post graduate training as demonstrated by their abilities to identify and solve important biomedical engineering problems, develop and implement new and valuable ideas with potential applications to healthcare, and to engage in lifelong learning opportunities.
- Graduates will be able to work competitively in diverse professional environments as demonstrated by their abilities to work on teams and independently, to provide leadership, and to communicate effectively to a variety of audiences.
- Graduates will behave professionally and ethically, be committed to responsible safety practices, and articulate the societal impact of their work.

Click here to view the Suggested Plan of Study (p. 718)

Curriculum in Biomedical Engineering

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum Requirements

To receive a degree of bachelor of science in biomedical engineering, a student must meet the University's undergraduate degree requirements, take all the courses indicated below, and attain a grade point average of 2.25 or better in all biomedical engineering courses, in all WVU courses, and overall. This requirement assures that the student has demonstrated overall competence in the major.

Freshman Engineering Requirements

ENGR 101	Engineering Problem Solving 1	2
Engineering Problem Solving:		3
CHE 102	Introduction to Chemical Engineering	
ENGR 102	Engineering Problem-Solving 2	
ENGR 103	Introduction to Nanotechnology Design	
MAE 102	Introduction to Mechanical and Aerospace Engineering Design	
ENGR 191	First-Year Seminar	1

Math and Science Requirements

Choose one of the following:		4
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory (GEF 8)	
BIOL 101 & BIOL 102 & BIOL 103 & BIOL 104	General Biology and General Biology and General Biology Laboratory and General Biology Laboratory	
BIOL 235 & BMEG 236	Human Physiology and Quantitative Analysis in Human Physiology *	5
Choose one of the following (GEF 2B):		8
CHEM 115 & 115L & CHEM 116 & CHEM 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory and Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	

CHEM 117 & 117L & CHEM 118 & CHEM 118L	Principles of Chemistry 1 and Principles of Chemistry 1 - Laboratory and Principles of Chemistry 2 and Principles of Chemistry 2 - Laboratory	
CHEM 233	Organic Chemistry	3
CHEM 235	Organic Chemistry Laboratory	1
Calculus I (GEF 3):		4
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus (Minimum grade of C- is required)	
MATH 155	Calculus 1 (Minimum grade of C- is required)	
MATH 156	Calculus 2 (GEF 8 - Minimum grade of C- is required)	4
MATH 251	Multivariable Calculus (Minimum grade of C- is required)	4
MATH 261	Elementary Differential Equations	4
PHYS 111	General Physics (GEF 8)	4
PHYS 112	General Physics	4
STAT 215 or IENG 213	Introduction to Probability and Statistics ** Engineering Statistics	3

Biomedical Engineering Core Requirements

A minimum GPA of 2.25 is required in all BMEG courses

BMEG 201	Introduction to Biomedical Engineering	3
BMEG 203	Biomedical Engineering Seminar	1
BMEG 310	Biomedical Imaging	3
BMEG 230	Numerical Methods in Biomedical Engineering	3
BMEG 311	Biomaterials	3
BMEG 315	Transport Phenomena in Biological Systems	4
BMEG 340	Biomechanics	3
BMEG 321	Thermodynamics and Kinetics for Biomedical Engineering	3
BMEG 350	Biomedical Engineering Laboratory	2
BMEG 420	Biomedical Instrumentation	3
BMEG 421	Biomedical Engineering Seminar and Journal Club	1
BMEG 455	Biomedical Senior Design 1 (Fulfills Writing and Communication Skills Requirement)	4
BMEG 456	Biomedical Senior Design 2	3
EE 221	Introduction to Electrical Engineering	3
EE 222	Introduction to Electrical Engineering Laboratory	1

Technical Electives**18**

Science Electives: Choose at least 6 credit hours from the following:

AGBI 410	Introductory Biochemistry	
AGBI 411	Introductory Biochemistry Laboratory	
AGBI 412	Introduction to Biochemistry Wet Laboratory	
ATTR 218	Gross Anatomy Lab	
BIOC 339	Introduction to Biochemistry	
BIOL 107	Biotechnology and Society	
BIOL 219 & BIOL 220	The Living Cell and The Living Cell Laboratory	
BIOL 302	Biometry	
BIOL 324	Molecular Genetics	
BIOL 325	Molecular Genetics Laboratory	
BIOL 348	Neuroscience 1	
BIOL 349	Neuroscience 2	
BIOS 601	Applied Biostatistics 1	
CHEM 215 & 215L	Introductory Analytical Chemistry and Introductory Analytical Chemistry Laboratory	
CHEM 234	Organic Chemistry	

CHEM 236	Organic Chemistry Laboratory
CHEM 310	Instrumental Analysis
CHEM 335	Methods of Structure Determination
CHEM 341	Physical Chemistry: Brief Course
CHEM 462	Biochemistry 2
CHEM 464	Biochemistry 2 Laboratory
CHPR 332	Safety Education Principles and Content
FIS 314	Introduction to Microscopy
PALM 205	Introduction to Human Anatomy
PASS 319	Basic Human Anatomy
PHIL 331	Health Care Ethics
PHYS 211	Introduction to Mathematical Physics
PHYS 225	Medical Imaging Physics
PHYS 314	Introductory Modern Physics
PHYS 321	Optics

Engineering Electives: Choose at least 9 credit hours from the following:

BMEG 480	Cellular Machinery (Cellular Machinery)
BMEG 481	Applied Bio-Molecular Modeling (Applied Bio-Molecular Modeling)
BMEG 482	Introduction to Tissue Engineering (Tissue Engineering)
BMEG 497	Research
BMEG 498	Honors Research
CHE 366	Materials Science
CHE 461	Polymer Science and Engineering
CHE 462	Polymer Processing
CHE 531	Mathematical Methods in Chemical Engineering
CPE 271	Introduction to Digital Logic Design
CS 111	Introduction to Data Structures
EE 223	Electrical Circuits
EE 251	Digital Electronics
EE 327	Signals and Systems 1
EE 328	Signals and Systems Laboratory
EE 329	Signals and Systems 2
EE 455	Introduction to Microfabrication
EE 465	Introduction to Digital Image Processing
EE 528	Biomedical Microdevices
IENG 213	Engineering Statistics
IENG 360	Human Factors Engineering
MAE 211	Mechatronics
MAE 241	Statics
MAE 242	Dynamics
MAE 243	Mechanics of Materials
MAE 343	Intermediate Mechanics of Materials

Other Elective: Choose at least 3 credit hours from the Science or Engineering Electives

GEF Electives 1, 4, 5, 6, 7

18

Total Hours

130

* Students can choose to take BIOL 117 & BIOL 118 in place of the BIOL 235 & BMEG 236 sequence. Students choosing this path are required to complete an additional credit hour to meet the minimum requirements of 130 total credit hours for the degree.

** IENG 213 cannot fulfill both the statistics requirement and a technical elective.

Suggested Plan of Study

It is important for students to take courses in the order specified in the Plan of Study as much as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.Bm.E degree program that completes degree requirements in four years is as follows.

First Year

Fall	Hours	Spring	Hours
BIOL 115 & BIOL 116 (GEF 8)		4 CHEM 116 & 116L	4
CHEM 115 & 115L (GEF 2B)		4 ENGL 101 (GEF 1)	3
ENGR 101		2 ENGR 102	3
ENGR 191		1 MATH 156 (GEF 8)	4
MATH 155 (GEF 3)		4 PHYS 111 (GEF 8)	4
		15	18

Second Year

Fall	Hours	Spring	Hours
BMEG 201		3 BIOL 235	3
BMEG 203		1 BMEG 230	3
EE 221		3 BMEG 236	2
EE 222		1 CHEM 233	3
ENGL 102 (GEF 1)		3 CHEM 235	1
PHYS 112		4 MATH 261	4
MATH 251		4 STAT 215	3
		19	19

Third Year

Fall	Hours	Spring	Hours
BMEG 311		3 BMEG 310	3
BMEG 321		3 BMEG 315	4
BMEG 350		2 BMEG 340	3
BMEG 420		3 GEF Course 5	3
GEF Course 4		3 GEF Course 6	3
		14	16

Fourth Year

Fall	Hours	Spring	Hours
BMEG 421		1 BMEG 456	3
BMEG 455		4 Science Technical Elective	3
Science Technical Elective		3 Technical Elective	3
Engineering Technical Elective		3 Two Engineering Technical Electives	6
GEF Course 7		3	
		14	15

Total credit hours: 130

Major Learning Outcomes

BIOMEDICAL ENGINEERING

Upon graduation, all Bachelors of Science students in Biomedical Engineering will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts

5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

These outcomes are achieved via rigorous individual courses in all basic areas of biomedical engineering, the natural and life sciences, mathematics, humanities, and social sciences. A flexible electives program allows specialization in areas such as biochemistry, biomechanics, biomaterials, and bioelectronics.

The Chemical and Biomedical Engineering Department uses an outcomes-assessment plan for continuous program improvement. Course work and design projects, in conjunction with yearly interviews provide the measures of learning outcomes. These outcomes-assessment results provide feedback to the faculty to improve teaching and learning processes.

Academic Policies

1. Students completing the four 200-level courses (BMEG 201, BMEG 203, BMEG 230, BMEG 236) must attain a 2.25 grade-point average in order to enroll in the 300-level core BMEG courses. Students with a grade-point average greater than or equal to 2.00 can submit a formal appeal of this restriction to the department chair for evaluation by the chair, BMEG curriculum committee, and CBE academic standards committee. No appeals will be considered for students below a 2.00 grade-point average in the four BMEG 200-level courses.
2. Students completing the 300-level core BMEG courses must attain a 2.25 grade-point average in core BMEG courses (BMEG 201, BMEG 203, BMEG 230, BMEG 236, BMEG 310, BMEG 311, BMEG 315, BMEG 321, BMEG 340, and BMEG 350) in order to enroll in 400-level core BMEG courses. No appeals will be considered for students moving from the junior to senior level courses.
3. In order to receive a degree, students must attain a 2.25 grade-point average in all biomedical engineering courses, including biomedical engineering elective and special topics courses. In addition, students may only have a grade of D in three (3) biomedical engineering courses. If a biomedical engineering course is repeated, the last grade received will be used to determine the number of D grades on the transcript.
4. A grade of F in any prerequisite course for a core BMEG course disqualifies the student from taking that core course until the F has been removed.
5. Requests to transfer credit for core biomedical engineering courses must be submitted to the BMEG Undergraduate Curriculum Committee via email to statler-cbe-curriculum@mail.wvu.edu. The course syllabus has to be submitted with the transfer request. Please see college guidelines for additional restrictions to transfer credit.

Chemical Engineering, B.S.Ch.E.

Degree Offered

- Bachelor of Science in Chemical Engineering (B.S.Ch.E.)

Nature of the Program

The chemical engineering curriculum is designed to give graduates a broad background in chemical engineering processes and to prepare them to become practicing engineers. Graduates are prepared for positions in operations, development, design, construction, and management of chemical plants, environmental processes, life sciences, and materials processing. These industries convert raw materials, such as ethylene and other organic feedstocks, via chemical and physical changes to produce economically desirable products such as plastics, detergents, paints, and adhesives. Students with this background are also prepared for graduate school in engineering and science as well as for any professional school. The chemical engineering program is accredited by the Engineering Accreditation Commission (EAC) of ABET, <http://www.abet.org>.

Practical work on process and product design and synthesis is incorporated into all chemical engineering classes. One element is group design projects that require sophomores and juniors to use their knowledge as it is gained. Another element is the small group design project that require seniors to synthesize their knowledge of chemical engineering, correct any deficiencies in their knowledge of chemical engineering, and which also provide faculty a method of assessing the success of the sophomore and junior years. The third element is a group project in which seniors work under the direction of a student chief engineer on a year-long comprehensive design. In conjunction with these projects, there are required written and oral presentations and required computer applications integrated throughout the curriculum. Completion of these projects also trains students to work in groups of different sizes and gives them experience in self-directed learning. Additionally, in the senior year, elements of professional practice, ethics, and safety are introduced in the classroom.

The chemical engineering curriculum also contains a significant laboratory component aimed at reinforcing the knowledge gained in the classroom. In addition to basic chemistry and physics laboratories, the chemical engineering laboratories include a laboratory course that reinforce material taught in the junior year, followed by a two-semester laboratory sequence in the senior year in which the principles of experimental design, laboratory and safety procedures, data analysis, and report writing are stressed.

Program Educational Objectives

- Graduates will be successful in their professional careers and/or post graduate training as demonstrated by their identification and subsequent solution of problems, development of new and valuable ideas, pursuit of continual professional development, and application of chemical engineering and related skills to new challenges.
- Graduates will be able to succeed in diverse professional environments, working effectively in multifunctional teams and independently, providing leadership, and communicating effectively.
- Graduates will demonstrate professional character exhibited by their ethical behavior, their commitment to responsible safety practices, and their dedication to maintain accountability for the global, societal, and environmental impact of their work.

Click here to view the Suggested Plan of Study (p. 724)

Curriculum in Chemical Engineering

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum Requirements

To receive a degree of bachelor of science in chemical engineering, a student must meet the University's undergraduate degree requirements, take all the courses indicated below, and attain a grade point average of 2.25 or better in all chemical engineering courses, in all WVU courses, and overall. This requirement assures that the student has demonstrated overall competence in the major.

Freshman Engineering Requirements

ENGR 101	Engineering Problem Solving 1	2
Engineering Problem Solving:		3
CHE 102	Introduction to Chemical Engineering	
ENGR 102	Engineering Problem-Solving 2	
ENGR 103	Introduction to Nanotechnology Design	
MAE 102	Introduction to Mechanical and Aerospace Engineering Design	
ENGR 191	First-Year Seminar	1

Chemical Engineering Core Requirements (Minimum GPA of 2.0 required)

CHE 201	Material and Energy Balances 1	3
CHE 202	Material and Energy Balances 2	3
CHE 226	Reaction Phenomena	3
CHE 230	Numerical Methods for Chemical Engineering	3
CHE 310	Process Fluid Mechanics	3

CHE 311	Process Heat Transfer	3
CHE 312	Separation Processes	3
CHE 315	Chemical Engineering Transport Analysis	3
CHE 320	Chemical Engineering Thermodynamics	3
CHE 325	Chemical Reaction Engineering	3
CHE 351	Chemical Process Laboratory	2
CHE 355	Process Simulation and Design	2
CHE 435	Chemical Process Control	3
CHE 450	Unit Operations Laboratory 1	2
CHE 451	Unit Operations Laboratory 2 (Fulfills Writing and Communication Skills Requirement)	2
CHE 455	Chemical Process Design 1	4
CHE 456	Chemical Process Design 2	3
CHE 475	Chemical Process Safety	3
Math & Science Requirements (36 Credits)		
First Year Chemistry (GEF 2B):		8
CHEM 115 & 115L & CHEM 116 & CHEM 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory and Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	
CHEM 117 & 117L & CHEM 118 & CHEM 118L	Principles of Chemistry 1 and Principles of Chemistry 1 - Laboratory and Principles of Chemistry 2 and Principles of Chemistry 2 - Laboratory	
CHEM 233	Organic Chemistry	3
CHEM 235	Organic Chemistry Laboratory	1
Calculus I (GEF 3):		4
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 155	Calculus 1	
MATH 156	Calculus 2 (GEF 8)	4
MATH 251	Multivariable Calculus	4
MATH 261	Elementary Differential Equations	4
PHYS 111	General Physics (GEF 8)	4
PHYS 112	General Physics (GEF 8)	4
Technical Electives		
Engineering Science Electives		6
Advanced Science Electives		7
Advanced Chemistry Elective (3hrs)		
Life Science Elective (4 hrs)		
Other Technical Electives		6
GEF Electives 1, 4, 5, 6, 7		18
Total Hours		130

TECHNICAL ELECTIVES

Engineering Electives

6

BMEG 201	Introduction to Biomedical Engineering
BMEG 311	Biomaterials
BMEG 480	Cellular Machinery
BMEG 481	Applied Bio-Molecular Modeling
BMEG 482	Introduction to Tissue Engineering
CE 310	Civil Engineering Materials
CE 332	Introduction to Transportation Engineering
CE 347	Introduction to Environmental Engineering

CE 351	Introductory Soil Mechanics
CHE 366	Materials Science
CHE 414	Coal Conversion Engineering
CHE 461	Polymer Science and Engineering
CHE 462	Polymer Processing
CHE 463	Polymer Composites Processing
CHE 466	Electronic Materials Processing
CHE 471	Biochemical Engineering
CHE 472	Biochemical Separations
CHE 475	Chemical Process Safety
CHE 476	Pollution Prevention
CHE 495	Independent Study
CHE 496	Senior Thesis
CHE 498	Honors
CPE 271	Introduction to Digital Logic Design
CPE 272	Digital Logic Laboratory
EE 221	Introduction to Electrical Engineering
EE 222	Introduction to Electrical Engineering Laboratory
EE 223	Electrical Circuits
EE 224	Electrical Circuits Laboratory
IENG 213	Engineering Statistics <small>Completion of IENG 213 and STAT 215 will not fulfill two elective requirements.</small>
IENG 220	Re-Engineering Management Systems
IENG 461	System Safety Engineering
MAE 211	Mechatronics
MAE 215	Intro to Aerospace Engineering
MAE 241	Statics
MAE 242	Dynamics
MAE 243	Mechanics of Materials
MAE 244	Dynamics and Strength Laboratory
MAE 425	Internal Combustion Engines
MAE 473	Bioengineering
PNGE 200	Introduction to Petroleum Engineering
Advanced Chemistry Electives	
AGBI 410	Introductory Biochemistry
AGBI 411	Introductory Biochemistry Laboratory
AGBI 512	Nutritional Biochemistry
BIOC 339	Introduction to Biochemistry
BMEG 311	Biomaterials
BMEG 480	Cellular Machinery
BMEG 481	Applied Bio-Molecular Modeling
BMEG 482	Introduction to Tissue Engineering
CHE 366	Materials Science
CHE 466	Electronic Materials Processing
CHEM 215 & 215L	Introductory Analytical Chemistry and Introductory Analytical Chemistry Laboratory
CHEM 234	Organic Chemistry
CHEM 236	Organic Chemistry Laboratory
CHEM 310	Instrumental Analysis
CHEM 312	Environmental Chemistry
CHEM 313	Instrumental Analysis Laboratory
CHEM 342	Experimental Physical Chemistry
CHEM 348	Physical Chemistry

Life Sciences Electives**4**

AEM 341	General Microbiology
AEM 401	Environmental Microbiology
BIOL 101 & BIOL 102 & BIOL 103 & BIOL 104	General Biology and General Biology and General Biology Laboratory and General Biology Laboratory
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory
BIOL 117 & BIOL 118	Introductory Physiology and Introductory Physiology Laboratory
BIOL 235	Human Physiology
BIOL 236	Human Physiology: Quantitative Laboratory
GEN 371	Principles of Genetics
PSIO 241	Elementary Physiology

Other Technical Electives**3**

AEM 341	General Microbiology
AEM 401	Environmental Microbiology
AGBI 410	Introductory Biochemistry
AGBI 411	Introductory Biochemistry Laboratory
AGBI 512	Nutritional Biochemistry
BIOC 339	Introduction to Biochemistry
BIOL 105	Environmental Biology
BIOL 106	Environmental Biology Laboratory
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory
BIOL 117 & BIOL 118	Introductory Physiology and Introductory Physiology Laboratory
BIOL 219 & BIOL 220	The Living Cell and The Living Cell Laboratory
BIOL 221	Ecology and Evolution
BIOL 235	Human Physiology
BIOL 236	Human Physiology: Quantitative Laboratory
BMEG 201	Introduction to Biomedical Engineering
BMEG 311	Biomaterials
BMEG 480	Cellular Machinery
BMEG 481	Applied Bio-Molecular Modeling
BMEG 482	Introduction to Tissue Engineering
CE 310	Civil Engineering Materials
CE 332	Introduction to Transportation Engineering
CE 347	Introduction to Environmental Engineering
CE 351	Introductory Soil Mechanics
CHE 366	Materials Science
CHE 414	Coal Conversion Engineering
CHE 461	Polymer Science and Engineering
CHE 462	Polymer Processing
CHE 463	Polymer Composites Processing
CHE 466	Electronic Materials Processing
CHE 471	Biochemical Engineering
CHE 472	Biochemical Separations
CHE 475	Chemical Process Safety
CHE 476	Pollution Prevention
CHE 495	Independent Study

CHE 496	Senior Thesis
CHE 498	Honors
CHEM 215 & 215L	Introductory Analytical Chemistry and Introductory Analytical Chemistry Laboratory
CHEM 234	Organic Chemistry
CHEM 236	Organic Chemistry Laboratory
CHEM 310	Instrumental Analysis
CHEM 312	Environmental Chemistry
CHEM 313	Instrumental Analysis Laboratory
CHEM 342	Experimental Physical Chemistry
CHEM 348	Physical Chemistry
CPE 271	Introduction to Digital Logic Design
CPE 272	Digital Logic Laboratory
CS 220	Discrete Mathematics
EE 221	Introduction to Electrical Engineering
EE 222	Introduction to Electrical Engineering Laboratory
EE 223	Electrical Circuits
EE 224	Electrical Circuits Laboratory
ENVP 155	Elements of Environmental Protection
FDST 200	Food Science and Technology
GEN 371	Principles of Genetics
GEOL 101	Planet Earth
GEOL 102	Planet Earth Laboratory
GEOL 203	Physical Oceanography
IENG 213	Engineering Statistics <small>Completion of IENG 213 and STAT 215 will not fulfill two elective requirements.</small>
IENG 220	Re-Engineering Management Systems
IENG 461	System Safety Engineering
MAE 211	Mechatronics
MAE 215	Intro to Aerospace Engineering
MAE 241	Statics
MAE 242	Dynamics
MAE 243	Mechanics of Materials
MAE 244	Dynamics and Strength Laboratory
MAE 425	Internal Combustion Engines
MAE 473	Bioengineering
MATH 303	Introduction to the Concepts of Mathematics
PHYS 211	Introduction to Mathematical Physics
PHYS 314	Introductory Modern Physics
PSIO 241	Elementary Physiology
STAT 215	Introduction to Probability and Statistics <small>Completion of IENG 213 and STAT 215 will not fulfill two elective requirements.</small>

Total Hours

16

* Completion of both IENG 213 and STAT 215 will not count as two separate electives as the course content is significantly similar.

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 B.S.Ch.E degree program that completes degree requirements in four years is as follows.

First Year

Fall	Hours	Spring	Hours
MATH 155 (GEF 3)		4 MATH 156 (GEF 8)	4
ENGR 101		2 CHE 102	3
ENGR 191		1 PHYS 111 (GEF 8)	4

CHEM 115 & 115L (GEF 2)		4 CHEM 116 & 116L		4
ENGL 101 (GEF 1)		3 GEF 5		3
GEF 4		3		
		17		18
Second Year				
Fall	Hours	Spring		Hours
CHE 201		3 CHE 202		3
CHEM 233		3 CHE 226		3
CHEM 235		1 CHE 230		3
MATH 251		4 MATH 261		4
PHYS 112 (GEF 8)		4 GEF 6		3
ENGL 102 (GEF 1)		3 GEF 7		3
		18		19
Third Year				
Fall	Hours	Spring		Hours
CHE 310		3 CHE 312		3
CHE 311		3 CHE 315		3
CHE 320		3 CHE 325		3
CHE 351		2 CHE 355		2
Life Science Technical Elective		4 Engineering Science Elective		3
		15		14
Fourth Year				
Fall	Hours	Spring		Hours
CHE 435		3 CHE 451		2
CHE 450		2 CHE 456		3
CHE 455		4 CHE 475		3
Advanced Science Elective		3 Engineering Science Elective		3
Technical Elective		3 Technical Elective		3
		15		14

Total credit hours: 130

Major Learning Outcomes

CHEMICAL ENGINEERING

Upon graduation, all Bachelors of Science students in Chemical Engineering will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

The Chemical and Biomedical Engineering Department uses an outcomes-assessment plan for continuous program improvement. Course work and design projects, in conjunction with yearly interviews provide the measures of learning outcomes. These outcomes-assessment results provide feedback to the faculty to improve teaching and learning processes.

Academic Policies

1. Students completing the three 200-level courses (CHE 201, CHE 202, and CHE 230) must attain a 2.25 grade-point average in order to enroll in the 300-level core CHE courses. Students with a grade-point average greater than or equal to 2.00 can submit a formal appeal of this restriction to the

department chair for evaluation by the chair, CHE curriculum committee, and CHE academic standards committee. No appeals will be considered for students below a 2.00 grade-point average in the three 200-level courses.

2. Students completing the 300-level core CHE courses must attain a 2.25 grade-point average in core CHE courses (CHE 201, CHE 202, CHE 230, CHE 310, CHE 311, CHE 312, CHE 320, CHE 325, CHE 326, CHE 351, CHE 355) in order to enroll in 400-level core CHE course. No appeals will be considered for students moving from the junior to senior level courses.
3. In order to receive a degree, students must attain a 2.25 grade-point average in all chemical engineering courses, including chemical engineering elective and special topics courses. In addition, students may only have a grade of D in three (3) chemical engineering courses. If a chemical engineering course is repeated, the last grade received will be used to determine the number of D grades on the transcript.
4. A grade of F in any prerequisite course for a core CHE course disqualifies the student from taking that core course until the F has been removed.
5. Requests to transfer credit for core chemical engineering courses must be submitted to the ChE Undergraduate Curriculum Committee by email at statler-cbe-curriculum@mail.wvu.edu (<http://catalog.wvu.eduMailto:statler-cbe-curriculum@mail.wvu.edu>). Consideration will only be made when the courses are offered at ABET accredited institutions and the course syllabus has been submitted. Please see college guidelines for additional restrictions to transfer credit.

Wadsworth Department of Civil and Environmental Engineering, B.S.C.E.

E-mail: Statler-CEE@mail.wvu.edu

Degrees Offered

- Bachelor of Science in Civil Engineering (B.S.C.E.)

Nature of the Program

Civil engineering historically encompassed all engineering endeavors needed to provide the infrastructure for society to function. Because of its origin and history, civil engineering still embraces a wide variety of technological areas. In the Wadsworth Department of Civil and Environmental Engineering, these areas include:

- Construction
- Environmental and Water Resources
- Geotechnical
- Structures
- Transportation

Civil engineers work with problems that directly impact the health and economic vitality of people and communities. These problems include waste disposal, environmental pollution, transportation systems analysis and design, water resource development, and the design, construction, and rehabilitation of constructed facilities such as dams, bridges, buildings, and highways.

Thus, the challenges and opportunities for a civil engineer lie in combining technical competence with a human concern for the applications of technology. To help students to understand their role in the community, to be effective in working with design teams involving other engineers and other professionals, and to be effective in written and spoken communications, the curriculum attempts to give a meaningful educational experience in the humanities, social studies, English, and economics.

The goal of the undergraduate curriculum in civil engineering is to prepare graduate civil engineers to meet the present and the future infrastructural and environmental needs of society. This requires an education based on scientific and engineering fundamentals as well as one that incorporates experience in engineering design using modern technology. Because the systems they design impact the public directly, civil engineers must be aware of the social and environmental consequences of their designs. Graduates must be prepared to work and communicate with other professionals in a variety of associations and organizations. Ethics and life-long learning are essential components in the education of civil engineers.

During the course of study, civil engineering students are given a solid grounding in mathematics, physics, and chemistry. Added to this is extensive development of the fundamentals of materials science, construction, water and environmental, soils, structural, and transportation systems engineering. This broad base of knowledge is provided to assure that civil engineers are educated in all branches of the profession and to permit continuous learning throughout a professional lifetime. Throughout the program, each student works with an academic advisor in the selection of electives. Specialization in one or more of the branches of civil engineering is possible by selection of a sequence of technical electives during the junior and senior years.

The Bachelor of Science in Civil Engineering (B.S.C.E.) is accredited by the Engineering Accreditation Commission (EAC) of ABET, <http://www.abet.org>.

Program Educational Objectives

- The graduates will be successful in their professional careers as civil engineers in industry, public agencies, and/or post-graduate education.
- The graduates will continue to develop professionally and serve in leadership roles.
- The graduates will be successful in demonstrating their obligations to the profession, to their employer, and to society.

Major Learning Outcomes

CIVIL ENGINEERING

Upon graduation, all Bachelor of Science in Civil Engineering students will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

FACULTY

CHAIR

- Hema J. Siriwardane - Ph.D. (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, Constructed Facilities Center. Director, 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. (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. (Purdue University)
Physicochemical and biological treatment, Innovative wastewater technologies, Emerging contaminants, sustainable development, Watershed pollution
- David R. Martinelli - Ph.D. (University of Maryland)
Transportation engineering, Traffic operations, Systems analysis, Infrastructure management
- Radhey Sharma - Ph.D. (Oxford)
Sustainable infrastructure, Geotechnical engineering & geoenvironmental , Energy engineering
- Hema J. Siriwardane - Ph.D. (Virginia Polytechnic Institute and State University)
Geomechanics/geotechnical engineering, Finite element method, Computer applications
- John P. Zaniwski - Ph.D. (University of Texas)
Asphalt Technology Professor, Pavement materials, Design, Construction, Maintenance, Infrastructure management

ASSOCIATE PROFESSORS

- 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)
Constructions 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. (West Virginia University)
Geotechnical/geoenvironmental engineering, Soil testing and characterization, Soil and mine waste dewatering, Geosynthetics, 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 Dey - 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)
River Engineering, Fluid Mechanics, Sediment Transport, Experimental Techniques in Engineering
- Dimitra Pyrialakou - Ph.D. (Purdue University)
Transportation Engineering, Transportation Planning and Evaluation, Public and Rail Transportation, Airport Operations, Transportation Econometrics, and Transportation Engineering Education
- 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 Infrastructure, Analytical Modeling

RESEARCH ASSISTANT PROFESSORS

- Rufieng Liang - Ph.D. (Chinese Academy of Sciences Institute of Chemistry)
Fiber Reinforced Polymer Composites, Engineering Plastics, Green Materials, Sustainable Infrastructure

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)

Curriculum in Civil Engineering

General Education Foundations

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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

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ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum Requirements

To receive a degree of bachelor of science in civil engineering, a student must meet the University's undergraduate degree requirements, take all the courses indicated below, and attain a GPA of 2.25 or better in all civil engineering courses, in all WVU courses, and overall. This requirement assures that the student has demonstrated overall competence in the major.

Freshman Engineering Requirements

ENGR 101	Engineering Problem Solving 1	2
Engineering Problem Solving:		3
CHE 102	Introduction to Chemical Engineering	
ENGR 102	Engineering Problem-Solving 2	
ENGR 103	Introduction to Nanotechnology Design	
MAE 102	Introduction to Mechanical and Aerospace Engineering Design	
ENGR 191	First-Year Seminar	1

Required Courses (minimum grade of C- required) *

Calculus I (GEF 3):		4
MATH 155	Calculus 1	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 156	Calculus 2 (GEF 8)	4
MATH 251	Multivariable Calculus	4
MATH 261	Elementary Differential Equations	4
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2B)	4
PHYS 111	General Physics (GEF 8)	4
MAE 241	Statics	3
MAE 242	Dynamics	3
MAE 243	Mechanics of Materials	3

Other Required Courses

CE 201	Introduction to Civil Engineering	1
CE 210	Introduction to Computer Aided Design and Drafting for Civil Engineers	2
CE 301	Engineering Professional Development	1
CE 321	Fluid Mechanics for Civil Engineers	3
CE 479	Integrated Civil Engineering Design-Capstone	3
ECON 201	Principles of Microeconomics	3
ENGL 305	Technical Writing (Fulfills Writing and Communications Skills Requirement)	3
IENG 377	Engineering Economy	3
STAT 215	Introduction to Probability and Statistics	3

Choose one of the following (GEF 8):

PHYS 112	General Physics	
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	

Civil Engineering Core Courses

CE 332	Introduction to Transportation Engineering	4
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CE 347	Introduction to Environmental Engineering	4
CE 351	Introductory Soil Mechanics	4
CE 361	Structural Analysis 1	4

CE Design Electives		6
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Choose two of the following:

CE 411	Pavement Design	
CE 415	Flexible Pavements	
CE 423	Water System Design	
CE 431	Highway Engineering	
CE 439	Traffic Engineering and Operations	
CE 447	Environmental Engineering Design	
CE 451	Foundation Engineering	
CE 453	Earthwork Design	
CE 462	Reinforced Concrete Design	
CE 463	Steel Design	
CE 464	Timber Design	

CE Open Electives: **		
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Choose five of the following:		15
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CE 305	Introduction to Geomatics	
CE 310	Civil Engineering Materials	
CE 322	Hydrotechnical Engineering	
CE 413	Construction Methods	
CE 414	Construction Engineering	
CE 416	Advanced Concrete Materials	
CE 420	Computational Fluid Mechanics	
CE 425	Engineering Hydrology	
CE 427	Water Resources Engineering	
CE 433	Urban Transportation Planning and Design	
CE 435	Railway Engineering	
CE 436	Pedestrian/Bike Transportation	
CE 443	Environmental Science and Technology	
CE 445	Properties of Air Pollutants	
CE 461	Structural Analysis 2	
CE 493	Special Topics	
CE 495	Independent Study	
CE 497	Research	
SAFM 470	Managing Construction Safety	

Engineering/Math/Science Electives ***		
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Choose three of the following:		9
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CHEM 215 & 215L	Introductory Analytical Chemistry and Introductory Analytical Chemistry Laboratory	
CHEM 231 & 231L	Organic Chemistry: Brief Course and Organic Chemistry: Brief Course - Laboratory	
AEM 341	General Microbiology	
AEM 401	Environmental Microbiology	
GEOG 350	Geographic Information Systems and Science	
GEOL 342	Structural Geology for Engineers	
GEOL 488	Environmental Geochemistry	
IENG 331	Computer Applications in Industrial Engineering	
IENG 350	Introduction to Operations Research	
IENG 360	Human Factors Engineering	
IENG 455	Simulation by Digital Methods	

MAE 316	Analysis-Engineering Systems
MAE 320	Thermodynamics
MAE 335	Incompressible Aerodynamics
MAE 423	Heat Transfer
MAE 432	Engineering Acoustics
MAE 446	Mechanics of Composite Materials
MAE 473	Bioengineering
MATH 343	Introduction to Linear Algebra
MATH 375	Applied Modern Algebra
MATH 420	Numerical Analysis 1
MATH 441	Applied Linear Algebra
MATH 456	Complex Variables
MATH 465	Partial Differential Equations
MINE 306	Mineral Property Evaluation
PHYS 331	Theoretical Mechanics 1
STAT 312	Intermediate Statistical Methods
STAT 313	Introductory Design and Analysis
STAT 331	Sampling Methods

Additional Requirements

General Science Elective (Select One)		3
AGRN 202 & AGRN 203	Principles of Soil Science and Principles of Soil Science Laboratory	
BIOL 101 & BIOL 103	General Biology and General Biology Laboratory	
BIOL 102 & BIOL 104	General Biology and General Biology Laboratory	
CHEM 233 & CHEM 235	Organic Chemistry and Organic Chemistry Laboratory	
BIOL 105	Environmental Biology	
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	
BIOL 302	Biometry	
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	
CS 110	Introduction to Computer Science	
AEM 341	General Microbiology	
AEM 401	Environmental Microbiology	
GEOG 350	Geographic Information Systems and Science	
GEOG 415	Global Environmental Change	
GEOG 455	Introduction to Remote Sensing	
GEOL 101	Planet Earth	
GEOL 203	Physical Oceanography	
GEOL 342	Structural Geology for Engineers	
PHYS 112	General Physics	
PHYS 211	Introduction to Mathematical Physics	
PHYS 314	Introductory Modern Physics	
PHYS 321	Optics	
PHYS 331	Theoretical Mechanics 1	
PHYS 333	Electricity and Magnetism 1	

Engineering Elective (outside CEE Dept:.) Any 200, 300, 400 level Statler College course not otherwise used- except Civil Engineering courses, Computer Science courses and IENG 213. 3

GEF Electives 1, 5, 6, 7	15
Total Hours	132

* A grade of D- is permitted in MAE 242 only. Any courses transferred from outside of WVU must be a C- or better.

** Any CE Design Electives that are not otherwise used can also be used.

*** Any CE 400 level course not otherwise used can also be used.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
MATH 155 (GEF 3)		4 MATH 156 (GEF 8)	4
ENGR 101		2 ENGR 102	3
ENGR 191		1 PHYS 111 (GEF 8)	4
CHEM 115 & 115L (GEF 2)		4 GEF 6	3
ENGL 101 (GEF 1)		3 GEF 7	3
GEF 5		3	
		17	17

Second Year

Fall	Hours	Spring	Hours
MAE 241		3 MAE 243	3
MATH 251		4 MAE 242	3
CE 210		2 MATH 261	4
CE 201		1 ENGL 305	3
ENGL 102 (GEF 1)		3 Select one of the following:	4
Select one of the following (GEF 8):		4 CE 332	
PHYS 112		CE 347	
CHEM 116			
BIOL 115			
		17	17

Third Year

Fall	Hours	Spring	Hours
CE 321		3 CE Core Class	4
Two CE Core Classes		8 CE 301	1
STAT 215		3 Two CE Open Electives	6
ECON 201 (GEF 4)		3 CE Design Elective	3
		ENGR/MATH/Science Elective	3
		17	17

Fourth Year

Fall	Hours	Spring	Hours
CE Design Elective		3 CE Open Elective	3
Two CE Open Electives		6 CE 479	3
General Science Elective		3 Two ENGR/MATH/Science Electives	6
IENG 377		3 ENGR Elective (outside CEE Dept.)	3
		15	15

Total credit hours: 132

Major Learning Outcomes

CIVIL ENGINEERING

Upon graduation, all Bachelors of Science students in Civil Engineering will:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

These outcomes are achieved via rigorous individual courses in all basic areas of chemical engineering, the natural and life sciences, mathematics, humanities, and social sciences. A flexible electives program allows specialization in areas such as environment and safety, polymers and materials, biological processes, and energy processes.

The civil engineering department uses an outcomes-assessment plan for continuous program improvement. The design projects, in conjunction with yearly interviews and questionnaires, provide the measures of learning outcomes. These outcomes-assessment results provide feedback to the faculty to improve teaching and learning processes.

Curriculum for a Dual Degree in Mining Engineering and Civil Engineering

This curriculum allows students to simultaneously pursue B.S. degrees in mining engineering and civil engineering by completing additional courses. A suggested schedule for the dual curriculum in mining engineering and civil engineering is shown below.

To receive the degrees of bachelor of science in mining engineering and bachelor of science in civil engineering, a student must take all of the courses indicated below and achieve a grade point average of 2.25 or better for all civil engineering courses attempted and a grade point average of 2.25 in all mining engineering courses attempted, except for those courses in which a grade of W was received. If a course is repeated, only the last grade received is counted in computing the grade point average, and the course credit hours are counted only once. This requirement assures that the student has demonstrated overall competence in the chosen major.

Undergraduate Student Minimum Performance Policy

All civil and environmental engineering students at WVU, including transfer students and second degree students, must complete each tracking course with a grade of C- or better, with the exception that one D- in a course taken at WVU is permitted. Any tracking course transferred from outside of WVU must be a C- or better. Only the following civil engineering courses may be taken prior to completion of the minimum performance policy: CE 201, CE 210, CE 305, CE 332, CE 347.

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 dual B.S.Min.E. and B.S.C.E. degree program that completes degree requirements in five years is as follows:

Mining/Civil Engineering Curriculum Requirements

Students must complete a minimum of 152 credit hours to graduate - the total at the bottom reflects all possible course combinations.

Tracking Courses

Minimum grade of C- required.

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2)	4
MAE 241	Statics	3
MAE 242	Dynamics *	3
MAE 243	Mechanics of Materials	3
Select one of the following (GEF 3):		4
MATH 155	Calculus 1	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 156	Calculus 2 (GEF 8)	4
MATH 251	Multivariable Calculus	4
MATH 261	Elementary Differential Equations	4
PHYS 111	General Physics (GEF 8)	4
Required Courses		
CE 201	Introduction to Civil Engineering	1

CE 301	Engineering Professional Development	1
CE 321	Fluid Mechanics for Civil Engineers	3
CE 423	Water System Design	3
CE 479	Integrated Civil Engineering Design-Capstone	3
ECON 201	Principles of Microeconomics (GEF 4)	3
ENGR 101	Engineering Problem Solving 1	2
ENGR 102	Engineering Problem-Solving 2	3
ENGR 191	First-Year Seminar	1
GEOL 101	Planet Earth	3
GEOL 102	Planet Earth Laboratory	1
GEOL 342	Structural Geology for Engineers	3
IENG 377	Engineering Economy	3
MAE 320	Thermodynamics	3
MINE 201	Mine Surveying	3
MINE 205	Underground Mining Systems	3
MINE 206	Surface Mining Systems	4
MINE 261	Engineering Computer Aided Design	2
MINE 306	Mineral Property Evaluation	3
MINE 331	Mine Ventilation	3
MINE 382	Mine Power Systems	3
MINE 411	Rock Mechanics/Ground Control	4
MINE 427	Coal Preparation	4
MINE 471	Mine and Safety Management	3
MINE 480	Multidisciplinary Team Project	1
MINE 483	Mine Design-Exploration Mapping	2
MINE 484	Mine Design-Report Capstone	4
PHYS 112	General Physics (GEF 8)	4
STAT 215	Introduction to Probability and Statistics	3
Civil Engineering Core Courses		
CE 332	Introduction to Transportation Engineering	4
CE 347	Introduction to Environmental Engineering	4
CE 351	Introductory Soil Mechanics	4
CE 361	Structural Analysis 1	4
Civil Engineering Design Electives		
Select from the following:		6
CE 411	Pavement Design	
CE 415	Flexible Pavements	
CE 447	Environmental Engineering Design	
CE 451	Foundation Engineering	
CE 453	Earthwork Design	
CE 462	Reinforced Concrete Design	
CE 463	Steel Design	
CE 464	Timber Design	
Civil Engineering Electives		
Select from the following:		3
CE 305	Introduction to Geomatics	
CE 310	Civil Engineering Materials	
CE 413	Construction Methods	
CE 414	Construction Engineering	
CE 416	Advanced Concrete Materials	
CE 420	Computational Fluid Mechanics	
CE 425	Engineering Hydrology	

CE 427	Water Resources Engineering	
CE 433	Urban Transportation Planning and Design	
CE 435	Railway Engineering	
CE 436	Pedestrian/Bike Transportation	
CE 443	Environmental Science and Technology	
CE 445	Properties of Air Pollutants	
CE 461	Structural Analysis 2	
CE 493 course (approved by Advisor)		
CE 495	Independent Study	
SAFM 470	Managing Construction Safety	
GEF Electives 1, 5, 6, 7		15
Total Hours		152

* A grade of D- is permitted in MAE 242 only. Any courses transferred from outside of WVU must be a C- or better.

MINE and CE Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
CHEM 115 & 115L (GEF 2)		4 ENGR 102	3
ENGL 101 (GEF 1)		3 GEOL 101	3
ENGR 101		2 GEOL 102	1
ENGR 191		1 MATH 156 (GEF 8)	4
MATH 155 (GEF 3)		4 PHYS 111 (GEF 8)	4
		14	15

Second Year

Fall	Hours	Spring	Hours
CE 201		1 ENGL 102 (GEF 1)	3
MAE 241		3 MAE 242	3
MATH 251		4 MATH 261	4
MINE 201		3 MINE 206	4
MINE 205		3 PHYS 112 (GEF 8)	4
MINE 261		2	
		16	18

Third Year

Fall	Hours	Spring	Hours
CE 321		3 Two CE Core Courses *	8
GEOL 342		3 MINE 331	3
MAE 243		3 MINE 427	4
MAE 320		3 MINE 480	1
STAT 215		3	
		15	16

Fourth Year

Fall	Hours	Spring	Hours
Two CE Core Courses *		8 CE 301	1
MINE 306		3 Two CE Design Electives **	6
MINE 382		3 GEF Elective 6	3
		CE 423	3
		IENG 377	3
		14	16

Fifth Year

Fall	Hours	Spring	Hours
GEF Elective 5		3 CE Open Elective ***	3
ECON 201 (GEF 4)		3 CE 479	3
MINE 411		4 GEF Elective 7	3
MINE 471		3 MINE 484	4
MINE 483		2	
		15	13

Total credit hours: 152

* CE Core Classes: CE 332, CE 347, CE 351, CE 361

** CE Design Electives—any approved CE 400-level design course. See advisor for approved list

*** CE Open Electives—any approved CE 300 or CE 400-level course. See advisor for approved list.

Notes: Discipline substitutions:

- MINE 306 fulfills requirement of CE Engr/Math/Sci Elective 1.
- MINE 411 fulfills requirement of CE Engr/Math/Sci Elective 2.
- MINE requirement for is fulfilled through CE 322 and CE 351.
- MINE 382 fulfills requirement of CE engineering elective outside CE.
- MINE 461 is fulfilled by CE 322.
- MINE 484 fulfills CE requirement of ENGL 305.
- MINE requirement for STAT 211 is fulfilled by CE requirement of STAT 215.
- CE 321 fulfills MINE requirement for MAE 331.
- MINE technical elective and MINE Eng/Sci technical elective requirements are fulfilled by any two of the following: CE 332, CE 347, or CE 361.
- GEOL 342 fulfills requirement of CE basic science elective.
- MINE 261 substitutes for CE 210.

Lane Department of Computer Science & Electrical Engineering

E-mail: Statler-LCSEE@mail.wvu.edu

Degrees Offered

- Bachelor of Science in Biometric Systems Engineering (B.S.B.S.E.)
- Bachelor of Science in Computer Engineering (B.S.Cp.E.)
- Bachelor of Science in Computer Science (B.S.C.S.)
- Bachelor of Science in Cybersecurity (B.S.)
- Bachelor of Science in Electrical Engineering (B.S.E.E.)

Nature of the Program

The Department offers undergraduate degrees in computer science, electrical engineering, computer engineering, cybersecurity, and biometric systems engineering. Each of these disciplines deals with the creation and processing of information. Our degree programs provide a strong theoretical background as well as practical experience gained through hands-on projects and research. Our undergraduate programs provide students with the skills required for a broad range of jobs in industry, government, academia, business, and research. We begin with a strong common foundation in mathematics and add a variety of degree-specific courses on the fundamentals of electronics, computer systems, computer science, and biometric systems. Each of the degree programs provides a broad spectrum of knowledge in its field but also provides the opportunity for specialization through emphasis areas, electives, independent research projects, and directed studies. All five undergraduate degrees include an interdisciplinary capstone design experience culminating the final year of study. The program also provides a broad general education foundation necessary to put technical knowledge into perspective.

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 Tech)
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 nonbinary 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 of Science & Technology)
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, St. Louis)
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)
Wireless 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. (West Virginia University)
Photonics, Nanofabrication, Biometrics data sensing, 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/energy conversion, Power systems, Controls, Signals and systems
- Yuxin Liu - Ph.D. (Louisiana Tech University)
Biotechnology/bioengineering, BioMEMS and microfluidics, Cellular sensors, Tissue engineering
- Daryl Reynolds - Ph.D. (Texas A&M University)
Statistical signal processing for communications, Iterative (turbo) processing, Transmitter precoding, Space-time coding and processing
- Frances Van Scoy - 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. (Mississippi 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
- Guilherme 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 Iowa)
- Robert McConnell - Ph.D. (University of Kentucky)
- James Mooney - Ph.D. (Ohio State University)
- George Trapp - Ph.D. (Carnegie Mellon University)

In this Section

- Dual Degrees (p. 739)
- Non-Major Core Curriculum (p. 740)
- Common Core Curriculum (p. 740)
- CPE and EE Curriculum (p. 740)
- Dual CPE and EE Suggested Plan of Study (p. 741)
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- CPE and CS Curriculum (p. 745)
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Dual Degrees in the Lane Department of Computer Science and Electrical Engineering

Students can simultaneously pursue B.S. degrees in two majors within the department by completing additional classes for a minimum of 156 hours. Students must meet all the requirements for both degrees. Credit hours may vary based on student's choice of technical electives and emphasis courses. A minimum of 156 credit hours are required for dual degree graduation. Suggested schedules and course requirements for the dual curricula in Computer and Electrical Engineering, Computer Engineering and Computer Science, Biometric Systems Engineering and Computer Engineering, and Biometric Systems Engineering and Electrical Engineering are shown below.

For academic requirements, including minimum required grades and GPAs, and details regarding elective choices, please refer to the course catalog descriptions of the individual degrees. For many dual degree combinations, a certain number of Free Elective is specified, which may be satisfied by any University scheduled courses.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

NON-MAJOR CORE FOR DUAL DEGREE COMBINATIONS

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory	4
ECON 201	Principles of Microeconomics	3
ENGR 101	Engineering Problem Solving 1	2
ENGR 102	Engineering Problem-Solving 2	3
ENGR 191	First-Year Seminar	1
MATH 155	Calculus 1	4
or MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 156	Calculus 2	4
MATH 251	Multivariable Calculus	4
MATH 261	Elementary Differential Equations	4
PHYS 111	General Physics	4
PHYS 112	General Physics	4
STAT 215	Introduction to Probability and Statistics	3
Engineering Science Elective (Choose one)		3
CHE 201	Material and Energy Balances 1	
CHE 366	Materials Science	
IENG 377	Engineering Economy	
MAE 241	Statics	
MAE 320	Thermodynamics	
Total Hours		43

MAJOR REQUIREMENTS COMMON TO ALL DUAL DEGREE COMBINATIONS

CPE 271	Introduction to Digital Logic Design	3
CPE 272	Digital Logic Laboratory	1
CPE 310	Microprocessor Systems	3
CPE 311	Microprocessor Laboratory	1
CS 110	Introduction to Computer Science	4
CS 111	Introduction to Data Structures	4
CS 350	Computer System Concepts	3
EE 221	Introduction to Electrical Engineering	3
EE 222	Introduction to Electrical Engineering Laboratory	1
EE 223	Electrical Circuits	3
EE 224	Electrical Circuits Laboratory	1
EE 327	Signals and Systems 1	3
CSEE 380	Engineering Professionalism Seminars	1
CSEE 480	Capstone Project - Design	2
CSEE 481	Capstone Project - Implementation	3
Total Hours		36

Curriculum for Dual Degrees in Computer and Electrical Engineering

Course Requirements Unique to the CPE/EE Dual Degree

CPE 312	Microcomputer Structures and Interfacing	3
CPE 313	Microcomputer Structures and Interfacing Laboratory	1
CS 230	Introduction to Software Engineering	4
CS 450	Operating Systems Structure	4
CS 453	Data and Computer Communications	3

EE 251	Digital Electronics	3
EE 252	Digital Electronics Laboratory	1
EE 328	Signals and Systems Laboratory	1
EE 329	Signals and Systems 2	3
EE 335	Electromechanical Energy Conversion and Systems	3
EE 336	Electromechanical Energy Conversion and Systems Lab	1
EE 345	Engineering Electromagnetics	3
EE 355	Analog Electronics	3
EE 356	Analog Electronics Laboratory	1
CPE 400 level Technical Elective		3
EE Emphasis Area Technical Electives		9
Free Electives		10
Technical Elective		3
MATH 375	Applied Modern Algebra	3
GEF Electives 1, 5, 6, 7 (Students who take ENGL 103 must take another technical Elective Course or department approved course)		15
Total Hours		77

DUAL CPE AND EE SUGGESTED PLAN OF STUDY

It is important for students to take courses in the order specified as closely as possible; all prerequisites and concurrent requirements must be observed. A typical dual B.S.Cp.E. and B.S.E.E. program that completes both degree requirements in four and one-half years is as follows.

First Year

Fall	Hours	Spring	Hours
CHEM 115 & 115L		4 MATH 156	4
CS 110		4 PHYS 111	4
ENGL 101		3 ENGR 102	3
ENGR 101		2 CS 111	4
ENGR 191		1 GEF 5	3
MATH 155		4	
		18	18

Second Year

Fall	Hours	Spring	Hours
CPE 271 & CPE 272		4 CS 230	4
EE 221 & EE 222		4 EE 223 & EE 224*	4
MATH 251		4 EE 251 & EE 252*	4
PHYS 112		4 MATH 261	4
		16	16

Third Year

Fall	Hours	Spring	Hours
CPE 310 & CPE 311		4 CPE 312 & CPE 313*	4
CS 350		3 ENGL 102	3
EE 327*		3 GEF 6	3
MATH 375		3 EE 329 & EE 328*	4
STAT 215		3 EE 345*	3
Free Elective		3	
		19	17

Fourth Year

Fall	Hours	Spring	Hours
CSEE 380		1 CSEE 480	2
CS 450		4 CS 453	3
EE 335 & EE 336*		4 ECON 201	3
EE 355 & EE 356*		4 Engr. Science Elective	3
CPE 4xx Elective		3 EE Emphasis Tech Elective	3
		Free Elective	4
		<hr/>	<hr/>
		16	18

Fifth Year

Fall	Hours
CSEE 481	3
EE Emphasis Technical Elective	3
EE Emphasis Technical Elective	3
Free Elective	3
GEF 7 Elective	3
Technical Elective	3
	<hr/>
	18

Total credit hours: 156

* Only taught once per year, in the semester shown.

Curriculum for Dual Degrees in Biometric Systems Engineering and Computer Engineering

Courses Unique to the BSE/CpE Dual Degree

BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	4
BIOM 201	Introduction to Biometrics Systems	1
BIOM 426	Biometric Systems	3
CPE 312	Microcomputer Structures and Interfacing	3
CPE 313	Microcomputer Structures and Interfacing Laboratory	1
CS 220	Discrete Mathematics	3
CS 230	Introduction to Software Engineering (satisfies BIOM Emph course 1)	4
CS 450	Operating Systems Structure (satisfies BIOM Emph course 2)	4
CS 453	Data and Computer Communications	3
CS 465	Cybersecurity Principles and Practice	3
EE 251	Digital Electronics	3
EE 252	Digital Electronics Laboratory	1
EE 355	Analog Electronics	3
EE 356	Analog Electronics Laboratory	1
EE 425	Bioengineering	3
EE 465	Introduction to Digital Image Processing	3
Bioscience Elective (Choose one of the following)		3
BIOL 235	Human Physiology	
BMEG 480	Cellular Machinery	
BSE AoE Elective		3
CPE 400 level Technical Elective		3
Technical Elective		3
Free Electives		4
MATH 375	Applied Modern Algebra	3

Technical Elective**	3
Free Elective	3
Free Elective	1
	16

Total credit hours: 156

* Only taught once per year, in the semester shown.

Curriculum for Dual Degrees in Biometric Systems Engineering and Electrical Engineering

Courses Unique to the BSE/EE Dual Degree

BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	4
BIOM 201	Introduction to Biometrics Systems	1
BIOM 426	Biometric Systems (satisfies EE Bioengineering emphasis)	3
CS 465	Cybersecurity Principles and Practice	3
EE 251	Digital Electronics	3
EE 252	Digital Electronics Laboratory	1
EE 328	Signals and Systems Laboratory	1
EE 329	Signals and Systems 2	3
EE 335	Electromechanical Energy Conversion and Systems	3
EE 336	Electromechanical Energy Conversion and Systems Lab	1
EE 345	Engineering Electromagnetics	3
EE 355	Analog Electronics	3
EE 356	Analog Electronics Laboratory	1
EE 425	Bioengineering (satisfies EE Bioengineering emphasis)	3
EE 465	Introduction to Digital Image Processing (satisfies EE Bioengineering emphasis)	3
BSE AoE Elective		3
Technical Electives		9
Free Electives		8
Bioscience Elective		3
MATH 343 or MATH 375	Introduction to Linear Algebra Applied Modern Algebra	3
GEF Electives 1, 5, 6, 7 (Students who take ENGL 103 must take another technical Elective Course or department approved course)		15
Total Hours		77

BSE AND EE SUGGESTED PLAN OF STUDY

It is important for students to take courses in the order specified as closely as possible; all prerequisites and concurrent requirements must be observed. A typical dual B.S.B.S.E. and B.S.E.E. program that completes both degree requirements in four and one-half years is as follows.

First Year

Fall	Hours	Spring	Hours
BIOL 115 & BIOL 116*		4 CHEM 115 & 115L	4
ENGL 101		3 ENGR 102	3
ENGR 101		2 MATH 156	4
ENGR 191		1 PHYS 111	4
MATH 155		4 GEF 6	3
GEF 5		3	
		17	18

Second Year

Fall	Hours	Spring	Hours
BIOM 201		1 CS 110	4

CPE 271 & CPE 272	4 EE 223 & EE 224*	4	
EE 221 & EE 222	4 EE 251 & EE 252*	4	
MATH 251	4 MATH 261	4	
PHYS 112	4 STAT 215	3	
	17	19	
Third Year			
Fall	Hours	Spring	
		Hours	
CPE 310 & CPE 311		4 CS 350	3
CS 111		4 EE 329 & EE 328*	4
EE 327*		3 MATH 375	3
EE 355 & EE 356*		4 EE 345*	3
ENGL 102		3 Bioscience Elective*	3
		18	16
Fourth Year			
Fall	Hours	Spring	Hours
BIOM 426*		3 ECON 201	3
CSEE 380		1 CSEE 480	2
EE 335 & EE 336*		4 EE 465*	3
EE 425*		3 CS 465*	3
Technical Elective		3 Engineering Science Elective	3
Free Elective		3 Technical Elective	3
		17	17
Fifth Year			
Fall	Hours		
CSEE 481		3	
BSE AoE Elective		3	
Free Elective		3	
Free Elective		2	
GEF 7		3	
Technical Elective		3	
		17	

Total credit hours: 156

* Only taught once per year, in the semester shown.

Curriculum for Dual Degrees in Computer Engineering and Computer Science

Courses Unique to the CPE/CS Dual Degree

CPE 312	Microcomputer Structures and Interfacing	3
CPE 313	Microcomputer Structures and Interfacing Laboratory	1
CPE 435	Computer Incident Response	3
CS 210	File and 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 410	Compiler Construction	3
CS 450	Operating Systems Structure	4

CS 453	Data and Computer Communications	3
EE 251	Digital Electronics	3
EE 252	Digital Electronics Laboratory	1
EE 355	Analog Electronics	3
EE 356	Analog Electronics Laboratory	1
Concentration Area Electives		12
ENGL 305	Technical Writing	3
COMM 112	Small Group Communication	3
MATH 375	Applied Modern Algebra	3
GEF Electives 1, 5, 6, 7 (Students who take ENGL 103 must take another technical Elective Course or department approved course)		15
Total Hours		78

CS Concentration Areas (CA's)**CA1: Theory of Computing**

CS 420	Design of Algorithms	3
CS 422	Automata Theory	3
CS 426	Discrete Mathematics 2	3

CA2: Software and Knowledge Engineering

CS 430	Advanced Software Engineering	3
CS 440	Database Design and Theory	3
CS 470	Introduction to Computer Graphics	3
CS 472	Artificial Intelligence	3
CS 475	Game Development	3

CA3: Computer Systems

CPE 435	Computer Incident Response	3
CS 453	Data and Computer Communications	3
CS 465	Cybersecurity Principles and Practice	3
CYBE 466	Host Based Cyber Defense	3
CYBE 467	Practicing Cybersecurity: Attacks & Countermeasures	3

CPE AND CS SUGGESTED PLAN OF STUDY

It is important for students to take courses in the order specified as closely as possible; all prerequisites and concurrent requirements must be observed. All CS, CpE, MATH, and STAT classes required for the BSCS must be completed with a grade of C or better. A typical dual B.S.C.S. and B.S.Cp.E. program that completes both degree requirements in four and one-half years is as follows.

First Year

Fall	Hours	Spring	Hours
CHEM 115 & 115L		4 COMM 112	3
CS 110		4 CS 111	4
ENGL 101		3 ENGR 102	3
ENGR 101		2 MATH 156	4
ENGR 191		1 PHYS 111	4
MATH 155		4	
		18	18

Second Year

Fall	Hours	Spring	Hours
CPE 271 & CPE 272		4 CS 230	4
CS 210*		4 EE 223 & EE 224*	4
EE 221 & EE 222		4 EE 251 & EE 252*	4
MATH 251		4 ENGL 102	3

PHYS 112		4 MATH 261	4
			19
Third Year			
Fall	Hours	Spring	Hours
CPE 310 & CPE 311		4 CPE 312 & CPE 313*	4
CS 220*		3 CS 310*	3
EE 327*		3 CS 320	3
EE 355 & EE 356*		4 CS 350	3
MATH 375		3 ECON 201	3
		ENGL 305	3
		17	19
Fourth Year			
Fall	Hours	Spring	Hours
CSEE 380		1 CPE 480	2
CPE 435		3 CS Concentration Area Elective**	3
CS 410*		3 CS Concentration Area Elective	3
CS 450		4 Engineering Science Elective	3
CS 453		3 GEF 6	3
STAT 215		3	
		17	14
Fifth Year			
Fall	Hours		
CSEE 481		3	
CS Concentration Area Elective**		3	
CS Concentration Area Elective		3	
GEF 7		3	
GEF 5		3	
		15	

Total credit hours: 157

* Only taught once per year, in the semester shown.

Biometric Systems Engineering, B.S.B.S.E.

Degree Offered

- Bachelor of Science in Biometric Systems Engineering (B.S.B.S.E.)

Nature of the Program

Biometric systems allow for personal identification based upon fundamental biometric features that are unique and time invariant, such as features derived from fingerprints, faces, irises, retinas, and voices. Biometric systems are composed of complex hardware and software designed to measure a signature of the human body, compare the signature to a database, and make a decision based on this matching process. The Statler College intends to seek ABET accreditation for the biometric systems engineering program.

WVU's Bachelor of Science in Biometric Systems Engineering degree program trains engineers in the skills needed to design, build, test, and modify biometric systems, as well as the application and interpretation of data from these systems. Biometric Systems Engineering majors take fundamental coursework in circuits and electronics; in digital and computing systems; and in computer programming, similar to our Computer Engineering majors.

During their junior and senior years, Biometric Systems Engineering majors take advanced classes in image processing; in computer security; in biometric devices; and in biomedical systems. During their senior year, all Biometric Systems Engineering majors complete a two semester Capstone project in which they work with a team of students to design, build and test a device, systems or application which makes use of biometric techniques.

Required courses in biology and statistics, provide Biometric Systems Engineering students with a specialized skill set that distinguishes this major from other engineering disciplines.

Graduates of the Biometrics Systems Engineering degree program are in high demand for engineering positions in law enforcement agencies, as well as government agencies and contractors in the defense and security fields. Demand for biometric systems engineers is also rapidly growing in commercial fields such as banking, manufacturing and consumer products that enhance the human computer interface. The continued rapid advance of integrated sensor, signal/image processing, computer, and mass storage technology promises to extend these applications further into our daily lives with even the most inanimate objects able to identify, interact with, and assist their users.

Areas of Emphasis

Presently, five specialization paths have been identified for the biometric systems engineering curriculum and each specialization path has a corresponding Area of Emphasis. Each Area of Emphasis enables students to develop an in-depth technical background in an area of their own choosing which is central to biometric system development. Currently designated Areas of Emphasis are (1) Sensors and Circuits, (2) Signal Processing, (3) Statistics, (4) Software Systems, and (5) Cybersecurity. Each Area of Emphasis is fulfilled by the successful completion of three courses. Each emphasis area curriculum is defined by three courses chosen from a set of classes prescribed for that area. Successful completion of an emphasis area's requirements is designated on the student's transcript. The computer engineering program is accredited by the Engineering Accreditation Commission (EAC) of ABET, The computer engineering program is accredited by the Engineering Accreditation Commission (EAC) of ABET

Click here to view the Suggested Plan of Study (p. 750)

Curriculum in Biometric Systems Engineering

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum Requirements

To receive a bachelor of science in Biometric Systems Engineering, a student must meet the University's undergraduate degree requirements, take all the courses indicated below, and attain a grade point average of 2.25 or better for all Lane Department of Computer Science and Electrical Engineering courses, in all WVU courses, and overall. This requirement assures that the student has demonstrated overall competence in the major.

Freshman Engineering Requirements

ENGR 101	Engineering Problem Solving 1	2
Engineering Problem Solving: (choose one of the following)		3
CHE 102	Introduction to Chemical Engineering	
ENGR 102	Engineering Problem-Solving 2	
ENGR 103	Introduction to Nanotechnology Design	
MAE 102	Introduction to Mechanical and Aerospace Engineering Design	
ENGR 191	First-Year Seminar	1

Non-Biometric Systems Core

BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory (GEF 8)	4
Bioscience Elective (Choose one of the following)		3
BIOL 235	Human Physiology	
BMEG 480	Cellular Machinery	
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2B)	4
ECON 201	Principles of Microeconomics (GEF 4)	3
Calculus I (GEF 3):		4
MATH 155	Calculus 1 (Minimum grade of C- is required)	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus (Minimum grade of C- is required)	
MATH 156	Calculus 2 (GEF 8 - Minimum grade of C- is required)	4
MATH 251	Multivariable Calculus (Minimum grade of C- is required)	4
MATH 261	Elementary Differential Equations	4
Math Elective (Choose one of the following)		3
CS 220	Discrete Mathematics	
MATH 343	Introduction to Linear Algebra	
MATH 373	Introduction to Cryptography	
MATH 375	Applied Modern Algebra	
PHYS 111	General Physics	4
PHYS 112	General Physics	4
STAT 215	Introduction to Probability and Statistics	3
Biometric Core (Minimum 2.25 GPA is required in all of the following courses.)		
BIOM 201	Introduction to Biometrics Systems	1
BIOM 426	Biometric Systems	3
CSEE 380	Engineering Professionalism Seminars	1
CSEE 480 or BIOM 480	Capstone Project - Design	2
CSEE 481 or BIOM 481	Capstone Project - Implementation	3
CPE 271	Introduction to Digital Logic Design	3
CPE 272	Digital Logic Laboratory	1
CPE 310	Microprocessor Systems	3
CPE 311	Microprocessor Laboratory	1
CS 110	Introduction to Computer Science	4
CS 111	Introduction to Data Structures	4
CS 350	Computer System Concepts	3
CS 465	Cybersecurity Principles and Practice	3
EE 221	Introduction to Electrical Engineering	3
EE 222	Introduction to Electrical Engineering Laboratory	1
EE 223	Electrical Circuits	3
EE 224	Electrical Circuits Laboratory	1
EE 327	Signals and Systems 1	3
EE 425	Bioengineering	3
EE 465	Introduction to Digital Image Processing	3
Area of Emphasis		9
Technical Elective (300 level or higher course in BIOM, CPE, CS, CYBE, or EE)		3
GEF Electives 1, 5, 6, 7		15
Total Hours		126

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 B.S.B.S.E. degree program, which completes degree requirements in four years, is as follows.

First Year

Fall	Hours	Spring	Hours
CS 110		4 CHEM 115 & 115L (GEF 2)	4
ENGL 101 (GEF 1)		3 CS 111	4
ENGR 101		2 ENGR 102	3
ENGR 191		1 MATH 156 (GEF 8)	4
MATH 155 (GEF 3)		4 PHYS 111 (GEF 8)	4
GEF 5		3	
		17	19

Second Year

Fall	Hours	Spring	Hours
BIOL 115 & BIOL 116*		4 CPE 271	3
EE 221		3 CPE 272	1
EE 222		1 EE 223	3
MATH 251		4 EE 224	1
PHYS 112		4 ENGL 102 (GEF 1)	3
BIOM 201		1 MATH 261	4
		17	15

Third Year

Fall	Hours	Spring	Hours
BIOM 426*		3 CPE 310	3
CS 350		3 CPE 311	1
EE 425*		3 CS 465*	3
EE 327*		3 EE 465*	3
STAT 215		3 Bioscience Elective	3
CSEE 380		1 Math Elective	3
		16	16

Fourth Year

Fall	Hours	Spring	Hours
CSEE 480		2 CSEE 481	3
ECON 201 (GEF 4)		3 Area of Emphasis Course 3	3
Area of Emphasis Course 1		3 GEF 6	3
Area of Emphasis Course 2		3 GEF 7	3
Technical Elective		3	
		14	12

Total credit hours: 126

* Offered once per year in the semester shown.

Areas of Emphasis

AREA OF EMPHASIS IN CYBERSECURITY

A minimum grade of C- is required in each course.

CS 453	Data and Computer Communications	3
CS 465	Cybersecurity Principles and Practice	3
CYBE 366	Secure Software Development	3
CYBE 467	Practicing Cybersecurity: Attacks & Countermeasures	3

Select one of the following:		3
CPE 435	Computer Incident Response	
CYBE 466	Host Based Cyber Defense	
Total Hours		15

MICROSENSORS AND CIRCUITS AREA OF EMPHASIS REQUIREMENTS

EE 251 & EE 252	Digital Electronics and Digital Electronics Laboratory	4
Choose two of the following:		6
PHYS 314	Introductory Modern Physics	
PHYS 321	Optics	
EE 355 & EE 356	Analog Electronics and Analog Electronics Laboratory	
EE 450	Device Design and Integration	
EE 455	Introduction to Microfabrication	
Total Hours		10

SIGNAL PROCESSING AREA OF EMPHASIS REQUIREMENTS

EE 251 & EE 252	Digital Electronics and Digital Electronics Laboratory	4
EE 329 & EE 328	Signals and Systems 2 and Signals and Systems Laboratory	4
Choose one of the following:		3
CS 453	Data and Computer Communications	
EE 463	Digital Signal Processing Fundamentals	
EE 565	Advanced Image Processing	
Total Hours		11

STATISTICS AREA OF EMPHASIS REQUIREMENTS

Choose either the Applied or Theory Option		9
Applied Option		
STAT 312	Intermediate Statistical Methods	
Choose two of the following:		
STAT 313	Introductory Design and Analysis	
STAT 331	Sampling Methods	
STAT 421	Statistical Analysis System (SAS)	
Theory Option		
STAT 312	Intermediate Statistical Methods	
STAT 461	Theory of Probability	
STAT 462	Theory of Statistics	
Total Hours		9

SOFTWARE SYSTEMS AREA OF EMPHASIS REQUIREMENTS

CS 230 or CPE 484	Introduction to Software Engineering Real-Time Systems Development	0-4
Choose two of the following:		6
CPE 442 or CS 455	Introduction to Digital Computer Architecture Computer Architecture	
CS 430	Advanced Software Engineering	
CS 450	Operating Systems Structure	
CS 453	Data and Computer Communications	

Program Educational Objectives

The Program Educational Objectives (PEO) of the Biometric Systems Engineering (BSE) program at West Virginia University is to produce graduates who will apply their knowledge and skills to achieve success in their careers in industry, research, government service or graduate study. It is expected that in the first five years after graduation our graduates will achieve success and proficiency in their profession, be recognized as leaders, and contribute to the well-being of society.

Major Learning Outcomes

BIOMETRIC SYSTEMS ENGINEERING

Upon graduation, all Bachelor of Science in Biometric Systems Engineering students will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.
8. An ability to understand the significance of biometric traits, explain the components of a biometric system, and assess its performance.

Computer Engineering, B.S.Cp.E.

Degree Offered

- Bachelor of Science in Computer Engineering (B.S.Cp.E.)

Nature of the Program

Computer engineers design, develop, test, and oversee the manufacture and maintenance of embedded computer hardware and software. As such, computer engineering combines portions of the knowledge of electrical engineers and computer scientists. Embedded computer systems include applications in the automotive, communications, radio and television, consumer electronics, aircraft, robotics, and health-care industries. In addition, computer engineers design, develop, test, manufacture, and maintain complex systems including digital communications systems such as cell phone networks, secure computer networks, and system-level software such as operating systems and applications software. The computer engineering program is accredited by the Engineering Accreditation Commission (EAC) of ABET, <http://www.abet.org>.

Fundamental courses in the computer engineering areas of hardware and software are taken during the second year with general fundamental engineering courses included. The third and fourth years in the curriculum concentrate on areas of computer engineering in both software and hardware with technical electives provided to allow the student to acquire more depth in a preferred area of expertise.

[Click here to view the Suggested Plan of Study \(p. 754\)](#)

Curriculum in Computer Engineering

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

ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing
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3-6

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.

Curriculum Requirements

To receive a bachelor of science in computer engineering, a student must meet the University's undergraduate degree requirements, take all the courses indicated below, and attain a grade point average of 2.25 or better for all Lane Department of Computer Science and Electrical Engineering courses, in all WVU courses, and overall. This requirement assures that the student has demonstrated overall competence in the major.

Freshman Engineering Requirements

ENGR 101	Engineering Problem Solving 1	2
Engineering Problem Solving:		3
CHE 102	Introduction to Chemical Engineering	
ENGR 102	Engineering Problem-Solving 2	
ENGR 103	Introduction to Nanotechnology Design	
MAE 102	Introduction to Mechanical and Aerospace Engineering Design	
ENGR 191	First-Year Seminar	1

Non-Computer Engineering Core

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2B)	4
ECON 201	Principles of Microeconomics (GEF 4)	3
Calculus I (GEF 3):		4
MATH 155	Calculus 1 (Minimum grade of C- is required)	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus (Minimum grade of C- is required)	
MATH 156	Calculus 2 (GEF 8 - Minimum grade of C- is required)	4
MATH 251	Multivariable Calculus (Minimum grade of C- is required)	4
MATH 261	Elementary Differential Equations	4
MATH 375	Applied Modern Algebra	3
PHYS 111	General Physics (GEF 8)	4
PHYS 112	General Physics (GEF 8)	4
STAT 215	Introduction to Probability and Statistics	3
Engineering Science Elective (Choose one)		3
CHE 201	Material and Energy Balances 1	
CHE 366	Materials Science	
IENG 377	Engineering Economy	
MAE 241	Statics	
MAE 320	Thermodynamics	

Computer Engineering Core Requirements (Minimum GPA of 2.0 required in BIOM, CPE, CS, and EE courses)

CPE 271	Introduction to Digital Logic Design	3
CPE 272	Digital Logic Laboratory	1
CPE 310	Microprocessor Systems	3
CPE 311	Microprocessor Laboratory	1
CPE 312	Microcomputer Structures and Interfacing	3
CPE 313	Microcomputer Structures and Interfacing Laboratory	1
CSEE 380	Engineering Professionalism Seminars	1

CSEE 480 or CPE 480	Capstone Project - Design Capstone Project - Design	2
CSEE 481 or CPE 481	Capstone Project - Implementation Capstone Project - Implementation	3
CS 110	Introduction to Computer Science	4
CS 111	Introduction to Data Structures	4
CS 230	Introduction to Software Engineering	4
CS 350	Computer System Concepts	3
CS 450	Operating Systems Structure	4
CS 453	Data and Computer Communications	3
EE 221	Introduction to Electrical Engineering	3
EE 222	Introduction to Electrical Engineering Laboratory	1
EE 223	Electrical Circuits	3
EE 224	Electrical Circuits Laboratory	1
EE 251	Digital Electronics	3
EE 252	Digital Electronics Laboratory	1
EE 327	Signals and Systems 1	3
EE 355	Analog Electronics	3
EE 356	Analog Electronics Laboratory	1
CPE Technical Elective (400-level course in Computer Engineering)		3
Technical Elective (300 level or higher course in Biometric Systems, Computer Engineering, Computer Science, Cybersecurity, or Electrical Engineering)		3
GEF Electives 1, 5, 6, 7		15
Total Hours		126

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 B.S.Cp.E. degree program that completes degree requirements in four years is as follows.

First Year

Fall	Hours	Spring	Hours
MATH 155 (GEF 3)		4 MATH 156 (GEF 8)	4
ENGR 101		2 ENGR 102	3
ENGR 191		1 PHYS 111 (GEF 8)	4
CHEM 115 & 115L (GEF 2)		4 GEF 6	3
ENGL 101 (GEF 1)		3 GEF 7	3
GEF 5		3	
		17	17

Second Year

Fall	Hours	Spring	Hours
CPE 271		3 CS 110	4
CPE 272		1 EE 223*	3
EE 221		3 EE 224*	1
EE 222		1 EE 251	3
MATH 251		4 EE 252*	1
PHYS 112 (GEF 8)		4 MATH 261	4
		16	16

Third Year

Fall	Hours	Spring	Hours
CPE 310		3 CPE 312*	3
CPE 311		1 CPE 313*	1
CS 111		4 CS 230	4

EE 327*	3 CS 350	3
EE 355*	3 STAT 215	3
EE 356*	1 ENGL 102 (GEF 1)	3
CSEE 380	1	
		<hr/>
		16
		17

Fourth Year

Fall	Hours	Spring	Hours
CSEE 480		2 CSEE 481	3
CS 450		4 Engr. Science Elective	3
CS 453		3 CPE Tech. Elective	3
MATH 375		3 Tech. Elective	3
ECON 201 (GEF 4)		3	
		<hr/>	
		15	12

Total credit hours: 126

* Offered once per year in the semester shown.

AREA OF EMPHASIS IN CYBERSECURITY

A minimum grade of C- is required in each course.

CS 453	Data and Computer Communications	3
CS 465	Cybersecurity Principles and Practice	3
CYBE 366	Secure Software Development	3
CYBE 467	Practicing Cybersecurity: Attacks & Countermeasures	3
Select one of the following:		3
CPE 435	Computer Incident Response	
CYBE 466	Host Based Cyber Defense	

Total Hours 15

Program Educational Objectives

The Program Educational Objectives (PEO) of the Computer Engineering (CpE) program at West Virginia University is to produce graduates who will apply their knowledge and skills to achieve success in their careers in industry, research, government service or graduate study. It is expected that in the first five years after graduation our graduates will achieve success and proficiency in their profession, be recognized as leaders, and contribute to the well-being of society.

Student Outcomes

Upon graduation, all Bachelor of Science in Computer Engineering students will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Computer Science, B.S.C.S.**Degree Offered**

- Bachelor of Science in Computer Science (B.S.C.S.)

Nature of the Program

Computer science is a discipline that involves the understanding and design of computational processes. The discipline ranges from a theoretical study of algorithms and information processing in general, to a practical design of efficient and reliable software that meets given specifications. This differs from most physical sciences, engineering included, that separate theoretical underpinnings of the science from applications within it. The computer science major prepares students for careers in fields such as software development, cybersecurity, machine learning, data analytics, virtual reality, and human computer interfaces. The computer science program is accredited by the Computing Accreditation Commission (CAC) of ABET, <http://www.abet.org>.

[Click here to view the Suggested Plan of Study \(p. 758\)](#)

Curriculum in Computer Science

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum Requirements

To receive a degree of bachelor of science in computer science, a student must meet the University's undergraduate degree requirements, take all the courses indicated below, and attain a grade point average of 2.25 or better for all Lane Department of Computer Science and Electrical Engineering courses, in all WVU courses, and overall. This requirement assures that the student has demonstrated overall competence in the major.

All CPE, CS, MATH, and STAT courses must be completed with a grade of C- or better.

Non-Computer Science Core

COMM 112	Small Group Communication (GEF 4)	3
ENGR 101	Engineering Problem Solving 1	2
ENGR 191	First-Year Seminar	1
Calculus I (GEF 3):		4
MATH 155	Calculus 1	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 156	Calculus 2 (GEF 8)	4
MATH 251	Multivariable Calculus (Minimum Grade of C- Required)	4
STAT 215	Introduction to Probability and Statistics (Minimum grade of C- required)	3
ENGL 305	Technical Writing	3
Lab Science I (GEF 2B) & II (GEF 8): Select one of the following 8-hr sequences		8

BIOL 115 & BIOL 116 & BIOL 117 & BIOL 118	Principles of Biology and Principles of Biology Laboratory and Introductory Physiology and Introductory Physiology Laboratory	
CHEM 115 & 115L & CHEM 116 & CHEM 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory and Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	
CHEM 117 & 117L & CHEM 118 & CHEM 118L	Principles of Chemistry 1 and Principles of Chemistry 1 - Laboratory and Principles of Chemistry 2 and Principles of Chemistry 2 - Laboratory	
PHYS 111 & PHYS 112	General Physics and General Physics	
GEOL 101 & GEOL 102 & GEOL 103 & GEOL 104	Planet Earth and Planet Earth Laboratory and Earth Through Time and Earth Through Time Laboratory	
Lab Science III (GEF 8): Choose an additional 4-hr lab science from a second discipline		4
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory	
CHEM 117 & 117L	Principles of Chemistry 1 and Principles of Chemistry 1 - Laboratory	
GEOL 101 & GEOL 102	Planet Earth and Planet Earth Laboratory	
PHYS 111	General Physics	
Major requirement Extra GEF 2-7		3
Free Electives (200 level or higher)		6
Computer Science Core Requirements		
CPE 271	Introduction to Digital Logic Design	3
CPE 272	Digital Logic Laboratory	1
Select one of the following:		3
CPE 310 & CPE 311	Microprocessor Systems and Microprocessor Laboratory	
CS 455	Computer Architecture	
CS 110	Introduction to Computer Science	4
CS 111	Introduction to Data Structures	4
CS 210	File and 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 (Analysis of Algorithms (new number))	3
CS 350	Computer System Concepts	3
CS 410	Compiler Construction	3
CS 450	Operating Systems Structure	4
CS 453	Data and Computer Communications	3
CSEE 380	Engineering Professionalism Seminars	1
CSEE 480 or CS 480	Capstone Project - Design Capstone Project - Design	2
CSEE 481 or CS 481	Capstone Project - Implementation Capstone Project - Implementation	3
Concentration Areas (CA)		15
Choose two courses from two CAs and one course from the remaining CA.		

CA 1: Theory of Computing

CS 420	Design of Algorithms
CS 422	Automata Theory
CS 426	Discrete Mathematics 2

CA2: Software and Knowledge Engineering

CS 430	Advanced Software Engineering
CS 440	Database Design and Theory
CS 470	Introduction to Computer Graphics
CS 472	Artificial Intelligence
CS 475	Game Development

CA3: Computer Systems

CPE 435	Computer Incident Response
CS 465	Cybersecurity Principles and Practice
CS 493	Concurrent Programming
CYBE 466	Host Based Cyber Defense
CYBE 467	Practicing Cybersecurity: Attacks & Countermeasures

GEF Electives 1, 5, 6, 7 15

Total Hours 126

Suggested Plan of Study

It is important for students to take courses in the order specified as closely as possible; all prerequisites and concurrent requirements must be observed. A typical B.S. degree program that completes degree requirements in four years is as follows.

First Year

Fall	Hours	Spring	Hours
CS 110		4 CS 111	4
COMM 112 (GEF 4)		3 ENGL 101 (GEF 1)	3
ENGR 101		2 MATH 156 (GEF 8)	4
ENGR 191		1 GEF 5	3
MATH 155 (GEF 3)		4 Lab Science II (GEF 8)	4
Lab Science I (GEF 2)		4	
		18	18

Second Year

Fall	Hours	Spring	Hours
CS 210*		4 CPE 271	3
CS 220*		3 CPE 272	1
ENGL 102 (GEF 1)		3 CS 230	4
MATH 251		4 STAT 215	3
Lab Science III (GEF 8)		4 GEF 6	3
		18	14

Third Year

Fall	Hours	Spring	Hours
CS 320		3 CS 310*	3
CS 350		3 CS 450*	4
CS 455 (or CPE 310/311)		3 Concentraion Area Course	3
CSEE 380		1 2x Free Elective	3
Concentration Area Course		3 ENGL 305	3
GEF 7		3	
		16	16

Fourth Year

Fall	Hours	Spring	Hours
CSEE 480		2 CSEE 481	3

CS 410*	3 Concentration Area Course	3
Two Concentration Area Courses	6 2xx Free Elective	3
CS 453	3 Extra GEF (2-7)	3
	14	12

Total credit hours: 126

* Offered once per year in the semester shown.

AREA OF EMPHASIS IN CYBERSECURITY

A minimum grade of C- is required in each course.

CS 453	Data and Computer Communications	3
CS 465	Cybersecurity Principles and Practice	3
CYBE 366	Secure Software Development	3
CYBE 467	Practicing Cybersecurity: Attacks & Countermeasures	3
Select one of the following:		3
CPE 435	Computer Incident Response	
CYBE 466	Host Based Cyber Defense	

Total Hours 15

Program Educational Objectives

The Program Educational Objectives (PEO) of the Bachelor of Science in Computer Science (B.S.C.S.) program at West Virginia University is to produce graduates who will apply their knowledge and skills to achieve success in their careers in industry, research, government service or graduate study. It is expected that in the first five years after graduation our graduate will achieve success and proficiency in their profession, be recognized as leaders, and contribute to the well-being of society.

Student Outcomes

Upon graduation, all Bachelor of Science students in Computer Science will have an ability to:

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply computer science theory and software development fundamentals to produce computing-based solutions.

Cybersecurity, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

Students will be able to recognize the relevant issues in cybersecurity and have knowledge in the areas: data security, software security, system security, human security, organizational security and societal security. Students will be able to apply the ethical aspects and cyber laws in each cybersecurity area. The Statler College intends to seek ABET accreditation for the cybersecurity program.

Curriculum in Cybersecurity

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

To receive a degree of bachelor of science with a major in cybersecurity, a student must meet the University's undergraduate degree requirements, take all the courses indicated below, and attain a grade point average of 2.25 or better for all Lane Department of Computer Science and Electrical Engineering courses, in all WVU courses, and overall. This requirement assures that the student has demonstrated overall competence in the major.

Curriculum Requirements

All CYBE, CPE, CS, CSEE, MATH, STAT, SOCA and MIST courses must be completed with a grade of C- or better.

Non-Cybersecurity Requirements

COMM 112	Small Group Communication (GEF 4)	3
ENGR 101	Engineering Problem Solving 1	2
ENGR 191	First-Year Seminar	1
Calculus I (GEF 3):		4
MATH 155	Calculus 1	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 156	Calculus 2 (GEF 8)	4
STAT 215	Introduction to Probability and Statistics	3
Lab Science I (GEF 2B) & II (GEF 8): Select one of the following 8-hr sequences		8
BIOL 115 & BIOL 116 & BIOL 117 & BIOL 118	Principles of Biology and Principles of Biology Laboratory and Introductory Physiology and Introductory Physiology Laboratory	
CHEM 115 & 115L & CHEM 116 & CHEM 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory and Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	
CHEM 117 & 117L & CHEM 118 & CHEM 118L	Principles of Chemistry 1 and Principles of Chemistry 1 - Laboratory and Principles of Chemistry 2 and Principles of Chemistry 2 - Laboratory	
PHYS 111 & PHYS 112	General Physics and General Physics	
GEOL 101 & GEOL 102 & GEOL 103 & GEOL 104	Planet Earth and Planet Earth Laboratory and Earth Through Time and Earth Through Time Laboratory	
Lab Science III (GEF 8): Choose an additional 4-hr lab science from a second discipline		4
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory	
CHEM 117 & 117L	Principles of Chemistry 1 and Principles of Chemistry 1 - Laboratory	
GEOL 101 & GEOL 102	Planet Earth and Planet Earth Laboratory	
PHYS 111	General Physics	
Cybersecurity Requirements		
CPE 271 & CPE 272	Introduction to Digital Logic Design and Digital Logic Laboratory	4
CPE 310 & CPE 311	Microprocessor Systems and Microprocessor Laboratory	4
CPE 435	Computer Incident Response	3
CS 110	Introduction to Computer Science	4
CS 111	Introduction to Data Structures	4
CS 210	File and Data Structures	4
CS 220	Discrete Mathematics	3
CS 230	Introduction to Software Engineering	4
CS 350	Computer System Concepts	3
CS 450	Operating Systems Structure	4
CS 453	Data and Computer Communications	3
CS 465	Cybersecurity Principles and Practice	3
CSEE 380	Engineering Professionalism Seminars	1
CSEE 480 or CS 480	Capstone Project - Design Capstone Project - Design	2
CSEE 481 or CS 481	Capstone Project - Implementation Capstone Project - Implementation	3
CYBE 266	Foundations of Cybersecurity	3
CYBE 366	Secure Software Development	3
CYBE 466	Host Based Cyber Defense	3
CYBE 467	Practicing Cybersecurity: Attacks & Countermeasures	3
MATH 373	Introduction to Cryptography	3
MIST 357	Information Ethics	3
SOCA 101	Introduction to Sociology	3
SOCA 431	Cybercrime	3
Technical Electives		9
Select three of the following:		
CS 422	Automata Theory	
CS 430	Advanced Software Engineering	
CS 440	Database Design and Theory	
CS 470	Introduction to Computer Graphics	
CS 472	Artificial Intelligence	
CPE 484	Real-Time Systems Development	
FIS 450	Computational Forensics	
GEF Electives 1, 5, 6, 7		15
Total Hours		126

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
CS 110		4 CS 111	4
COMM 112 (GEF 4)		3 ENGL 101 (GEF 1)	3
ENGR 101		2 MATH 156 (GEF 8)	4

ENGR 191		1 Lab Science II (GEF 8)	4
MATH 155 (GEF 3)		4	
Lab Science I (GEF 2)		4	
		18	15
Second Year			
Fall	Hours	Spring	Hours
CPE 271		3 CS 350	3
CPE 272		1 MATH 373	3
CS 210		4 SOCA 101	3
CS 220		3 STAT 215	3
CYBE 266		3 Lab Science III (GEF 8)	4
ENGL 102 (GEF 1)		3	
		17	16
Third Year			
Fall	Hours	Spring	Hours
CPE 310		3 CS 450	4
CPE 311		1 CS 465	3
CS 230		4 CYBE 366	3
CS 453		3 MIST 357	3
SOCA 431		3 GEF 6	3
CSEE 380		1	
		15	16
Fourth Year			
Fall	Hours	Spring	Hours
CSEE 480		2 CSEE 481	3
CPE 435		3 CYBE 467	3
CYBE 466		3 Technical Elective	3
Technical Elective		3 Technical Elective	3
GEF 7		3 GEF 5	3
		14	15

Total credit hours: 126

Program Educational Objectives

The objective of the bachelor's degree program in Cybersecurity (CYBE) at West Virginia University is to produce graduates who have the attitudes that will ensure success in professional positions in business, industry, research, governmental service, or graduate study or professional school.

Student Outcomes

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply security principles and practices to maintain operations in the presence of risks and threats.

Electrical Engineering, B.S.E.E.

Degree Offered

- Bachelor of Science in Electrical Engineering (B.S.E.E.)

Nature of the Program

Electrical engineers design, develop, test, and oversee the manufacture and maintenance of equipment that uses electricity, including subsystems for power generation and transmission, sensors, electronics, instrumentation, controls, communications and signal processing. The electrical engineering program is accredited by the Engineering Accreditation Commission (EAC) of ABET, <http://www.abet.org>.

In the first two years of electrical engineering, coursework is limited to those subjects that are essential as preparatory courses for more technical courses in the third and fourth years. Fundamental courses in electrical engineering are introduced in the second year. In the third and fourth years, the curriculum provides advanced instruction through required courses and electives. These electives are included in the curriculum to allow the student to acquire additional depth in the student's selected field of electrical engineering.

Concentration Areas

Each student must select a concentration area from the list below. Students should check with instructors of the newly developed courses that are being offered under EE/CpE/CS 493 to determine what emphasis area they fall under. Students should also be certain that this information is being recorded in their advising file.

1. **Power Systems:** The cost and reliability of electricity plays a critical role in the quality of life and price of all manufactured goods. Advances in power electronics devices and computers are improving the efficiency of electromechanical devices. Electric deregulation in many states is offering retail customers an opportunity to select their electricity supplier and reduce cost. Improvements in technologies such as fuel cells, micro-turbines, wind turbines and photovoltaic systems offer new choices for power generation. Siting of distributed generation sources near the loads and operating power system under deregulation offer new challenges for power engineers.
2. **Control Systems:** Control theory is fundamental to any system that is required to behave in a desired manner. Such systems include all engineering systems such as mechanical, chemical, electrical and computer systems as well as many other dynamical systems such as economic markets. Control theory therefore has a broad range of applications. This track interests those students who wish to apply technology to control dynamical systems. Signals from sensors, usually processed by a computer, are necessary for proper control of a system. Consequently, the student interested in the control systems track will take a course in digital control and at least two additional courses in control systems, digital signal processing and/or applications such as control of power systems. Additional courses that are useful are mathematical courses such as linear algebra and complex variable analysis.
3. **Electronics:** Electronics spans a number of large technical specialties within CSEE. A solid understanding of device operation and their limitations is key to good electronic design, be it the design of individual devices or the design of complex electronic systems. Several programming tools will be introduced to the students during their training in this emphasis area to support the development of this understanding. In the core course required in this emphasis area, the students will model devices using pSpice and layout electronic circuits using VLSI design rules. Additional electronic design concepts will be introduced in the technical electives. The following areas within electronics are emphasized at WVU based upon the expertise of the LCSEE faculty members: electronic device design and fabrication, analog electronic circuit design and applications, and optical device design and applications.
4. **Communications and Signal Processing:** Communications and signal processing are interrelated fields that play an important role in today's information driven economy. Signal processing involves the use of programmable computer architectures to operate on physical-world signals. Signal processors are found within modern control systems, biomedical applications, and communication devices. Communications is the conveyance of information from one location to another. The capacity of a communications system is limited by the random noise in the channel. The communication channel may be a fiber optic cable, a local or wide area computer network, or the radio frequency spectrum.
5. **Bioengineering and Biometrics:** Bioengineering is the multidisciplinary application of engineering to medicine and biology, including such areas as biomedical signal and image processing, medical informatics, and biomedical instrumentation. Bioengineering work can include the development of new technologies for use in medicine and biology or the use of engineering techniques to study issues in biology and medicine. Biometrics is a specific area of bioengineering in which biological signatures (fingerprint, voice, face, DNA) is used for identification or authentication in criminal justice, e-commerce, and medical applications. Specific LCSEE projects in these areas include signal processing for prediction of sudden cardiac death in an animal model of heart failure, development of algorithms for arrhythmia detection in implanted medical devices, telemedicine for rural health care delivery in West Virginia, analysis of temporal fingerprint images for determination of vitality, CMOS fingerprint sensor design and modeling, neural net fingerprint matching, and 3-D craniofacial reconstruction. At the undergraduate level, these projects impact courses and create opportunities for senior design projects and undergraduate research experiences.
6. **Computers:** Computers have become an important part of the technology used by engineers and a very important part of many technological systems and products. The computer emphasis area is designed to provide an electrical engineer with the basic understanding of how to use computers and microprocessors. When this track is completed, the electrical engineer should be able to develop, program, and use systems with embedded microcomputers.

[Click here to view the Suggested Plan of Study \(p. 767\)](#)

Curriculum in Electrical Engineering

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum Requirements

To receive a bachelor of science in electrical engineering, a student must meet the University's undergraduate degree requirements, take all the courses indicated below, and attain a grade point average of 2.25 or better for all Lane Department of Computer Science and Electrical Engineering designated courses, in all WVU courses, and overall. This requirement assures that the student has demonstrated overall competence in the major.

Freshman Engineering Requirements

ENGR 101	Engineering Problem Solving 1	2
Engineering Problem Solving:		3
CHE 102	Introduction to Chemical Engineering	
ENGR 102	Engineering Problem-Solving 2	
ENGR 103	Introduction to Nanotechnology Design	
MAE 102	Introduction to Mechanical and Aerospace Engineering Design	
ENGR 191	First-Year Seminar	1

Non-Electrical Engineering Core

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2B)	4
ECON 201	Principles of Microeconomics (GEF 4)	3
Calculus I (GEF 3):		4
MATH 155	Calculus 1 (Minimum grade of C- is required)	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus (Minimum grade of C- is required)	
MATH 156	Calculus 2 (GEF 8 - Minimum grade of C- is required)	4
MATH 251	Multivariable Calculus (Minimum grade of C- is required)	4
MATH 261	Elementary Differential Equations	4
PHYS 111	General Physics (GEF 8)	4
PHYS 112	General Physics (GEF 8)	4
STAT 215	Introduction to Probability and Statistics	3
Engineering Science Elective (choose one of the following:)		3
CE 443	Environmental Science and Technology	
CHE 201	Material and Energy Balances 1	

CHE 366	Materials Science	
IENG 316	Industrial Quality Control	
IENG 377	Engineering Economy	
MAE 241	Statics	
MAE 320	Thermodynamics	
Math/Science Elective (Choose one of the following)		3
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	
MATH 343	Introduction to Linear Algebra	
MATH 375	Applied Modern Algebra	
MATH 420	Numerical Analysis 1	
MATH 441	Applied Linear Algebra	
MATH 456	Complex Variables	
MATH 465	Partial Differential Equations	
PHYS 211	Introduction to Mathematical Physics	
PHYS 314	Introductory Modern Physics	
PHYS 321	Optics	
PHYS 331	Theoretical Mechanics 1	
PSIO 241	Elementary Physiology	
PSIO 441	Mechanisms of Body Function	
STAT 312	Intermediate Statistical Methods	
STAT 331	Sampling Methods	
STAT 461	Theory of Probability	
Electrical Engineering Requirements (Minimum GPA of 2.0 required in BIOM, CPE, CS, CYBE, and EE courses)		
CPE 271	Introduction to Digital Logic Design	3
CPE 272	Digital Logic Laboratory	1
CPE 310	Microprocessor Systems	3
CPE 311	Microprocessor Laboratory	1
CS 110	Introduction to Computer Science	4
EE 221	Introduction to Electrical Engineering	3
EE 222	Introduction to Electrical Engineering Laboratory	1
EE 223	Electrical Circuits	3
EE 224	Electrical Circuits Laboratory	1
EE 327	Signals and Systems 1	3
EE 328	Signals and Systems Laboratory	1
EE 329	Signals and Systems 2	3
EE 335	Electromechanical Energy Conversion and Systems	3
EE 336	Electromechanical Energy Conversion and Systems Lab	1
EE 345	Engineering Electromagnetics	3
EE 251	Digital Electronics	3
EE 252	Digital Electronics Laboratory	1
EE 355	Analog Electronics	3
EE 356	Analog Electronics Laboratory	1
CSEE 380	Engineering Professionalism Seminars	1
CSEE 480 or EE 480	Capstone Project - Design	2
CSEE 481 or EE 481	Capstone Project - Implementation	3
Concentration Area (CA) Technical Electives (Selected from one of the CAs below)		9
CA1: Power Systems		

EE 435	Introduction to Power Electronics
Choose one of the following:	
EE 431	Electrical Power Distribution Systems
EE 436	Power Systems Analysis
Choose one of the following:	
CS 453	Data and Computer Communications
CS 465	Cybersecurity Principles and Practice
EE 411	Fundamentals of Control Systems
EE 413	Introduction to Digital Control
EE 431	Electrical Power Distribution Systems
EE 436	Power Systems Analysis
EE 461	Introduction to Communications Systems
CA2: Control Systems	
Choose one of the following:	
EE 411	Fundamentals of Control Systems
EE 413	Introduction to Digital Control
Choose two of the following:	
EE 411	Fundamentals of Control Systems
EE 413	Introduction to Digital Control
EE 435	Introduction to Power Electronics
EE 461	Introduction to Communications Systems
EE 463	Digital Signal Processing Fundamentals
CA3: Electronics	
EE 450	Device Design and Integration
Choose two of the following:	
EE 435	Introduction to Power Electronics
EE 437	Fiber Optics Communications
EE 445	Introduction to Antennas
EE 455	Introduction to Microfabrication
EE 457	Fundamentals of Photonics
PHYS 321	Optics
PHYS 471	Solid State Physics
CA4: Communications & Signal Processing	
Choose one of the following:	
EE 437	Fiber Optics Communications
EE 461	Introduction to Communications Systems
EE 463	Digital Signal Processing Fundamentals
Choose two of the following:	
BIOM 426	Biometric Systems
CPE 442	Introduction to Digital Computer Architecture
CPE 462	Wireless Networking
CS 453	Data and Computer Communications
EE 411	Fundamentals of Control Systems
EE 413	Introduction to Digital Control
EE 437	Fiber Optics Communications
EE 445	Introduction to Antennas
EE 461	Introduction to Communications Systems
EE 463	Digital Signal Processing Fundamentals
EE 465	Introduction to Digital Image Processing
EE 467	Digital Speech Processing
CA5: Bioengineering and Biometrics	
EE 425	Bioengineering

Choose one of the following:			
BIOM 426	Biometric Systems		
EE 463	Digital Signal Processing Fundamentals		
EE 465	Introduction to Digital Image Processing		
Choose one of the following:			
BIOM 426	Biometric Systems		
CHEM 231 & 231L	Organic Chemistry: Brief Course and Organic Chemistry: Brief Course - Laboratory		
CHEM 233	Organic Chemistry		
CHEM 234	Organic Chemistry		
EE 463	Digital Signal Processing Fundamentals		
EE 465	Introduction to Digital Image Processing		
PSIO 241 or PSIO 441	Elementary Physiology Mechanisms of Body Function		
CA6: Computers			
Option 1			
CPE 312	Microcomputer Structures and Interfacing		
CPE 313	Microcomputer Structures and Interfacing Laboratory		
Choose two of the following:			
CPE 435	Computer Incident Response		
CPE 442	Introduction to Digital Computer Architecture		
CPE 484	Real-Time Systems Development		
Option 2			
CPE 435	Computer Incident Response		
CPE 442	Introduction to Digital Computer Architecture		
CPE 484	Real-Time Systems Development		
Technical Electives (300 level or higher in BIOM, BMEG, CE, CHE, CPE, CS, CYBE, EE, IENG, MAE, MINE, PNGE, BIOL, CHEM, PHYS, STAT, OR MATH courses - Excluding Non-LCSEE 493)			9
GEF Electives 1, 5, 6, 7 *			15
Total Hours			127

Suggested Plan of Study

It is important for students to take courses in the order specified as closely as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.E.E. degree program that completes degree requirements in four years is as follows.

First Year

Fall	Hours	Spring	Hours
CHEM 115 & 115L (GEF 2)		4 ENGR 102	3
ENGL 101 (GEF 1)		3 MATH 156 (GEF 8)	4
ENGR 101		2 PHYS 111 (GEF 8)	4
ENGR 191		1 GEF 6	3
MATH 155 (GEF 3)		4 GEF 7	3
GEF 5		3	
		17	17

Second Year

Fall	Hours	Spring	Hours
CPE 271		3 CS 110	4
CPE 272		1 EE 223*	3
EE 221		3 EE 224*	1
EE 222		1 EE 251	3
MATH 251		4 EE 252*	1

PHYS 112 (GEF 8)		4 MATH 261	4
		16	16
Third Year			
Fall	Hours	Spring	Hours
EE 327*		3 CPE 310	3
EE 335*		3 CPE 311	1
EE 336*		1 EE 329*	3
EE 355		3 EE 328*	1
EE 356		1 EE 345	3
STAT 215		3 Math/Science Elective	3
ENGL 102 (GEF 1)		3 CSEE 380	1
		17	15
Fourth Year			
Fall	Hours	Spring	Hours
CSEE 480		2 CSEE 481	3
ECON 201 (GEF 4)		3 CA Technical Elective	3
CA Technical Elective		3 Technical Elective	3
CA Technical Elective		3 Technical Elective	3
Engineering Science Elective		3 Technical Elective	3
		14	15
Total credit hours: 127			

* Offered once per year in semester shown.

Program Educational Objectives

The Program Educational Objectives (PEO) of the Electrical Engineering (EE) program at West Virginia University is to produce graduates who will apply their knowledge and skills to achieve success in their careers in industry, research, government service or graduate study. It is expected that in the first five years after graduation our graduates will achieve success and proficiency in their profession, be recognized as leaders, and contribute to the well-being of society.

Student Outcomes

Upon graduation, all Bachelor of Science in Electrical Engineering students will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Department of Industrial & Management Systems Engineering, B.S.I.E.

E-mail: Statler-IMSE@mail.wvu.edu (//krcurrie@mail.wvu.edu)

Degree Offered

- Bachelor of Science in Industrial Engineering (B.S.I.E.)

Nature of the Program

Industrial engineering is the discipline of engineering concerned with the design, improvement, and installation of integrated systems of people, material, information, equipment, and energy to assure performance, reliability, maintainability, schedule adherence, and cost control. Industrial engineers look at the "big picture" of an operation or system and bridge the gap between management and operations. They deal with and motivate people as well as

determine what tools should be used and how they should be used. Industrial engineers use computers and sophisticated software as tools to solve complicated problems to design, quantify, predict, and evaluate the performance of all types of complex technologies and systems.

The mission of the B.S.I.E. program at WVU is to advance the industrial engineering profession through innovative and high-quality academic programs, relevant research, and professional services that address the needs of West Virginia, the nation, and the world. The industrial engineering students at WVU are taught to draw upon specialized knowledge and skills in the mathematical, physical, and social sciences, together with the principles and methods of engineering analysis and design to specify, predict, and evaluate the results to be obtained from such systems. They are introduced to state-of-the-art software in their coursework for data analysis, information management, scheduling, quality control, optimization, and other practices and procedures used by the industrial engineering profession in highly evolving industries of the 21st century.

The discipline of industrial engineering has a rich, ever-increasing diversity of applications. Traditionally, industrial engineers have been employed by manufacturing companies to do facilities and plant design, plant management, quality control, ergonomics, and production engineering. Today, however, industrial engineers are employed in almost any type of industry, business, or institution. Because of their skills, industrial engineers are more widely distributed and in greater demand among more industries than any other engineering discipline.

As an industrial engineer educated at WVU, you can expect to have employment opportunities in manufacturing companies, insurance companies, banks, hospitals, technical sales, pharmaceutical companies, retail organizations including e-business, airlines, government agencies, consulting firms, construction, transportation, public utilities, social service, electronics, digital and wireless communications, etc. The diverse orientation of industrial engineering, coupled with the skills and training you receive at WVU, make you a prime source of management talent that offers unique professional advancement opportunities.

The B.S.I.E. program at WVU devotes considerable attention to the individual needs of the student. It is committed to develop student strengths in technical abilities, personal development, problem solving, and practical experience, preparing them for careers in industry, business, government, or advanced professional degrees. One of the defining attributes in the success of the department is the dedication and talent of its faculty and staff. The aggregate careers of our faculty and staff represent over 300 years of service to students at WVU. In these 300 years of service are embodied the wisdom and experience to successfully prepare industrial engineers for the 21st century.

The faculty works extensively with nearly 300 sophomore, junior, and senior students in such areas as communication skills, personal growth and development, creation of summer internship opportunities, senior capstone project experience, and permanent job opportunities. As faculty and staff, we are committed to provide for our students:

- A friendly, open-door, collegial environment
- Personable faculty mentoring students
- Teaching concepts and techniques for today's demands
- Quality courses that are innovative and challenging
- Placement in the jobs they want
- Notable life-long successes

The industrial engineering program is accredited by the Engineering Accreditation Commission (EAC) of ABET, <http://www.abet.org>.

Program Educational Objectives

Drawing from the University's mission, the departmental mission, the needs of our constituents, and ABET Engineering Criteria, the following educational objectives were developed. Within a few years of graduation, an IE graduate...

- Creates value by applying the appropriate industrial engineering methods and tools to organizations through critical and creative thinking, structured problem solving, analysis, evaluation, and improvement of systems and processes.
- Communicates effectively across disciplines and cultures to influence decisions and lead activities in support of organizational goals and objectives.
- On a continual basis, pursues professional development and inquiry via graduate study, continuing education and/or training and development through employer-based or industry/sector groups.
- Works collaboratively as both a member and leader of cross-functional teams comprised of members with varying experience levels, organizational backgrounds, positions, and geographic locations.
- Demonstrates ethical standards in designing and implementing innovative systems or processes taking into account social responsibility, global responsibility, and overall benefit to organizational constituents.

Major Learning Outcomes

INDUSTRIAL ENGINEERING

Upon graduation, all Bachelor of Science in Industrial Engineering students will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

FACULTY

CHAIR

- Kenneth R Currie - Ph.D., P.E., (West Virginia University)
Manufacturing systems design, Optimization, Automation & Controls, Healthcare Systems Engineering

PROFESSORS

- Rashpal S. 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
- B. Gopalakrishnan - Ph.D., P.E., CEM (Virginia Polytechnic Institute and State University)
Manufacturing processes and systems engineering, Information systems, Artificial intelligence applications, Expert systems development, Mechatronics, Facilities planning and materials handling, Databases, Industrial energy/waste productivity management
- 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 Wyrick - Ph.D., P.E., P.E.M. (University of Missouri-Rolla)
Associate Dean for Academic Affairs, Engineering management, Engineering education, Effective management of technology in SMEs

ASSOCIATE PROFESSORS

- Elyce Biddle - Ph.D. (West Virginia University)
Teaching Associate Professor, Economics of safety, Risk management, Injury prevention
- 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)
Occupational biomechanics, human factors engineering, Industrial ergonomics, Industrial hygiene, Occupational safety and health
- Feng Yang - Ph.D. (Northwestern University)
Simulation, Applied statistics, Stochastic Processes

ASSISTANT PROFESSORS

- Leily Farrokhvar - Ph.D. (Virginia Tech University)
Logistics systems modeling and analysis, Supply chain integration, Large scale optimization, Transportation and distribution networks, Decision support development for emergency and disaster management, Applied operations research in healthcare
- Xinjian (Kevin) He - Ph.D. (University of Cincinnati)
Respiratory protection, air purification and filtration, Aerosol measurement and characterization, Occupational exposure assessment, Underground coal mine ventilation and fire protection
- Xiaopeng Ning - Ph.D. (Iowa State University)
Occupational safety and health, Occupational biomechanics, Human factors engineering, Industrial ergonomics
- Thorsten Wuest - Ph.D. (Dr.-Ing.; University of Bremen, Germany)
Smart and advanced manufacturing, Intelligent manufacturing systems, Machine learning / Big data in manufacturing applications, Product lifecycle management, Smart product design, Information and knowledge management, IPPS / Servitization

ADJUNCT AND VISITING PROFESSORS

- Lorenzo G. Cena - Ph.D. (University of Iowa)
Occupational health and safety, Aerosol generation and characterization, Exposure assessment
- Christopher Coffey - Ph.D. (West Virginia University)
Occupational Safety and Health, Assessment, Evaluation of Respiratory protective equipment
- Ren Dong - Ph.D. (Concordia University)
Human Factors Engineering, Ergonomics, Safety engineering
- John R. Etherton - Ph.D. (West Virginia University)
Safety engineering
- Martin Harper - Ph.D. (London School of Hygiene and Tropical Medicine)
Industrial hygiene, Exposure assessment
- James Harris - Ph.D., P.E. (West Virginia University)
Safety, Human factors
- Hongwei Hsiao - Ph.D. (University of Michigan)
Safety, Human factors
- Kevin Michael - Ph.D. (The Pennsylvania State University)
Acoustics, Hearing protection, Industrial hygiene
- Christopher Pan - Ph.D. (University of Cincinnati)
Human factors engineering, Safety engineering, Ergonomics
- Ju-Hyeong Park - Sc.D., M.P.H., C.I.H. (Harvard)
Industrial hygiene, Exposure assessment
- M. Abbas Virgi - Sc.D., C.I.H. (University of Massachusetts)
Exposure assessment, Epidemiology, Biostatistics
- Ziqing Zhuang - Ph.D. (West Virginia University)
Exposure assessment, Assessment and evaluation of respiratory protective equipment

LECTURERS

- Michael Carr - MSIE (West Virginia University)
Decision support systems, Computer applications
- Kenton Colvin - MSIE (West Virginia University)
Production planning and control, Manufacturing processes
- Shanti Hamburg - M.S. (West Virginia University)
Prototyping, manufacturing systems, Digital manufacturing, Unmanned aerial vehicles
- Daniel Kniska - MSIE (West Virginia University)
Engineering economy, Statistics, Production planning and control

PROFESSOR EMERITUS

- 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 Iskander - Ph.D., P.E. (Texas Tech University)
Operations research and optimization, Simulation modeling and analysis, Production planning and control, Applied statistics, Energy efficiency, Transportation planning
- Warren Myers - Ph.D., C.I.H. (West Virginia University)
Industrial hygiene and safety, Worker exposure assessment and modeling, Aerosol filtration, Occupational respiratory protection design and testing
- Ralph W. Plummer - Ph.D. (West Virginia University)
Systems safety engineering, Energy conservation, Human factors, Ergonomics

ASSOCIATE PROFESSOR EMERITUS

- Andrew Sorine - Ph.D. (West Virginia University)
Benchmarking, Safety and health programs, Safety management information systems

[Click here to view the Suggested Plan of Study \(p. 774\)](#)

Curriculum in Industrial Engineering

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum Requirements

To be eligible for graduation with a bachelor of science in industrial engineering, a student must meet the University's undergraduate degree requirements, take all the courses indicated below, and attain a grade point average of 2.25 or better in all industrial engineering courses, in all WVU courses, and overall. This requirement assures that the student has demonstrated overall competence in the major.

Freshman Engineering Requirements

ENGR 101	Engineering Problem Solving 1	2
Engineering Problem Solving:		3
CHE 102	Introduction to Chemical Engineering	
ENGR 102	Engineering Problem-Solving 2	
ENGR 103	Introduction to Nanotechnology Design	
MAE 102	Introduction to Mechanical and Aerospace Engineering Design	
ENGR 191	First-Year Seminar	1

Non-Industrial Engineering Core

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2B)	4
ECON 201	Principles of Microeconomics (GEF 4)	3
ECON 202	Principles of Macroeconomics	3
Calculus I (GEF 3):		4
MATH 155	Calculus 1 (Minimum grade of C- is required)	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus (Minimum grade of C- is required)	
MATH 156	Calculus 2 (GEF 8 - Minimum grade of C- is required)	4
MATH 251	Multivariable Calculus (Minimum grade of C- is required)	4
MATH 261	Elementary Differential Equations	4
PHYS 111	General Physics (GEF 8)	4
Select one of the following (GEF 8):		4
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	

CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	
PHYS 112	General Physics	

Major in Industrial Engineering Requirements

A minimum GPA of 2.25 is required in all IENG courses

EE 221	Introduction to Electrical Engineering	3
EE 222	Introduction to Electrical Engineering Laboratory	1
IENG 200	Fundamentals of Industrial Engineering	1
IENG 213	Engineering Statistics	3
IENG 220	Re-Engineering Management Systems	3
IENG 301	Materials and Costing	3
IENG 302	Manufacturing Processes	2
IENG 303	Manufacturing Processes Laboratory	1
IENG 305	Introduction to Systems Engineering	3
IENG 314	Advanced Analysis of Engineering Data	3
IENG 316	Industrial Quality Control	3
IENG 331	Computer Applications in Industrial Engineering	3
IENG 343	Production Planning and Control	3
IENG 350	Introduction to Operations Research	3
IENG 360	Human Factors Engineering	3
IENG 377	Engineering Economy	3
IENG 445	Project Management for Engineers	3
IENG 446	Plant Layout/Material Handling	3
IENG 455	Simulation by Digital Methods	3
IENG 471	Design of Productive Systems 1 (Fulfills Writing and Communications Skills Requirement)	3
IENG 472	Design of Productive Systems 2	3
MAE 241	Statics	3
IENG Technical Electives (Any 400 and 500 level IENG courses)		6
MAE Elective - Choose one of the following:		3
MAE 242	Dynamics	
MAE 243	Mechanics of Materials	
MAE 320	Thermodynamics	
MAE 331	Fluid Mechanics	
Additional Technical Electives - Choose two of the following:		6
CE 347	Introduction to Environmental Engineering	
CE 414	Construction Engineering	
CS 430	Advanced Software Engineering	
CS 440	Database Design and Theory	
EE 425	Bioengineering	
EE 426	Biometric Systems	
GEOG 350	Geographic Information Systems and Science	
IENG 400 level courses		
IENG 500 level courses		
IH&S 500 level courses		
MAE 242	Dynamics	
MAE 320	Thermodynamics	
MAE 331	Fluid Mechanics	
MAE 427	Heating, Ventilating, and Air Conditioning	
MATH 343	Introduction to Linear Algebra	
MATH 420	Numerical Analysis 1	
MATH 441	Applied Linear Algebra	
SAFM 470	Managing Construction Safety	

STAT 421	Statistical Analysis System (SAS)	
STAT 541	Applied Multivariate Analysis	
GEF Electives 1, 5, 6, 7		15
Total Hours		129

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 B.S.I.E. degree program that completes degree requirements in four years is as follows.

First Year

Fall	Hours	Spring	Hours
MATH 155 (GEF 3)		4 MATH 156 (GEF 8)	4
ENGR 101		2 ENGR 102	3
ENGR 191		1 PHYS 111 (GEF 8)	4
CHEM 115 & 115L (GEF 2B)		4 GEF Elective 6	3
ENGL 101 (GEF 1)		3 GEF Elective 7	3
GEF Elective 5		3	
		17	17

Second Year

Fall	Hours	Spring	Hours
MATH 251		4 MATH 261	4
Select one of the following (GEF 8):		4 IENG 213	3
CHEM 116 & 116L		IENG 377	3
PHYS 112		EE 221	3
MAE 241		3 EE 222	1
ENGL 102 (GEF 1)		3 ECON 201	3
IENG 200		1	
IENG 220		3	
		18	17

Third Year

Fall	Hours	Spring	Hours
IENG 314		3 ECON 202	3
IENG 301		3 IENG 302	2
IENG 305		3 IENG 303	1
IENG 350		3 IENG 316	3
IENG 360		3 IENG 331	3
		IENG 343	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
IENG Technical Elective		3 IENG 472	3
IENG 445		3 IENG Technical Elective	3
IENG 455		3 IENG 446	3
IENG 471		3 MAE Elective	3
Technical Elective		3 Technical Elective	3
		15	15

Total credit hours: 129

Major Learning Outcomes

INDUSTRIAL ENGINEERING

Upon graduation, all Bachelor of Science in Industrial Engineering students will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Department of Mechanical & Aerospace Engineering

E-mail: Statler-MAE@mail.wvu.edu (/jacky.prucz%20@mail.wvu.edu)

Degrees Offered

- Bachelor of Science in Aerospace Engineering (B.S.A.E.)
- Bachelor of Science in Mechanical Engineering (B.S.M.E.)
- Dual Degree in Aerospace and Mechanical Engineering

Nature of the Program

The MAE Department offers undergraduate degrees in aerospace engineering and mechanical engineering. Our degree programs provide a strong theoretical background as well as practical experience gained through projects and hands-on research. Our undergraduate programs provide students with the skills required for a broad range of jobs in industry, government, academia, business, and research. We begin with a strong foundation in mathematics and add a wide spectrum of courses on the fundamentals of engineering mechanics, thermodynamics, fluid mechanics, and engineering design. Each of the degree programs provides a broad spectrum of knowledge in the field and allows for specialization through electives, independent research projects, and learning abroad opportunities. Both undergraduate degrees include several options for capstone design experience in the final year of study. The program also provides a broad general education necessary to put technical knowledge into perspective.

FACULTY

CHAIR

- Jacky C. Prucz - Ph.D. (Georgia Institute of Technology)
Structural Design, Composite Materials, Solid Mechanics

PROFESSORS

- Ever J. Barbero - Ph.D. (Virginia Polytechnic Institute & State University)
Materials, Experimental and Computational Mechanics
- Wade W. Huebsch - Ph.D. (Iowa State University)
Fluid Mechanics, CFD, Numerical Methods
- Bruce S. Kang - Ph.D. (University of Washington)
Experimental Mechanics, Advanced Materials
- Hailin Li - Ph.D. (University of Calgary, Canada)
Combustion, Emissions, Fuel Efficiency of Vehicles and IC Engines
- Xingbo Liu - Ph.D. (University of Science and Technology of China, Beijing)
Materials Science
- 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)
- Mario Perhinschi - Ph. D. (University of Bucharest, Romania)

Flight Modeling and Simulation

- Songgang Qui - Ph. D.(University of Minnesota)
Thermodynamics, Heat Transfer
- Edward M. Sabolsky - Ph.D. (The Pennsylvania State University)
Materials, Ceramic Science
- 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
- Xueyan Song - Ph.D. (Zhejiang University, China)
Materials Science, Electron Microscopy

ASSOCIATE PROFESSORS

- V'yacheslav Akkerman - Ph.D. (Umeå University, Sweden)
Turbulent Combustion, Flame Turbulization,
- 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
- Derek Johnosn - Ph.D. P. E. (West Virginia University)
Alternative Fuels, Engines and Emissions
- David S. Mebane - Ph.D. (Georgia Institute of Technology)
Fuel Cells, Mutli Scale Simulation of Chemical and Electrochemical Systems
- Osama Mukdadi - Ph.D. (University of Colorado)
Bioengineering, Acoustics, Solid Mecanics and Materials
- Terence D. Musho - Ph.D. P.E. (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
- Guilherme Augusto Silva Pereira - Ph.D. (Federal University of Minas Gerais)
Field Robotics, Autonomous Vehicles
- Konstantinos Sierros - Ph.D. (University of Birmingham, U. K.)
Flexible Optoelectronic Devices, Tribology, Materials for Renewable Energy
- 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

- Cosmin E. Dumitrescu - Ph.D. (University of Alabama)
Combustion, Alternate Fuels, IC Engines
- Piyush M. Mehta - Ph.D. (University of Kansas)
Astrodynamics, Space Situational Awareness
- Stefanos Papanikolaou - Ph.D. (University of Illinois)
Statistical Methods, Computational Modeling
- Nicholas Szczecinski - Ph.D. (Case Western)
Robotics
- Arvind Thiruvengadam - Ph.D. (West Virginia University)
Emissions of Heavy-Duty Internal Combustion Egines

TEACHING ASSISTANT PROFESSORS

- Patrick H. Browning - Ph.D. (West Virginia University)
Aerodynamics, Aircraft Design
- Peter D. Gall - Ph. D. (West Virginia University)
Aerodynamics, Aircraft Design

- Christopher Griffin - Ph.D. (West Virginia University)
Aerodynamics, Fluid Mechanics

RESEARCH ASSOCIATE PROFESSOR

- David C. Lewellen - Ph.D. (Cornell University)
Fluid Dynamics, Turbulence
- Eduardo Sosa - Ph. D. (University of Puerto Rico)
Thin Wall Structures

RESEARCH ASSISTANT PROFESSORS

- Ali Baheri - Ph.D. (University of North Carolina at Charlotte)
Machine Learning, Autonomous Driving
- Marc Besch - Ph. D. (West Virginia University)
Alternative Fuels, Engines and Emissions
- Yun Chen - Ph.D. (Universidade Tecnica de Lisboa)
Material Science, Metal Hydrides, Cathode Material Development
- Wenjuan Li - Ph.D. (West Virginia University)
Fuel Cells

VISITING PROFESSORS AND ADJUNCT PROFESSORS

- Alberto Ayala - Ph.D. (University of California, Davis)
Engine Emissions
- David Booker - Ph. D. (Univeristy of Exeter)
Exhaust Flow
- Darran R. Cairns - Ph.D. (University of Birmingham, U.K.)
Materials Science
- John A. Christian - Ph.D. (University of Texas)
Spacecraft Design, Navigation, Estimation Theory
- Weigiang Ding - Ph.D. (Northwestern University)
Nanostructures
- Donald H. Ferguson - Ph.D. (West Virginia University)
Thermal Sciences
- 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
- Yiqun Huang - Ph.D. (University of Texas, Austin)
Engine and Emissions Control
- 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.)
Structural Analysis, Power and Control Systems (CICATA-IPN)
- 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. (Universtiy of Rome Tor Vergata)
Internal Combustion Engines, Emissions
- John Nuzkowski - Ph.D. (West Virginia University)
Alternative Fuels and Engine Emissions, UNF
- Dale Olson - MBA (Western Governors University)

Strategic Leadership

- Ming Pei - M.D., Ph.D. (Beijing Medical University, China)
Tissue Engineering HSC-WVU
- Matthew Robinson - Ph. D. (West Virginia University)
Analysis and Optimization of Engines
- Brad Seanor - Ph.D. (West Virginia University)
Controls Systems
- Benjamin Shade - Ph.D. (West Virginia University)
Engine Emissions, IAV Automotive
- Matthew S. Smith - M.D. (West Virginia University)
- 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 Systems, Wind Turbine Modeling and Design
- Gergis William - Ph.D. (West Virginia University)
Structural Engineering
- David A. Wyrick - Ph.D (University of Missouri-Rolla)
Engineering Management, Engineering Education
- Sergiy Yakovenko - Ph.D. (University of Alberta, Canada)
Neuroscience

PROFESSORS EMERITI

- Richard A. Bajura - Ph.D. (University of Notre Dame)
- Larry Banta - Ph.D. (Georgia Institute of Technology)
- Ismail Celik - Ph.D. (University of Iowa)
- Nigel N. Clark - Ph.D. (University of Natal, South Africa)
- John M. Kuhlman - Ph.D. (Case Western Reserve University)
- John Loth - Ph.D. (University of Toronto, Canada)
- Ken Means - Ph.D (West Virginia University)
- Gary Morris - Ph.D. (West Virginia University)
- 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)

To be eligible to receive a bachelor's degree, a student is required to complete satisfactorily the number of semester hours of work as specified in the program curriculum. Students must achieve a minimum grade point average of 2.25 for all courses taken at WVU, a major grade point average of 2.25 or better in courses completed within the student's major, and a minimum overall grade point average of 2.25.

Dual Degree in Aerospace Engineering and Mechanical Engineering

In the modern technical marketplace, college graduates must attain every competitive edge possible to enhance their career opportunities. One way to do this is with a master's degree following the bachelor's degree; however, this often results in more specialization than may be desired and may take an additional two years. Another option is to broaden the undergraduate experience, thus opening more opportunities for the graduate. The dual B.S.A.E./B.S.M.E. program awards both the aerospace engineering and mechanical engineering degrees at the completion of a planned curriculum.

Students under this option pursue the B.S.A.E. and B.S.M.E. degrees simultaneously. This can be accomplished by declaring intentions as a freshman requesting admission to the programs or by informing an MAE advisor of the dual-degree preference. Maximum scheduling flexibility will result when this decision is made as early as possible in the student's academic career. Dual-degree students must take all courses listed in the 158-hour dual curriculum under the Major tab and satisfy the other requirements of the two individual programs.

Curriculum for the Dual Degree in Aerospace Engineering and Mechanical Engineering

A requirement for graduation in aerospace and mechanical engineering is a departmental grade point average of 2.25 or better for all required mechanical and aerospace engineering (MAE) courses. Also a grade of C- or better is required in each of the four required mathematics courses and physics 111.

It is important for students to take courses in the order specified as close as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.A.E./B.S.M.E. degree program that completes degree requirements in four and a half years is listed below.

Students must complete a minimum of 158 credit hours to graduate - the total at the bottom reflects all possible course combinations

Mechanical and Aerospace Engineering Core Requirements

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory	4
ECON 201	Principles of Microeconomics	3
ECON 202	Principles of Macroeconomics	3
ENGR 101	Engineering Problem Solving 1	2
ENGR 102 or MAE 102 or CHE 102	Engineering Problem-Solving 2 Introduction to Mechanical and Aerospace Engineering Design Introduction to Chemical Engineering	3
ENGR 191	First-Year Seminar	1
Select one of the following: *		4
MATH 155 or MATH 153 & MATH 154	Calculus 1 Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 156	Calculus 2 *	4
MATH 251	Multivariable Calculus *	4
MATH 261	Elementary Differential Equations *	4
PHYS 111	General Physics *	4
PHYS 112	General Physics	4
A minimum cumulative GPA of 2.25 is required in all MAE courses		
Dual Core		
MAE 215	Intro to Aerospace Engineering	3
MAE 241	Statics	3
MAE 211	Mechatronics	3
MAE 242	Dynamics	3
MAE 243	Mechanics of Materials	3
MAE 331	Fluid Mechanics	3
EE 221	Introduction to Electrical Engineering	3
EE 222	Introduction to Electrical Engineering Laboratory	1
MAE 316	Analysis-Engineering Systems	3
MAE 320	Thermodynamics	3
MAE 335	Incompressible Aerodynamics	3
MAE 343	Intermediate Mechanics of Materials	3
MAE 244	Dynamics and Strength Laboratory	1
MAE 322	Thermal and Fluids Laboratory	1
MAE 336	Compressible Aerodynamics	3
MAE 342	Dynamics of Machines	3
MAE 345	Aerospace Structures	3
MAE 434	Experimental Aerodynamics	2
MAE 456	Computer-Aided Design and Finite Element Analysis	3
MAE 476	Space Flight and Systems	3
IENG 302	Manufacturing Processes	2
IENG 303	Manufacturing Processes Laboratory	1
MAE 411	Advanced Mechatronics	3
MAE 423	Heat Transfer	3
MAE 460	Automatic Controls	3
MAE 454	Machine Design and Manufacturing	3
MAE 471	Principles of Engineering Design	3
Aerospace Engineering Technical Electives		9

Mechanical Engineering Technical Electives	9
Aerospace Engineering or Mechanical Engineering Technical Electives	2
GEF Courses (Students who take ENGL 103 must take another technical Elective Course or department approved course) **	15
Area of Emphasis	12
Total Hours	158

* Minimum Grade of C required

DUAL SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
CHEM 115 & 115L (GEF 2)		4 MATH 156 (GEF 8)	4
ENGL 101 (GEF1)		3 PHYS 111 (GEF 8)	4
ENGR 101		2 ENGR 102	3
ENGR 191		1 GEF 6	3
MATH 155 (GEF 3)		4 GEF 7	3
GEF 5		3	
		17	17

Second Year

Fall	Hours	Spring	Hours
MAE 215		3 MAE 211	3
MAE 241		3 MAE 242	3
MATH 251		4 MAE 243	3
PHYS 112 (GEF 8)		4 MAE 331	3
ENGL 102 (GEF1)		3 MATH 261	4
		ECON 201 (GEF 4)	3
		17	19

Third Year

Fall	Hours	Spring	Hours
MAE 316		3 MAE 244	1
MAE 320		3 MAE 322	1
MAE 335*		3 MAE 336*	3
MAE 343		3 MAE 342	3
EE 221		3 MAE 345*	3
EE 222		1 MAE 476*	3
ECON 202		3 Area of Emphasis Course 1	3
		19	17

Fourth Year

Fall	Hours	Spring	Hours
MAE 434*		2 MAE 411	3
MAE 456		3 MAE 423	3
Technical Electives		6 MAE 460	3
Area of emphasis Course 2		3 IENG 302	2
Area of Emphasis Course 3		3 IENG 303	1
		Area of Emphasis Course 4	3
		Technical Elective	3
		17	18

Fifth Year

Fall	Hours
MAE 454	3
MAE 471	3

Four Technical Electives	11
	17

Total credit hours: 158

Note: The dual degree requires twenty hours of technical electives. The twenty hours consists of: nine hours of approved aerospace engineering technical electives, nine hours of approved mechanical engineering technical electives, and the final two hours can be either aerospace engineering or mechanical engineering approved technical electives. Students should consult with their academic advisor to select courses that form a clear and consistent pattern according to the career objectives of the student.

For Aeronautical Area of Emphasis students must completed MAE 365, MAE 426, MAE 475, MAE 485.

For Astronautical Area of Emphasis students must complete MAE 466, MAE 484, MAE 486, MAE 487.

* Offered once per year in the semester shown.

Aerospace Engineering, B.S.A.E.

Degrees Offered

- Bachelor of Science in Aerospace Engineering (B.S.A.E.)
- Dual Degree in Aerospace and Mechanical Engineering

Nature of the Program

Aerospace travel, space exploration, and flight of manned or unmanned vehicles continue to gain significance. Aerospace engineering is involved with the science and technology of advanced vehicles, including aircraft, rockets, missiles, and spacecraft. Although a specialized branch of engineering, it is also diverse. Aerospace technology has expanded to include design and development of earthbound vehicles such as ground-effect machines, hydrofoil ships, and high-speed rail-type systems.

The curriculum consists of a judicious combination of fundamentals, including mathematics and sciences, and practical laboratory experience which provides access to modern engineering tools. Aeronautical engineering subjects are to be the focus of the discipline along with significant exposure to space-related topics. Graduates will be able to critically analyze aerospace engineering problems and execute practical solutions. In addition to being able to function independently, it is expected that graduates will be able to function with effective written and oral communication within multidisciplinary teams and be prepared to address several issues such as environmental, social, and economic considerations, due to a thorough education in the humanities, social sciences, ethics, safety, and professionalism.

The aerospace engineering curriculum includes studies in the disciplines encountered in the design of aerospace vehicles, missiles, rockets, and spacecraft. Undergraduate students extensively study the basic principles of aerodynamics, solid mechanics and structures, stability and control, thermal sciences, and propulsion. The senior year includes a capstone flight vehicle design course providing an experiential learning opportunity.

Students are involved in both theoretical and experimental studies and trained to integrate knowledge with practical engineering design. With the breadth and depth of education in aerospace engineering, students become versatile engineers, competent to work in many areas. The curriculum may serve as a terminal degree program by incorporating design-oriented courses for technical electives or it may be used as a preparatory program for advanced study by the selection of science-oriented courses.

While the undergraduate curriculum is sufficiently broad to permit graduates to select from a wide variety of employment opportunities, it contains sufficient depth to prepare students to enter graduate school to pursue advanced degrees. As modern science and engineering become more complex, the desirability of graduate-level preparation is being recognized by most advanced industries and government agencies.

Students can simultaneously pursue B.S. degrees in both aerospace engineering and mechanical engineering by completing additional courses. Information on this 158 credit-hour, four-and-one-half-year option can be seen at the end of this department description.

Students who plan a career in medicine, dentistry, or related areas, but who desire an aerospace engineering degree before entering the appropriate professional school, may substitute eight hours (from a combination of biology and organic chemistry courses) for the required six hours of technical electives. This selection will help students satisfy admission requirements to the professional schools in the health sciences.

The aerospace engineering program at WVU is administered by the faculty of the Department of Mechanical and Aerospace Engineering. The aerospace engineering program is accredited by the Engineering Accreditation Commission (EAC) of ABET.

Program Educational Objectives

It is expected that, within a few years of graduation (3 to 5 years), graduates will attain the following Program Educational Objectives (PEO's):

PEO-1. Proficiency in practicing one or more areas of aerospace engineering.

It is expected that after a few years of graduating (3 to 5 years), graduates will have consolidated professional proficiency as practitioners in at least one technical area of aerospace engineering, as reflected by the responsibilities and accomplishments of their professional practice.

PEO-2. Success in adapting to the demands of the workforce in the dynamic technological arena.

It is expected that, within a few years of graduation (3 to 5 years), graduates will have successfully adapted to the demands of the workforce in a dynamic technological arena through a professional practice that reflects high credentials or development of new technical skills and acumen for administrative functions.

PEO-3. Progress in their personal career development through professional service, continuing education and/or graduate studies.

It is expected that, within a few years of graduation (3 to 5 years), graduates will have made meaningful progress in their professional career, either by promotions to positions of higher responsibility with their employers, by participation in professional service activities, or by technical self-improvement through continuing education or graduate degree programs.

PEO-4. Meaningful involvement in a team that tangibly contributes to industry and/or society through the engineering discipline.

It is expected that, within a few years of graduation (3 to 5 years), graduates will have the experience of being or having been members in a team of professionals successfully making tangible technical contributions to industry or society through an engineering discipline.

Student Outcomes

Upon graduation, all Bachelor of Science in Aerospace Engineering students will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

The primary learning goal of the BSAE program is to implement state-of-the-art instructional materials, methods and technologies in order to prepare engineers who are highly proficient in their field of specialty and ready to contribute to the well-being of society through competent practice of the engineering profession, leading to economic development and innovative technological advancements.

The graduates of the BSAE program are well prepared to engage in the long-life pursuit of successful engineering careers by quickly adapting to the changing demands of the workforce in a dynamic global environment, by enhancing continuously their professional abilities or skills, and by contributing effectively in multidisciplinary teams to the advancement of existing or anticipated industrial, economical and societal needs.

Spring Semester Study Abroad Opportunity in Rome, Italy

PRIMARILY FOR JUNIOR YEAR ME AND AE UNDERGRADUATE STUDENTS

All MAE undergraduates are invited to consider spending the spring semester of their junior year studying abroad at the University of Rome Tor Vergata ("UTV", for short). This very successful program is taught fully in English at UTV to both Italian undergraduate engineering students and students from other countries all over the world. Through this program WVU students have the opportunity to earn credits towards their WVU BSME or dual BSME/BSAE degrees for a full semester of equivalent WVU engineering courses towards their degrees. Please see the following link for the UTV description of this program:

<http://engineering-sciences.uniroma2.it/MENU/COURSES/Courses.html>

In order to ensure that, upon successfully passing the UTV class examinations, the credits earned at UTV will transfer back to WVU for the equivalent courses within the MAE degree programs, it is recommended that students should select from the following list of UTV courses only those courses that are regularly taught during their spring semester:

UTV also strongly recommends that WVU students register for Italian Language Class for Foreigners 2.

Additional courses taught during the UTV fall semester as listed above can also be completed by students who participate in this WVU-UTV student exchange program for their full junior year: e.g., Kinematics and Dynamics of Mechanisms (for WVU courses MAE 342 & MAE 495), Electrical Network Analysis (for WVU course EE 221), and Fluid Machinery (for WVU course MAE 495).

The UTV spring semester classes begin each year in mid-February, with classes ending near the end of June. Examinations are then given during the month of July. WVU students who participate in the WVU-UTV exchange program must pay their normal WVU tuition and fees for their study abroad semester, and are also responsible to cover all of their travel and living expenses while participating in the program. You must complete your transient form (studyabroad.wvu.edu) before your semester abroad. Check with your advisor before registering for courses to approve your course choices. This program is also part of the WVU Statler program to earn the Certificate of Global Competency; see the MAE Department program description in the current WVU Catalog for additional details of this Certificate Program (<http://statler.wvu.edu/international-programs/global-competency> (<http://statler.wvu.edu/international-programs/global-competency/>)).

WVU students must meet the relevant course prerequisites for the WVU course for which they wish to earn credit via a course taken at UTV. Also, because the UTV courses are only taught once a year, WVU students are encouraged to discuss with their academic advisors as early as possible the feasibility of delaying a course listed in the current WVU Catalog for the junior year fall semester in the Suggested Plan of Study for your major.

Study Abroad in the Summer

INDUSTRIAL OUTREACH PROGRAM IN MEXICO

PRIMARILY FOR SENIOR YEAR ME AND AE UNDERGRADUATE STUDENTS

Senior students in good standing in the MAE Department have the opportunity to participate in the Industrial Outreach Program in Mexico (IOPM) during the summer of each year (June and July) to earn a total of 9 credits (described below) toward their BS degree requirements in the BSAE or BSME Degree; this program is also available for other engineering majors. In this program, students are teamed up with Mexican students from local universities and conduct meaningful engineering projects in industrial sites, working full time under the guidance and supervision of practicing industrial engineers and faculty members. The duration of the program is 8 weeks.

The Objectives of this Program are:

1. To add value to student's education through international experiential learning.
2. To solve meaningful engineering problems of value to industry.
3. To bridge the gap between academia and industry to benefit both.

Practical engineering problems from well-established companies in Mexico are presented to each team, with specific objectives and technical deliverables to be attained during the 8 week duration of the program. A final report and a final presentation are delivered at the end to personnel from industry and faculty members. A poster session is conducted at the closing of the program.

The main venue of this program is in Queretaro City and surroundings. Students are placed in home-stay with local families who provide clean, safe, healthy and friendly environment to students providing a full cultural and professional immersion. Weekends are used for field trips and cultural sightseeing. Fundamental knowledge of Spanish language is recommended but is not essential, as all the Mexican students and engineering liaisons are required to speak English.

Courses with credit:

- MAE 471 Principles of Engineering Design (3 cr) – Capstone Design Course
- MAE 472 Engineering System Design (3 cr) – Project Technical Elective
- FCLT 260 Cultures of Mexico (3 cr) – GEF 7 Global Studies and Diversity

This is a summer faculty led program administered by WVU Office of International Programs (<https://studyabroad.wvu.edu/>) and provides eligibility for the Statler College Certificate of Global Competency (<http://statler.wvu.edu/international-programs/global-competency> (<http://statler.wvu.edu/international-programs/global-competency/>)).

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Aerospace Curriculum Requirements

To receive a bachelor of science in aerospace engineering, a student must meet the University's undergraduate degree requirements, take all the courses indicated below, and attain a grade point average of 2.25 or better in all mechanical and aerospace engineering courses, in all WVU courses, and overall. This requirement ensures that the student has demonstrated overall competence in the major.

Freshman Engineering Requirements

ENGR 101	Engineering Problem Solving 1	2
Engineering Problem Solving:		3
CHE 102	Introduction to Chemical Engineering	
ENGR 102	Engineering Problem-Solving 2	
ENGR 103	Introduction to Nanotechnology Design	
MAE 102	Introduction to Mechanical and Aerospace Engineering Design	
ENGR 191	First-Year Seminar	1

Non Aerospace Engineering Core Requirements (Minimum grade of C- required)

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2B)	4
Calculus I: (GEF 3)		4
MATH 155	Calculus 1	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 156	Calculus 2 (GEF 8)	4
MATH 251	Multivariable Calculus	4
MATH 261	Elementary Differential Equations	4
PHYS 111	General Physics (GEF 8)	4

Aerospace Engineering Core Requirements

A minimum cumulative GPA of 2.25 is required in all MAE courses

ECON 201	Principles of Microeconomics (GEF 4)	3
ECON 202	Principles of Macroeconomics	3
PHYS 112	General Physics (GEF 8)	4
EE 221	Introduction to Electrical Engineering	3
EE 222	Introduction to Electrical Engineering Laboratory	1
MAE 215	Intro to Aerospace Engineering	3
MAE 241	Statics	3
MAE 242	Dynamics	3
MAE 243	Mechanics of Materials	3
MAE 244	Dynamics and Strength Laboratory	1
MAE 316	Analysis-Engineering Systems	3
MAE 320	Thermodynamics	3
MAE 335	Incompressible Aerodynamics	3
MAE 336	Compressible Aerodynamics	3
MAE 343	Intermediate Mechanics of Materials	3
MAE 345	Aerospace Structures	3
MAE 423	Heat Transfer	3
MAE 434	Experimental Aerodynamics	2

MAE 456	Computer-Aided Design and Finite Element Analysis	3
MAE 460	Automatic Controls	3
MAE 476	Space Flight and Systems	3
Area of Emphasis		12
Technical Electives (see list for details below)		12
GEF 1, 5, 6, 7		15
<hr/>		
Total Hours		128

AEROSPACE ENGINEERING TECHNICAL ELECTIVES

Students are limited to a total of 3 hours under MAE 495 and MAE 496

Students may substitute one technical elective from the substitute technical electives

Students may substitute two technical electives from the pre medical technical electives

MAE 312	Introduction to Mechanical Design	3
MAE 361	Introduction to Unmanned Aerial Systems	3
MAE 415 & MAE 417	Balloon Satellite Project 1 and Balloon Satellite Project 2	3
MAE 430 or MAE 431	Microgravity Research 1 Microgravity Research 2	3
MAE 432	Engineering Acoustics	3
MAE 433	Computational Fluid Dynamics	3
MAE 437	Vertical/Short Takeoff and Landing Aerodynamics	3
MAE 446	Mechanics of Composite Materials	3
MAE 447	Aeroelasticity	3
MAE 465	Flight Mechanics 2	3
MAE 467	Introduction to Flight Simulation	3
MAE 470	Unmanned Aerial Vehicle Design/Build/Fly Competition 1	1
MAE 474	UAV Design/Build/Fly Comp	3
MAE 478	Guided Missile Systems	3
MAE 482	Flight Simulation for Aircraft Safety	3
Any MAE 493 Except Technical Entrepreneurship, Additive Manufacturing, and Mobile Robotics		
MAE 495	Independent Study	3
MAE 496	Senior Thesis	3
Any MAE 500 Level Course		
BMEG 340	Biomechanics	3

SUBSTITUTE TECHNICAL ELECTIVES

Aerospace Engineering students may take one of the following courses with prior approval from the AE curriculum chair. Students may only count one of the substitute courses toward their degree, and must complete other elective requirements from the Technical Electives list.

CHE 366	Materials Science	3
CHE 463	Polymer Composites Processing	3
CS 430	Advanced Software Engineering	3
CS 453	Data and Computer Communications	3
EE 327	Signals and Systems 1	3
EE 335	Electromechanical Energy Conversion and Systems	3
EE 345	Engineering Electromagnetics	3
EE 463	Digital Signal Processing Fundamentals	3
MATH 441	Applied Linear Algebra	3
MATH 456	Complex Variables	3
MATH 465	Partial Differential Equations	3
PHYS 314	Introductory Modern Physics	4

PHYS 332	Theoretical Mechanics 2	3
PHYS 451	Introductory Quantum Mechanics	3

PRE-MEDICAL TECHNICAL ELECTIVES

Students who plan a career in medicine, dentistry, or related areas may substitute eight hours from the list of courses below for six hours of technical electives.

Choose two of the following:

CHEM 233 & CHEM 235	Organic Chemistry and Organic Chemistry Laboratory	4
CHEM 234 & CHEM 236	Organic Chemistry and Organic Chemistry Laboratory	4
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	4
BIOL 117 & BIOL 118	Introductory Physiology and Introductory Physiology Laboratory	4

AREA OF EMPHASIS IN AERONAUTICAL ENGINEERING

MAE 365	Flight Dynamics	3
MAE 426	Flight Vehicle Propulsion	3
MAE 475	Flight Vehicle Design-Capstone	3
MAE 485	Flight Vehicle Design 2	3
Total Hours		12

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
CHEM 115 & 115L (GEF 2B)		4 MATH 156 (GEF 8)	4
ENGL 101 (GEF 1)		3 PHYS 111 (GEF 8)	4
ENGR 101		2 MAE 102	3
ENGR 191		1 GEF Elective 6	3
MATH 155 (GEF 3)		4 GEF Elective 7	3
GEF Elective 5		3	
		17	17

Second Year

Fall	Hours	Spring	Hours
MAE 215		3 MAE 242	3
MAE 241		3 MAE 243	3
MATH 251		4 MAE 244	1
PHYS 112 (GEF 8)		4 MATH 261	4
ENGL 102 (GEF 1)		3 ECON 201 (GEF 4)	3
		17	14

Third Year

Fall	Hours	Spring	Hours
MAE 316		3 EE 221	3
MAE 320		3 EE 222	1
MAE 335*		3 MAE 336*	3
MAE 343		3 MAE 345*	3
ECON 202		3 MAE 365*	3
		MAE 476*	3

Fourth Year

Fall	Hours	Spring	Hours
MAE 426*		3 MAE 423	3
MAE 434*		2 MAE 460	3
MAE 456		3 MAE 485*	3
MAE 475*		3 Technical Electives	6
Technical Elective		6	
		17	15

Total credit hours: 128

* Offered once per year in the semester shown.

AREA OF EMPHASIS IN ASTRONAUTICAL ENGINEERING

MAE 466	Spacecraft Dynamics	3
MAE 484	Spacecraft Propulsion	3
MAE 486	Spacecraft Design 1	3
MAE 487	Spacecraft Design 2	3
Total Hours		12

SUGGESTED PLAN OF STUDY**First Year**

Fall	Hours	Spring	Hours
CHEM 115 & 115L (GEF 2B)		4 MATH 156 (GEF 8)	4
ENGL 101 (GEF 1)		3 PHYS 111 (GEF 8)	4
ENGR 101		2 MAE 102	3
ENGR 191		1 GEF Elective 6	3
MATH 155 (GEF 3)		4 GEF Elective 7	3
GEF Elective 5		3	
		17	17

Second Year

Fall	Hours	Spring	Hours
MAE 215		3 MAE 242	3
MAE 241		3 MAE 243	3
MATH 251		4 MAE 244	1
PHYS 112 (GEF 8)		4 MATH 261	4
ENGL 102 (GEF 1)		3 ECON 201 (GEF 4)	3
		17	14

Third Year

Fall	Hours	Spring	Hours
MAE 316		3 EE 221	3
MAE 320		3 EE 222	1
MAE 335*		3 MAE 336*	3
MAE 343		3 MAE 345*	3
ECON 202		3 MAE 476*	3
		Technical Elective	3
		15	16

Fourth Year

Fall	Hours	Spring	Hours
MAE 434*		2 MAE 423	3
MAE 456		3 MAE 460	3
MAE 466*		3 MAE 487*	3

MAE 484*	3 Two Technical Elective	6
MAE 486*	3	
Technical Elective	3	
	17	15

Total credit hours: 128

* Offered once per year in the semester shown.

AREA OF EMPHASIS IN UNMANNED AERIAL SYSTEMS

Select three of the following: 9

MAE 361	Introduction to Unmanned Aerial Systems
MAE 457	UAV Path Planning and Trajectory Tracking
MAE 469	UAV Guidance, Navigation & Control
MAE 474	UAV Design/Build/Fly Comp*

Select one of the following: 3

CS 453	Data and Computer Communications
EE 327	Signals and Systems 1
EE 463	Digital Signal Processing Fundamentals
MAE 361	Introduction to Unmanned Aerial Systems
MAE 446	Mechanics of Composite Materials
MAE 457	UAV Path Planning and Trajectory Tracking
MAE 469	UAV Guidance, Navigation & Control
MAE 478	Guided Missile Systems
MATH 441	Applied Linear Algebra

Total Hours 12

* Maximum of 3 credit hours of MAE 474 can count toward AOE

Student Outcomes

Upon graduation, all Bachelor of Science in Aerospace Engineering students will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

The primary learning goal of the BSAE program is to implement state-of-the-art instructional materials, methods and technologies in order to prepare engineers who are highly proficient in their field of specialty and ready to contribute to the well-being of society through competent practice of the engineering profession, leading to economic development and innovative technological advancements.

The graduates of the BSAE program are well prepared to engage in the long-life pursuit of successful engineering careers by quickly adapting to the changing demands of the workforce in a dynamic global environment, by enhancing continuously their professional abilities or skills, and by contributing effectively in multidisciplinary teams to the advancement of existing or anticipated industrial, economical and societal needs.

Mechanical Engineering, B.S.M.E.

Degrees Offered

- Bachelor of Science in Mechanical Engineering (B.S.M.E.)
- Dual Degree in Aerospace and Mechanical Engineering

Nature of the Program

Mechanical engineering is a broad technical discipline. It integrates knowledge of the physical sciences and mathematics for the design, construction, and manufacture, testing, analysis, use, and operation of a device, structure, a machine, a process, or a system in service to humanity. Its development parallels the growth of industry. Modern society needs mechanical engineers who have broad and deep training in the fundamentals of engineering and related sciences and who have developed versatility in analyzing and solving complex problems. The mechanical engineer must not only possess a high level of professional expertise but also have an appreciation for the impact of engineering solutions in a societal context, including ethical and economic considerations.

Mechanical engineers are problem-solvers who are scientifically informed and mathematically minded. The mechanical engineering curriculum prepares students to deal effectively with a broad range of engineering problems rather than with narrow specialties. Graduates find employment in a wide range of industries, government agencies, and educational institutions where they are concerned with many functions:

- The use and economic conversion of energy from natural sources into useful energy for power, light, heating, cooling, and transportation;
- The design and production of machines to lighten the burden of human work;
- The planning and development of systems for using energy machines and resources;
- The processing of materials into products useful to mankind; and
- The education and training of specialists who deal with mechanical systems.

The curriculum consists of a judicious combination of fundamentals, including mathematics and sciences, and practical laboratory experience which provides access to modern engineering tools. Mechatronics, which is a study of the interdependence between mechanical engineering and electrical/electronics engineering, is a key part of the mechanical engineering curriculum. Graduates will be able to critically analyze mechanical engineering problems and execute practical solutions. In addition to being able to function independently, it is expected that graduates will be able to function with effective written and oral communication within multidisciplinary teams and be prepared to address several issues such as environmental, social, and economic considerations due to a thorough education in the humanities, social sciences, ethics, safety, and professionalism.

While the undergraduate curriculum is sufficiently broad to permit graduates to select from a wide variety of employment opportunities, it contains sufficient depth to prepare students to enter graduate school to pursue advanced degrees. As modern science and engineering become more complex, the desirability of graduate-level preparation is being recognized by most advanced industries and government agencies.

Students can simultaneously pursue B.S. degrees in both aerospace engineering and mechanical engineering by completing additional courses. Information on this 158 credit-hour, four-and-one-half-year option can be seen at the end of this section.

Students who plan a career in medicine, dentistry, or related areas, but who desire a mechanical engineering degree before entering the appropriate professional school, may substitute eight hours (from a combination of biology and organic chemistry courses) for the required six hours of technical electives. This selection will help the student satisfy admission requirements to the professional schools in the health sciences.

The mechanical engineering program at WVU is administered by the faculty of the Department of Mechanical and Aerospace Engineering. The mechanical engineering program is accredited by the Engineering Accreditation Commission (EAC) of ABET, <http://www.abet.org>.

Program Educational Objectives

It is expected that, within a few years of graduation (3 to 5 years), graduates will attain the following Program Educational Objectives (PEO's):

PEO-1. Proficiency in practicing one or more areas of mechanical engineering.

It is expected that after a few years of graduating (3 to 5 years), graduates will have consolidated professional proficiency as practitioners in at least one technical area of mechanical engineering, as reflected by the responsibilities and accomplishments of their professional practice.

PEO-2. Success in adapting to the demands of the workforce in the dynamic technological arena.

It is expected that, within a few years of graduation (3 to 5 years), graduates will have successfully adapted to the demands of the workforce in a dynamic technological arena through a professional practice that reflects high credentials or development of new technical skills and acumen for administrative functions.

PEO-3. Progress in their personal career development through professional service, continuing education and/or graduate studies.

It is expected that, within a few years of graduation (3 to 5 years), graduates will have made meaningful progress in their professional career, either by promotions to positions of higher responsibility with their employers, by participation in professional service activities, or by technical self-improvement through continuing education or graduate degree programs.

PEO-4. Meaningful involvement in a team that tangibly contributes to industry and/or society through the engineering discipline.

It is expected that, within a few years of graduation (3 to 5 years), graduates will have the experience of being or having been members in a team of professionals successfully making tangible technical contributions to industry or society through an engineering discipline.

Student Outcomes

Upon graduation, all Bachelors of Science students in Mechanical Engineering will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

The primary learning goal of the BSME program is to implement state-of-the-art instructional materials, methods and technologies in order to prepare engineers who are highly proficient in their field of specialty and ready to contribute to the well-being of society through competent practice of the engineering profession, leading to economic development and innovative technological advancements.

The graduates of the BSME program are well prepared to engage in the long-life pursuit of successful engineering careers by quickly adapting to the changing demands of the workforce in a dynamic global environment, by enhancing continuously their professional abilities or skills, and by contributing effectively in multidisciplinary teams to the advancement of existing or anticipated industrial, economical and societal needs.

Spring Semester Study Abroad Opportunity in Rome, Italy

PRIMARILY FOR JUNIOR YEAR ME AND AE UNDERGRADUATE STUDENTS

All MAE undergraduates are invited to consider spending the spring semester of their junior year studying abroad at the University of Rome Tor Vergata ("UTV", for short). This very successful program is taught fully in English at UTV to both Italian undergraduate engineering students and students from other countries all over the world. Through this program WVU students have the opportunity to earn credits towards their WVU BSME or dual BSME/BSAE degrees for a full semester of equivalent WVU engineering courses towards their degrees. Please see the following link for the UTV description of this program:

<http://engineering-sciences.uniroma2.it/MENU/COURSES/Courses.html>

In order to ensure that, upon successfully passing the UTV class examinations, the credits earned at UTV will transfer back to WVU for the equivalent courses within the MAE degree programs, it is recommended that students should select from the following list of UTV courses only those courses that are regularly taught during their spring semester:

UTV also strongly recommends that WVU students register for Italian Language Class for Foreigners 2.

Additional courses taught during the UTV fall semester as listed above can also be completed by students who participate in this WVU-UTV student exchange program for their full junior year: e.g., Kinematics and Dynamics of Mechanisms (for WVU courses MAE 342 & MAE 495), Electrical Network Analysis (for WVU course EE 221), and Fluid Machinery (for WVU course MAE 495).

The UTV spring semester classes begin each year in mid-February, with classes ending near the end of June. Examinations are then given during the month of July. WVU students who participate in the WVU-UTV exchange program must pay their normal WVU tuition and fees for their study abroad semester, and are also responsible to cover all of their travel and living expenses while participating in the program. You must complete your transient form (studyabroad.wvu.edu) before your semester abroad. Check with your advisor before registering for courses to approve your course choices. This program is also part of the WVU Statler program to earn the Certificate of Global Competency; see the MAE Department program description in the current WVU Catalog for additional details of this Certificate Program. (<http://statler.wvu.edu/international-programs/global-competency/>)

WVU students must meet the relevant course prerequisites for the WVU course for which they wish to earn credit via a course taken at UTV. Also, because the UTV courses are only taught once a year, WVU students are encouraged to discuss with their academic advisors as early as possible the feasibility of delaying a course listed in the current WVU Catalog for the junior year fall semester in the Suggested Plan of Study for your major.

Study Abroad in the Summer

INDUSTRIAL OUTREACH PROGRAM IN MEXICO

PRIMARILY FOR SENIOR YEAR ME AND AE UNDERGRADUATE STUDENTS

Senior students in good standing in the MAE Department have the opportunity to participate in the Industrial Outreach Program in Mexico (IOPM) during the summer of each year (June and July) to earn a total of 9 credits (described below) toward their BS degree requirements in the BSAE or

BSME Degree; this program is also available for other engineering majors. In this program, students are teamed up with Mexican students from local universities and conduct meaningful engineering projects in industrial sites, working full time under the guidance and supervision of practicing industrial engineers and faculty members. The duration of the program is 8 weeks.

The Objectives of this Program are:

1. To add value to student's education through international experiential learning.
2. To solve meaningful engineering problems of value to industry.
3. To bridge the gap between academia and industry to benefit both.

Practical engineering problems from well-established companies in Mexico are presented to each team, with specific objectives and technical deliverables to be attained during the 8 week duration of the program. A final report and a final presentation are delivered at the end to personnel from industry and faculty members. A poster session is conducted at the closing of the program.

The main venue of this program is in Queretaro City and surroundings. Students are placed in home-stay with local families who provide clean, safe, healthy and friendly environment to students providing a full cultural and professional immersion. Weekends are used for field trips and cultural sightseeing. Fundamental knowledge of Spanish language is recommended but is not essential, as all the Mexican students and engineering liaisons are required to speak English.

Courses with credit:

- MAE 471 Principles of Engineering Design (3 cr) – Capstone Design Course
- MAE 472 Engineering System Design (3 cr) – Project Technical Elective
- FCLT 260 Cultures of Mexico (3 cr) – GEF-F7 Global Studies and Diversity

This is a summer faculty led program administered by WVU Office of International Programs (<https://studyabroad.wvu.edu/>) and provides eligibility for the Statler College Certificate of Global Competency. (<http://statler.wvu.edu/international-programs/global-competency> (<http://statler.wvu.edu/international-programs/global-competency/>)).

Click here to view the Suggested Plan of Study (p. 794)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Mechanical Engineering Curriculum Requirements

To receive a bachelor of science in mechanical engineering, a student must meet the University's undergraduate degree requirements, take all the courses indicated below, and attain a grade point average of 2.25 or better in all mechanical and aerospace engineering courses, in all WVU courses, and overall. This requirement ensures that the student has demonstrated overall competence in the major.

Freshman Engineering Requirements

ENGR 101	Engineering Problem Solving 1	2
Engineering Problem Solving:		3
CHE 102	Introduction to Chemical Engineering	
ENGR 102	Engineering Problem-Solving 2	
ENGR 103	Introduction to Nanotechnology Design	
MAE 102	Introduction to Mechanical and Aerospace Engineering Design	
ENGR 191	First-Year Seminar	1

Non Mechanical Engineering Core Requirements (Minimum grade of C- required)

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2B)	4
Calculus I (GEF 3):		4
MATH 155	Calculus 1	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 156	Calculus 2 (GEF 8)	4
MATH 251	Multivariable Calculus	4
MATH 261	Elementary Differential Equations	4
PHYS 111	General Physics (GEF 8)	4

Mechanical Engineering Core Requirements

A minimum cumulative GPA of 2.25 is required in all MAE courses

ECON 201	Principles of Microeconomics (GEF 4)	3
ECON 202	Principles of Macroeconomics	3
PHYS 112	General Physics (GEF 8)	4
EE 221	Introduction to Electrical Engineering	3
EE 222	Introduction to Electrical Engineering Laboratory	1
IENG 302	Manufacturing Processes	2
IENG 303	Manufacturing Processes Laboratory	1
MAE 211	Mechatronics	3
MAE 241	Statics	3
MAE 242	Dynamics	3
MAE 243	Mechanics of Materials	3
MAE 244	Dynamics and Strength Laboratory	1
MAE 316	Analysis-Engineering Systems	3
MAE 320	Thermodynamics	3
MAE 321	Applied Thermodynamics	3
MAE 322	Thermal and Fluids Laboratory	1
MAE 331	Fluid Mechanics	3
MAE 342	Dynamics of Machines	3
MAE 343	Intermediate Mechanics of Materials	3
MAE 411	Advanced Mechatronics	3
MAE 423	Heat Transfer	3
MAE 454	Machine Design and Manufacturing	3
MAE 456	Computer-Aided Design and Finite Element Analysis	3
MAE 460	Automatic Controls	3
MAE 471	Principles of Engineering Design (Fulfills Writing and Communications Skills Requirement)	3
Technical Electives		12
GEF Electives 1, 5, 6, 7 **		15
Total Hours		124

MECHANICAL ENGINEERING TECHNICAL ELECTIVES

Mechanical Engineering Technical Electives

Students are limited to a total of 3 hours under MAE 491, MAE 495, and/or MAE 496

Students may substitute one technical elective from the substitute technical electives

Students may substitute two technical electives from the pre medical technical electives

MAE 271 & MAE 371	Mechanical and Aerospace Engineering Design 1 and Mechanical and Aerospace Engineering Design 2	3
MAE 312	Introduction to Mechanical Design	3
MAE 335	Incompressible Aerodynamics	3
MAE 336	Compressible Aerodynamics	3
MAE 345	Aerospace Structures	3
MAE 412	Mobile Robotics	3
MAE 415 & MAE 417	Balloon Satellite Project 1 and Balloon Satellite Project 2	3
MAE 421	Problems in Thermodynamics	3
MAE 425	Internal Combustion Engines	3
MAE 426	Flight Vehicle Propulsion	3
MAE 427	Heating, Ventilating, and Air Conditioning	3
MAE 430 or MAE 431	Microgravity Research 1 Microgravity Research 2	3
MAE 432	Engineering Acoustics	3
MAE 433	Computational Fluid Dynamics	3
MAE 441	Gas Turbine Design and Durability	3
MAE 446	Mechanics of Composite Materials	3
MAE 459	Hybrid Electric Vehicle Propulsion and Control	3
MAE 461	Applied Feedback Control	3
MAE 462	Design of Robotic Systems	3
MAE 472	Engineering Systems Design	3
MAE 473	Bioengineering	3
MAE 474	UAV Design/Build/Fly Comp	1-3
MAE 476	Space Flight and Systems	3
Any MAE 493 Except Advanced Orbital Mechanics		
MAE 491	Professional Field Experience	3
MAE 495	Independent Study	3
MAE 496	Senior Thesis	3
Any MAE 500 Level Course		
IENG 377	Engineering Economy	3
Approved ENGR 493 Courses		

SUBSTITUTE TECHNICAL ELECTIVES

Mechanical Engineering students may take one of the following courses with prior approval from the ME curriculum chair. Students may only take one of the substitute courses and must take the other technical elective from the list above.

CHE 366	Materials Science	3
CHE 463	Polymer Composites Processing	3
CE 322	Hydrotechnical Engineering	3
CE 347	Introduction to Environmental Engineering	4
CE 443	Environmental Science and Technology	3
CE 463	Steel Design	3
CE 464	Timber Design	3
CS 430	Advanced Software Engineering	3
CS 440	Database Design and Theory	3
CS 453	Data and Computer Communications	3

CS 455	Computer Architecture	3
EE 327	Signals and Systems 1	3
EE 335	Electromechanical Energy Conversion and Systems	3
EE 345	Engineering Electromagnetics	3
EE 463	Digital Signal Processing Fundamentals	3
ENGR 310	Energy Engineering	3
IENG 405	Design for Manufacturability	3
MATH 441	Applied Linear Algebra	3
MATH 456	Complex Variables	3
MATH 465	Partial Differential Equations	3
PHYS 314	Introductory Modern Physics	4
PHYS 321	Optics	3
PHYS 332	Theoretical Mechanics 2	3
PHYS 451	Introductory Quantum Mechanics	3
PHYS 463	Nuclear Physics	3
PHYS 471	Solid State Physics	3

PRE-MEDICAL TECHNICAL ELECTIVES

Students who plan a career in medicine, dentistry, or related area may substitute the following courses to count as the technical elective requirement.

Choose two of the following:

CHEM 233 & CHEM 235	Organic Chemistry and Organic Chemistry Laboratory
CHEM 234 & CHEM 236	Organic Chemistry and Organic Chemistry Laboratory
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory
BIOL 117 & BIOL 118	Introductory Physiology and Introductory Physiology Laboratory

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGR 102	3
MATH 155 (GEF 3)		4 MATH 156 (GEF 8)	4
CHEM 115 & 115L (GEF 2B)		4 PHYS 111 (GEF 8)	4
ENGR 101		2 GEF Elective 6	3
ENGR 191		1 GEF Elective 7	3
GEF Elective 5		3	
		17	17

Second Year

Fall	Hours	Spring	Hours
MAE 211		3 ECON 201 (GEF 4)	3
MAE 241		3 MAE 242	3
MATH 251		4 MAE 243	3
PHYS 112 (GEF 8)		4 MAE 244	1
ENGL 102 (GEF 1)		3 MATH 261	4
		17	14

Third Year

Fall	Hours	Spring	Hours
MAE 316		3 MAE 321	3
MAE 320		3 MAE 322	1

MAE 343	3 MAE 331	3
EE 221	3 MAE 342	3
EE 222	1 IENG 302	2
ECON 202	3 IENG 303	1
	Technical Elective	3
<hr/>		
	16	16

Fourth Year

Fall	Hours	Spring	Hours
MAE 454		3 MAE 411	3
MAE 456		3 MAE 423	3
MAE 471		3 MAE 460	3
Two Technical Electives		6 Technical Elective	3
<hr/>			
	15		12

Total credit hours: 124

Student Outcomes

Upon graduation, all Bachelors of Science students in Mechanical Engineering will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

The primary learning goal of the BSME program is to implement state-of-the-art instructional materials, methods and technologies in order to prepare engineers who are highly proficient in their field of specialty and ready to contribute to the well-being of society through competent practice of the engineering profession, leading to economic development and innovative technological advancements.

The graduates of the BSME program are well prepared to engage in the long-life pursuit of successful engineering careers by quickly adapting to the changing demands of the workforce in a dynamic global environment, by enhancing continuously their professional abilities or skills, and by contributing effectively in multidisciplinary teams to the advancement of existing or anticipated industrial, economical and societal needs.

Department of Mining Engineering, B.S.Min.E.

E-mail: Stater-MINE@mail.wvu.edu (vlad.kecojevic@mail.wvu.edu)

Degree Offered

- Bachelor of Science in Mining Engineering (B.S.Min.E.)

Nature of the Program

Mining engineering deals with discovering, extracting, processing, marketing, and utilizing mineral deposits from the earth's crust. The role of the mining engineer may be quite diversified, and the field offers opportunities for specialization in a large number of technical areas. The trained professional in this field is well versed in mining and geology and also in the principles of civil, electrical, and mechanical engineering as applied to the mining industry. With the present trend toward the use of engineers in industrial management and administrative positions, the mining engineer's training also includes economics, business, personnel management, and the humanities.

The mission of the Bachelor of Science in Mining Engineering (B.S.Min.E.) program at West Virginia University has been established to produce graduates who are thoroughly prepared to meet the operational and engineering challenges of the mining industry and to continue their studies in graduate programs. The mining engineering program is accredited by the Engineering Accreditation Commission (EAC) of ABET, <http://www.abet.org>.

Program Educational Objectives

The four program educational objectives of the WVU BSMInE have been established:

1. Our graduates will be successful in their professional careers and will continue to develop professionally and serve in leadership roles in industry, research, public service, and/or post-graduate education.
2. Our graduates will achieve their professional objectives by coordinating and leveraging key aspects of Mining Engineering: geology, exploration, valuation, development, exploitation, reclamation, and beneficiation.
3. Our graduates will successfully utilize engineering principles and technology to solve engineering problems in their career.
4. Throughout their careers, our graduates will successfully demonstrate their awareness and appreciation for professional registration, ethics, and lifelong learning while recognizing their obligations to society, the environment, the profession, and miner health and safety.

Student Outcomes

Upon graduation, all Bachelors of Science of Science in Mining Engineering students will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Professional technical courses include surface and underground mining systems, engineering principles of blasting, materials handling, ventilation, roof control, rock mechanics, mining equipment, coal and mineral preparation, plant and mine design, geology, and water control. In addition, students receive a foundation in the managerial, financial, environmental, and social aspects of the operation of a mining enterprise. Local coal fields, mines, and preparation plants provide extensive opportunity for research, instruction, and field work in a real-world situation.

In the fourth year, the student may specialize in such career areas as coal mining, ore mining, or other phases of mining engineering through the proper selection of design problems and electives. The student will be assigned an advisor who will assist in this phase of the program.

FACULTY

CHAIR

- Vladislav Kecojevic - Ph.D. (University of Belgrade)
Surface mining, Surface mine health and safety, Environmental impact of surface mining

ASSOCIATE PROFESSORS

- 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
- I. Berk Tulu - Ph.D. (West Virginia University)
Coal/stone/hard rock pillar stability, Coal bump/burst, Rock drilling and fragmentation

PER COURSE LECTURER

- Dan Alexander - Ph.D. (West Virginia University)
Mineral economics evaluation

PROFESSORS EMERITUS

- Syd S. Peng - Ph.D. (Stanford University)
- Felicia F. Peng - Ph.D. (West Virginia University)
Coal preparation, Coal utilization, Process control, Plant design

Click here to view the Suggested Plan of Study (p. 798)

Curriculum in Mining Engineering

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum Requirements

To receive a degree of bachelor of science in mining engineering, a student must meet the University's undergraduate degree requirements, take all the courses indicated below, and attain a grade point average of 2.25 or better in all mining engineering courses, in all WVU courses, and overall. This requirement assures that the student has demonstrated overall competence in the major.

Freshman Engineering Requirements

ENGR 101	Engineering Problem Solving 1	2
Engineering Problem Solving:		3
CHE 102	Introduction to Chemical Engineering	
ENGR 102	Engineering Problem-Solving 2	
ENGR 103	Introduction to Nanotechnology Design	
MAE 102	Introduction to Mechanical and Aerospace Engineering Design	
ENGR 191	First-Year Seminar	1

Non-Mining Engineering Core

AGRN 455	Reclamation of Disturbed Soils	3
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2B)	4
GEOL 101	Planet Earth	3
GEOL 102	Planet Earth Laboratory	1
GEOL 342	Structural Geology for Engineers	3
MAE 241	Statics	3
MAE 242	Dynamics	3
MAE 243	Mechanics of Materials	3
MAE 320	Thermodynamics	3

MAE 331	Fluid Mechanics	3
Calculus I (GEF 3):		4
MATH 155	Calculus 1 (Minimum grade of C- is required)	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus (Minimum grade of C- is required)	
MATH 156	Calculus 2 (GEF 8 - Minimum grade of C- is required)	4
MATH 251	Multivariable Calculus (Minimum grade of C- is required)	4
MATH 261	Elementary Differential Equations	4
PHYS 111	General Physics (GEF 8)	4
PHYS 112	General Physics (GEF 8)	4
STAT 215	Introduction to Probability and Statistics	3
Mining Engineering Core Requirements (Minimum GPA of 2.25 required)		
MINE 201	Mine Surveying	3
MINE 205	Underground Mining Systems	3
MINE 206	Surface Mining Systems	4
MINE 261	Engineering CAD	2
MINE 306	Mineral Property Evaluation	3
MINE 331	Mine Ventilation	3
MINE 382	Mine Power Systems	3
MINE 411	Rock Mechanics/Ground Control	4
MINE 427 or MINE 425	Coal Preparation Mineral Processing	4
MINE 461	Applied Mineral Computer Methods	3
MINE 471	Mine and Safety Management	3
MINE 480	Multidisciplinary Team Project	1
MINE 483	Mine Design-Exploration Mapping	2
MINE 484	Mine Design-Report Capstone (Fulfills Writing and Communications Skills Requirement)	4
Mining Technical Electives (300 or 400 level MINE course)		6
Engineering/Science Electives: 300 or 400 level science or engineering course in BIOM, BMEG, CE, CHE, CPE, CS, EE, IENG, MAE, MINE, PNGE, BIOL, CHEM, PHYS, GEOL, and MATH.		6
GEF Electives 1, 4, 5, 6, 7		18
Total Hours		134

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 B.S.Min.E. degree program that completes degree requirements in four years is as follows:

First Year

Fall	Hours	Spring	Hours
MATH 155 (GEF 3)		4 MATH 156 (GEF 8)	4
ENGR 101		2 ENGR 102	3
ENGR 191		1 PHYS 111 (GEF 8)	4
CHEM 115 & 115L (GEF 2)		4 GEF 4	3
ENGL 101 (GEF 1)		3 GEF 5	3
GEOL 101		3	
GEOL 102		1	
		18	17

Second Year

Fall	Hours	Spring	Hours
MINE 205		3 MINE 206	4
MINE 201		3 MAE 243	3
MINE 261		2 MATH 261	4

MAE 241		3 PHYS 112 (GEF 8)	4
GEOL 342		3 MAE 331	3
MATH 251		4	
		18	18
Third Year			
Fall	Hours	Spring	Hours
MINE 306		3 MINE 331	3
MINE 382		3 MINE 427 or 425	4
MINE 461		3 ENGL 102 (GEF 1)	3
MAE 320		3 MAE 242	3
STAT 215		3 GEF 6	3
		15	16
Fourth Year			
Fall	Hours	Spring	Hours
MINE 411		4 MINE 484	4
MINE 483		2 AGRN 455	3
MINE 471		3 MINE 480	1
Mining Technical Elective		3 Two Engineering/Science Electives	6
GEF 7		3 Mining Technical Elective	3
		15	17

Total credit hours: 134

Student Outcomes

Upon graduation, all Bachelors of Science of Science in Mining Engineering students will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Dual Degrees

In this Section:

- MINE and CE Curriculum (p. 800)
- Dual MINE and CE Suggested Plan of Study (p. 802)
- MINE and GEOL Curriculum (p. 803)
- Dual MINE and GEOL Suggested Plan of Study (p. 805)

To be eligible to receive a bachelor's degree in the Statler College, a student is required to complete satisfactorily the number of semester hours of work as specified in the program curriculum. Students must achieve a minimum grade point average of 2.25 for all courses taken at WVU, a major grade point average of 2.25 or better in courses completed within the student's major, and a minimum overall grade point average of 2.25.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum for a Dual Degree in Mining Engineering and Civil Engineering

This curriculum allows students to simultaneously pursue B.S. degrees in mining engineering and civil engineering by completing additional courses. A suggested schedule for the dual curriculum in mining engineering and civil engineering is shown below.

To receive the degrees of bachelor of science in mining engineering and bachelor of science in civil engineering, a student must take all of the courses indicated below and achieve a grade point average of 2.25 or better for all civil engineering courses attempted and a grade point average of 2.25 in all mining engineering courses attempted, except for those courses in which a grade of W was received. If a course is repeated, only the last grade received is counted in computing the grade point average, and the course credit hours are counted only once. This requirement assures that the student has demonstrated overall competence in the chosen major.

Undergraduate Student Minimum Performance Policy

All civil and environmental engineering students at WVU, including transfer students and second degree students, must complete each tracking course with a grade of C- or better, with the exception that one D- in a course taken at WVU is permitted. Any tracking course transferred from outside of WVU must be a C- or better. Only the following civil engineering courses may be taken prior to completion of the minimum performance policy: CE 201, CE 210, CE 305, CE 332, CE 347.

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 dual B.S.Min.E. and B.S.C.E. degree program that completes degree requirements in five years is as follows:

Mining/Civil Engineering Curriculum Requirements

Students must complete a minimum of 152 credit hours to graduate - the total at the bottom reflects all possible course combinations.

Tracking Courses

Minimum grade of C- required.

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2)	4
MAE 241	Statics	3
MAE 242	Dynamics *	3
MAE 243	Mechanics of Materials	3
Select one of the following (GEF 3):		4
MATH 155	Calculus 1	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 156	Calculus 2 (GEF 8)	4
MATH 251	Multivariable Calculus	4
MATH 261	Elementary Differential Equations	4
PHYS 111	General Physics (GEF 8)	4
Required Courses		
CE 201	Introduction to Civil Engineering	1

CE 301	Engineering Professional Development	1
CE 321	Fluid Mechanics for Civil Engineers	3
CE 423	Water System Design	3
CE 479	Integrated Civil Engineering Design-Capstone	3
ECON 201	Principles of Microeconomics (GEF 4)	3
ENGR 101	Engineering Problem Solving 1	2
ENGR 102	Engineering Problem-Solving 2	3
ENGR 191	First-Year Seminar	1
GEOL 101	Planet Earth	3
GEOL 102	Planet Earth Laboratory	1
GEOL 342	Structural Geology for Engineers	3
IENG 377	Engineering Economy	3
MAE 320	Thermodynamics	3
MINE 201	Mine Surveying	3
MINE 205	Underground Mining Systems	3
MINE 206	Surface Mining Systems	4
MINE 261	Engineering Computer Aided Design	2
MINE 306	Mineral Property Evaluation	3
MINE 331	Mine Ventilation	3
MINE 382	Mine Power Systems	3
MINE 411	Rock Mechanics/Ground Control	4
MINE 427	Coal Preparation	4
MINE 471	Mine and Safety Management	3
MINE 480	Multidisciplinary Team Project	1
MINE 483	Mine Design-Exploration Mapping	2
MINE 484	Mine Design-Report Capstone	4
PHYS 112	General Physics (GEF 8)	4
STAT 215	Introduction to Probability and Statistics	3
Civil Engineering Core Courses		
CE 332	Introduction to Transportation Engineering	4
CE 347	Introduction to Environmental Engineering	4
CE 351	Introductory Soil Mechanics	4
CE 361	Structural Analysis 1	4
Civil Engineering Design Electives		
Select from the following:		6
CE 411	Pavement Design	
CE 415	Flexible Pavements	
CE 447	Environmental Engineering Design	
CE 451	Foundation Engineering	
CE 453	Earthwork Design	
CE 462	Reinforced Concrete Design	
CE 463	Steel Design	
CE 464	Timber Design	
Civil Engineering Electives		
Select from the following:		3
CE 305	Introduction to Geomatics	
CE 310	Civil Engineering Materials	
CE 413	Construction Methods	
CE 414	Construction Engineering	
CE 416	Advanced Concrete Materials	
CE 420	Computational Fluid Mechanics	
CE 425	Engineering Hydrology	

CE 427	Water Resources Engineering	
CE 433	Urban Transportation Planning and Design	
CE 435	Railway Engineering	
CE 436	Pedestrian/Bike Transportation	
CE 443	Environmental Science and Technology	
CE 445	Properties of Air Pollutants	
CE 461	Structural Analysis 2	
CE 493 course (approved by Advisor)		
CE 495	Independent Study	
SAFM 470	Managing Construction Safety	
GEF Electives 1, 5, 6, 7		15
Total Hours		152

* A grade of D- is permitted in MAE 242 only. Any courses transferred from outside of WVU must be a C- or better.

MINE and CE Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
CHEM 115 & 115L (GEF 2)		4 ENGR 102	3
ENGL 101 (GEF 1)		3 GEOL 101	3
ENGR 101		2 GEOL 102	1
ENGR 191		1 MATH 156 (GEF 8)	4
MATH 155 (GEF 3)		4 PHYS 111 (GEF 8)	4
		14	15

Second Year

Fall	Hours	Spring	Hours
CE 201		1 ENGL 102 (GEF 1)	3
MAE 241		3 MAE 242	3
MATH 251		4 MATH 261	4
MINE 201		3 MINE 206	4
MINE 205		3 PHYS 112 (GEF 8)	4
MINE 261		2	
		16	18

Third Year

Fall	Hours	Spring	Hours
CE 321		3 Two CE Core Courses *	8
GEOL 342		3 MINE 331	3
MAE 243		3 MINE 427	4
MAE 320		3 MINE 480	1
STAT 215		3	
		15	16

Fourth Year

Fall	Hours	Spring	Hours
Two CE Core Courses *		8 CE 301	1
MINE 306		3 Two CE Design Electives **	6
MINE 382		3 GEF Elective 6	3
		CE 423	3
		IENG 377	3
		14	16

Fifth Year

Fall	Hours	Spring	Hours
GEF Elective 5		3 CE Open Elective ***	3
ECON 201 (GEF 4)		3 CE 479	3
MINE 411		4 GEF Elective 7	3
MINE 471		3 MINE 484	4
MINE 483		2	
		15	13

Total credit hours: 152

* CE Core Classes: CE 332, CE 347, CE 351, CE 361

** CE Design Electives—any approved CE 400-level design course. See advisor for approved list

*** CE Open Electives—any approved CE 300 or CE 400-level course. See advisor for approved list.

Notes: Discipline substitutions:

- MINE 306 fulfills requirement of CE Engr/Math/Sci Elective 1.
- MINE 411 fulfills requirement of CE Engr/Math/Sci Elective 2.
- MINE requirement for is fulfilled through CE 322 and CE 351.
- MINE 382 fulfills requirement of CE engineering elective outside CE.
- MINE 461 is fulfilled by CE 322.
- MINE 484 fulfills CE requirement of ENGL 305.
- MINE requirement for STAT 211 is fulfilled by CE requirement of STAT 215.
- CE 321 fulfills MINE requirement for MAE 331.
- MINE technical elective and MINE Eng/Sci technical elective requirements are fulfilled by any two of the following: CE 332, CE 347, or CE 361.
- GEOL 342 fulfills requirement of CE basic science elective.
- MINE 261 substitutes for CE 210.

Mining Engineering/Geology Curriculum Requirements

Dual Degree Curriculum for Mining Engineering and Geology

This curriculum allows students to simultaneously pursue a BS.Min.E. degree in mining engineering and a B.S. in geology. The dual degree program requires satisfactory completion of 154 credits and fulfilling all the requirements for both degrees.

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 dual B.S.Min.E. and B.S.Geology program that completes both degree requirements in five years is as follows.

To be eligible to receive a bachelor's degree in the Statler College, a student is required to complete satisfactorily the number of semester hours of work as specified in the program curriculum. Students must achieve a minimum grade point average of 2.25 for all courses taken at WVU, a major grade point average of 2.25 or better in courses completed within the student's major, and a minimum overall grade point average of 2.25.

Required Courses

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2)	4
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory (GEF 8)	4
ECON 201	Principles of Microeconomics (GEF 4)	3
ENGR 101	Engineering Problem Solving 1	2
ENGR 102	Engineering Problem-Solving 2	3
ENGR 191	First-Year Seminar	1
GEOL 101	Planet Earth	3
GEOL 102	Planet Earth Laboratory	1
GEOL 103	Earth Through Time	3
GEOL 104	Earth Through Time Laboratory	1
GEOL 286	Introduction to Minerals & Rocks	4
GEOL 311	Stratigraphy and Sedimentation	4

GEOL 331	Paleontology	3
or GEOL 454	Environmental and Exploration of Geophysics 1	
GEOL 341	Structural Geology	4
GEOL 404	Geology Field Camp	6
GEOL 495	Independent Study	1
or MINE 495	Independent Study	
Geology Elective (Choose 3 courses)		9
GEOL 300	Geology of West Virginia	
GEOL 321	Geomorphology	
GEOL 365	Environmental Geology	
GEOL 373	Introduction to Petroleum Geology	
GEOL 386	Igneous and Metamorphic Petrology	
GEOL 454	Environmental and Exploration of Geophysics 1	
GEOL 455	Introduction to Remote Sensing	
GEOL 463	Physical Hydrogeology	
GEOG 350	Geographic Information Systems and Science	
MAE 241	Statics	3
MAE 242	Dynamics	3
MAE 243	Mechanics of Materials	3
MAE 320	Thermodynamics	3
MAE 331	Fluid Mechanics	3
Select one of the following (GEF 3):		4
MATH 155	Calculus 1	
or MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus	
MATH 156	Calculus 2 (GEF 8)	4
MATH 251	Multivariable Calculus	4
MATH 261	Elementary Differential Equations	4
MINE 201	Mine Surveying	3
MINE 205	Underground Mining Systems	3
MINE 206	Surface Mining Systems	4
MINE 261	Engineering Computer Aided Design	2
MINE 306	Mineral Property Evaluation	3
MINE 331	Mine Ventilation	3
MINE 382	Mine Power Systems	3
MINE 411	Rock Mechanics/Ground Control	4
MINE 427	Coal Preparation	4
MINE 461	Applied Mineral Computer Methods	3
MINE 471	Mine and Safety Management	3
MINE 480	Multidisciplinary Team Project	1
MINE 483	Mine Design-Exploration Mapping	2
MINE 484	Mine Design-Report Capstone (Fulfills Writing and Communications Skills Requirement)	4
PHYS 111	General Physics (GEF 8)	4
PHYS 112	General Physics	4
STAT 215	Introduction to Probability and Statistics	3
GEF Electives 1, 5, 6, 7		15
Total Hours		155

DUAL MINE AND GEOL SUGGESTED PLAN OF STUDY**First Year**

Fall	Hours	Spring	Hours	
MATH 155 (GEF 3)		4 MATH 156 (GEF 8)		4
ENGR 101		2 ENGR 102		3
ENGR 191		1 PHYS 111 (GEF 8)		4
CHEM 115 & 115L (GEF 2)		4 ENGL 102 (GEF 1)		3
ENGL 101 (GEF 1)		3 GEOL 103 & GEOL 104		4
GEOL 101 & GEOL 102		4		
			18	18

Second Year

Fall	Hours	Spring	Hours	
MAE 241		3 CHEM 116 & 116L (GEF 8)		4
GEOL 285		3 MAE 331		3
MATH 251		4 MINE 206		4
MINE 201		3 Geology Elective		3
MINE 205		3 PHYS 112		4
MINE 261		2		
			18	18

Third Year

Fall	Hours	Spring	Hours	Summer	Hours	
GEOL 341		4 GEOL 286		4 GEOL 404 ***		6
MAE 320		3 GEOL 311		4		
MATH 261		4 MAE 243		3		
MINE 461		3 MINE 331		3		
STAT 215		3 MINE 427		4		
		MINE 480		1		
			17	19		6

Fourth Year

Fall	Hours	Spring	Hours	
GEF 5		3 GEF 6		3
ECON 201 (GEF 4)		3 GEF 7		3
GEOL 331		3 Geology Elective		3
MINE 382		3 MAE 242		3
MINE 306		3 MINE 483		2
Geology Elective		3		
			18	14

Fifth Year

Fall	Hours	
MINE 411		4
MINE 471		3
MINE 484		4
GEOL 495 or MINE 495		1
		12

Total credit hours: 158

*** GEOL 404 Geology Field Camp is GEOL capstone course.

Notes: Discipline substitutions:

- GEOL 311 and other GEOL upper-division elective courses fulfill the requirements for MinE technical elective and eng/sci technical elective.
- GEOL requirement for GEOL 341 is substituted for MINE requirement for GEOL 342.
- MINE requirement of AGRN 455 is fulfilled through GEOL 321.
- MINE 205 and MINE 206 fulfill the requirement of GEOL upper-division technical electives.
- MINE 484 and GEOL 311 fulfill the requirement of writing course.
- ECON 201 and GEOL 101 fulfill two of the GEF requirements in the mining curriculum.

Department of Petroleum & Natural Gas Engineering, B.S.P.N.G.E.

E-mail: Statler-PNGE@mail.wvu.edu (samuel.ameri@mail.wvu.edu)

Degree Offered

- Bachelor of Science in Petroleum and Natural Gas Engineering (B.S.P.N.G.E.)

Nature of the Program

Petroleum and Natural Gas Engineering is concerned with design and application aspects of the discovery, production, and transportation of oil and natural gas resources.

Professionals in this field must have a thorough understanding of the geological principles relating to the occurrence, discovery, and production of fluid hydrocarbons. The petroleum and natural gas engineer must know and be capable of applying both conventional engineering design principles as well as those pertaining specifically to the field of petroleum and natural gas engineering. These are developed in the petroleum and natural gas engineering courses in the curriculum. In addition, a strong foundation in mathematics and the sciences broadens the future engineer's professional capabilities. Because many engineers will be employed as supervisors or executives, managerial and social skills are also emphasized.

Students are offered the opportunity to enter all phases of the petroleum and natural gas industry in meaningful and important jobs, continue their education towards advanced degrees, or in some cases pursue a combination of professional employment and continued education. The petroleum and natural gas engineering program is accredited by the Engineering Accreditation Commission (EAC) of ABET, <http://www.abet.org>.

Program Learning Objectives

- The graduates will be successful in their professional careers as petroleum engineers in the energy industry, government agencies, and/or post-graduate education.
- The graduates will continue to develop professionally and serve in leadership roles.
- The graduates will be successful in demonstrating their obligations to the profession, to their employer, and to society.

The foundation for achieving program objectives is established through a rigorous curriculum that provides the students with:

- An understanding of scientific and engineering principles and the application of these principles in solving petroleum and natural gas engineering problems using modern tools
- An integrated design experience leading to a capstone design course
- A balanced and rounded education to recognize the need for developing technical communication and teamwork skills, as well as understanding the engineer's professional, ethical, and societal obligations

Student Outcomes

Upon graduation, all Bachelors of Science in Petroleum and Natural Gas Engineering students will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

These outcomes are achieved by enrolling in rigorous individual courses in all basic areas of petroleum and natural gas engineering, basic science, mathematics, geology, and humanities and social sciences. The petroleum and natural gas engineering curriculum also contains significant laboratory components aimed at reinforcing the knowledge gained in the classroom. In the senior year, technical electives are offered in which the student may obtain additional depth of knowledge in specific areas of petroleum and natural gas engineering technology. Each student is individually mentored by a member of the petroleum and natural gas engineering faculty.

Students gain practical experience and first-hand knowledge of many aspects of petroleum and natural gas engineering through close proximity to the industry in West Virginia and surrounding states. Production sites, secondary and enhanced oil recovery projects, compressor stations, gas storage fields, and corporate offices all provide excellent opportunities for our students. Additional experience is provided through modern, well-equipped laboratories within the department and the University. Students are urged to gain field experience through summer employment in the industry.

FACULTY

CHAIR

- Samuel Ameri - M.S.Pet.E., P.E. (West Virginia University)
Formation Evaluation

PROFESSORS

- Kashy Aminian - Ph.D. (University of Michigan)
Graduate Coordinator. 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
- Mehrdad Zamirian - Ph.D. (West Virginia University)
Property Evaluation

ADJUNCT PROFESSORS

- Alan Brannon - Ph.D. (West Virginia University)
Petroleum Engineering Fundamentals
- Josh Dalton - MS, PNGE
- Pramod Thakur - Ph.D. (Pennsylvania State University)
Coalbed Methane

Click here to view the Suggested Plan of Study (p. 809)

Curriculum in Petroleum and Natural Gas Engineering

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum Requirements

To receive a degree of bachelor of science in petroleum and natural gas engineering, a student must meet the University's undergraduate degree requirements, take all of the courses indicated below, earn a grade of C- or better in all petroleum and natural gas engineering courses, and attain a grade point average of 2.25 or better in all petroleum and natural gas engineering courses, in all WVU courses, and overall. This requirement assures that the student has demonstrated overall competence in the major.

Freshman Engineering Requirements

ENGR 101	Engineering Problem Solving 1	2
Engineering Problem Solving:		3
CHE 102	Introduction to Chemical Engineering	
ENGR 102	Engineering Problem-Solving 2	
ENGR 103	Introduction to Nanotechnology Design	
MAE 102	Introduction to Mechanical and Aerospace Engineering Design	
ENGR 191	First-Year Seminar	1

Non-Petroleum & Natural Gas Engineering Core

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2B)	4
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory (GEF 8)	4
ECON 201	Principles of Microeconomics (GEF 4)	3
ECON 202	Principles of Macroeconomics	3
GEOL 101	Planet Earth	3
GEOL 373	Introduction to Petroleum Geology	3
Calculus I (GEF 3):		4
MATH 155	Calculus 1 (Minimum grade of C- is required)	
MATH 153 & MATH 154	Calculus 1a with Precalculus and Calculus 1b with Precalculus (Minimum grade of C- is required)	
MATH 156	Calculus 2 (GEF 8 - Minimum grade of C- is required)	4
MATH 251	Multivariable Calculus (Minimum grade of C- is required)	4
MATH 261	Elementary Differential Equations	4
PHYS 111	General Physics (GEF 8)	4
PHYS 112	General Physics	4
STAT 215 or IENG 213	Introduction to Probability and Statistics Engineering Statistics	3
EE 221	Introduction to Electrical Engineering	3
MAE 241	Statics	3
MAE 243	Mechanics of Materials	3
MAE 320	Thermodynamics	3
MAE 331	Fluid Mechanics	3

Petroleum & Natural Gas Engineering Core Requirements (Minimum grade of C- required)

Minimum GPA of 2.25 required in all petroleum and natural gas courses

PNGE 200	Introduction to Petroleum Engineering	3
PNGE 310	Drilling Engineering	4
PNGE 312	Drilling Fluids Laboratory	1

PNGE 332	Petroleum Properties and Phase Behavior (Fulfills Writing and Communications Skills Requirement)	3
PNGE 333	Basic Reservoir Engineering	3
PNGE 400	Petroleum Engineering Ethics	1
PNGE 405	Multidisciplinary Team Project	1
PNGE 420	Production Engineering	3
PNGE 432	Petroleum Reservoir Engineering Laboratory	1
PNGE 434	Applied Reservoir Engineering	3
PNGE 441	Oil and Gas Property Evaluation	3
PNGE 450	Formation Evaluation	3
PNGE 470	Natural Gas Engineering	4
PNGE 480	Petroleum Engineering Design	3
Professional Elective - select two of the following:		6
PNGE 415	Well Control	
PNGE 460	Well Stimulation Design	
PNGE 463	Horizontal Drilling	
PNGE 471	Natural Gas Production and Storage	
PNGE 472	Shale Analytics	
PNGE 501	Petroleum Engineering Problems	
PNGE 532	Introduction to Reservoir Simulation	
Additional GEF Elective (2-7)		3
GEF Electives 1, 5, 6, 7		15
Total Hours		128

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 B.S.P.N.G.E. degree program that completes degree requirements in four years is as follows.

First Year

Fall	Hours	Spring	Hours
MATH 155 (GEF 3)		4 MATH 156 (GEF 8)	4
ENGR 101		2 ENGR 102	3
ENGR 191		1 PHYS 111 (GEF 8)	4
CHEM 115 & 115L (GEF 2B)		4 CHEM 116 & 116L (GEF 8)	4
ENGL 101 (GEF 1)		3 GEF Elective 6	3
GEF Elective 5		3	
		17	18

Second Year

Fall	Hours	Spring	Hours
PHYS 112		4 MATH 261	4
MATH 251		4 MAE 243	3
MAE 241		3 MAE 331	3
ENGL 102 (GEF 1)		3 IENG 213 or STAT 215	3
GEOL 101		3 PNGE 200	3
		17	16

Third Year

Fall	Hours	Spring	Hours
PNGE 332		3 PNGE 310	4
EE 221		3 PNGE 312	1
ECON 201 (GEF 4)		3 PNGE 333	3
MAE 320		3 ECON 202	3
GEF Elective 7		3 GEOL 373	3

		Additional GEF Course	3
		15	17
Fourth Year			
Fall	Hours	Spring	Hours
PNGE 420		3 PNGE 400	1
PNGE 434		3 PNGE 405	1
PNGE 441		3 PNGE 432	1
PNGE 450		3 PNGE 480	3
PNGE 470		4 Two Professional Electives	6
		16	12

Total credit hours: 128

Student Outcomes

Upon graduation, all Bachelors of Science of Science in Petroleum and Natural Gas Engineering students will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Fundamentals of Engineering Program

E-mail: Statler-freshman@mail.wvu.edu

Nature of the Program

The Benjamin M. Statler College of Engineering and Mineral Resources Fundamentals of Engineering Program (FEP) is designed to support engineering students as they build foundational engineering skills and discern their career interests within engineering and computer science-related fields. The mission of this student-oriented program is to advise, prepare, and retain qualified students for degree programs in the Statler College. More specifically, the FEP provides the academic and co-curricular support students need for success in their: transition to college life; development of academic discipline and skills needed to succeed as an engineering student; basic courses in Mathematics, Chemistry, Physics, and engineering; and selection of a Computer Science, Cybersecurity, or Engineering discipline major.

Program Objectives

The FEP uses both curricular and co-curricular programmatic elements to meet its educational objectives. Students who successfully complete the requirements of the WVU Fundamentals of Engineering Program:

- Apply their knowledge of mathematics, science, and engineering, as well as problem-solving techniques, to define, formulate, and solve engineering problems.
- Use Word[®], Excel[®], Power Point[®], and MATLAB[®] as engineering tools to perform computations, analyze and plot data, and model a simple system as part of solving an engineering problem.
- Communicate effectively, orally, in writing, and with the use of technical tools such as Microsoft Word[®], Excel[®], Power Point[®], and MATLAB[®] to analyze, report, and present data.
- Work collaboratively on a team.
- Demonstrate their understanding of professional and ethical responsibility by applying ethical principles and professional standards to making engineering decisions.
- Demonstrate an understanding of the impact of engineering solutions and actions in a global, economic, environmental, and societal context.
- Demonstrate the academic maturity and skills necessary to manage their time and use available resources, as necessary, to succeed in their coursework and to engage in life-long learning.

- Identify ways to become involved in and engaged with the Statler College community.
- Select a major that fits with their career goals.

The FEP focuses on: (1) careful advising and accurate placement of students into courses that are at an appropriate level to facilitate academic success; (2) communication between students, faculty, advisors, and parents; (3) academic support services to help students in the fundamental math, science and engineering courses; (4) provision of a co-curricular and social environment that facilitates successful transition to the college environment, provides career exploration opportunities, and supports students' academic endeavors; and (5) quality and engaging fundamental engineering instruction.

The FEP provides a vibrant and supportive community for beginning engineering students centered in the Eugene V. Cilento Engineering Learning Center (ELC). Freshmen have a "one-stop" place to get the answers they need as they navigate through the transition from high school to college. In the ELC, students receive free tutoring, find information about upcoming guest speakers and other College events, get advising questions answered, and spend a significant amount of time studying, doing homework, and working on team projects for their engineering classes.

Academic support is provided to all FEP students in the following subjects: Math, Chemistry, Physics, and Engineering. Academic support takes several forms: free tutoring available at the ELC, the Math Learning Center, the Chemistry Learning Center, and other campus learning centers; special review sessions for math, chemistry, physics, and engineering courses hosted by the ELC; and support from faculty who care about their students' learning and who are willing to meet with students during office hours and in the ELC. All students taking any 100-level ENGR course must spend two hours each week studying, working on homework or class assignments in an approved and supervised environment that provides tutoring support services.

To facilitate engagement with the engineering community and development as engineering professionals, FEP students are required to participate in and reflect upon engineering-related "Out of Class Experiences" (OCEs). Typical OCE opportunities include: *EngineerFEST*, an engineering student organization fair held at the beginning of the year to encourage students to learn about and become involved in one of the College's many student chapters of the professional engineering societies; *Department Visitations*, in which each department hosts freshmen in an informational seminar describing their majors, relevant research opportunities, and the career paths of graduates; and *Student Success Seminars* where students learn academic skills and strategies that promote success in engineering disciplines.

All policies, procedures, upcoming events and activities, and academic resources are listed on the FEP website. All of these efforts, academic and co-curricular, work together to create a coherent program designed to facilitate student success in engineering.

FACULTY

ASSISTANT DEAN

- Robin A. M. Hensel - Ed.D. (West Virginia University)
STEM education K-16, Student success and retention, Underrepresented minorities in STEM fields, Curriculum Development

TEACHING ASSOCIATE PROFESSORS

- Todd R. Hamrick - Ph.D. (West Virginia University)
STEM education, Robotics, Industrial applications, Curriculum development
- Lizzie Y. Santiago - Ph.D. (The Pennsylvania State University)
Bioengineering, Engineering education, Curriculum development, STEM education, Retention

TEACHING ASSISTANT PROFESSORS

- Gerald M. Angle, II - Ph.D. (West Virginia University)
Aerospace engineering, STEM education K-16, Curriculum development
- Carter Hulcher - Ph.D. (West Virginia University)
Civil Engineering, Geomechanics, Student retention
- Xinyu (Catherine) Zhang - Ph.D. (University of Illinois at Urbana-Champaign)
STEM education, Chemical and biomedical engineering, Sustainability of biomanufacturing

TEACHING INSTRUCTORS

- Michael K. Brewster - M.A. (West Virginia University)
Mathematics, Statistics, STEM education K-16

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Benjamin M. Statler College of Engineering and Mineral Resources (<https://www.statler.wvu.edu/undergraduate/admissions-criteria/>).

ADMISSION TO THE FUNDAMENTALS OF ENGINEERING PROGRAM (INTERNAL TRANSFER STUDENT, FTFT)

To be admitted into the Engineering Track 2 or 3 major, a student must have:

- A WVU and overall GPA of at least 2.5
- Completed the prerequisites for or be ready to take MATH 153 or MATH 155

ADMISSION TO THE FUNDAMENTALS OF ENGINEERING PROGRAM (EXTERNAL TRANSFER STUDENT)

To be admitted into the Engineering Track 2 major, a transfer student must have:

- A cumulative GPA of 2.75 or higher
- Completed the prerequisites for or be ready to take MATH 153 or MATH 155

ADMISSION TO A DISCIPLINE MAJOR

To be admitted into an engineering major, a student must have:

- Successfully completed MATH 154 or MATH 155, CHEM 115 and CHEM 115L, ENGL 101, ENGR 101, ENGR 102, and ENGR 191, all with a grade of C- or better
- A WVU and overall GPA of at least 2.25

To be admitted into a computer science or cybersecurity major, a student must have:

- Successfully completed MATH 154 or MATH 155, ENGL 101, any approved 4-credit lab science course, CS 110, ENGR 101, and ENGR 191, all with a grade of C- or better
- A WVU and overall GPA of at least 2.25

The criteria listed above are minimum requirements.

ADMISSION TO PROGRAMS UNDER ENROLLMENT MANAGEMENT

In rare cases, programs may need to be placed under enrollment management. Admission to programs under enrollment management will follow the priority structure listed below. If the number of eligible first priority students exceeds the number of admission slots, students will be admitted into the program based on review and consideration of their cumulative GPAs.

1. First priority will be given to students starting within the WVU system.
2. Second priority will be given to internal transfer students from other majors.
3. Third priority will be given to students previously enrolled in Statler College.
4. Fourth priority will be given to students wishing to transfer from outside WVU and all second degree students.

EARLY ADMISSION TO DISCIPLINE MAJOR

Freshman students having outstanding academic performance during their first semester may elect to move into their selected major at the end of the first semester. These students have the option of taking ENGR 102 or an approved department-specific ENGR 102 substitute course during the second semester. Early admission is based on a combination of prior credit and first semester academic performance. For early admission to a discipline major, students must:

- Have seven credit hours or more of degree-pursuant AP or prior college credit including at least four credits of CHEM 115 and CHEM 115L, CHEM 116 and CHEM 116L, PHYS 111, or PHYS 112;
- Pass all first semester math (MATH 155 and above) and science courses (CHEM 115/115L or CHEM 116/116L; PHYS 111 or PHYS 112; or GEOL 101, GEOL 102) plus ENGR 191 and ENGR 101 with a C or better; and
- Achieve a cumulative GPA # 3.0.

Or advancement can be based on the following exceptional performance:

- Pass all first semester math (MATH 155 and above) and science courses (CHEM 115/115L or CHEM 116/116L; PHYS 111 or PHYS 112; or GEOL 101, GEOL 102) plus ENGR 191 and ENGR 101 with a C or better, and
- Achieve a cumulative GPA # 3.5.

Curriculum

In this Section

- Engineering Track 1 Program Curriculum (p. 813)
- Engineering Track 2 Program Curriculum (p. 814)
- Engineering Track 3 Program Curriculum (p. 816)
- Computer Science and Cybersecurity (p. 817)

Engineering Track 1 Program Curriculum

The Engineering Track 1 program curriculum is designed for students who have similar math and science backgrounds so they can work effectively in teams, solve problems, and undertake challenging projects in the first Engineering Problem Solving course, ENGR 101. While SAT/ACT Math scores are used to determine initial math and chemistry course placement, some students may opt or be required to use the ALEKS assessment and preparation system to determine initial course placement. Engineering Track 1 students are expected to have the math background necessary to place into MATH 155 and CHEM 115 and CHEM 115L. Credit hours for chemistry courses below CHEM 115 and CHEM 115L, mathematics courses below MATH 154/155, and physics courses below PHYS 111 do not count toward meeting degree credit hour requirements for chemistry, mathematics or physics; students placing below MATH 155 and CHEM 115/115L will be placed in either Engineering Track 2 or Engineering Track 3.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Engineering Track 1 Curriculum Requirements

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory	4
CHEM 116 & 116L or BIOL 115 & BIOL 116	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory Principles of Biology and Principles of Biology Laboratory	4
Select one of the following:		3
ENGL 101 or ENGL 103	Introduction to Composition and Rhetoric Accelerated Academic Writing	3
ENGR 101	Engineering Problem Solving 1	2
ENGR 102	Engineering Problem-Solving 2	3
ENGR 191	First-Year Seminar	1
MATH 155	Calculus 1 (minimum grade C)	4
MATH 156	Calculus 2	4
PHYS 111	General Physics	4

GEF Elective	3
Total Hours	35

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
MATH 155		4 MATH 156	4
ENGR 101		2 ENGR 102	3
ENGR 191		1 PHYS 111	4
Select one of the following:		4 Select one of the following:	3-4
CHEM 115 & 115L		CHEM 116 & 116L**	
BIOL 115 & BIOL 116*		CHEM 115 & 115L	
Select one of the following:		3 GEF Elective***	
ENGL 103		Select one of the following:	3
ENGL 101		ENGL 101	
GEF Elective***		ENGL 103	
Select one of the following:		3-4 GEF Elective***	
GEF Elective***			
BIOL 115 & BIOL 116			
	17-18		17-18

Total credit hours: 34-36

- * Students intending to pursue a biometric systems engineering degree should take BIOL 115 and BIOL 116 in place of CHEM 115 and CHEM 115L first semester and CS 110 in place of a second semester GEF elective.
- ** Students intending to pursue a chemical engineering degree or petroleum and natural gas engineering degree must take CHEM 116 and CHEM 116L. Students intending to pursue a civil engineering degree or an industrial engineering degree must take only one 4 credit course sequence of: CHEM 116 & 116L, PHYS 112, or BIOL 115 and BIOL 116. Students wishing to pursue single or dual degrees in aerospace, computer, electrical, mechanical, mining, or biometric systems engineering, or computer science or cybersecurity do not need CHEM 116 and CHEM 116L.
- *** Students intending to pursue a petroleum and natural gas engineering degree should take GEOL 101 in place of one GEF elective. Students intending to pursue a mining engineering degree should take GEOL 101 and GEOL 102 in place of one GEF elective. Students pursuing dual mining engineering and geology degrees need to take GEOL 101, 102, 103 and 104 in place of two GEF electives.

Engineering Track 2 Program Curriculum

The Engineering track 2 program curriculum is tailored for those students who are not ready to take MATH 155 and ENGR 101. While ACT/SAT-Math scores are used to determine initial math and chemistry course placement, some students may opt or be required to use the ALEKS assessment and preparation system to determine initial course placement. Engineering Track 2 students are expected to have the math background necessary to place into MATH 153 and CHEM 115 and CHEM 115L. These students will need to complete ENGR 102 either in the summer following their first year or during the fall of the second year before they will be accepted into an engineering discipline major. Credit hours for chemistry courses below CHEM 115 and CHEM 115L, mathematics courses below MATH 154/155, and physics courses below PHYS 111 do not count toward meeting degree credit hour requirements for chemistry, mathematics or physics.

Engineering Track 2 Curriculum Requirements

CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory	4
CHEM 116 & 116L or BIOL 115 & BIOL 116	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory Principles of Biology and Principles of Biology Laboratory	4
ENGL 101 or ENGL 103	Introduction to Composition and Rhetoric Accelerated Academic Writing	3
ENGR 100	Introduction to Engineering Applications	3
ENGR 101	Engineering Problem Solving 1	2

ENGR 102	Engineering Problem-Solving 2	3
ENGR 191	First-Year Seminar	1
Select from the following based on Placement:		4
MATH 153	Calculus 1a with Precalculus (minimum grade C)	
MATH 154	Calculus 1b with Precalculus (minimum grade C)	
MATH 155	Calculus 1 (minimum grade C)	
MATH 156	Calculus 2	4
PHYS 111	General Physics	4
Total Hours		32

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
MATH 153****		3 MATH 154	3
ENGR 191		1 ENGR 101	2
Select one of the following:		4 Select one of the following:	3-4
CHEM 115 & 115L		CHEM 115 & 115L	
BIOL 115 & BIOL 116		CHEM 116 & 116L	
Select one of the following:		3 GEF Elective***	
ENGL 101		Select one of the following:	3
ENGL 103		ENGL 101	
GEF Elective***		ENGL 103	
Select one of the following:		3-4 GEF Elective***	
ENGR 100****		GEF Elective***	3
BIOL 115 & BIOL 116*			
GEF Elective***			
	14-15		14-15

Second Year

Fall	Hours
MATH 156	4
ENGR 102	3
PHYS 111	4
Select one of the following:	3-4
CHEM 116 & 116L**	
BIOL 115 & BIOL 116*	
GEF Elective***	
GEF Electives***	3
	17-18

Total credit hours: 45-48

* Students intending to pursue a biometric systems engineering degree should take BIOL 115 and BIOL 116 in the first semester and should also take CS 110 in place of a GEF Elective.

** Students intending to pursue a chemical engineering degree or petroleum and natural gas engineering degree must take CHEM 116 and CHEM 116L. Students intending to pursue a civil engineering degree or an industrial engineering degree must take only one 4 credit course sequence of: CHEM 116 and CHEM 116L, PHYS 112, or BIOL 115 and BIOL 116. Students wishing to pursue single or dual degrees in aerospace, computer, electrical, mechanical, mining, or biometric systems engineering, or computer science or cybersecurity do not need CHEM 116 and CHEM 116L.

*** Students intending to pursue a petroleum and natural gas engineering degree should take GEOL 101 in place of one GEF elective. Students intending to pursue a mining engineering degree should take GEOL 101 and GEOL 102 in place of one GEF elective. Students pursuing dual mining engineering and geology degrees need to take GEOL 101, 102, 103 and 104 in place of two GEF electives.

**** Students taking MATH 153 should take ENGR 100 in the same semester.

Engineering Track 3 Program Curriculum

The Engineering Track 3 program curriculum is tailored for those students who demonstrate the need to take more than one math course before MATH 154 or MATH 155 Calculus 1. While ACT/SAT-Math scores are used to determine initial math and chemistry course placement, some students may opt or be required to use the ALEKS assessment and preparation system to determine initial course placement. Typically, Engineering Track 3 students have the background necessary to place into CHEM 110 and MATH 126. Engineering Track 3 students should expect to take more than one year to complete the six courses that are pre-requisite to entering an engineering discipline major. Credit hours for chemistry courses below CHEM 115, mathematics courses below MATH 154/155, and physics courses below PHYS 111 do not count toward meeting degree credit hour requirements for chemistry, mathematics or physics.

Engineering Track 3 Curriculum Requirements

CHEM 110	Introduction to Chemistry	2
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory	4
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	4
or BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	
ENGL 101 or ENGL 103	Introduction to Composition and Rhetoric Accelerated Academic Writing	3
ENGR 100	Introduction to Engineering Applications	3
ENGR 101	Engineering Problem Solving 1	2
ENGR 102	Engineering Problem-Solving 2	3
ENGR 191	First-Year Seminar	1
Select from the following based on Placement:		4
MATH 126	College Algebra	
MATH 128	Plane Trigonometry (minimum grade C)	
MATH 153	Calculus 1a with Precalculus (minimum grade C)	
MATH 154	Calculus 1b with Precalculus (minimum grade C)	
MATH 155	Calculus 1 (minimum grade C)	
MATH 156	Calculus 2	4
PHYS 111	General Physics	4
Total Hours		34

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours	Summer	Hours
MATH 126		3 MATH 128		3 MATH 153	3
ENGR 191		1 CHEM 115 & 115L		4	
CHEM 110		2 Select one of the following:		3	
Select one of the following:		3 ENGL 101			
ENGL 101		ENGL 103			
ENGL 103		GEF Elective ***			
GEF Elective ***		GEF Elective ***		3	
Select two of the following:		6-7 GEF Elective ***		3	
ENGR 151					

BIOL 115 & BIOL 116* GEF Elective***		15-16		16	3
Second Year					
Fall	Hours		Spring	Hours	
MATH 155			4 MATH 156		4
ENGR 101			2 ENGR 102		3
Select one of the following:			4 PHYS 111		4
CHEM 115 & 115L			Select two of the following:		6
CHEM 116 & 116L**			ENGL 102		
BIOL 115 & BIOL 116*			ECON 201		
Select two of the following:		6	ECON 202		
ECON 201			GEF Elective***		
ENGL 102			Minor course		
GEF Elective***					
Minor Course					
		16		17	

Total credit hours: 67-68

* Students intending to pursue a biometrics systems engineering degree should take BIOL 115 and BIOL 116 in the first semester and should also take CS 110 in place of a GEF elective.

** Students intending to pursue a chemical engineering degree or petroleum and natural gas engineering degree must take CHEM 116 and CHEM 116L. Students intending to pursue a civil engineering degree or an industrial engineering degree must take only one 4-credit course sequence of: CHEM 116 and CHEM 116L, PHYS 112, or BIOL 115 and BIOL 115L. Students wishing to pursue single or dual degrees in aerospace, computer, electrical, mechanical, mining, or biometric systems engineering or in computer science or cybersecurity do not need CHEM 116 and CHEM 116L.

*** Students intending to pursue a petroleum and natural gas engineering degree should take GEOL 101 in place of one GEF elective. Students intending to pursue a mining engineering degree should take GEOL 101 and GEOL 102 in place of one GEF elective. Students pursuing dual mining engineering and geology degrees need to take GEOL 101, 102, 103 and 104 in place of two GEF electives.

Computer Science and Cybersecurity

Students intending to major in computer science or cybersecurity follow engineering tracks 1, 2, and 3. This develops a strong technical foundation for engineering and computing professionals.

Policies

IN THIS SECTION

- Adequate Academic Progress (p. 817)
- Dismissal from the Statler College (p. 818)

ADEQUATE ACADEMIC PROGRESS

All students need to make adequate academic progress. Adequate academic progress for Track 1, Track 2, and Track 3 engineering students is defined as meeting the prerequisites to take MATH 153 or MATH 155 by the beginning of the third semester within the Fundamentals of Engineering Program and meeting the criteria for admission to an engineering discipline major within four semesters of the date of entrance to the Statler College. Because each student's case is unique, the academic progress of all students who have not started MATH 153/MATH 155 by the start of their third semester and all students who have not moved to an engineering discipline major by the end of their fourth semester will be reviewed by the Fundamentals of Engineering Program Academic Standards Committee. Upon review, the committee will either:

1. Transfer the student out of the Statler College to the Center for Learning, Advising, and Student Success and specify the conditions which must be met before the student may return to the Statler College; or
2. Retain the student in the Statler College and specify the academic progress which must be met within one semester.

Students will not be permitted to enroll, without college approval, in courses carrying a discipline major code until they have been accepted into an engineering discipline major.

DISMISSAL FROM THE STATLER COLLEGE

A student who has been dismissed from the Fundamentals of Engineering program for not making adequate academic progress or for low academic performance (overall and/or WVU grade point average less than 2.25) must petition to be readmitted to the Statler College; the decision to readmit will be on a case-by-case basis. A student who has been dismissed from the Statler College cannot transfer academic major course work taken at another institution, during the period of dismissal, for credit toward meeting their degree requirements.

A student may also be dismissed from the Statler College for violating the WVU Student Code of Conduct. Dismissal from the Statler College for academic integrity offenses is permanent.

Honors College

Mission

The Honors College enhances the undergraduate experience for high-achieving students at West Virginia University (WVU) by building a community of scholars who enrich their education in the classroom and beyond.

The Honors College features three academic programs: University Honors for students enrolled prior to 2017, the Honors Foundations Program for first- and second-year students, and the Honors EXCEL (Experiential and Community-Engaged Learning) Program for upper-class students.

University Honors Requirements

PRESIDENTIAL HONORS SCHOLAR

- Students admitted to WVU prior to Fall 2017
- 3.5 grade point average
- Twenty-five hours of Honors-eligible credit hours
- At least one credit hour of Honors-eligible orientation (HONR 199 or eligible departmental first-year seminar)
- Three to six credits of thesis or an approved Honors senior project, including approved study abroad, undergraduate research, or internship. Thesis hours can be used to count toward 25-hour total.

DEAN'S HONORS SCHOLAR

- Students admitted to WVU prior to Fall 2017
- 3.4 grade point average
- Sixteen hours of Honors-eligible credit hours
- At least one credit hour of Honors-eligible orientation (HONR 199 or eligible departmental first-year seminar)
- (Optional) Three to six credits of thesis or an approved Honors senior project, including approved study abroad, undergraduate research, or internship.

Students admitted to WVU prior to Fall 2017 may shift between Presidential and Dean's levels as academic performance merits.

HONORS FOUNDATIONS PROGRAM

ADMISSIONS REQUIREMENTS

Most eligible students will meet the following criteria:

- 3.7 High School GPA (weighted or unweighted), and
- 26 ACT or 1180 SAT (M/CR) or 1230 Redesigned SAT (M/EBRW)

The Honors College also invites a small number of students (with unusually promising application profiles that nonetheless do not meet the above criteria) to participate in an alternative application process.

Students may also join the Honors Foundations Program with a 3.7 cumulative GPA after the first semester of full-time course work with no withdrawals or incompletes, or if they transfer to WVU in good standing in an Honors program at their previous institution.

HONORS FOUNDATIONS PROGRAM BENEFITS

- Smaller class sizes, often under 25 students;
- Access to innovative Honors course topics;
- Dedicated Honors housing and community activities;
- Priority registration for classes before general population students;
- Honors advising, tutoring, and mentoring;
- Opportunities for peer leadership and community service;
- Recognition at graduation and on their transcripts;
- Connections with a community of Honors students.

HONORS FOUNDATIONS PROGRAM REQUIREMENTS

Students will ideally complete the program within four semesters, typically taking one three credit Honors course per semester. In order to complete the program, students must:

- Complete a minimum of five Honors courses (including a one-credit Honors-eligible orientation course) and a minimum of 13 Honors credits.
- Meet ongoing requirements for good standing:
 - After year one, students must have completed at least two Honors courses/four Honors credits (including an Honors-eligible orientation experience), and must maintain a 3.0 cumulative GPA and a 3.0 GPA in Honors courses.
 - Students who do not meet this requirement will be suspended from the program.
 - Students may apply to extend enrollment in the program in order to complete the requirements after year two, students must have completed four Honors courses/ten Honors credits (including an Honors-eligible orientation experience), and must maintain a 3.0 cumulative GPA and a 3.5 GPA in Honors courses.
 - Students who have been found responsible for violating WVU's Policy on Student Academic Integrity will be dismissed from the Honors College at the end of the semester in which the violation occurred and will be permanently prohibited from being readmitted to the Honors College.
- Meet appropriate final requirements, including
 - Minimum 3.5 GPA in Honors credits at the time of program completion
 - Minimum 3.0 cumulative GPA at the time of program completion
 - Participation in the Honors exit process

Honors EXCEL (Experiential and Community-Engaged Learning) Program

OVERVIEW

The Honors EXCEL program supports WVU undergraduate students in experiential and community-engaged projects. Students will develop skills in leadership, project management, communication and collaborative scholarship. Students will create scholarly products appropriate to their project, while advancing the service mission of WVU.

HONORS EXCEL ADMISSIONS REQUIREMENTS

Students may apply for the program regardless of previous enrollment in the Honors College. Students with a cumulative GPA 3.4 or higher can apply for the program when they have 3-4 semesters remaining (typically in sophomore year or the fourth semester). Students with lower GPAs may apply with a faculty recommendation.

Admissions will prioritize projects that feature the following experiential values:

- the project is long-term (several semesters), feasible and innovative.
- represents an identifiable enhancement of a knowledge base or set of skills already being pursued by the student, either via coursework or extracurricular activity.
- builds on prior scholarship and proposes appropriate methodologies, processes or practices.
- is mentored by a WVU faculty or staff member.
- has an expectation of positive impact to a community (defined broadly) beyond the benefits to the student alone.
- includes at least some aspects that are unique to the applicant. Although all projects will likely be collaborations with faculty, staff, community members and/or other students, all projects must demonstrate a sense of ownership by the student.

HONORS EXCEL PROGRAM BENEFITS

- Opportunities to deeply pursue projects of academic and personal interest
- Curricular and financial support for student projects
- Mentorship from faculty in the discipline and in the Honors College
- Connections with a community of Honors students
- Priority registration for classes before general population students
- Recognition at graduation, on the transcript and on the diploma

HONORS EXCEL PROGRAM REQUIREMENTS

Students in the program will complete an experiential learning project over the course of at least two semesters. Most projects will fall under one of the following headings: 1) Discipline-specific research; 2) Creative works, innovation and design; 3) Global enrichment; 4) Community engagement or social action; 5) Internships; or 6) Collaborative work in a group of peers. Other projects will be considered through the application process. All projects will culminate in a work of scholarly or creative work appropriate to the project.

- Complete the two EXCEL Program courses: HONR450 (Project Development) in the first semester of participation in the program and HONR451 (Honors EXCEL Capstone) in the last semester of participation.
- Complete 6 credits of approved experiential learning. These credits may come from a variety of course numbers including, but not limited to, 491, 495, 497 or 498. In some circumstances, students may count courses toward both the degree program and the Honors EXCEL program.

- Complete a set of out-of-class experiences each semester. These will be defined by the student and their faculty mentor and should include experiences that contribute to and enhance work in the EXCEL program.
 - Meet ongoing requirements for good standing:
 - After year one, students must have completed HONR450, the required out-of-class experiences and have filed a project prospectus with the Honors EXCEL office.
 - Students who do not meet at least 3.0 institutional GPA will be suspended from the program.
 - Students with a verified violation of WVU's Policy on Student Academic Integrity will be removed from the program and will not be readmitted.
 - Meet appropriate final requirements, including:
 - Completion of all program requirements
 - Submission of the final written portion of the project.
 - Participation in the Honors exit interview process.
-

ADMINISTRATION

ACTING DEAN

- Damien Clement - Ph.D.
West Virginia University

ASSISTANT DEAN

- Kate Staples - Ph.D.
University of Minnesota

PROGRAM COORDINATOR

- Ashley Watts - MS
West Virginia University

DIRECTOR HONORS LIVE/LEARN COMMUNITY

- Kevin Gooding - Ph.D.
Purdue University

DIRECTOR HONORS EXCEL PROGRAM

- Dana Huebert Lima - Ph.D.
University of Wisconsin

Media - Reed College of

Degrees Offered

- **Bachelor of Science in Journalism** with majors in Advertising and Public Relations, Journalism and Sport and Adventure Media
- **Bachelor of Arts** with majors in Interactive Design for Media and Multidisciplinary Studies
- **Bachelor of Science** with a major in Integrated Marketing Communications

Areas of Emphasis

Advertising and Public Relations:

- Advertising
- Public Relations

Sports and Adventure Media:

- Adventure Media
- Sports Media

Minors

- Advertising
- Entertainment Media
- Event Planning
- Health Promotion
- Interactive Media Design (offered jointly with the College of Creative Arts)
- Journalism
- Public Relations
- Sport Communication (offered jointly with the College of Physical Activity and Sport Sciences)
- Strategic Social Media

Nature of the Program

The WVU Reed College of Media is a student-centered journalism school that has been graduating journalists and strategic communicators since 1939. While rooted in tradition, the College of Media also offers an innovative curriculum and real-world experiences that prepare students for careers in today's media industry. The College is known for its innovative course delivery and ability to build community in the classroom and beyond.

In all programs at the College of Media, our students learn by doing, producing stories and projects for professional clients and using the latest digital media technology. Our graduates work in top news organizations and communication agencies around the world, leading the industry and transforming the media landscape.

We believe that robust, independent media are fundamental to a democratic society in which individuals are empowered as critical thinkers, creative problem-solvers and engaged citizens. We expect our students, faculty and staff to use their communications skills and expertise to help our communities adapt and thrive in a complex global society. We aspire to be a catalyst for positive change in our region and a national leader in modern media education.

The College of Media currently offers a bachelor of science in journalism (BSJ) degree in 1) advertising and public relations; 2) journalism, which includes multimedia storytelling and production coursework; and 3) sports and adventure media. The College also offers a bachelor of arts (BA) degree in multidisciplinary studies, an interdisciplinary major with the College of Creative Arts in interactive media design and an interdisciplinary major with the Chambers College of Business and Economics in integrated marketing communication.

While they are still in school, students intern at various on- and off-campus locations, including top regional and national TV stations, public relations firms, newspapers and advertising agencies. Students also have the opportunity to work for campus media, including U-92 (the campus radio station) and *The Daily Athenaeum* (the student newspaper). Many students also build their skills by working part-time at local media outlets, agencies, non-profit organizations and within programs and departments across the WVU campus, such as athletics and health sciences.

Accreditation

The Accrediting Council on Education in Journalism and Mass Communications (ACEJMC) fully accredits the College of Media's undergraduate programs in advertising and public relations and in journalism. Only about 115 colleges and universities with journalism or communications programs

have earned ACEJMC approval. The College is also one of only 39 programs internationally to earn the Certification in Public Relations from the Public Relations Society of America. The College is also a member of the Association of Schools of Journalism and Mass Communications.

Reed College of Media Diversity, Equity and Inclusion Statement

The Reed College of Media believes in and takes action to further the University's commitment to equity, inclusion and diversity in recruiting and retaining students, faculty and staff. We embrace a shared responsibility and commitment to fostering a safe, welcoming and inclusive environment for individuals of all races, genders, ethnicities, religions, sexual orientations, socioeconomic status, geographical origin and physical abilities, and to express their culture, experience and perspectives through the art and science of journalistic storytelling.

Through its curriculum, service, faculty and student scholarship and media, the College is actively committed to presenting diverse viewpoints to a general audience and to seeking and maintaining ties to a range of diverse sources. In public relations and advertising, the college equates excellence in campaigns to representing and communicating with diverse clients and audiences. In news storytelling, excellence is equated with the ability to produce stories for and about a wide range of communities and audiences, and exploring new forms of media technology that empower and drive inclusion and equity for under-represented groups.

The Reed College of Media has a formal Diversity, Equity and Inclusion Plan, which is developed in collaboration with a faculty and staff DEI committee, and with faculty and staff oversight. The committee works each semester with faculty and staff to document progress on stated goals in the plan and meets quarterly to review progress, and prepares an annual end-of-year report. Goals for the College include: Improve the College of Media's awareness of diversity, equity and inclusion issues; Improve and increase the organic incorporation of diversity, equity and inclusion in curriculum and course instruction for all journalism faculty and students; Increase efforts to recruit and retain qualified faculty and staff members representing historically underrepresented and groups; Increase efforts to recruit and retain top students from diverse/minority groups; Increase programming and collaborations that address diversity issues and integrate underrepresented perspectives and experiences into media research, professional practice and community service.

ADMINISTRATION

PROVOST

- Marianne Reed - M.S. (Northwestern University)
Professor

DEAN

- Diana Martinelli - Ph.D. (University of North Carolina at Chapel Hill)
Widmeyer Professor in Public Relations

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

BACHELOR OF ARTS (BA)

The WVU Reed College of Media prepares its students to excel as professional communicators, scholars and innovators in a rapidly changing global media environment. As such, the College maintains the following overarching learning goals for its B.A. in Multidisciplinary Studies (MDS) students. MDS students must have at least two of their three minors in the College of Media.

Upon completion of the B.A. in MDS, students will:

- understand the interrelationships among different disciplines and possess a knowledge of and aptitude with principles, practices, facts, concepts, theories and tools in three minor areas of concentration
- understand and apply the U.S. principles and laws of freedom of speech and press
- understand the range of systems of freedom of expression around the world, including the right to dissent, to monitor and criticize power, and to assemble and petition for redress of grievances
- demonstrate an understanding of the history and role of professionals and institutions in shaping communications

- demonstrate an understanding of gender, race ethnicity, sexual orientation and, as appropriate, other forms of diversity in domestic society in relation to mass communications
- demonstrate an understanding of the diversity of peoples and cultures and of the significance and impact of mass communications in a global society
- understand concepts and apply theories in the use and presentation of images and information
- demonstrate an understanding of professional ethical principles and work ethically in pursuit of truth, accuracy, fairness and diversity
- think critically, creatively and independently
- conduct research and evaluate information by methods appropriate to the communications professions in which they work
- write correctly and clearly in forms and styles appropriate for the communications professions, audiences and purposes they serve
- critically evaluate their own work and that of others for accuracy and fairness, clarity, appropriate style and grammatical correctness
- apply basic numerical and statistical concepts
- apply tools and technologies appropriate for the communications professions in which they work.

BACHELOR OF SCIENCE IN JOURNALISM (BSJ)

The WVU Reed College of Media prepares its students to excel as professional communicators, scholars and innovators in a rapidly changing global media environment. As such, the College maintains the following overarching learning goals for its Bachelor of Science (Journalism and Advertising and Public Relations) students.

Upon completion of the BSJ, students will:

- demonstrate professional communications knowledge, skills and judgment
- demonstrate the ability to work professionally and effectively as part of a diverse team
- understand and apply the U.S. principles and laws of freedom of speech and press
- understand the range of systems of freedom of expression around the world, including the right to dissent, to monitor and criticize power, and to assemble and petition for redress of grievances
- demonstrate an understanding of the history and role of professionals and institutions in shaping communications
- demonstrate an understanding of gender, race ethnicity, sexual orientation and, as appropriate, other forms of diversity in domestic society in relation to mass communications
- demonstrate an understanding of the diversity of peoples and cultures and of the significance and impact of mass communications in a global society
- understand concepts and apply theories in the use and presentation of images and information
- demonstrate an understanding of professional ethical principles and work ethically in pursuit of truth, accuracy, fairness and diversity
- think critically, creatively and independently
- conduct research and evaluate information by methods appropriate to the communications professions in which they work
- write correctly and clearly in forms and styles appropriate for the communications professions, audiences and purposes they serve
- critically evaluate their own work and that of others for accuracy and fairness, clarity, appropriate style and grammatical correctness
- apply basic numerical and statistical concepts
- apply tools and technologies appropriate for the communications professions in which they work

Reed College of Media Minors

Each minor must have a minimum of 9 unique credit hours. If a student is majoring in Multidisciplinary Studies, all hours in each minor must be unique to that minor and not shared with other degree requirements. JRL or MDIA 101 may also count as a GEF 4.

- Advertising (<http://catalog.wvu.edu/undergraduate/minors/advertising/>)
- Entertainment Media (<http://catalog.wvu.edu/undergraduate/minors/entertainmentmedia/>)
- Event Planning (<http://catalog.wvu.edu/undergraduate/minors/eventplanning/>)
- Health Promotion (http://catalog.wvu.edu/undergraduate/minors/health_promotion/)
- Interactive Design for Media (<http://catalog.wvu.edu/undergraduate/minors/interactivedesignformedia/minor/>)
- Journalism (<http://catalog.wvu.edu/undergraduate/minors/journalism/>)
- Public Relations (http://catalog.wvu.edu/undergraduate/minors/public_relations/)
- Sport Communication (http://catalog.wvu.edu/undergraduate/minors/sports_communication/)
- Strategic Social Media (<http://catalog.wvu.edu/undergraduate/minors/strategicsocialmedia/>)

Admissions

- Admission to the College of Media (p. 825)
- Scholarships (p. 825)
- Choosing a Major (p. 825)
- Accelerated Bachelor's/Master's Program (p. 825)

Admission to the College of Media

The WVU Reed College of Media uses the same undergraduate admission standards for first-time freshmen as West Virginia University (WVU). Visit the WVU undergraduate admissions page for details on general WVU admission.

Students who have completed at least one full-time semester of college work (either at WVU or elsewhere) with a cumulative GPA of 2.25 or higher may also qualify for direct admission into the College of Media irrespective of standardized test scores. Students who do not meet these criteria will automatically be enrolled in a pre-media major and advised by WVU's Center for Learning, Advising and Student Success (CLASS). Students advised in CLASS may declare a major in the College of Media once they have earned a cumulative GPA of 2.25 at WVU. Or, if a student has a 2.0 cumulative GPA at WVU, they may enroll in MDIA 215 (space permitting) or they may declare the College's Multidisciplinary Studies major after earning at least 29 credit hours. If the student earns a C- or better in MDIA 215 and maintains a 2.0 overall GPA at WVU, then the student may then declare a major in the College of Media.

Scholarships

In addition to financial aid from West Virginia University, the College of Media offers a number of scholarships each year to eligible students. All students applying for scholarships must file a FAFSA form by the deadline, even if they are not eligible for need-based aid.

Choosing a Major

The College of Media offers six majors: advertising and public relations, integrated marketing communication, interactive media design, journalism, sports and adventure media and multidisciplinary studies.

Direct admission students are admitted to the College upon admission to the University and declare their majors at that time. However, to declare a multidisciplinary studies major, students must have earned 29 college credit hours and have a minimum 2.0 overall GPA.

Accelerated Bachelor's/Master's Program

Students in the advertising and public relations or journalism BSJ programs in the College of Media with a minimum cumulative GPA of 3.5 are eligible for this program. The accelerated MSJ program allows students to customize a research project that is relevant to their interests, whether they are Advertising and Public Relations or Journalism majors. Interested students are identified during their initial year or two at the College, and, if interested, must meet with Dr. Steve Urbanski, Director of Graduate Studies, by the fall of their junior year. Freshmen and sophomores are welcome to stop by to discuss the program as well. Information is posted on the College's website.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Reed College of Media (<http://reedcollegeofmedia.wvu.edu>).

Policies

- Graduation Requirements (p. 825)
- Scholastic Requirements (p. 826)
- Academic Minors (p. 826)
- Full-Time Load/Probation (p. 826)
- Priorities for Admission to Journalism 215 and Major Program Specific Courses (p. 826)
- Courses for Non-Majors (p. 826)

Graduation Requirements

College of Media graduates earn a Bachelor of Science in Journalism (BSJ) degree that requires a minimum of 120 credit hours. Of the 120 credit hours required to graduate, College of Media students must take a minimum of 72 credit hours outside of the College of Media in non journalism/non-mass communications courses.

Included in those 120 hours are a minimum of 36 credits in major courses; a minimum of 15 credits in minor courses; 27 credits in other liberal arts requirements outside of the College of Media; a minimum of 22 credit hours of General Education Foundations (GEF) courses; and general electives to bring the total number of credit hours to at least 120. Some courses are available only once a year; it is the student's responsibility to arrange their

schedule accordingly. Please note that while some classes can count in more than one category, students still need to complete at least 120 credit hours.

The College of Media will accept no more than fifteen hours of journalism/mass-communication courses from community colleges.

Students majoring in interactive design for media or multidisciplinary studies earn a Bachelor of Arts (B.A.) degree that requires a minimum of 120 hours. Please review those major requirements in the Undergraduate Catalog for specific information.

Students may not double major or dual degree within the College of Media, but they can pursue a dual-degree program with another academic unit on campus. To earn a second baccalaureate degree, students must complete at least 150 credit hours (30 hours beyond the first bachelor's degree). Students pursuing dual degrees must have their academic plan approved by the assistant dean.

Scholastic Requirements

To be eligible for graduation, students must earn a minimum 2.0 cumulative grade point average. Students also must earn a grade of C- or better in all major pre-requisite courses to advance. Students who do not earn a C- or better will not be allowed to remain enrolled in subsequent courses until the required grade has been earned in the pre-requisite course. Students must earn a grade of C- or better in all major courses that are counted toward graduation requirements. Minor requirements are set by the College(s) where the minor is housed.

To help ensure timely progression toward a WVU degree, if a student earns D/F/W grades in three attempts at any single major course, even if the student's overall GPA is 2.0 or greater, they must meet with the assistant and/or associate Dean to assess progress toward graduation and the likelihood of success within their current major. If, after consultation with the student, it is deemed that the major is not the right academic program, the student will be referred to WVU's Center for Learning, Advising and Student Success (CLASS) to explore other possible majors.

Students found guilty of violating the University's Student Conduct Code may be dismissed from the College of Media. This includes, but is not limited to, obstruction, disruption or misconduct in the classroom as outlined in the Conduct Code.

All students must see their respective advisors each semester to schedule classes and ensure they are progressing appropriately. In addition, during the semester prior to applying for graduation, students must complete a graduation audit with their advisor during the registration advising session.

Academic Minors

Students pursuing the advertising and public relations or journalism major must complete an officially sanctioned minor outside the College of Media. However, students may pursue the sport communication minor, which is offered jointly by the College of Media and the College of Physical Activity and Sport Sciences, or the interactive media design minor, which is offered jointly by the College of Media and the College of Creative Arts. Students in the College of Media may add a second minor in event planning or strategic social media; however, these minors will not fulfill the requirement of having a minor outside of the College. Students completing a dual-degree are exempt from the requirement to complete a minor. Students should consult their advisor before starting a minor, as many minors require at least four semesters to complete. The minor will also fulfill the University's GEF 8 requirement. Each minor must have a minimum of 9 unique credit hours. Students majoring in multidisciplinary studies must have unique credit hours in each minor.

Full-Time Load/Probation

Students may not enroll for more than 20 hours in a single term or 14 hours in two summer sessions without permission from the assistant dean. For requests to register for more than 21 credit hours during the fall/spring and more than 15 credits during the summer, the request must also be approved by the associate provost for Undergraduate Academic Affairs.

While on probation, a student is not permitted to register for more than 15 hours of coursework in an academic term and must successfully complete at least 12 hours. Students enrolling in more than 15 hours will be notified by the Media College's Advising Center to reduce their credit-hour registration.

Priorities for Admission to Media 215 and Major Program Specific Courses

MDIA 215 is restricted to College of Media students. Pre-media majors with at least a 2.0 cumulative GPA may enroll in MDIA 215 if space permits after College of Media students have received their registration priority. Major courses are restricted to College of Media majors, with priority given to those students pursuing that specific area of study.

Courses for Non-Majors

The following are open to all WVU students on a first-come, first-served basis:

ADV 201	Advertising and Society (GEF 4)	3
ADV 215	Principles of Advertising	3
MDIA 101	Media and Society (GEF 4)	3
JRL 220	Introduction to Photojournalism	3

PR 215	Introduction to Public Relations	3
MDIA 201	Media Literacy	3

Those who attempt to enroll in other courses offered by the College of Media but who lack the appropriate prerequisites or major will be removed from such classes.

Career

- Professional Relations (p. 827)
- Experiential Learning (p. 827)
- Journalism Organizations (p. 827)
- Internship/Practicum Credit (p. 828)
- Job Placement (p. 828)

Professional Relations

A close relationship is maintained with state and national communications and journalism professionals through the West Virginia Press Association, the West Virginia Broadcasters Association, the West Virginia Associated Press Broadcasters Association, Public Relations Society of America, American Advertising Federation, Business/Professional Advertising Association, National Press Photographers Association, the National Association of Black Journalists, the Broadcast Education Association, the Association for Women in Sports Media and the Society of Professional Journalists. These groups have provided educational and financial support to the College along with internships and job opportunities.

Every year, the College provides opportunities for students to get advice on how to find jobs, write resumes, produce professional portfolios and broadcast clips, and conduct themselves on job interviews. Employers also regularly visit campus to interview College of Media students for internships and permanent positions.

The College also hosts a number of events, such as hackathons and createathons, to spur innovation and creativity in media and workshops and panel discussions on such themes as sensor journalism, social justice reporting, women in communications, fake news, sport communication, political photography, and storytelling through augmented and virtual reality, digital and mobile media.

Experiential Learning

Students gain real-world experience through service-learning and senior capstone courses, as well as with special projects and student organizations. For example, advertising and public relations students work with local nonprofit organizations to help plan and promote campaigns and special events and work through the Martin Hall Agency to assist regional and statewide clients. Through the annual CreateAthon, students partner with media professionals in the community to provide pro bono marketing and communications support to area non-profits. Journalism students write, report, and produce multimedia content for newspapers, television, and other media and sports networks across the state and region. Faculty and students work together on high-profile journalism projects that impact the community and give students valuable hands-on experience. These have included developing a mobile application and social media promotional campaign to help support regional tourism; an interactive, multimedia exhibit and grand reopening for the national African-American World War I memorial; community branding efforts to help promote economic development and community pride; and collaborative faculty and student work with Innovators-in-Residence, such as professionals from The New York Times, Huffington Post, Quartz, National Public Radio, Harrison Omnicom, and more.

Students also develop their professional skills and portfolios through internships at news organizations and advertising and public relations agencies, as well as in the communications departments of companies and nonprofit organizations. College of Media students have interned at such organizations as ABC's "Good Morning America," the Associated Press, the White House, ESPN, GolinHarris International, MARC USA, U.S. Congress, NBC News, Pittsburgh Penguins, Fox News, USA Today, Walt Disney World, NASA and Ketchum Inc., among others.

Advertising and Public Relations, Journalism and Sports and Adventure Media Organizations

Several organizations affiliated with the College of Media provide honor and recognition as well as fellowship and education. They include:

- Association for Women in Sports Media, an organization supporting the advancement of women in sports media
- Ed on Campus: All Things Magazine, a community of young magazine editors and aspiring editors who want to learn more about the industry
- Kappa Tau Alpha, a national scholastic honorary for students with exceptional academic records in journalism
- Martin Hall Agency, a student-run professional advertising/public relations agency
- National Association of Black Journalists, an organization dedicated to strengthening ties among African-American journalists and promoting diversity in newsrooms
- Online News Association, a nonprofit membership organization of digital journalists
- Public Relations Student Society of America, the student arm of the largest professional organization devoted to public relations
- Radio Television Digital News Association, the world's largest organization exclusively serving the electronic news profession

- RAPID, an organization that explores emerging media and technology
- Society of Professional Journalists, the journalism profession's most broad-based organization
- WVU Film Club, a student-run group that helps people learn more about film, its production and creation process

Internship/Practicum Credit

Students may choose any of the following options when taking an internship or practicum:

- Resume experience—no College credit or monetary compensation
- Experience—paid, but not for credit
- Experience—College credit plus monetary compensation
- Experience—College credit but no monetary compensation

Typically, students choose to do an internship/practicum for credit because the employer requires it or the student needs the elective credit(s). Students who wish to do an internship/practicum for credit must see the College of Media's director of student careers and opportunities to complete a contract and to be registered for JRL 441 (3 credits, typically done in the summer) or JRL 442 (1–2 credits). Students in the Sport and Adventure Media major take MDIA 441 (1-3 credits) which a graded course required in the Area of Emphasis for the major. (Students cannot receive credit retroactively, per College policy). Fifty hours on the job equals one credit hour. If internship/practicum is graded as pass/fail, it may be used for general elective credit, but cannot be used to fulfill major course elective requirements.

Job Placement

The College of Media's director of student careers and opportunities assists future graduates in finding professional positions by acting as a placement clearinghouse for current students and alumni. College of Media faculty also advise and assist students in the preparation of resumes and portfolios. Representatives of newspapers, magazines, public relations, broadcasting, advertising firms and many units on campus frequently request that College of Media faculty provide applicants for job openings and internships.

Accreditation

The Reed College of Media has specialized accreditation through the Accrediting Council for Education in Journalism and Mass Communication (ACEJMC) for the advertising and public relations and the journalism major. The College is also one of only 39 programs internationally to earn the Certification in Public Relations from the Public Relations Society of America.

Advertising and Public Relations, B.S.J.

Degree Offered

- Bachelor of Science in Journalism

Nature of the Program

The advertising and public relations major teaches students how to ethically serve and engage diverse audiences in all sectors of society. As such, student learn how to develop and manage creative, comprehensive and strategic campaigns. Students in this major select an area of emphasis (AOE) in either advertising or public relations to complement their strategic communications coursework. Both majors require creativity and critical thinking.

Students build skills in writing, research, strategy, design, digital and social media, as well as the history and laws that provide a foundation for their field. They may further their expertise through such courses as crisis communications, agency experience, event planning, advocacy communication, video storytelling, media planning, community branding, and study abroad experiences. Students plan and produce promotional and educational campaigns and materials for actual clients, which include local businesses, nonprofits and communities, as well as larger grant-funded projects that impact our state. As a result, students gain real-world experience that can lead to careers in advertising and public relations agencies, corporations, nonprofits, government, education, entertainment, sports, healthcare, and other public-sector fields.

The College boasts a faculty-advised and student-run integrated communications agency called Martin-Hall Agency (<https://reedcollegeofmedia.wvu.edu/student-resources/clubs-organizations/martin-hall-agency/>), the American Advertising Federation, Ed on Campus (All Things Magazine), the Association of Women in Sports Media, American Advertising Federation and an award-winning Public Relations Student Society of America chapter. These organizations offer students professional networking opportunities and the opportunity to apply what they are learning in the classroom to projects that align with their passions.

ADVERTISING AREA OF EMPHASIS

Students who select the advertising AOE within the advertising and public relations major obtain a solid foundation in creative copywriting and design, media planning, audience insights and analysis, and campaigns. Additional courses in interactive marketing, strategic social media and account management are available to round out students' individual interests. They go on to work at advertising and marketing agencies, within corporate

communications offices, as media planners, or as consultants and business owners. The advertising curriculum affords a solid foundation for law or other specialized graduate programs.

PUBLIC RELATIONS AREA OF EMPHASIS

Students who select the public relations AOE within the advertising and public relations major take courses in strategic writing and social media, design, audience research and analysis, and campaigns. Other courses that apply to the major include special event planning, crisis communications, multi- and interactive media, integrated marketing communications for sports, and planning and management. Students go on to work at communications agencies, in government, health care organizations, nonprofits, corporations and politics. Those students who wish to go on to graduate school have a solid grounding in writing, research, analysis and communications.

FACULTY

PROFESSOR

- Diana Martinelli - Ph.D. (University of North Carolina at Chapel Hill)
Dean; Widmeyer Professor in Public Relations

PROGRAM CHAIR

- Geah Pressgrove - Ph.D. (University of South Carolina)
Associate Professor: Public Relations, Advocacy, Strategic Communications

ASSOCIATE PROFESSORS

- Dana Coester - M.A. (University of Missouri-Columbia)
Media Innovation Center, Creative Director
- Rita Colistra - Ph.D. (University of North Carolina at Chapel Hill)
Public Relations, Community Branding, Strategic Communications
- Sang Lee - Ph.D. (Pennsylvania State University)
Advertising, Strategic Communications

ASSISTANT PROFESSORS

- Julia Fraustino - Ph.D. (University of Maryland)
Public Interest Communications, Public Relations, Strategic Communications
- Jennifer Harker - Ph.D. (University of North Carolina at Chapel Hill)
Public Relations and Sports Communication

TEACHING ASSOCIATE PROFESSOR

- Catherine Mezera - M.S.J. (West Virginia University)
Advertising and Strategic Communications
- Elizabeth Oppe - Ph.D. (Ohio University)
Public Relations and Service Learning

VISITING ASSISTANT PROFESSOR

- Jasper Fessman - Ph.D. (University of Florida)
Public Interest Communications, Public Relations, Strategic Communications
- David Eiben - MBA (Michigan State University)
Advertising, Integrated Marketing, Brand Management, Content Strategy

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

MDIA 191	First-Year Seminar	2
General Education Requirements		
GEF 1, 2, 3, 5, 6, and 7		22
Non-Journalism/Media Requirements***		
For all students in the major, required non-major courses include		
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 (may fulfill GEF 4)	3
MDIA 215	Media Writing (fulfills Writing and Communication Skills requirement)	3
MDIA 225	Media Tools & Applications	3
JRL 328	Media Law and Ethics	3
Advertising and Public Relations Major Core		
ADPR 215	Introduction to Advertising and Public Relations	3
ADPR 421	Advertising & PR Audience Insights & Analysis	3
Select one of the following capstone courses:		3
ADPR 457	Martin Hall Agency Experience	
ADPR 459	Strategic Communication Campaigns for Public Relations and Advertising	
Required Area of Emphasis (12 credits)		12
Select one of the following Areas of Emphasis (details below):		
Advertising (ADV)		
Public Relations (PR)		
Required Minor *		15
General Electives **		21
Total Hours		120

English Literature or Creative Writing Courses

English Literature		
ENGL 131	Poetry and Drama	3
ENGL 132	Short Story and Novel	3
ENGL 139	Contemporary African Literature	3

ENGL 154	African American Literature	3
ENGL 156	Literature of Native America	3
ENGL 226	Non-Western World Literature	3
ENGL 232	Poetry	3
ENGL 233	The Short Story	3
ENGL 234	Drama	3
ENGL 235	Novel	3
ENGL 236	The Bible as Literature	3
ENGL 241	American Literature 1	3
ENGL 242	American Literature 2	3
ENGL 251	American Folklore and Culture	3
ENGL 252	Appalachian Fiction	3
ENGL 254	African American Literature	3
ENGL 257	Science Fiction and Fantasy	3
ENGL 258	Popular American Culture	3
ENGL 261	British Literature 1	3
ENGL 262	British Literature 2	3
ENGL 263	Shakespeare 1	3
ENGL 272	Modern Literature	3
ENGL 273	Contemporary Literature	3
ENGL 285	Images of Women in Literature	3
Creative Writing		
ENGL 111	Introduction to Creative Writing	3
ENGL 212	Creative Writing: Fiction	3
ENGL 213	Creative Writing: Poetry	3
ENGL 214	Creative Writing: Non-Fiction	3

* Minors must have 9 hours of unique coursework. Note that some minors require online coursework for which additional fees apply. Students must complete an officially sanctioned minor outside the College of Media. However, students may pursue the Sport Communication minor, which is offered jointly by the College of Media and the College of Physical Activity and Sport Sciences, or the Interactive Media and Design minor, which is offered jointly by the College of Media and the College of Creative Arts. Students completing a dual-degree are exempt from the requirement to complete a minor. Students should consult their advisor before starting a minor. Some minors require 18 hours of coursework instead of 15 hours.

** General Education and Elective Credits can vary - students must have a minimum of 120 credit hours total to complete the degree.

*** College of Media students must take a minimum of 72 credit hours outside of the College of Media in non journalism/mass communications courses.

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 MDIA 215	3
MDIA 101 (GEF 4)		3 MDIA 225	3
MDIA 191		2 Language Course	3
ADPR 215		3 GEF 2B	4
Language Course		3 Select one of the following:	3
		PSYC 101	
		SOCA 101	
		SOCA 105	
		14	16

Second Year

Fall	Hours	Spring	Hours
Select one of the following according to AOE:		3 JRL 328	3
ADV 315		ENGL 102	3
PR 324		STAT 111	3
ECON 200		3 Minor Course	3

GEF 3		3 Elective		3
Minor Course		3		
Elective		3		
		15	15	
Third Year				
Fall	Hours	Spring		Hours
HIST 153		3 ENGL Literature or Creative Writing Course		3
ADPR 421		3 GEF 5		3
Select one of the following according to AOE:		3 Minor Course		3
ADV Elective		BCOR 350		3
PR 319		AOE Elective		3
Minor Course		3		
Elective		3		
		15	15	
Fourth Year				
Fall	Hours	Spring		Hours
POLS 102		3 Choose one of the following capstones:		3
Minor Course		3 ADPR 457		
GEF 6		3 ADPR 459		
Electives		6 AOE Elective		3
		Electives		6
		GEF 7		3
		15	15	

Total credit hours: 120

Advertising (ADV) Area of Emphasis Requirements

Students learn how to develop and produce persuasive messages and advertising campaigns. Students build skills in writing, research, media planning, and campaign management. Advertising students plan and produce advertising campaigns for actual clients, gaining real-world experience that can lead to careers in advertising agencies, corporations and public-sector fields.

A grade of C- or higher must be earned in all emphasis courses.

ADV 315	Advertising Copywriting	3
3 courses (9 hours) of 300- or 400-level ADV, ADPR or advisor-approved Course Electives		9
ADV 401	Creative I	
ADV 403	Media Planning/Strategy	
ADV 450	Audience Psychology and Behavior	
ADV 451	Interactive Marketing Commctns	
ADV 493	Special Topics	
ADPR 452	Strategic Communication Strategy and Management	

Total Hours 12

Suggested Plan of Study for Advertising (ADV) Area of Emphasis

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 MDIA 215	3
MDIA 101 (GEF 4)		3 ENGL Literature or Creative Writing Course	3
MDIA 191 (Fulfills WVUE 191 requirement)		2 Language Course	3
ADPR 215		3 GEF 3	3
Language Course		3 Select one of the following:	3
Elective		1 PSYC 101	
		SOCA 101	

SOCA 105

		15		15
Second Year				
Fall	Hours		Spring	Hours
ENGL 102 (GEF 1)			3 HIST 153	3
ECON 200			3 Electives	5
MDIA 225			3 GEF 6	3
GEF 2B			4 ADV 315	3
GEF 5			3	
		16		14
Third Year				
Fall	Hours		Spring	Hours
STAT 111			3 BCOR 350	3
300- or 400-level AOE Course			3 ADPR 421	3
Minor Course			3 300- or 400-level AOE Course	3
Elective			3 Minor Course	3
GEF 7			3 Elective	3
		15		15
Fourth Year				
Fall	Hours		Spring	Hours
POLS 102			3 JRL 328	3
ADPR 459			3 Minor Course	3
300- or 400-level AOE Course			3 Electives	9
Minor Courses			6	
		15		15

Total credit hours: 120

Public Relations (PR) Area of Emphasis Requirements

Students learn how to communicate with multiple stakeholders to achieve business objectives, create media campaigns and plan events for nonprofit organizations, private firms, government agencies and businesses. Public relations students develop traditional and digital communication strategies and tactics, such as communication and social media plans, public service announcements, videos, media kits, brochures, speeches, and press releases. While focusing on public relations, students also receive a solid education in writing, research, interviewing skills, and media and audience analysis.

A grade of C- or higher must be earned in all emphasis courses.

PR 319	Creative Design and Strategy	3
PR 324	Public Relations Writing and Applications	3
2 courses (6 hours) of 300- or 400-level PR, ADPR or advisor-approved Course Electives		6
PR 333	Web Development	
PR 455	Strategic Event Planning and Promotion	
PR 493	Special Topics	
ADPR 438	Branded Content and Narrative	
ADPR 439	Strategic Social Media	

Total Hours 12

Suggested Plan of Study for Public Relations (PR) Area of Emphasis

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 MDIA 215	3
MDIA 101 (GEF 4)		3 ENGL Literature or Creative Writing Course	3
MDIA 191 (Fulfills WVUE 191 Requirement)		2 Language Course	3
ADPR 215		3 GEF 3	3
Language Course		3 Select one of the following:	3

Elective		1	PSYC 101 SOCA 101 SOCA 105		
		15			15
Second Year					
Fall	Hours		Spring		Hours
ENGL 102 (GEF 1)			3 BCOR 350		3
ECON 200			3 HIST 153		3
MDIA 225			3 Elective		2
GEF 2B			4 GEF 6		3
GEF 5			3 Select one of the following: PR 319 PR 333		3
		16			14
Third Year					
Fall	Hours		Spring		Hours
POLS 102			3 STAT 111		3
Minor Course			3 300- or 400-level AOE Course		3
PR 324			3 Minor Course		3
Elective			3 Electives		6
GEF 7			3		
		15			15
Fourth Year					
Fall	Hours		Spring		Hours
ADPR 421			3 JRL 328		3
300- or 400-level AOE Course			3 ADPR 459		3
Minor Courses			6 Minor Course		3
Elective			3 Electives		6
		15			15

Total credit hours: 120

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				
College of Media Core					
A grade of C- or higher must be earned in all major courses.					
MDIA 101	Media and Society (GEF 4)				3
MDIA 215	Media Writing (fulfills Writing and Communication Skills Requirement)				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 one capstone course:		3
ADPR 559	Advertising and Public Relations Campaigns	
ADPR 457	Martin Hall Agency Experience	
Required Area of Emphasis		
Select one of the following Areas of Emphasis (details below):		12
Public Relations (PR)		
Advertising (ADV)		
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
MDIA 101 (GEF 4)		3 GEF 3	3
ADPR 215		3 MDIA 215	3
Language Course		3 Language Course	3
JRL 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 319 or 333 (or ADV AOE Elective)	3
ECON 200		3 Elective	2
	16		14

Third Year

Fall	Hours	Spring	Hours
GEF 7		3 300- or 400-Level AOE Course	3
POLS 102		3 Minor Course	3
Minor Course		3 BCOR 350	3

ADV 315 or PR 324		3 Elective		6
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

ADVERTISING AND PUBLIC RELATIONS

The Reed College of Media states as its learning goals the values and competencies of its national accrediting body, the Accrediting Council for Education in Journalism and Mass Communications, which appear under information about the B.S. in Journalism degree. In addition, the College faculty have set other specific educational outcomes deemed critical for success as professional communicators. These additional educational outcomes for advertising and public relations majors are:

1. Advertising and public relations graduates will understand how to serve, reflect and engage diverse publics and will be prepared to either work in the field or to pursue advanced educational opportunities.
2. Advertising and public relations graduates will demonstrate professional competency in preparing campaign plans, using both traditional and digital means, including obtaining, analyzing and interpreting data; establishing goals and objectives; identifying appropriate strategies; developing creative tactics; and understanding budgeting, timeframes, and success indicators/evaluation.
3. Advertising and public relations graduates will demonstrate an understanding of the history of media, advertising, public relations, and the influence of technology on the communication professions.
4. Advertising and public relations graduates will demonstrate the ability to professionally present ideas in all forms: written, verbal, and with the use of appropriate digital/electronic audio-visual materials.
5. Advertising and public relations graduates will understand the working relationship between advertising and public relations, as well as related marketing communications vehicles and media planning and placement.
6. Advertising and public relations graduates will be able to demonstrate knowledge and understanding of communication ethics and law as it applies to advertising, media and public relations, including privacy in the context of database marketing, artificial intelligence and social media.
7. Advertising and public relations graduates will be able to work effectively and collaboratively in teams to create messages, solve problems and develop and implement integrated communication strategies using human-centered design principles.

Integrated Marketing Communication, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

The Integrated Marketing and Communications program is a wholly online, interdisciplinary major through two nationally accredited WVU programs: marketing in the Chambers College of Business and Economics and advertising and public relations in the Reed College of Media.

This major combines the complementary business and communications fields of advertising, marketing and public relations. As such, students develop an understanding of using traditional, digital/social media and other promotional and marketing techniques to reach and engage consumers and stakeholders. Students will learn about ethical, legal and socially responsible considerations in such efforts and will demonstrate an understanding of research, data, diverse audiences and inclusive practices.

Admissions

The Integrated Marketing Communications major uses the same undergraduate admission standards for first-time freshmen as West Virginia University (WVU).

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Integrated Marketing Communications (<https://online.wvu.edu/programs/integrated-marketing-communications-b-s/>) major.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

IMC 191 (Minimum grade of C-)		2
General Education Requirements		
GEF 1, 2, 5, 6, and 7		21
MDIA 101	Media and Society	3
IMC 215	Principles of Integrated Marketing Communications (IMC) (Minimum grade of C-)	3
MDIA 215	Media Writing	3
ACCT 200	Survey of Accounting	3
STCM 315 or PR 324	Strategic Advertising and Public Relations Writing Public Relations Writing and Applications	3
PSYC 101 or SOCA 101	Introduction to Psychology Introduction to Sociology	3
BCOR 350	Principles of Marketing	3
ADPR 439	Strategic Social Media	3
MKTG 330	Distribution Channels	3
BCOR 380	Business Ethics	3
ECON 225	Elementary Business and Economics Statistics (GEF 3)	3
ADPR 421 or MKTG 325	Advertising & PR Audience Insights & Analysis Marketing Research	3

MKTG 350	Product and Price Policies	3
ADV 450	Audience Psychology and Behavior	3
or MKTG 315	Buyer Behavior	
ADV 403	Media Planning/Strategy	3
ADV 491	Professional Field Experience	3
or PR 491	Professional Field Experience	
or MKTG 491	Professional Field Experience	
ADPR 438	Branded Content and Narrative	3
MKTG 400-Level Elective		3
IMC 459	IMC Capstone (Minimum grade of C-)	3
BCOR 320	Legal Environment of Business	3
Required Minor *		15
General Electives		22
<hr/>		
Total Hours		120

* Wholly online minors (which must have 9 distinct hours that aren't applied toward a major requirement) include Agribusiness Management, Child Development, Communication Studies, Criminology, Entertainment Media, Event, Planning, Family and Youth, Forensic and Investigative Science, General Business, Health Promotion, History, Human Services, Infant and Toddler, Music Industry, Political Science, Professional Writing and Editing, Religious Studies, Sport Communication, Sport and Exercise Psychology, Strategic Social Media.

First Year

Fall	Hours	Spring	Hours
IMC 191		2 ACCT 200	3
ENGL 101 (GEF 1)		3 MDIA 215	3
MDIA 101 (GEF 4)		3 GEF 2	3
IMC 215		3 Minor Course 1	3
Elective		3 Elective	3
Elective		1	
		<hr/>	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 ECON 225 (GEF 3)	3
BCOR 350		3 ADPR 439	3
PSYC 101 or SOCA 101		3 BCOR 380	3
STCM 315 or PR 324		3 MKTG 330	3
GEF 2		3 Minor Course 2	3
		<hr/>	
		15	15

Third Year

Fall	Hours	Spring	Hours
ADPR 421 or MKTG 325		3 ADV 403	3
MKTG 350		3 MKTG 315 or ADV 450	3
Minor Course 3		3 Minor Course 4	3
GEF 5		3 GEF 6	3
Elective		3 Elective	3
		<hr/>	
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ADV 491, PR 491, or MKTG 491		3 IMC 459	3
ADPR 438		3 BCOR 320	3
Minor Course 5		3 GEF 7	3
400-level MKTG Elective		3 Elective	3

Elective	3 Elective	3
	15	15

Total credit hours: 120

Major Learning Outcomes

INTEGRATED MARKETING COMMUNICATIONS

Graduates of the undergraduate IMC program will:

1. Apply critical thinking, creativity and secondary research skills in collaboration with student colleagues and in the completion of written assignments.
2. Illustrate an understanding of consumer and business segments and the importance of reaching, serving and engaging diverse publics.
3. Demonstrate an understanding of the strategic marketing communications planning process and the importance of a demonstrated return on investment.
4. Demonstrate an understanding of the history of media, advertising, marketing and public relations, their complementary roles, and the influence of technology on these professions.
5. Know when and how to apply traditional and social media planning and placement buys in support of an organization's goals.
6. Be able to evaluate and assess ethical, legal and socially responsible marketing communications decisions.
7. Describe the major types of consumer behavior and the stages in the buyer decision process.

Interactive Design for Media, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

The Interactive Design for Media major is a hybrid program of the College of Creative Arts and Reed College of Media. The major combines two core foundational areas of study: one focused on media and delivered by the Reed College of Media; the other focused on art and design, delivered by the College of Creative Arts. As such, course work exposes students to the history, guiding principles, ethics, diversity and cultural issues as related to design, technology and interactive media. The colleges' skills-based courses provide students with ample hands-on opportunities in the technologies and design thinking germane to digital, interactive platforms.

The program begins with foundational skills in design, production, and editing using digital tools and software. These classes provide the skill sets to create interactive experiences including websites, mobile apps, immersive environments, video games, and virtual and augmented reality. Courses offered in the School of Art and Design provide skill building and theory in audiovisual design and motion graphics, while courses offered in the Reed College of Media provide theoretical exploration and applied implementation of those skills in emergent media experiences. Students are concurrently oriented to innovation and design thinking methodologies and project management skills to create expertise in coordinating a team of diverse thinkers, from computer programmers to visual designers.

FACULTY

TEACHING ASSISTANT PROFESSOR

- Jeffrey Moser - M.F.A. (University of Delaware)
Interactive Media for Design
- Heather Cole - M.F.A. (Goddard College)
Interactive Design for Media

Admissions

The WVU Reed College of Media uses the same undergraduate admission standards for first-time freshmen as West Virginia University (WVU). Visit the WVU undergraduate admissions page for details on general WVU admission.

Students not meeting the above requirements will be admitted to WVU as either a pre-Art or pre-Media student through CLASS.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Arts in Interactive Design for Media (<https://admissions.wvu.edu/academics/majors/interactive-design-for-media/>) major.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Major Requirements

A minimum grade of C- or better is required in all major coursework.

First-Year Seminar

MDIA 191 or ART 191	First-Year Seminar First-Year Seminar	2
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General Education Requirements

GEF 1, 2, 3, 5, 7, 8		25
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Art Requirements

ART 121	Visual Foundations 1	3
ART 122	Visual Foundations 2	3
ART 223	Introduction to Graphic Design	3
ART 234	Digital Photography	3
ART 270	Introduction to Electronic Media 1	3
ART 271	Introduction to Electronic Media 2	3
ART 272	Designing for Multimedia	3
ART 285	Interactive Audio Design	3
ART 325	Design for Web and Screen	3
ART 372	Interactive Design	3
ART 472	Advanced Interactive Design	3
ART 485	Experiments in Interactivity	3
ARHS 160	Survey of Art History 2 (GEF 6)	3
ARHS 406	Graphic Design History	3

Media Requirements

ADV 215	Principles of Advertising (GEF 8)	3
MDIA 101	Media and Society (GEF 4)	3
MDIA 215	Media Writing	3
MDIA 225	Media Tools & Applications	3
JRL 210	Visual Journalism and New Media	3
JRL 262	Coding for Media Applications	3
JRL 322	Gaming Design and Digital Narrative	3

JRL 362	User Experience Design for Media Applications	3
JRL 328	Media Law and Ethics	3
JRL 431	Multimedia Storytelling	3
or JRL 440	Visual Storytelling for the Media	
JRL 458	Interactive Media and Audience Building	3
Electives*		18

Total Hours 120

* General Education and Elective Credits can vary - students must have a minimum of 120 credit hours total to complete the degree.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ART 122	3
MDIA 101 (GEF 4)		3 ARHS 160 (GEF 6)	3
MDIA 191 or ART 191		2 MDIA 215	3
ART 121		3 GEF 2	4
Elective		3 Elective	3
		14	16

Second Year

Fall	Hours	Spring	Hours
ART 223		3 ENGL 102 (GEF 1)	3
ART 234		3 ADV 215 (GEF 8)	3
JRL 210		3 ART 272	3
MDIA 225		3 ART 285	3
GEF 3		3 JRL 262	3
		15	15

Third Year

Fall	Hours	Spring	Hours
ART 270		3 ART 271	3
ART 372		3 ART 325	3
JRL 322		3 ARHS 406	3
GEF 5		3 JRL 362	3
GEF 7		3 Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ART 485		3 ART 472	3
JRL 328		3 JRL 458	3
JRL 431 or 440		3 GEF 8	3
GEF 8		3 Elective	3
Elective		3 Elective	3
		15	15

Total credit hours: 120

Major Learning Outcomes

INTERACTIVE DESIGN FOR MEDIA

The School of Art and Design and all its degrees and majors are accredited by the National Association of the Schools of Art and Design (NASAD). The Interactive Design for Media major will undergo the accreditation through NASAD process as a new program. The following criteria are from NASAD and provide the basis of assessment for course and programmatic Student Learning Outcomes.

Upon completion of the Interactive Design for Media major, graduates must have attained the following;

1. Knowledge of the concepts related to the visual, spatial, sound, motion, interactive, and temporal elements/features of digital technology and principles for their use in the creation and application of digital media-based work.
2. Understanding of narrative and other information/language structures for organizing content in time-based or interactive media; the ability to organize and represent content structures in ways that are responsive to technological, social, and cultural systems.
3. Understanding of the characteristics and capabilities of various technologies (hardware and software); their appropriateness for particular expressive, functional, and strategic applications; their positions within larger contexts and systems; and their influences on individuals and society.
4. Knowledge of the processes for the development and coordination of digitally-based art and design strategies (for example, storyboarding, concept mapping, and the use of scenarios and personas).
5. Ability to analyze and synthesize relevant aspects of human interaction in various contexts (physical, cognitive, cultural, social, political, and economic) and with respect to technologically-mediated communication, objects, and environments.
6. Understanding of what is useful, usable, effective, and desirable with respect to user/ audience-centered digitally-based communication, objects, and environments.
7. Knowledge of history, theory, and criticism with respect to such areas as film, video, technology, and digital art and design.
8. Ability to work in teams and to organize collaborations among people from different disciplines.
9. Ability to use the above competencies in the creation and development of professional quality digital media productions.

Journalism, B.S.J.

Degree Offered

- Bachelor of Science in Journalism

Nature of the Program

The journalism major at the College of Media prepares students for careers as journalists working in the fields of broadcast, video production, multimedia, internet, newspaper or magazine journalism. All students in the journalism major must complete a series of shared core requirements (12 credit hours) and a shared capstone experience (3 credit hours). In addition, students will take courses of their own choosing across three skills areas: writing, creating, and engaging (15 credit hours), and an elective course (3 credit hours).

Journalism majors have the opportunity to participate in such immersion journalism courses as Visual Storytelling, Experimental Journalism, Audience Engagement, WVU News and Adventure Travel Writing and Photography and numerous other special topics classes. The College houses student chapters of the Society of Professional Journalists; National Association of Black Journalists; Online News Association; WVU Film Club; Association for Women in Sports Media; Radio, Television, Digital News Association; and Ed on Campus (All Things Magazine). Journalism majors who wish to pursue law school or other graduate study have a solid basis in writing and research on which to build.

FACULTY

PROGRAM CHAIR

- Gina Martino Dahlia - M.S.J. (West Virginia University)
Teaching Professor, Television Journalism

PROFESSORS

- Joel Beeson - Ph.D. (Union College)
Visual Journalism
- Maryanne Reed - M.S. (Northwestern University)
Provost, Television Journalism
- John Temple - M.F.A. (University of Pittsburgh)
Print and Narrative Journalism

ASSOCIATE PROFESSORS

- Dana Coester - M.A. (University of Missouri-Columbia)
Media Innovation Center, Creative Director
- Lois Raimondo - M.A. (University of Missouri-Columbia)
Shott Chair of Journalism, Visual Journalism
- Stephen Urbanski - Ph.D. (Duquesne University)
Print Journalism, Media Ethics and Law

TEACHING ASSOCIATE PROFESSORS

- Robert Britten - Ph.D. (University of Missouri-Columbia)
Print and Experimental Journalism
- Emily Hughes Corio - M.S.J. (West Virginia University)
Television Journalism
- Mary Kay McFarland - M.S. (University of Missouri-Columbia)
Visual Journalism

TEACHING ASSISTANT PROFESSORS

- Heather Cole - M.F.A. (Goddard College)
Interactive Design for Media
- Ashton Marra - M.S. (West Virginia University)
Multimedia Journalism
- Clifton (David) Smith - M.A. (West Virginia University)
Multimedia and Experimental Journalism

LECTURER

- Tyler Channell - M.S.J. (West Virginia University)
Multimedia Specialist

VISITING ASSISTANT PROFESSOR

- Jim Iovino - B.A. (The Pennsylvania State University)
Ogden Newspapers Visiting Assistant Professor of Media Innovation

PRACITIONER-IN-RESIDENCE

- Jesse Wright - B.S.J. (West Virginia University)
Multimedia

Click here to view the Suggested Plan of Study (p. 845)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

MDIA 191	First-Year Seminar	2
General Education Requirements		
GEF 1, 2, 3, 5, 6, and 7		22

Non-Journalism/Media Requirements***

For all students in the major, required non-major courses include:

POLS 102	Introduction to American Government	3
STAT 111	Understanding Statistics	3
HIST 153	Making of Modern America: 1865 to the Present	3
ECON 200	Survey of Economics	3
BCOR 350	Principles of Marketing	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 (may fulfill GEF 4)	3
MDIA 215	Media Writing (fulfills Writing and Communication Skills Requirement)	3
MDIA 225	Media Tools & Applications	3
JRL 328	Media Law and Ethics	3

Journalism Major Core

Select three one-credit-hour JRL skills courses, which include, but are not limited to, the following options:

JRL 236	Podcast Producing	3
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:

JRL 411	Experimental Journalism	3
JRL 431	Multimedia Storytelling	
JRL 459	Multimedia News Publication	
JRL 487	Advanced Video Reporting and Producing	

Select two advisor-approved "track" electives from the following or from other advisor-approved upper-level JRL electives:

JRL 320	Advanced Photojournalism	6
JRL 340	Advanced Video Storytelling	
JRL 440	Visual Storytelling for the Media	
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 448	Digital Publication: Social Video	
JRL 451	Advanced Video Storytelling	

Required Minor ***15****General Electives ******18**

Total Hours

120

English Literature or Creative Writing Courses

English Literature		
ENGL 131	Poetry and Drama	3
ENGL 132	Short Story and Novel	3
ENGL 139	Contemporary African Literature	3
ENGL 154	African American Literature	3
ENGL 156	Literature of Native America	3
ENGL 226	Non-Western World Literature	3
ENGL 232	Poetry	3
ENGL 233	The Short Story	3
ENGL 234	Drama	3
ENGL 235	Novel	3
ENGL 236	The Bible as Literature	3
ENGL 241	American Literature 1	3
ENGL 242	American Literature 2	3
ENGL 251	American Folklore and Culture	3
ENGL 252	Appalachian Fiction	3
ENGL 254	African American Literature	3
ENGL 257	Science Fiction and Fantasy	3
ENGL 258	Popular American Culture	3
ENGL 261	British Literature 1	3
ENGL 262	British Literature 2	3
ENGL 263	Shakespeare 1	3
ENGL 272	Modern Literature	3
ENGL 273	Contemporary Literature	3
ENGL 285	Images of Women in Literature	3
Creative Writing		
ENGL 111	Introduction to Creative Writing	3
ENGL 212	Creative Writing: Fiction	3
ENGL 213	Creative Writing: Poetry	3
ENGL 214	Creative Writing: Non-Fiction	3

* Students must complete an officially sanctioned minor outside the College of Media. However, students may pursue the Sport Communication minor, which is offered jointly by the College of Media and the College of Physical Activity and Sport Sciences, or the Interactive Media and Design minor, which is offered jointly by the College of Media and the College of Creative Arts. Students completing a dual-degree are exempt from the requirement to complete a minor. Students should consult their advisor before starting a minor. Some minors require 18 hours of coursework instead of 15 hours, and some minor courses are offered online primarily during summer terms.

** General Education and Elective Credits can vary - students must have a minimum of 120 credit hours total to complete the degree. College of Media students must take a minimum of 72 credit hours outside of the College of Media in non journalism/mass communications courses.

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 Language Course	3
MDIA 215		3 MDIA 225	3
MDIA 191		2 GEF 3	3
Language Course		3 GEF 2B	4

Choose one capstone course:		3
JRL 531	Multimedia Reporting	
JRL 587	Advanced Video Reporting and Producing	
JRL 559	Multimedia News Publication	
Take 3 one-credit-hour skills classes:		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 two "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 321	Media Design	
JRL 331	Infographics and Data Visualization	
JRL 430	Social Media and Journalism	
JRL 426	Investigative Reporting	
JRL 335	Video and Audio News Writing	
JRL 386	Beginning Video Reporting	
JRL 593	Special Topics	
JRL 440	Visual Storytelling for the Media	
JRL 418	Advanced Reporting	
Required Minor		15
General Electives		11
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
MDIA 101 (GEF 4)		3 GEF 3	3
MDIA 215		3 GEF 2B	4
Language Course		3 Language Course	3
JRL 191		2 Select one of the following:	3
		PSYC 101	
		SOCA 101	

SOCA 105

		14	16
Second Year			
Fall	Hours	Spring	Hours
One-credit-hour JRL Skills course		1 GEF 6	3
Elective		3 HIST 153	3
MDIA 225		3 JRL 318	3
ENGL 102 (GEF 1)		3 GEF 5	3
BCOR 350		3 Minor Course	3
One-credit-hour JRL Skills Course		1	
		14	15
Third Year			
Fall	Hours	Spring	Hours
GEF 7		3 STAT 111	3
POLS 102		3 Minor Course	3
Minor Course		3 Electives	3
JRL 319		3 ECON 200	3
JRL 341		3 JRL "track" elective	3
One credit-hour-hour JRL Skills Course		1	
		16	15
Fourth Year			
Fall	Hours	Spring	Hours
JRL 528		3 JRL Capstone Course	3
Minor Course		3 Minor Course	3
JRL 500		1 Elective	2
JRL 504		3 JRL 520	3
Elective		3 JRL "track" elective	3
JRL 458		3	
		16	14
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

The Reed College of Media states as its learning goals the values and competencies of its national accrediting body, the Accrediting Council for Education in Journalism and Mass Communications, which appear under information about the B.S. in Journalism degree. In addition, the College faculty have set other specific educational outcomes deemed critical for success as professional communicators. These additional educational outcomes for journalism majors are:

1. Journalism graduates will demonstrate proficiency in critical thinking skills, writing and reporting, and an understanding of basic production skills, allowing them to produce news stories and multimedia projects. Graduates will be adequately prepared to either work in the field or pursue advanced educational opportunities.
2. Journalism graduates will demonstrate a mastery of written and spoken communications, an understanding of the technologies of print, television and digital media, and knowledge and applications of these skills in their chosen careers.
3. Journalism graduates will demonstrate an understanding of how to serve, reflect and engage diverse publics in their reporting and producing.

4. Journalism graduates will demonstrate knowledge of media ethics, law and regulation, including a full understanding of the First Amendment within the context of artificial intelligence and social media.
5. Journalism graduates will demonstrate specialized knowledge of news media interactions with various critical publics, including but not limited to: government at all levels; educational entities; law enforcement; medical, social and humanitarian services; and religious and secular organizations within the community.
6. Journalism graduates will learn to work as collaborative teams to solve problems, create strategies and produce content across all media platforms using the principles of human-centered design.
7. Journalism graduates demonstrate the ability to engage an audience using social media networking and analytics tools.
8. Journalism graduates will demonstrate an understanding of the history of technology and Silicon Valley in the context of media and its impact on acquisition, production, distribution and the economic models of media.
9. Journalism graduates will learn methods for data mining, evaluating sources, and investigating algorithms.
10. Journalism graduates will be introduced to programming for media in one or more modern languages.

Multidisciplinary Studies, B.A.

Degree Offered

- Bachelor of Arts

Nature of the Program

As the world has become more complex, our communications industries have evolved with it, and future professionals must have both specific skills and broad-based backgrounds to adapt quickly to this changing environment. The College of Media Multidisciplinary Studies Bachelor of Arts program draws upon undergraduate course offerings university-wide and is comprised of three complementary minors. *Many College of Media minors are designed to be completed online; therefore many of the courses are available only online and sometimes must be taken during summer terms. Note that additional online course fees apply.*

The Multidisciplinary Studies program will develop students who will:

- acquire a broad liberal arts education
- have studied three areas of interest in depth
- understand the interrelationships among different disciplines
- be capable of critical thought
- be able to understand complex issues
- be able to analyze problems from multiple perspectives
- be prepared to engage in life-long learning

To declare a Multidisciplinary Studies major, students must have at least 29 earned college hours and a minimum of 2.0 overall GPA.

[Click here to view the Suggested Plan of Study \(p. 850\)](#)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

MDIA 119	Reed College Multidisciplinary Orientation	3
MDIA 485	Reed College Multidisciplinary Capstone (fulfills Writing and Communication Skills requirement)	3
First-Year Seminar		1
General Education Requirements*		
Cumulative GPA of 2.0 or higher required.		
GEF 1, 2, 3, 5, 6, 7, and 8		31
Reed College of Media Minor **		15
Reed College of Media Minor **		15
Third Minor		15
A grade of C- or higher must be earned in all minor courses.		
Electives (as needed to reach at least 120 credit hours) *		37
Total Hours		120

* General Education and Elective Credits can vary - students must have a minimum of 120 earned credit hours total to complete the degree.

** Reed College of Media minors must be selected from the following: Advertising, Entertainment Media, Event Planning, Health Promotion, Interactive Design for Media, Journalism, Public Relations, Sport Communication, Strategic Social Media. Students must complete unique credit hours for each of their minors. Because courses can only be counted toward one minor, students may replace duplicate course requirements within their College of Media minors with College of Media core courses (i.e., MDIA 215, MDIA 225, JRL 328).

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
GEF 2A		4 ENGL 101 (GEF 1)	3
GEF 3		3 GEF 6	3
GEF 5		3 GEF 7	3
First-Year Seminar		1 Elective	3
Electives		4 Elective	3
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 GEF2/Elective	3
MDIA 101 (Media and Society (fulfills GEF 4 and counts toward College of Media Minor I-1))		3 GEF 8	3
MDIA 119		3 Minor I-2	3
GEF 8		3 Minor II-1	3
Elective		3 Minor III-1	3
		15	15

Third Year

Fall	Hours	Spring	Hours
GEF 8		3 Minor I-4	3
Minor I-3		3 Minor II-3	3
Minor II-2		3 Minor III-3	3
Minor III-2		3 Electives	6
Elective		3	
		15	15

Fourth Year

Fall	Hours	Spring	Hours
MDIA 485		3 Minor II-5	3
Minor II-4		3 Minor I- 5	3
Minor III-4		3 Minor III-5	3
Electives		6 Electives	6
		15	15

Total credit hours: 120

Note: Some minors may require online course enrollment during Summer terms to complete. Students should check with their advisor about individual minor requirements and expected course availabilities. Additional online course fees apply.

This suggested plan of study assumes three minors requiring 15 unique hours each. Minors that require more than 15 hours can be completed by substituting the extra minor hours in place of elective hours.

Minor courses may not be used to fulfill both a minor requirement and a General Education Foundation requirement, except JRL 101. Minors used as part of the MDS requirements may not be used to complete GEF 8.

Minor courses may not be used to fulfill the requirements for more than one minor. All Reed College minors and shared college minors must be completed with their own unique hours.

In the event of course overlap between minors, the Reed College of Media's Writing and Communications Skills Requirement, JRL 215, may be substituted in place of the overlapped course within one of the minors. When used to fulfill both requirements, the number of credit hours associated with the course will calculate into total earned credit hours only once.

In the event of additional course overlap among minors, JRL 225 (Media Tools & Applications) and/or JRL 328 (Media Law and Ethics) may be used as replacement courses. Other minor course overlaps may be replaced with Reed College of Media's coursework at the 200-level or higher, at the approval and discretion of the College.

If completed prior to admission into the program, ADV 215, PR 215, and/or ADPR 215 may be substituted as equivalent 215 coursework within Reed College minors or shared college minors, at the discretion of the College.

Of total earned credit hours, a minimum of 30 credit hours must be at the 200-level or higher, and an additional minimum of 30 credit hours must be at the 300-level or higher.

A grade of C- or higher must be earned in all major- and minor-required courses.

Students have the option to use elective hours to pursue a fourth minor to complement their studies.

Major Learning Outcomes

MULTIDISCIPLINARY STUDIES

Upon completion of the B.A. in MDS, students will:

- understand the interrelationships among different disciplines and possess a knowledge of and aptitude with principles, practices, facts, concepts, theories and tools in three minor areas of concentration
- understand and apply the U.S. principles and laws of freedom of speech and press
- understand the range of systems of freedom of expression around the world, including the right to dissent, to monitor and criticize power, and to assemble and petition for redress of grievances
- demonstrate an understanding of the history and role of professionals and institutions in shaping communications
- demonstrate an understanding of gender, race ethnicity, sexual orientation and, as appropriate, other forms of diversity in domestic society in relation to mass communications
- demonstrate an understanding of the diversity of peoples and cultures and of the significance and impact of mass communications in a global society
- understand concepts and apply theories in the use and presentation of images and information
- demonstrate an understanding of professional ethical principles and work ethically in pursuit of truth, accuracy, fairness and diversity
- think critically, creatively and independently
- conduct research and evaluate information by methods appropriate to the communications professions in which they work
- write correctly and clearly in forms and styles appropriate for the communications professions, audiences and purposes they serve
- critically evaluate their own work and that of others for accuracy and fairness, clarity, appropriate style and grammatical correctness

- apply basic numerical and statistical concepts
- apply tools and technologies appropriate for the communications professions in which they work

Sports and Adventure Media, B.S.J.

Degree Offered

- Bachelor of Science in Journalism

Nature of the Program

The Sports and Adventure Media Major includes two core foundational areas of study: one focused on media and content creation delivered by the Reed College of Media; the other focused on sport psychology and management and adventure sport skills, delivered by the College of Physical Activity and Sport Sciences. Students in the major select an Area of Emphasis (AOE) in either Sports Media or Adventure Media.

The Sports Media Area of Emphasis offers courses that focus on video production for the sports industry and journalism purposes and requires two College of Media electives, which offer students flexibility to further tailor their specific interests and skill sets.

The Adventure Media Area of Emphasis offers courses on multi-platform content production for advertising, public relations and journalism purposes. The Adventure Media Area of Emphasis includes PE courses in adventure sports, which provide students with necessary technical skills to work as media professionals in the industry.

Students in both AOE's will be prepared to enter an ever-changing digital media landscape by taking innovative courses that utilize the latest storytelling technology and audience engagement tactics, while instilling fundamental storytelling principles and media ethics. Graduates of this degree will stand out in sports media, adventure sports media, and adventure tourism and travel industries.

FACULTY

PROGRAM CHAIR

- Gina Martino Dahlia - M.S.J. (West Virginia University)
Teaching Professor, Television Journalism

TEACHING ASSOCIATE PROFESSOR

- Emily Hughes Corio - M.S.J. (West Virginia University)
Television Journalism

TEACHING ASSISTANT PROFESSOR

- Chuck Scatterday - M.S.J. (West Virginia University)
Sport Journalism

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

MDIA 191	First-Year Seminar	2
General Education Requirements		
GEF 1, 2B, 3, 5, 6, 7 and 8		31
Non-Journalism/Media Requirements		
For all students in the major, required non-major courses include:		
ADRC 102	Adventure in Society	3
ECON 200	Survey of Economics	3
BCOR 350	Principles of Marketing	3
STAT 111	Understanding Statistics	3
PSYC 101	Introduction to Psychology	3
or SOCA 101	Introduction to Sociology	
PSYC 251	Introduction to Social Psychology	3
or SOCA 320	Social Psychology	
English literature or Creative Writing Course		3
College of Media 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 328	Media Law and Ethics	3
JRL 330	Sports and Adventure Media Writing	3
JRL 380	Sports and Adventure Media Video Storytelling	3
JRL 488	Video Editing	1
College of Physical Activity and Sport Sciences Core		
SEP 271	Sport in American Society	3
SEP 272	Psychological Perspectives of Sport	3
ACE 265	Diversity and Sport	3
or SEP 373	African Americans in Sports	
or SM 375	Sport in the Global Market	
Or Advisor-approved Study Abroad		
SM 380	History and Philosophy of Sport	3
SM 486	Sport Marketing & Sales	3
or RPTR 472	Tourism System and Destination Management	
Required Area of Emphasis		
Select one of the following Areas of Emphasis (details below):		17
Sports Media		
Adventure Media		
General Electives*		15
Total Hours		120

* General Elective and Elective Credits can vary - students must have a minimum of 120 credit hours total to complete the degree

Adventure Media Area of Emphasis

A grade of C- or higher must be earned in all Adventure Media Area of Emphasis courses.

ADPR 438	Branded Content and Narrative	3
JRL 424	Adventure Travel Writing & Photography	3
JRL 457	Adventure Media Capstone: Advanced Adventure Media Production	3
MDIA 441	Sports and Adventure Media Internship	2

Adventure Skills Courses		6
Whitewater Paddling		
ADRC 111	Introduction to Whitewater Rafting	
ADRC 112	Whitewater Rafting Techniques	
ADRC 211	Introduction to Whitewater Raft Guiding	
ADRC 212	Swiftwater Rescue	
ADRC 311	Whitewater Raft Trip Leadership	
Rock Climbing		
ADRC 121	Introduction to Rock Climbing	
ADRC 122	Rock Climbing Techniques	
ADRC 221	Lead Climbing	
ADRC 222	Climbing Rescue Techniques	
ADRC 321	Rock Climbing Instructor Development	
Aerial ***		
RPTR 325	Challenge Course Facilitation	
RPTR 326	Canopy Tour Facilitation	
Mountain Biking		
ADRC 131	Introduction to Mountain Biking	
Total Hours		17

* Students who choose MDIA 441 would be required to complete one hour less of free electives as the AOE would be 18 hours.

** Adventure Media Area of Emphasis Majors must take six credit hours of adventure skills courses in at least two skill areas. Additionally, at least three credit hours must be in the same skill area.

*** Either RPTR 325 or RPTR 326 can be substituted for three one-credit hour courses to fulfill half of the adventure skills requirement for the degree.

Suggested Plan of Study for Adventure Media Area of Emphasis

First Year

Fall	Hours	Spring	Hours
MDIA 101		3 ENGL 101 (GEF 1)	3
MDIA 191		2 MDIA 225	3
MDIA 215		3 PSYC 101 or SOCA 101	3
SEP 271		3 SEP 272	3
GEF 2B		4 GEF 3	3
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 ECON 200	3
JRL 330		3 JRL 380	3
JRL 488		1 STAT 111	3
PSYC 251 or SOCA 320		3 PE Adventure Skills Course	1
ADRC 102		3 PE Adventure Skills Course	1
PE Adventure Skills Course		1 General Elective	4
PE Adventure Skills Course		1	
		15	15

Third Year

Fall	Hours	Spring	Hours
ADPR 438		3 ACE 265, SEP 373, or SM 375	3
JRL 328		3 BCOR 350	3
SM 380		3 MDIA 441	2
PE Adventure Skills Course		1 SM 486 or RPTR 472	3
General Elective		2 PE Adventure Skills Course	1

GEF 6		3 GEF 8 Focus	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
JRL 424		3 JRL 457	3
ENGL Literature or Creative Writing Course		3 General Elective	3
General Elective		3 General Elective	3
GEF 5		3 GEF 7	3
GEF 8 Focus		3 GEF 8 Focus	3
		15	15

Total credit hours: 120

Sports Media Area of Emphasis Requirements

A grade of C- or higher must be earned in all Sports Media Area of Emphasis courses.

JRL 361	Media Relations In Sport	3
JRL 435	Live Sports Video Production	3
JRL 484	Advanced Sports Video Production	3
MDIA 441	Sports and Adventure Media Internship	2
Advisor-approved JRL or STCM Elective		3
Advisor-approved JRL or STCM Elective		3
Total Hours		17

Suggested Plan of Study for Sports Media Area of Emphasis

First Year

Fall	Hours	Spring	Hours
MDIA 101		3 MDIA 225	3
MDIA 191		2 SEP 272	3
MDIA 215		3 PSYC 101 or SOCA 101	3
SEP 271		3 General Elective	3
ENGL 101 (GEF 1)		3 GEF 3	3
General Elective		1	
		15	15

Second Year

Fall	Hours	Spring	Hours
JRL 330		3 JRL 380	3
JRL 488		1 ECON 200	3
ADRC 102		3 STAT 111	3
ENGL 102 (GEF 1)		3 GEF 2B	4
GEF 5		3 General Elective	2
General Elective		2	
		15	15

Third Year

Fall	Hours	Spring	Hours
JRL 361		3 JRL 435	3
ACE 265, SEP 373, or SM 375		3 JRL 328	3
SM 380		3 PSYC 251 or SOCA 320	3
Approved JRL or STCM Elective		3 Approved JRL or STCM Elective	3
ENGL Literature or Creative Writing Course		3 GEF 8 Focus	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
SM 486 or RPTR 472		3 JRL 484	3
MDIA 441		2 BCOR 350	3
GEF 7		3 GEF 6	3
GEF 8 Focus		3 GEF 8 Focus	3
General Elective		3 General Elective	3
General Elective		1	
		15	15

Total credit hours: 120

Major Learning Outcomes**SPORTS AND ADVENTURE MEDIA**

The goal of the blended WVU Reed College of Media and College of Physical Activity and Sport Sciences major in Sports and Adventure Media is to provide students with a foundation of knowledge and critical thinking and a depth of skills and understanding that will prepare them for professions in the sports and adventure media industries and/or for further education and research pursuits in sports and adventure media. We will achieve this goal by meeting the following objectives, which will culminate in a B.S.J. degree:

1. Provide knowledge of the sports and adventure media industries so students have a foundational understanding and the necessary context for their future academics and profession in the industry.
2. Through the major's blended approach with the WVU College of Physical Activity and Sport Sciences, students will learn about the history, theory and current trends in sport management and adventure recreation, which will deepen their understanding of and applied learning in sports and adventure media.
3. Provide students with a foundation in media ethics so they understand the importance of adhering to ethical guidelines and incorporate real-world experiences that allow students to apply their professional ethics knowledge.
4. Teach students about the importance of diversity in the sports, sports management, and adventure media and recreation industries and provide hands-on experiences that require them to produce work that is about, and also serves, a diverse society.
5. Provide students with skills and knowledge in sports and adventure media content creation – through writing, photography and videography – through live and pre-produced programming, dissemination and audience engagement.
6. Provide students with field experiences in sports and adventure media.
7. Assist students in securing professional internships in their field of study.
8. Expose students to emerging technologies and guide their appropriate use/application of them.

Medicine

Degrees Offered

- B.A. in Human Performance and Health
- B.S. in Exercise Physiology
- B.S. in Health Informatics and Information Management
- B.S. in Immunology and Medical Microbiology
- B.S. in Medical Laboratory Science

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 Morgantown campus, students have access to a full range of research and clinical facilities, including a new laboratory building and a wide range of advanced research centers. West Virginia University Hospitals includes sophisticated medical technology, including magnetic resonance imagery, lithotripsy, and laser surgery; the campus includes a large and busy tertiary hospital, a trauma center, children's hospital, cancer center, a psychiatric hospital, primary care and specialty clinics, a rehabilitation hospital and many other patient care facilities.

The undergraduate degrees in the School of Medicine are in the Professional Programs division of the school. At the undergraduate level, BS degrees are offered in Exercise Physiology, Health Informatics and Information Management, Immunology and Medical Microbiology and Medical Laboratory Science, with tracks of study in Clinical Laboratory Science and Histotechnology. The undergraduate experience is enhanced by the academic health sciences environment as described above and in most cases involves practical work in a health care setting in addition to classroom and laboratory experiences. Many students have the opportunity to pursue undergraduate research experiences.

The undergraduate degree programs in the School of Medicine are enhanced by the presence of robust biomedical sciences graduate programs and other graduate and professional programs, including the M.D. degree program. Graduate degrees in the Professional Programs include Exercise Physiology (both MS and PhD), master's in occupational therapy (MOT), doctorate in physical therapy (DPT), and master's of health sciences (MHS) with a major in both pathologist's assistant and physician assistant..

Undergraduate students may choose to enter the workforce or to continue their study in a graduate or professional program. These programs often have competitive admission requirements for which the undergraduate degree programs provide an excellent foundation.

ADMINISTRATION

DEAN

- Clay Marsh - M.D. (West Virginia University)

VICE DEAN-MEDICAL EDUCATION/ACADEMIC AFFAIRS

- Norman D. Ferrari III - M.D. (West Virginia University)

VICE DEAN-CLINICAL SERVICES/CMO WVU HEALTHCARE

- Judie Charlton - M.D. (West Virginia University)

VICE DEAN-PROFESSIONAL & UNDERGRADUATE PROGRAMS

- MaryBeth Mandich - Ph.D. (West Virginia University)

ASSOCIATE DEANS

- Scott A. Cottrell - Ed.D. (West Virginia University)
Student Services & Curriculum
- Barbara Ducatman - M.D. (Albany Medical College)
Faculty Services
- James P. Griffith - M.D. (West Virginia University)
Charleston Campus Student Services
- Maria Kolar - M.D. (West Virginia University)
Veterans Affairs
- Rosemarie Cannarella Lorenzetti - M.D. (West Virginia University)
Eastern Campus Student Services
- Timothy Palencik -

Finance

- James M. Stevenson - M.D. (West Virginia University)
Development

ASSISTANT DEANS

- Kathleen Bors - M.D. (West Virginia University)
Charleston Campus
- James Brown - M.D. (Meharry Medical School)
Eastern Campus
- Hannah Hazard - M.D. (West Virginia University)
Admissions
- Fred L. Minnear - Ph.D. (Oregon Health Sciences University)
Graduate Studies
- Jamal Mustafa - Ph.D. (Lucknow University, India)
Research
- James O'Donnell - Ph.D. (University of Chicago)
Research
- David Wilks - M.D. (University of Pittsburgh School of Medicine)
Medical Education Technology

ASSOCIATE VICE PRESIDENT FOR HEALTH SCIENCE

- Clark Hansbarger - M.D. (Medical College of Virginia School of Medicine)
Dean Charleston Campus
- Konrad Nau - M.D. (West Virginia University)
Dean Eastern Campus

SENIOR ASSOCIATE DEAN/CHIEF ADMINISTRATIVE OFFICER

- John Worth - M.B.A. (State University of New York)

Degree Designation Learning Outcomes

BACHELOR OF SCIENCE (BS)

Bachelor of Science (BS) in Exercise Physiology

Goal 1: The Bachelor of Science in Exercise Physiology program is designed to meet the knowledge, skill, and aptitude (KSA) requirements for students to be eligible to take the American College of Sports Medicine Health and Fitness National Examination and the National Strength and Conditioning Association Certified Strength and Conditioning Specialist Examination. The KSA areas for these examinations include:

- Exercise Physiology and Related Exercise Science
- Pathophysiology and Risk Factors
- Health Appraisal, Fitness, and Clinical Exercise Testing
- Electrocardiography and Diagnostic Techniques
- Patient Management and Medications
- Exercise Prescription and Programming
- Nutrition and Weight Management
- Human Behavior and Counseling
- Safety, Injury Prevention, and Emergency Procedures
- Program Administration, Quality Assurance, and Outcome Assessment
- Cardiovascular Pathophysiology and Risk Factors

Goal 2: Students will have a background in basic science and exercise physiology as well as courses in nutrition, athletic training, personal fitness, first aid and emergency care, and business.

Goal 3: Students will experience training in basic and applied sciences that will allow them to continue in a career path towards treatment or interventions and identification and dissemination of new knowledge that will contribute to exercise-induced health care and disease treatment.

Goal 4: Students will experience intensive, hands-on training in laboratories that use state-of-the-art equipment and develop the ability to step into hospitals, clinics, or other settings and be able to treat patients who have various clinically important health problems that can be evaluated and treated with exercise.

Goal 5: Students will complete a 200-hour internship training in the senior year for additional clinical or research experience under the guidance and supervision of trained personnel. Students will develop attitudes, habits, skills, and abilities that will enable them to grow and develop as clinical exercise physiologists and/or that will set the framework for additional clinical or research training in the biomedical sciences.

Goal 6: Students will be prepared for graduate or professional school in areas such as exercise physiology, physical therapy, dentistry, pharmacy, occupational therapy, or medicine.

Bachelor of Science (BS) in Immunology and Medical Microbiology

Goal 1: The Bachelor of Science in Immunology and Medical Microbiology program is designed to provide students with a thorough understanding of the basis of the mammalian immune system and how it functions to protect the body from infectious agents in conjunction with an in-depth knowledge and understanding of pathogens.

Goal 2: Students will be prepared 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.

Goal 3: Students' knowledge of the immune system will be fully integrated with an understanding of the diversity of microorganisms that cause disease in humans and other mammals and mechanisms of disease pathogenesis.

Goal 4: Graduates of the program will provide a well-trained healthcare and research workforce who have the education and experience to work in a variety of occupations that require knowledge in immunology, medical microbiology, and related disciplines.

Goal 5: Graduates will possess the laboratory skills and knowledge needed to assess the functional status of the immune system and to safely cultivate and identify microorganisms that cause disease in mammals.

Goal 6: Graduates will be well-suited for various educational or career options. They will be qualified to work as immunologists or microbiologists in many diverse fields – including biotechnology research and industry, the pharmaceutical industry, the medical industry, the public health arena, academia, and various state and federal government agencies.

Goal 7: Graduates will be well prepared for advanced graduate or professional school education and training including public health, medicine, dentistry, and pharmacy.

Bachelor of Science (BS) in Medical Laboratory Science

Goal 1: The Bachelor of Science in Medical Laboratory Science program is designed to prepare graduates for their roles as members of a healthcare team in an environment of rapidly changing technology.

Goal 2: Graduates of the program will be prepared to serve as medical laboratory scientists for medical (both urban and rural) laboratories, public health laboratories, research laboratories, and industry.

Goal 3: Clinical Laboratory Scientist graduates will be able to analyze, develop, and perform medical laboratory tests and evaluate results on blood and bodily fluids.

Goal 4: Clinical Laboratory Scientist graduates will be prepared to sit for the Medical Laboratory Scientist (MLS) certification exam administered by the American Society for Clinical Pathology (ASCP).

Goal 5: Histotechnologist graduates will be prepared to conduct routine and specialized procedures on tissue and autopsy specimens for diagnosis.

Goal 6: Histotechnologist graduates will be prepared to sit for the Histotechnologist (HTL) certification exam administered by the American Society for Clinical Pathology (ASCP).

Goal 7: Graduates of the program will be prepared to assume teaching and supervisory positions in medical laboratory science.

Goal 8: Graduates of the program will be prepared for graduate work in the medical sciences.

Accreditation

The following programs within the School of Medicine have specialized accreditation through the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).

- Bachelor of Science in Medical Laboratory Science
 - Clinical Laboratory Science Area of Emphasis
 - Histotechnology Area of Emphasis

Biomedical Laboratory Diagnostics, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

The B.S. in biomedical laboratory diagnostics has two tracks: Medical laboratory science (<http://medicine.hsc.wvu.edu/medical-laboratory-science/>) (formerly clinical laboratory science) and Histotechnology (<http://medicine.hsc.wvu.edu/Histotech/>). Medical laboratory scientists are healthcare professionals educated in all aspects of clinical laboratory analysis, including test development, performance, and evaluation. Medical laboratory scientists may work in many areas, including clinical chemistry, hematology, immunohematology, immunology, clinical microbiology, and molecular diagnostics.

Histotechnologists are healthcare professionals who are qualified through academic and applied science education and training to provide service, research, and management in histotechnology and areas related to anatomic pathology. Histotechnologists are integral to the success of the anatomic pathology department by performing routine and complex procedures to preserve and process tissue specimens for examination and diagnosis by a pathologist.

Practice settings for both medical laboratory scientists and histotechnologists include hospital, clinic, public health, or private clinical laboratories; research, cytogenetic, pharmaceutical, or in-vitro fertilization laboratories; technical or sales representatives for medical manufacturers and suppliers; biotechnology, food, and cosmetic industries; and state or federal forensics laboratories.

Students are admitted into either the medical laboratory science or the histotechnology track within the biomedical laboratory diagnostics major after completing the pre-requisite courses at an accredited college or university. As students complete the pre-requisite courses, they may apply to the biomedical laboratory diagnostics major, typically during the sophomore year.

Within both tracks, the junior year (the first year of the professional curriculum) includes core and area-specific courses to introduce the student to the biomedical sciences and to prepare for the senior year curriculum. During the senior year (the second year of the professional curriculum), the student receives both didactic instruction and practical experience. Students receive practical experience at one or more of the affiliated hospital laboratories. Students must provide their own transportation and housing during the clinical rotations.

The WVU biomedical laboratory diagnostics tracks in medical laboratory science and histotechnology are accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Road, Suite 720, Rosemont, IL 60018, and (773) 714-8880. Graduates of the clinical laboratory science and histotechnology programs are eligible for certification by the Board of Certification of the American Society for Clinical Pathology (ASCP).

FACULTY

VICE-CHAIR AND MEDICAL LABORATORY SCIENCE PROGRAM DIRECTOR

- Michelle Butina - PhD

HISTOTECHNOLOGY PROGRAM DIRECTOR

- Kimberly Feaster - MA

ASSOCIATE PROFESSOR

- Kerry Harbert - MA

INSTRUCTOR

- Jane Wade - BA

ASSISTANT PROFESSOR

- Luisa Battistella - MS
- Marianne T. Downes - PhD
- Jason V. Evans - PhD

ASSOCIATE PROFESSOR EMERITUS

- Barbara J. Gutman
- Beverly Kirby

- Mary Ellen Koenn
- Karen S. Long

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Biomedical Laboratory Diagnostics (<https://admissions.wvu.edu/academics/majors/medical-laboratory-science/>) major.

Students in the pre-biomedical laboratory diagnostics major and direct admit students must meet the admission criteria of WVU. Pre-biomedical laboratory diagnostics students are advised by the Center for Learning, Advising, and Student Success (CLASS). Professional programs staff and biomedical laboratory diagnostics faculty advise direct admit and honors students. Prospective students are advised to take mathematics, chemistry, and biology in high school.

Qualified applicants may enter the pre-biomedical laboratory diagnostics major at the beginning of any semester, however the professional curriculum begins the fall semester after the student is admitted to either the medical laboratory science or histotechnology track. Admission to the pre-biomedical laboratory diagnostics major does not ensure admission to the biomedical laboratory diagnostics tracks in medical laboratory science or histotechnology.

Pre-biomedical laboratory diagnostics students apply for admission into the junior year (first year in the biomedical laboratory diagnostics professional curriculum) before the second semester of the sophomore year in college. Fulfillment of the pre-requisites does not ensure admittance into either the medical laboratory science or the histotechnology track.

DIRECT ADMIT

Entering WVU freshman may be admitted directly into the biomedical laboratory diagnostics major with a minimum math component ACT score of 22, or a minimum math component SAT score of 540, or placement into CHEM 110, and a high school GPA requirement of 2.0 or higher. Students admitted via this route must maintain a minimum 3.0 overall GPA, and a minimum 2.75 science/math pre-requisite GPA at each review period. In addition to the above requirements, direct admit students are required to take PALM 100, 101, and 201. Any student who fails to meet the direct admit criteria will be permitted to apply through regular admission.

PRE-REQUISITES

Biology		8
BIOL 101 & BIOL 103 or BIOL 115	General Biology and General Biology Laboratory Principles of Biology	4
BIOL 102 & BIOL 104 or BIOL 117	General Biology and General Biology Laboratory Introductory Physiology	4
Chemistry		
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory	4
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	4
CHEM 233 & CHEM 235 or CHEM 231 & 231L	Organic Chemistry and Organic Chemistry Laboratory Organic Chemistry: Brief Course and Organic Chemistry: Brief Course - Laboratory	4
CHEM 234 & CHEM 236 or CHEM 231 & 231L	Organic Chemistry and Organic Chemistry Laboratory Organic Chemistry: Brief Course and Organic Chemistry: Brief Course - Laboratory	4
Mathematics		3
MATH 124	Algebra with Applications (or higher)	
Statistics		3
STAT 211 or ECON 225	Elementary Statistical Inference Elementary Business and Economics Statistics	3
Physiology		
BIOL 235 or PSIO 241	Human Physiology Elementary Physiology	3

Medical Terminology

PALM 200	Medical Terminology	3
GEF		18
Credits to satisfy foundations 1, 4, 5, 6 & 7		
Total Hours		65

* CHEM 231 and CHEM 231L may be substituted for CHEM 233/235 and CHEM 234/236, however two semesters of organic chemistry are strongly recommended to better prepare for the professional curriculum.

Although not required for admission to the biomedical laboratory diagnostics tracks in medical laboratory science and histotechnology, eight credits of organic chemistry, eight credits of physics, cell biology, and six credits of social sciences are suggested electives for those students interested in applying to medical, dental, or other graduate programs. In addition, a foreign language is recommended for students who plan to do graduate work.

Admission decisions are based upon the applicant's grade point average, recommendations, and interview. Applicants should have a minimum overall and pre-requisite science and math GPA of 2.5. A GPA of 2.5 or above does not ensure admission. Two letters of recommendation are required; one from a college science professor is preferred. A personal interview with the Biomedical Laboratory Diagnostics Admissions Committee is required.

APPLICATION PROCEDURE

Each year the biomedical laboratory diagnostics major selects a limited number of applicants from the applications received for admission into the medical laboratory science and histotechnology track. The application is available online after December 1.

There is an application fee for residents and non-residents. The priority deadline is March 15th. Applications received by March 15th will be given first consideration for admissions. The standard deadline is June 15th.

Click the link below to view the corresponding track requirements and Suggested Plans of Study.

- Medical Laboratory Science (p. 865)
- Histotechnology (p. 864)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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**Biomedical Laboratory Diagnostics Pre-Requisites**

BIOL 101 & BIOL 103 or BIOL 115 & BIOL 116	General Biology and General Biology Laboratory Principles of Biology and Principles of Biology Laboratory	4
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BIOL 102 & BIOL 104 or BIOL 117 & BIOL 118	General Biology and General Biology Laboratory Introductory Physiology and Introductory Physiology Laboratory	4
BIOL 235 or PSIO 241	Human Physiology * Elementary Physiology	3
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory	4
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	4
Organic Chemistry **		4-8
CHEM 233 & CHEM 235 & CHEM 234 & CHEM 236 Or	Organic Chemistry and Organic Chemistry Laboratory and Organic Chemistry and Organic Chemistry Laboratory	
CHEM 231 & 231L	Organic Chemistry: Brief Course and Organic Chemistry: Brief Course - Laboratory	
MATH 124	Algebra with Applications (or higher)	3
PALM 200	Medical Terminology	3
STAT 211 or ECON 225	Elementary Statistical Inference Elementary Business and Economics Statistics	3
GEF Requirements 1, 4, 5, 6, & 7		18
First Year Studies Requirement		
PALM 191	First-Year Seminar	1
Biomedical Laboratory Diagnostics Core Curriculum		
MICB 200	Medical Microbiology	3
PALM 300	Introduction to Pathology	3
PALM 303	Laboratory Methods	1
PALM 320	Medical Biochemistry	3
PALM 322	Medical Biochemistry Laboratory	1
PALM 380	Medical Immunology	3
PALM 381	Research and Educational Methodology	2
PALM 410	Molecular Diagnostics	2
PALM 412	Molecular Diagnostics Laboratory	1
PALM 465	Medical Laboratory Management	2
PALM 475	Medical Relevance - Capstone	3
There are two Tracks: Histotechnology or Medical Laboratory Science		43-45
Histotechnology (43 credits)		
PSIO 441	Mechanisms of Body Function	
PALM 205	Introduction to Human Anatomy	
PALM 304	Histotechnology Microanatomy	
PALM 305	Staining Techniques 1	
PALM 306	Histotechnique 1	
PALM 405	Staining Techniques 2	
PALM 406	Histotechnique 2	
PALM 407	Histology Laboratory	
PALM 408	Histotechnologist Practicum	
Medical Laboratory Science (45 credits)		
PALM 312	Phlebotomy	
PALM 350	Clinical Mycology & Parasitology	
PALM 360	Urinalysis and Body Fluids	
PALM 362	Urinalysis and Body Fluids Laboratory	

PALM 382	Medical Immunology Laboratory
PALM 401	Phlebotomy Practicum
PALM 420	Immunoematology
PALM 422	Immunoematology Laboratory
PALM 425	Immunoematology Practicum
PALM 430	Clinical Chemistry
PALM 432	Clinical Chemistry Laboratory
PALM 435	Clinical Chemistry Practicum
PALM 440	Clinical Hematology
PALM 442	Clinical Hematology Laboratory
PALM 444	Hemostasis
PALM 445	Clinical Hematology Practicum
PALM 446	Hemostasis Laboratory
PALM 450	Clinical Microbiology
PALM 452	Clinical Microbiology Laboratory
PALM 455	Clinical Microbiology Practicum

Total Hours 122

* Or 2 semester of combined Anatomy and Physiology courses.

** CHEM 231/CHEM 231L may be substituted for CHEM 233/235 and CHEM 234/236, however two semesters of organic chemistry are strongly recommended to prepare for the professional curriculum.

*** PALM 100, PALM 101, and PALM 201 are required for Direct Admit students and highly recommended for Pre-Medical Laboratory Science students. A minimum of 120 hours are required for graduation. However, students may have to take additional hours.

SUGGESTED PLAN OF STUDY FOR HISTOTECHNOLOGY

First Year

Fall	Hours	Spring	Hours
CHEM 115 & 115L (GEF 8)		4 CHEM 116 & 116L	4
MATH 124 (or higher; GEF 3)		3 ENGL 101 (GEF 1)	3
Select one of the following (GEF 2):		4 Select one of the following (GEF 8):	4
BIOL 101 & BIOL 103		BIOL 102 & BIOL 104	
BIOL 115 & BIOL 116		BIOL 117 & BIOL 118	
GEF 4, 5, 6, or 7		3 GEF 4, 5, 6, or 7	3
PALM 191		1	
		15	14

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 CHEM 234 & CHEM 236	4
STAT 211 or ECON 225 (GEF 8)		3 BIOL 235 or PSIO 241	3
CHEM 233 & CHEM 235		4 PALM 200	3
GEF 4, 5, 6, or 7		3 GEF 4, 5, 6, or 7	3
		13	13

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
PSIO 441		4 MICB 200		3 PALM 305	4

PALM 300		3 PALM 205		3 PALM 406	3
PALM 303		1 PALM 304		4	
PALM 320		3 PALM 306		3	
PALM 322		1 PALM 381		2	
PALM 380		3			
		15		15	7

Fourth Year

Fall	Hours	Spring	Hours		
PALM 405		4 PALM 408		10	
PALM 407		8 PALM 475		3	
PALM 410		2			
PALM 412		1			
PALM 465		2			
		17		13	

Total credit hours: 122

SUGGESTED PLAN OF STUDY FOR MEDICAL LABORATORY SCIENCE**First Year**

Fall	Hours	Spring	Hours		
CHEM 115 & 115L (GEF 8)		4 CHEM 116 & 116L		4	
MATH 124 (or higher; GEF 3)		3 ENGL 101 (GEF 1)		3	
Select one of the following (GEF 2):		4 Select one of the following (GEF 8):		4	
BIOL 101 & BIOL 103		BIOL 102 & BIOL 104			
BIOL 115 & BIOL 116		BIOL 117 & BIOL 118			
GEF 4, 5, 6, or 7		3 GEF 4, 5, 6, or 7		3	
PALM 191		1			
		15		14	

Second Year

Fall	Hours	Spring	Hours		
ENGL 102 (GEF 1)		3 CHEM 234 & CHEM 236		4	
STAT 211 or ECON 225 (GEF 8)		3 BIOL 235 or PSIO 241		3	
CHEM 233 & CHEM 235		4 PALM 200		3	
GEF 4, 5, 6, or 7		3 GEF 4, 5, 6, or 7		3	
		13		13	

Third Year

Fall	Hours	Spring	Hours	Summer	Hours	
MICB 200		3 PALM 350		2 PALM 312		1
PALM 300		3 PALM 360		1 PALM 401		1
PALM 303		1 PALM 362		1 PALM 444		1
PALM 320		3 PALM 381		2 PALM 446		1
PALM 322		1 PALM 430		3		
PALM 380		3 PALM 432		2		
PALM 382		1 PALM 440		3		
		PALM 442		2		
		15		16		4

Fourth Year

Fall	Hours	Spring	Hours
PALM 410		2 PALM 425	4
PALM 412		1 PALM 435	4
PALM 420		3 PALM 445	4
PALM 422		2 PALM 455	4
PALM 450		3 PALM 475	3
PALM 452		2	
PALM 465		2	
		15	19

Total credit hours: 124

Major Learning Outcomes**BIOMEDICAL LABORATORY DIAGNOSTICS**

Upon graduation, students will:

- Demonstrate entry level knowledge for a laboratory medicine professional.
- Perform accurate and reliable qualitative and quantitative test procedures using sophisticated instrumentation.
- Model the professional traits of a laboratory medicine practitioner in a workplace setting (e.g., during clinical rotations).
- Communicate effectively in written and oral forms appropriate to a laboratory medicine professional.

Progression Requirements

Students must maintain a minimum overall and semester GPA of 2.5 throughout the program. Failure to maintain at least a 2.5 GPA may result in disciplinary sanctions. Graduation requires satisfactory completion of all academic work and the recommendation of the faculty of the School of Medicine. All first degree students are required to complete a total of 120 semester hours for the BS in Biomedical Laboratory Diagnostics degree. Any competencies not completed must be made up by the end of the school year (mid-May) or graduation may be delayed. Graduation is not dependent upon passing a national certification examination.

Exercise Physiology, B.S.**Degrees Offered**

- Bachelor of Science

Randall W. Bryner, Ed.D, Associate Professor, Chair and Director of Undergraduate Education, rbryner@hsc.wvu.edu; (rbryner@hsc.wvu.edu) <http://medicine.hsc.wvu.edu/ep/students/bachelor-of-science/>

John M. Hollander, Ph.D., Professor, Senior Assistant Dean for Research and Graduate Education, jhollander@hsc.wvu.edu; (jhollander@hsc.wvu.edu) <http://medicine.hsc.wvu.edu/ep/students/phd-program/>

Nature of the Program

The mission of the Division of Exercise Physiology is to prepare qualified professionals at the B.S., M.S., and Ph.D. levels to promote health and quality of life through the use of appropriate physical activity and lifestyle behaviors. In addition it is our mission to provide exercise physiology programs and expertise at the community, state, and national level, and to make meaningful scientific contributions to the discipline of exercise science through faculty research and by training graduate students in research skills. The WVU Exercise Physiology Program was established in the Health Sciences Center's School of Medicine in July 1993. The program offers a four-year curriculum leading to a bachelor of science degree in exercise physiology, a one or two-year program leading to a masters of science (clinical or thesis track), and a doctoral program leading to a Ph.D. in exercise physiology. The Bachelor of Science program meets the knowledge, skill, and aptitude (KSA) requirements for students to be eligible to take the certification examinations offered by the American College of Sports Medicine and the National Strength and Conditioning Association.

What is an Exercise Physiologist?

Exercise physiology is the study of the biological and biochemical processes associated with exercise and overload that affects the underlying function of cells and organ systems in the human body. Exercise physiology is a rapidly evolving field that is becoming increasingly important in the delivery of healthcare. Exercise physiologists work to prevent or delay the onset of chronic disease in healthy participants or to provide therapeutic or functional benefits to patients with known disease. Services may be offered in a variety of medical settings such as hospitals, rehabilitation centers, and out-patient

clinics; in community, corporate, commercial, and university fitness and wellness centers; in nursing homes and senior citizens centers; as well as in research and academic settings.

Research by scientists trained in exercise physiology have greatly expanded our understanding of the ways in which exercise affects cell function. Advances in research in exercise physiology have provided a foundation for many types of medical treatment in areas that include but are not limited to cardiovascular diseases, diabetes, aging, obesity, and disuse atrophy. Employment opportunities are expanding and increase with experience and level of education.

Exercise physiologists are trained to evaluate people in the areas of cardiovascular fitness, muscular strength and endurance, flexibility, neuromuscular integration, and body composition. They are also trained to provide exercise programs based on the results of these evaluations that are designed to increase the functional capacity of the participants.

Exercise physiologists work with athletes, patients, and healthy participants in the areas of disease prevention in wellness programs or rehabilitation in hospital settings. The bachelor of science program is a preparatory program for graduate school. Graduates of this program continue their studies in exercise physiology, physical therapy, medicine, or other health-related careers. Graduates of the master of science or doctoral program find employment in corporate wellness, hospital rehabilitation, higher education, or other research settings. Graduates of our Ph.D. program have obtained postdoctoral positions in prestigious universities and medical schools. Additionally, they may be employed in a wide variety of private, community, state, and national agencies. Exercise physiology is an evolving field that is becoming increasingly important with the integration of preventive medicine into the healthcare system.

ADMINISTRATION

CHAIR

- Randall Bryner - Ed.D.
Director of Undergraduate Education

VICE CHAIR AND DIRECTOR OF GRADUATE STUDIES

- John Hollander - Ph.D.
Director of Graduate Studies

FACULTY

CHAIR

- Randall Bryner - Ed.D. (West Virginia University)
Associate Professor, Director of Undergraduate Studies, Diabetes, Exercise

PROFESSOR

- John M. Hollander - Ph.D. (University of Wisconsin)
Senior Assistant Dean for Research and Graduate Education

ASSOCIATE PROFESSORS

- Daniel Bonner - MS (West Virginia University)
Clinical Exercise Physiology
- Randall W. Bryner - Ed.D. (West Virginia University)
Vice Chair, Director of Undergraduate Studies, Diabetes, Exercise, Cancer
- Paul D. Chantler - Ph.D. (Liverpool John Moores University)
Metabolic Syndrome, Vascular Biology, Effects of Aging and CV Diseases on Arterial and Ventricular Structure and Function
- David Donley - MS (West Virginia University)
Obesity and Metabolic Syndrome
- Diana Gilleland - MS (West Virginia University)
Cardiac Rehabilitation
- Jean L. McCrory - Ph.D. (Penn State University)
Gait and Balance Biomechanics
- Beth Nardella - M.A. (West Virginia University)
Writing Instructor, Global Engagement Coordinator
- I. Mark Olfert - Ph.D. (Loma Linda University)
Angiogenesis, Respiratory Physiology
- 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 Diabetes
- Sergiy Yakovenko - Ph.D. (University of Alberta)
Neuromuscular Integration of Movement

ASSISTANT PROFESSORS

- Miriam E. Leary - Ph.D. (University of Texas at Austin)
Student Retention, Teaching and Learning, Community Engagement, Exercise Nutrition
- Emily Ryan - Ph.D. (Kent State University)
Obesity Exercise
- James Thomas - M.S. (West Virginia University)
Exercise, Children, Strength Training

ADJUNCT ASSOCIATE PROFESSOR

- Ming Pei - Ph.D. (Beijing University, China)
Stem Cells, Cartilage Repair

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Exercise Physiology (<https://admissions.wvu.edu/academics/majors/exercise-physiology/>) major.

Students must meet the minimum requirements for WVU for admission to the program.

As a transfer student from another school, you must have a 2.75 cumulative GPA.

Current WVU students must attend a major change session and have a 2.75 cumulative GPA.

[Click here to view the Suggested Plan of Study \(p. 870\)](#)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum Requirements

A grade of C- or higher must be earned in all graded courses required for the major. (a maximum of three attempts will be given). In addition, students must maintain a minimal cumulative GPA of 2.5 to remain in the program. Students who fail to meet or maintain these minimal requirements will be eligible for dismissal.

Select one of the following sequences:

BIOL 101 & BIOL 103	General Biology and General Biology Laboratory (GEF 2)	
BIOL 102 & BIOL 104	General Biology and General Biology Laboratory (GEF 2)	
OR		
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory *	
BIOL 117 & BIOL 118	Introductory Physiology and Introductory Physiology Laboratory *	
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 8)	4
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	4
Select one of the following sequences:		4
CHEM 231 & 231L	Organic Chemistry: Brief Course and Organic Chemistry: Brief Course - Laboratory	
OR		
CHEM 233 & CHEM 235	Organic Chemistry and Organic Chemistry Laboratory	
OR		
CHEM 233 & CHEM 235 & CHEM 234 & CHEM 236	Organic Chemistry and Organic Chemistry Laboratory and Organic Chemistry and Organic Chemistry Laboratory *	
EXPH 101	Introduction to Exercise Physiology	1
EXPH 191	First-Year Seminar	1
EXPH 240	Medical Terminology	1
EXPH 364	Kinesiology	3
EXPH 369	Strength/Conditioning Methods	4
EXPH 370	Writing for Exercise Science	3
EXPH 386	Advanced Physiology of Exercise 1	3
EXPH 387	Advanced Physiology of Exercise 2	3
EXPH 388	Physiology of Exercise Laboratory 1	1
EXPH 389	Advanced Physiology of Exercise Lab 2	1
EXPH 440	Anatomy for Exercise Physiology	3
EXPH 491 or EXPH 497	Professional Field Experience Research	4
EXPH 475	Industry Organization in Exercise Physiology (or)	3
EXPH 496	Senior Thesis	3
HN&F 171	Introduction to Human Nutrition	3
Math Requirement (Choose one of the following sequences; May fulfill GEF 3):		6
MATH 124 & MATH 128	Algebra with Applications and Plane Trigonometry	
Or select one of the following courses:		
MATH 129	Pre-Calculus Mathematics	
MATH 150	Applied Calculus	
MATH 155	Calculus 1	
PHYS 101 or PHYS 111	Introductory Physics 1 (or) General Physics	4
PHYS 102 or PHYS 112	Introductory Physics 2 (or) General Physics	4
PSYC 101	Introduction to Psychology (GEF 4)	3
PSYC 241	Introduction to Human Development	3
Select one of the following:		4

PSIO 241	Elementary Physiology	
PSIO 441	Mechanisms of Body Function	
Select one of the following:		3
STAT 211	Elementary Statistical Inference	
ECON 225	Elementary Business and Economics Statistics	
GEF Requirements 1, 5, 6, and 7		15
Electives (May vary depending on overlap with GEF and area of emphasis if selected)		21
All students must complete 25 hours of community service per year.		
Total Hours		120

* BIOL 115/BIOL 116, BIOL 117/BIOL 118, CHEM 233/CHEM 235 and CHEM 234/CHEM 236 are required for students selecting the Health Professions Area of Emphasis. Students in the General Track can take CHEM 231/CHEM 231L or CHEM 233/CHEM 235.

** MATH 129, MATH 150, or MATH 155 may be substituted for MATH 124.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
BIOL 101 & BIOL 103 (GEF 2)		4 ENGL 101 (GEF 1)	3
EXPH 191		1 EXPH 101	1
MATH 124 (GEF 3)		3 MATH 128 (GEF 8)	3
PSYC 101 (GEF 4)		3 BIOL 102 & BIOL 104 (GEF 8)	4
HN&F 171		3 GEF 5, 6, or 7	3
Elective		1 Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
PHYS 101		4 PHYS 102	4
ENGL 102 (GEF 1)		3 CHEM 116 & 116L	4
CHEM 115 & 115L (GEF 8)		4 PSIO 241	4
EXPH 240		1 EXPH 364	3
GEF 5, 6, or 7		3	
		15	15

Third Year

Fall	Hours	Spring	Hours
PSYC 241		3 CHEM 231 & 231L	4
EXPH 370		3 EXPH 369	4
EXPH 386		3 EXPH 387	3
EXPH 388		1 EXPH 389	1
Electives		5 EXPH 440	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
EXPH 496		3 EXPH 491	4
STAT 211		3 EXPH 475	3
Electives		6 Electives	8

GEF 5, 6 or 7	3	
	15	15

Total credit hours: 120

Areas of Emphasis

AQUATIC THERAPY AREA OF EMPHASIS REQUIREMENTS

Minimum GPA of 2.5 required.

EXPH 450	Theory of Aquatic Therapy	4
EXPH 451	Application of Aquatic Therapy	3
EXPH 452	Aquatic Therapy Facility Management	3
EXPH 491	Professional Field Experience	5
Total Hours		15

DANCE SCIENCE AREA OF EMPHASIS REQUIREMENTS

A GPA of 3.0 is required for acceptance in to the Dance Science Area of Emphasis. An interview with the coordinator of the program is required for admission. The first class in the area of emphasis as seen in the Suggested Plan of Study is offered in the fall semester of junior year.

Minimum GPA of 2.5 required.

EXPH 480	Tissue Biomechanics	3
EXPH 481	Applied Neuromechanics	3
EXPH 482	Dance Injury Prevention	3
EXPH 483	Seminar in Applied Anatomy for Dance Movements	1
EXPH 491	Professional Field Experience	5
Total Hours		15

HEALTH PROFESSIONS AREA OF EMPHASIS REQUIREMENTS

All courses must be completed but 12 hours replace courses from the general course list

BIOC 339	Introduction to Biochemistry	3
or BIOC 531	General Biochemistry	
or AGBI 410	Introductory Biochemistry	
BIOL 219	The Living Cell	4
& BIOL 220	and The Living Cell Laboratory	
EXPH 460	Pathophysiology	3
Select 1 of the following:		3
AEM 341	General Microbiology	
BIOL 310	Advanced Cellular/Molecular Biology	
BIOL 313	Molecular Basis of Cellular Growth	
BIOL 316	Developmental Biology	
BIOL 324	Molecular Genetics	
BIOL 348	Neuroscience 1	
BIOL 410	Cell and Molecular Biology Methods	
BIOL 413	Molecular Endocrinology	
BIOL 414	Molecular Endocrinology-Laboratory	
BIOL 439	Neuroethology	
BIOL 440	Comparative Anatomy	
BIOL 441	Vertebrate Microanatomy	
BIOL 454	Immunology	
GEN 371	Principles of Genetics	
Total Hours		13

SUGGESTED PLAN OF STUDY**First Year**

Fall	Hours	Spring	Hours
EXPH 191		1 EXPH 101	1
CHEM 115 & 115L (GEF 8)		4 ENGL 101	3
BIOL 115 & BIOL 116 (GEF 2)		4 MATH 128 (GEF 8)	3
MATH 124 (GEF 3)		3 BIOL 117 & BIOL 118 (GEF 8)	4
PSYC 101		3 CHEM 116 & 116L	4
		15	15

Second Year

Fall	Hours	Spring	Hours
BIOL 219 & BIOL 220		4 PHYS 102	4
HN&F 171		3 CHEM 234 & CHEM 236	4
CHEM 233 & CHEM 235		4 ENGL 102	3
PHYS 101		4 PSIO 241	4
EXPH 240		1 EXPH 364	3
		16	18

Third Year

Fall	Hours	Spring	Hours
BIOC 339		4 EXPH 369	4
EXPH 386		3 EXPH 370	3
EXPH 388		1 EXPH 387	3
EXPH 440		3 EXPH 389	1
STAT 211		3 PSYC 241	3
GEF 5, 6, or 7		3	
		17	14

Fourth Year

Fall	Hours	Spring	Hours
EXPH 460		3 EXPH 475	3
EXPH 496		3 EXPH 491	4
Elective Science		3 GEF 5, 6, or 7	3
GEF 5, 6, or 7		3 Elective	3
		12	13

Total credit hours: 120

Major Learning Outcomes**BACHELOR OF SCIENCE (BS) IN EXERCISE PHYSIOLOGY**

The Bachelor of Science program in exercise physiology is a preparatory program for graduate or professional school in areas such as exercise physiology, physical therapy, or medicine. The undergraduate program includes courses in science, anatomy, physiology, nutrition, and business, and hands-on laboratories in exercise physiology, and exercise instruction. Students will also complete a 134 hr. clinical internship or research in their senior year. Select senior students can also take a hands on cadaver dissection gross anatomy laboratory to further enhance their ability to compete for admission to Physician Assistant, Physical Therapy, Medicine or other Rehabilitative Science graduate programs.

Students will:

- Identify physiological, molecular, cellular, and integrative systems concepts in exercise physiology to athletic and diseased populations
- Critically interpret the current scientific literature in areas of health and disease that are impacted by exercise

- Develop critical hands-on-experience for identifying health problems through proper evaluations
- Describe and demonstrate proper exercise techniques for healthy, and unhealthy populations
- Design and interpret stress test experiments for evaluation of health risk
- Demonstrate technical skills in conducting clinical assessments for cardiovascular or skeletal muscle function
- Articulate, verbally and in writing, their understanding of physiology and anatomical concepts in health and disease that are impacted by exercise intervention
- Discuss relevant scientific ethical issues pertinent to working as a team of health care providers
- Engage with fellow students and faculty and demonstrate teamwork in research and laboratory assessments of persons with or without health risks

Health Informatics and Information Management, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

The program in Health Informatics and Information Management (HIIM) was approved in the Spring of 2017 with the first students being accepted for Fall 2017. The first class of graduates will be May of 2020. HIIM is an integration of healthcare management, business management, and information systems technology. HIIM professionals possess a unique blend of knowledge, skills, and competencies related to the complex and ever-evolving healthcare industry, including healthcare systems organization; workflow and delivery processes; healthcare privacy and security; policy and finance; data management; compliance; clinical documentation improvement; and quality healthcare outcomes and improvement processes.

The goal of the HIIM program is to prepare students to graduate with an understanding of current and future healthcare industry trends and issues; to prepare students to develop, communicate, and manage resources and solutions to address healthcare industry challenges; and to prepare students to improve overall quality and outcomes of the healthcare system.

Students graduating with this degree are prepared for leadership roles in a wide variety of job settings. Opportunities are available in compliance/risk management, healthcare privacy and security, health informatics/data analysis, clinical documentation improvement, information governance, operations/administration, and revenue cycle management (clinical coding and billing).

ADMINISTRATION

PROGRAM DIRECTOR

- Sally Lucci - MS, RHIA, CCA

FACULTY

PROGRAM DIRECTOR

- Sally Lucci - MS (Geneva College)
RHIS, CCA

ASSISTANT PROFESSORS

- Megan McDougal - MS (College of Saint Scholastica)
RHIS, CHTS-IM
- Zach Otey - MS, RHIA (Marshall University)
- Ashley Simmons - MBA, RHIA, CCS, CDIP (West Liberty University)

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Health Informatics and Information Management (<https://admissions.wvu.edu/academics/majors/health-informatics-and-information-management/>) major.

Freshman and transfer applicants must meet the minimum WVU general admission requirements for admission to the program. Please see details at <http://admissions.wvu.edu/how-to-apply> (<http://admissions.wvu.edu/how-to-apply/>).

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum Requirements

GEF Requirements		15
HIIM 191	First-Year Seminar	1
A grade of C- or higher must be earned in all graded courses required for the major.		
Minimum GPA of 2.5 required.		
ENGL 101	Introduction to Composition and Rhetoric (GEF 1)	3
ENGL 102	Composition, Rhetoric, and Research (GEF 1)	3
BIOL 102 & BIOL 104	General Biology and General Biology Laboratory (GEF 2)	4
CS 101	Intro to Computer Applications (GEF 8)	4
PHIL 331	Health Care Ethics (GEF 5)	3
Program Requirements		
STAT 111	Understanding Statistics (GEF 3)	3
PALM 200	Medical Terminology	3
PALM 205 & PALM 206	Introduction to Human Anatomy and Human Anatomy Laboratory	4
PSIO 241	Elementary Physiology	4
Major Requirements		
HIIM 110	Introduction to U.S. Healthcare Delivery System	3
HIIM 112	Fundamentals of Health Information Management	3
HIIM 231	Health Information Management Applications	2
HIIM 233	Health Informatics and Information Management Disease Fundamentals and Management	3
HIIM 235	Coding and Classification of Diseases	3
HIIM 237	Introduction to Professional Practice	1
HIIM 240	Classification of Healthcare Procedures	3
HIIM 242	Healthcare Reimbursement and Revenue Cycle Management	2
HIIM 244	Principles of Health Informatics and Information Management Quality Management	2
HIIM 246	Fundamentals of Clinical Documentation Improvement	3
HIIM 247	Registries in Healthcare	2
HIIM 248	Health Informatics and Information Management Professional Practice 1	1
HIIM 351	Data Privacy, Confidentiality, and Security	3
HIIM 353	Healthcare Information System Analysis and Design	3
HIIM 355	Health Informatics and Information Management Legal Issues	3
HIIM 360	Application of Healthcare Classification Systems	3

HIIM 362	Data Governance in Healthcare Systems	3
HIIM 364	Healthcare Data Design	3
HIIM 366	Healthcare Analytics 1	2
HIIM 368	Health Informatics & Information Management Professional Practice 2	1
HIIM 471	Health Informatics & Information Management Research	3
HIIM 473	Healthcare Analytics 2	2
HIIM 475	Project Management in Health Informatics & Information Management	3
HIIM 477	Leadership in Health Informatics & Information Management	3
HIIM 480	Health Informatics & Information Management Administration	3
HIIM 482	Health Informatics and Information Governance	3
HIIM 484	Capstone in Health Informatics & Information Management	3
HIIM 486	Advanced Professional Practice in Health Informatics & Information Management	3
Electives		1
Total Hours		120

First Year

Fall	Hours	Spring	Hours
HIIM 191		1 ENGL 101	3
BIOL 102 & BIOL 104 (GEF 2)		4 PALM 205 & PALM 206	4
CS 101 (GEF 8)		4 HIIM 110	3
PALM 200		3 HIIM 112	3
STAT 111		3 GEF Requirements (4, 6, 7 or 8)	3
		15	16

Second Year

Fall	Hours	Spring	Hours
ENGL 102		3 HIIM 240	3
HIIM 231		2 HIIM 242	2
HIIM 233		3 HIIM 244	2
HIIM 235		3 HIIM 246	3
HIIM 237		1 HIIM 247	2
PSIO 241		4 HIIM 248	1
		Elective	1
		16	14

Third Year

Fall	Hours	Spring	Hours
HIIM 351		3 HIIM 360	3
HIIM 353		3 HIIM 362	3
HIIM 355		3 HIIM 364	3
PHIL 331 (GEF 5)		3 HIIM 366	2
GEF Requirements (4, 6, 7, or 8)		3 HIIM 368	1
		GEF Requirement (4, 6, 7 or 8)	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
HIIM 471		3 HIIM 480	3
HIIM 473		2 HIIM 482	3
HIIM 475		3 HIIM 484	3
HIIM 477		3 HIIM 486	3

GEF Requirement (4, 6, 7 or 8)	3 GEF Requirement (4, 6, 7 or 8)	3
	14	15

Total credit hours: 120

Major Learning Outcomes

BACHELOR OF SCIENCE IN HEALTH INFORMATICS AND INFORMATION MANAGEMENT (HIIM)

Students completing the degree will be able to:

- Coordinate all information management functions across the enterprise that encompasses the quality, appropriateness, retrieval and analysis, and security of patients-related and other enterprise data.
- Employ skills in the design and use of medical vocabularies and classification systems; define data and retrieve information from computer-based patient record systems using vocabularies and classification systems.
- Employ skills to maintain organizational compliance across the enterprise.
- Understand and synthesize finance and reimbursement strategies related to various delivery systems.
- Implement methodologies known to improve data quality that are required in today's healthcare environment.
- Design, implement, and/or maintain an information security program that balances the requirements of privacy, integrity, and availability of data.
- Employ systems and strategic planning, integrate and maintain information resources, and understand acquisition and implementation of systems.
- Employ skills in data retrieval, data mining, data cartography, modeling, and statistical tools for analysis of healthcare data.
- Understand vocabulary of the healthcare enterprise; serve as the human interface between the healthcare professional and the systems professional with technical expertise and the systems environment; construct data models.
- Manage the implementation of systems necessary to support the computer-based patient record and other systems implementation projects.

Immunology & Medical Microbiology, B.S.

Degree Offered

- Bachelor of Science

Introduction

Every day of our lives, we are exposed to microbes such as bacteria, viruses, and parasites. For the most part we suffer no disease or symptoms from these organisms, and they often go un-noticed. The single system in the body that allows life to continue in the face of these assaults is the immune system. The immune system is the network of cells and their biological processes that enable the body to recognize diseased cells or the invasion by microorganisms (bacteria, viruses, parasites, and prions) and eliminate them. The scientific discipline called Immunology is the study of this system, and Medical Microbiology is the study of the disease states induced by the invasion of microorganisms. Collectively, these two disciplines address how humans and other mammals respond to infectious disease. These scientific disciplines have become the cornerstone for many industries - including the biotechnology, pharmaceutical and medical and public health industries. These are all areas of particular emphasis and are being targeted for further development in West Virginia.

Educational Objectives

The Bachelor of Science degree in Immunology and Medical Microbiology 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. Graduates will possess the laboratory skills and knowledge needed to assess the functional status of the immune system and to safely cultivate and identify microorganisms that 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 degree can also provide a strong foundation to progress to advanced studies including medical school, dental school, and graduate school.

Relationship of the Objectives to the Mission of WVU

The Bachelor of Science degree in Immunology and Medical Microbiology directly fulfills many of the stated objectives in the Strategic Plan for WVU, the WVU Health Sciences Center and the WVU School of Medicine. It will be a financially viable, innovative and dynamic educational program that provides a unique opportunity to earn a degree in Immunology and Medical Microbiology for both in-state and out-of-state undergraduate students. Its learner centered curriculum will integrate both classroom and hands-on laboratory experiences. Graduates of the program will provide the state of West Virginia with a well-trained healthcare and research workforce who have the education and experience to work in a variety of occupations that require knowledge in immunology, medical microbiology and related disciplines.

FACULTY

CHAIR

- John B. 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)

ASSISTANT PROFESSORS

- Amanda Ammer - PhD (West Virginia University)
- Mariette Barbier - Ph.D. (Universitat de les Illes Balears)
- Kathy Brundage - Ph.D. (University of Pennsylvania)
Technical Director of Flow Cytometry Core Facility
- Jonathan Busada - Ph.D. (East Carolina University)
- Duaa Dakhllallah - 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 of University of Hong Kong)
- Valerie Watson - M.S. (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)
- Lisa Robinson - Ph.D. (Cornell University)
- Cory Robinson - Ph.D. (Miami University of Ohio)
- Rosana Schafer - Ph.D. (Temple University)
- James M. Sheil - Ph.D. (University of Kentucky)

ADJUNCT PROFESSORS

- John Noti - Ph.D. (Purdue University)
- David Weissman - M.D. (Northwestern University)

ADJUNCT ASSOCIATE PROFESSOR

- David Klinke - Ph.D. (Northwestern University)

ADJUNCT ASSISTANT PROFESSORS

- Stacey Anderson - Ph.D. (West Virginia University)
- Brian Boone - MD (University of South Florida)
- Alexandra Elliott - Ph.D.
- Brett Green - Ph.D. (University of Sydney)
- Yong Qian - Ph.D. (West Virginia University)

LECTURER

- Michelle Witt - M.S. (Virginia Tech)

Admission Requirements

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Immunology and Medical Microbiology (<https://admissions.wvu.edu/academics/majors/immunology-and-medical-microbiology/>) major.

Applicants must fulfill all requirements for admission to WVU and the IMMB program:

- ACT Math score of 26, or SAT Math score of 610, or place into Chemistry 115
- High school GPA of # 3.70
- Complete admissions information at <http://admissions.wvu.edu/admissions/university-requirements> (<http://admissions.wvu.edu/admissions/university-requirements/>)

Click here to view the Suggested Plan of Study (p. 880)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Minimum GPA of 2.75 is required in all coursework

A minimum grade of C- is required for all courses with the exception of FYS and GEF requirements 1, 4, 5, 6 and 7.

First Year Studies Requirement

GEF Requirements 1, 4, 5, 6, and 7		18
IMMB 191	First-Year Seminar	1
BIOC 339	Introduction to Biochemistry	4
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	4
BIOL 117 & BIOL 118	Introductory Physiology and Introductory Physiology Laboratory	4
BIOL 219 & BIOL 220	The Living Cell and The Living Cell Laboratory	4
Select one of the following sequences:		8
CHEM 115 & 115L & CHEM 116 & CHEM 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory and Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	

CHEM 117 & 117L & CHEM 118 & CHEM 118L	Principles of Chemistry 1 and Principles of Chemistry 1 - Laboratory and Principles of Chemistry 2 and Principles of Chemistry 2 - Laboratory	
CHEM 233 & CHEM 235	Organic Chemistry and Organic Chemistry Laboratory	4
CHEM 234 & CHEM 236	Organic Chemistry and Organic Chemistry Laboratory	4
Select one of the following:		3
MATH 150	Applied Calculus	
MATH 153	Calculus 1a with Precalculus	
MATH 154	Calculus 1b with Precalculus	
MATH 155	Calculus 1	
MATH 156	Calculus 2	
Select one of the following sequences:		8
PHYS 101 & PHYS 102	Introductory Physics 1 and Introductory Physics 2	
PHYS 111 & PHYS 112	General Physics and General Physics	
STAT 211 or STAT 215 or ECON 225	Elementary Statistical Inference Introduction to Probability and Statistics Elementary Business and Economics Statistics	3
IMMB 150	Microbiology Colloquium 1	2
IMMB 200	Immunology Colloquium 1	2
IMMB 250	Microbiology Colloquium 2	2
IMMB 300	Immunology Colloquium 2	2
IMMB 301 & 301L	Basic Medical Microbiology and Basic Medical Microbiology Laboratory	4
IMMB 302	Principles of Immunobiology	3
IMMB 310 & 310L	Bacterial Pathogenesis and Bacterial Pathogenesis Laboratory	4
IMMB 320	Cellular Immunobiology	3
IMMB 400	Immunology/Microbiology Journal Club	1
IMMB 405	Scientific Integrity	1
IMMB 410	Microbial Genetics	3
IMMB 420 & 420L	Molecular Immunobiology and Molecular Immunobiology Laboratory	5
IMMB 494	Seminar	1
IMMB 450	Immunology/Microbiology Journal Club 2	1
IMMB 460	Contemporary Issues for Majors	3
IMMB 470	Medical Virology	3
IMMB 484	Senior Thesis (fulfills Writing and Communication Skills and Capstone requirements)	3
IMMB Electives		9
IMMB 327	Parasitology	
IMMB 480	Vaccinology	
IMMB 490	Teaching Practicum **	
IMMB 491	Professional Field Experience	
IMMB 497	Research *	
AEM 401	Environmental Microbiology	
AEM 445 & AEM 449	Food Microbiology and Food Microbiology Lab	
AEM 545	Food Microbiology	
ANPH 424	Physiology of Reproduction	
BIOL 302	Biometry	

BIOL 310	Advanced Cellular/Molecular Biology
BIOL 313	Molecular Basis of Cellular Growth
BIOL 315	Communicating Natural Science
BIOL 316	Developmental Biology
BIOL 324	Molecular Genetics
BIOL 348	Neuroscience 1
BIOL 349	Neuroscience 2
BIOL 409	Biochemical Basis of Therapeutics
BIOL 413	Molecular Endocrinology
BIOL 415	Epigenetics
BIOL 418	Medical Genetics
BIOL 420	Genomics
BIOL 424	Protein Structure and Function
BIOL 426	Molecular Biology of Cancer
BIOL 430	Bioinformatics
BIOL 453	Molecular Basis of Disease
BIOL 455	Evolution of Infectious Diseases
BIOL 461	Principles of Evolution
BIOL 475	Neurobiological Diseases
BIOL 476	Computational Neuroscience
BIOL 493	Special Topics
HN&F 348	Science of Food Preparation
HN&F 353	Food Service Systems Management
PALM 205	Introduction to Human Anatomy
PALM 206	Human Anatomy Laboratory
PCOL 449	Drugs and Medicine
PSIO 241	Elementary Physiology
PUBH 201	Global Perspectives of Public Health
PUBH 222	Epidemiology for Public Health
PUBH 462	Clinical Research Methods and Practice
VETS 401	Veterinary Anatomy
General Elective	3
Total Hours	120

* A total of 3-credits of IMMB 497 can be applied to the IMMB Approved Electives group.

** A total of 2-credits of IMMB 490 can be applied to the IMMB Approved Electives group.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
IMMB 191		1 ENGL 101 (GEF 1)	3
IMMB 150		2 GEF 4, 5, 6, or 7	3
MATH 150, 153, or 155 (GEF 3)		3 CHEM 116 (GEF 2)	3
CHEM 115 (GEF 8)		3 CHEM 116L	1
CHEM 115L		1 BIOL 117	3
BIOL 115 (GEF 8)		3 BIOL 118	1
BIOL 116		1	
		14	14

Second Year

Fall	Hours	Spring	Hours
IMMB 250		2 IMMB 200	2
BIOL 219		3 IMMB 301	3

BIOL 220	1	IMMB 301L	1
CHEM 233		3 CHEM 234	3
CHEM 235		1 CHEM 236	1
PHYS 101		4 PHYS 102 (GEF 8)	4
ENGL 102 (GEF 1)		3 GEF 4, 5, 6, or 7	3
		17	17

Third Year

Fall	Hours	Spring	Hours
IMMB 302		3 IMMB 300	2
IMMB 410		3 IMMB 310	3
IMMB Elective		3 IMMB 310L	1
BIOC 339		4 IMMB 320	3
GEF 4, 5, 6 or 7		3 IMMB Elective	2-4
		GEF 4, 5, 6, or 7	3
		General Elective	3
		16	17

Fourth Year

Fall	Hours	Spring	Hours
IMMB 400		1 IMMB 405	1
IMMB 420		3 IMMB 450	1
IMMB 420L		2 IMMB 460	3
IMMB 494		1 IMMB 470	3
IMMB elective		2-4 IMMB 484	3
STAT 211 or 215		3 IMMB Elective	2-4
		12	13

Total credit hours: 120

Major Learning Outcomes

IMMUNOLOGY & MEDICAL MICROBIOLOGY

Goal 1: The Bachelor of Science in Immunology and Medical Microbiology program is designed to provide students with a thorough understanding of the basis of the mammalian immune system and how it functions to protect the body from infectious agents in conjunction with an in-depth knowledge and understanding of pathogens.

- Identify and summarize the basic concepts of microbiology, microbial pathogenesis, and immunology.
- Acquire expertise in the laboratory skills and knowledge needed to assess the functional status of the immune system and to safely cultivate and identify microorganisms that cause disease in mammals.

Goal 2: Students' knowledge of the immune system will be fully integrated with an understanding of the diversity of microorganisms that cause disease in humans and other mammals and mechanisms of disease pathogenesis.

- Discuss, critique, and interpret primary literature in microbiology, microbial pathogenesis, and immunology.

Goal 3: Students will be prepared 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.

- Demonstrate oral, written, and visual communication skills that result in clear and organized dissemination of material at a level appropriate for the audience.

Goal 4: Graduates of the program will provide a well-trained healthcare and research workforce who have the education and experience to work in a variety of occupations that require knowledge in immunology, medical microbiology, and related disciplines.

Goal 5: Graduates will be well-suited for various educational or career options. They will be qualified to work as immunologists or microbiologists in many diverse fields – including biotechnology research and industry, the pharmaceutical industry, the medical industry, the public health arena, academia, and various state and federal government agencies.

Goal 6: Graduates will be well prepared for advanced graduate or professional school education and training including public health, medicine, dentistry, and pharmacy.

Occupational Therapy

Degree Offered

- Current Degrees Offered: Master of Occupational Therapy (MOT) and Occupational Therapy Doctorate (OTD)

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 prerequisite courses, which in most instances will take two years to fulfill.

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 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, which begins in the summer with basic sciences coursework relevant to the profession and practice of occupational therapy. Immersion in practice occurs from the first fall semester onward through integrated experiential, simulated, 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 Pass 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. Clinical fieldwork is an essential part of professional training and required by national OT educational standards. Students are assigned to Level I and Level II fieldwork sites locally, and at locations across the United States. Assignment to specialty fieldwork or elective internship 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 experience expenses such as transportation, housing and/or meals, and for making their own housing and travel arrangements for clinical fieldwork experiences. 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.

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 of Chicago)
- Rondalyn Whitney - Ph.D., OTR/L, FAOTA (Trident International University)

ASSISTANT PROFESSORS

- Amy Burt - M.O.T., OTR/L (University of Pittsburgh)
- Brandy Brown - O.T.D., OTR/L (Chatham University)
- Garth Graebe - M.O.T., OTR/L (West Virginia University)
- Brian Scaife - OTD, OTR/L (Chatham Univeristy)
- Sue Ann Woods - MOT, OTR/L, CHT (West Virginia University)
- Sue Ann Woods - MOT, OTR/L (West Virginia University)
Assistant Professor

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 - 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.

Click here to view the Suggested Plan of Study (p. 886)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum Requirements

GEF Requirements: GEF 6		3
Pre-Major Requirements		
ENGL 101	Introduction to Composition and Rhetoric	3
ENGL 102 or ENGL 103	Composition, Rhetoric, and Research Accelerated Academic Writing	3
WVUE 191	First Year Seminar	1
PSYC 101	Introduction to Psychology	3
PSYC 241	Introduction to Human Development	3

PSYC 281	Introduction to Abnormal Psychology	3
SOCA 101	Introduction to Sociology	3
or SOCA 105	Introduction to Anthropology	
Select one of the following:		4-8
BIOL 101 & BIOL 103 & BIOL 102 & BIOL 104	General Biology and General Biology Laboratory and General Biology and General Biology Laboratory	
or BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	
PHYS 101	Introductory Physics 1	4
STAT 211	Elementary Statistical Inference	3
Select one of the following (Students who take COMM 100 & 102 will need to complete GEF 5 & 6):		3
COMM 100 & COMM 102	Principles of Human Communication and Fundamentals of Interpersonal Communication	
or COMM 104	Public Communication	
PSIO 241	Elementary Physiology	4
or PSIO 441	Mechanisms of Body Function	
OTH 201	Medical Terminology for Occupational Therapy	1
Undergraduate Occupational Therapy Courses		
Minimum grade of C required.		
Minimum GPA of 3.0 required		
OTH 301	Professional Foundations of OT	2
OTH 303	Functional Movement Across the Lifespan	2
OTH 304	Physical Impairment and Function 1	4
OTH 307	Neurobiologic Foundations	4
OTH 308	Evaluation Procedures	3
OTH 309	The Brain and Occupation in Occupational Therapy	1
OTH 310	Critical Reasoning in Occupational Therapy	3
OTH 311	Anatomic Foundations of OT	4
OTH 312	Functional Kinesiology in Occupational Therapy	2
OTH 321	Development Life Tasks	3
OTH 360	Research Methods in Occupational Therapy	3
OTH 361	Qualitative Research in Occupational Therapy	1
OTH 370	Principles of Occupational Science	3
OTH 384	Level 1 Fieldwork 1 (Graded as Pass/Fail)	2
OTH 386	Level 1 Fieldwork 3 (Graded as Pass/Fail)	2
OTH 387	Level 1 Fieldwork 4 (Graded as Pass/Fail)	2
OTH 401	Physical Impairment and Function 2	4
OTH 403	Intro to Pediatrics in OT	2
OTH 405	Upper Extremity Rehabilitation	4
OTH 408	Physical Impairment and Function 3	3
OTH 416	Professional Decision-Making	2
OTH 417	Occupational Therapy in Geriatrics	3
OTH 419	Professional Values	3
OTH 430	Occupational Therapy in Mental Health	3
OTH 432	Occupational Therapy Interventions in Mental Health	3
OTH 435	Therapeutic Activity	3
OTH 440	Cognition and Perception in Occupational Therapy	2
OTH 480	Current Topics in Occupational Therapy	2
OTH 497	Research (Graded as Pass/Fail)	2

Total Hours

122

Degree Requirements

BACHELOR OF ARTS IN HUMAN PERFORMANCE AND HEALTH

Students are awarded a Bachelor of Arts degree in Human Performance and Health at the end of the senior year (year two in the OT program). In order to receive this degree, students must have successfully completed a minimum total of 122 hours of college credits, including completion of the GEF requirements.

MASTER OF OCCUPATIONAL THERAPY

The master of Occupational Therapy (MOT) degree is awarded upon completion of all required graduate work (typically the end of the third year in the OT program). Requirements for the MOT are found in the Graduate Catalog.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours	Summer	Hours
BIOL 101 & BIOL 103 (GEF 2)		4 BIOL 102 & BIOL 104 (GEF 8)		4 PSIO 241	4
MATH 124		3 MATH 128		3	
PSYC 101 (GEF 4)		3 PSYC 241 (GEF 8)		3	
COMM 100 & COMM 102		3 SOCA 101 or 105		3	
WVUE 191		1			
<hr/>					
			14	13	4

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)		3 OTH 301	2
PSYC 281 (GEF 7)		3 PHYS 101		4 OTH 311	4
STAT 211 (GEF 3)		3 GEF 6		3	
OTH 201		1 Elective		3	
GEF 5		3			
<hr/>					
			13	13	6

Third Year

Fall	Hours	Spring	Hours		
OTH 303		2 OTH 307		4	
OTH 304		4 OTH 308		3	
OTH 312		2 OTH 309		1	
OTH 360		3 OTH 310		3	
OTH 370		3 OTH 321		3	
OTH 435		3 OTH 361		1	
		OTH 384		2	
		OTH 480		1	
<hr/>					
			17	18	

Fourth Year

Fall	Hours	Spring	Hours		
OTH 387		2 OTH 386		2	
OTH 401		4 OTH 405		3	
OTH 403		2 OTH 408		3	
OTH 417		3 OTH 416		2	
OTH 430		3 OTH 419		3	
OTH 440		2 OTH 432		3	
OTH 497		1 OTH 480		1	

OTH 497

1

17

18

 Total credit hours: 133

Major Learning Outcomes

OCCUPATIONAL THERAPY

- Program content based on a broad foundation in the liberal arts and sciences. A strong foundation in the biological, physical, social, and behavioral sciences supports an understanding of occupation across the lifespan.
- The basic tenants of occupational therapy including its history, philosophy, foundation in occupation, and models of occupational performance.
- The process of screening, evaluation, and referral as related to occupational performance and participation that is culturally relevant and based on theoretical perspectives, models of practice, frames of reference, and available evidence.
- The process of formulation and implementation of the therapeutic intervention plan to facilitate occupational performance and participation that is culturally relevant; reflective of current occupational therapy practice; based on available evidence; and based on theoretical perspectives, models of practice, and frames of reference.
- Context of service delivery information and skills including the knowledge and understanding of the various contexts, such as professional, social, cultural, political, economic, and ecological, in which occupational therapy services are provided.
- Leadership and management skills including principles and applications of leadership and management theory.
- Promotion of scholarly endeavors including describing and interpreting the scope of the profession, establishing new knowledge, and interpreting and applying this knowledge to practice.
- Professional ethics, values, and responsibilities, including an understanding and appreciation of ethics and values of the profession of occupational therapy.

Nursing

Degrees Offered

- Bachelor of Science 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 WVU College of Business and Economics offers 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 the student nurse anesthetist for certification in nurse anesthesia. The program includes a rigorous, challenging program of study, 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 are 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.coacna.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.

Students entering the traditional BSN or BS/BA to BSN program are required to participate in the WVU Health Sciences Center Student Computer Program. A laptop computer will be issued to all students entering these programs. Please visit the School of Nursing website at <http://nursing.hsc.wvu.edu/academics/undergraduate-programs/bachelor-of-science/program-information/> for more information.

Proof of specific immunizations is required for all health sciences students. Students in the BSN, BA/BS to BSN, RN-BSN, MSN, DNP, and post graduate certificate nursing 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 programs.

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: <http://nursing.hsc.wvu.edu/academics/current-students/>.

Additional Information

Visit the School of Nursing website at <http://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

ADMINISTRATION

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- Tara F. Hulsey - PhD (University of South Carolina)
Vice President Health Promotion & Wellness

ASSOCIATE DEAN OF ACADEMICS

- Tanya Rogers - EdD (West Virginia University)
Clinical Education Professor

ASSOCIATE DEAN FOR RESEARCH

- Ubolrat Piamjariyakul - PhD (University of Kansas)
Associate Professor

ASSISTANT DEAN FOR STUDENT AND ALUMNI SERVICES

- Gregory Cave - BA (West Virginia University)

ASSISTANT DEAN FOR FACULTY PRACTICE AND COMMUNITY ENGAGEMENT

- Toni DiChiacchio - DNP (West Virginia University)
Clinical Assistant Professor

DIRECTOR AND ASSISTANT DEAN OF BUSINESS & FINANCE

- Karis P. Wolfe - MBA (West Virginia University)

CHAIR - DEPARTMENT OF ADULT HEALTH

- Tanya Rogers - EdD (West Virginia University)
Clinical Education Professor

CHAIR-DEPARTMENT OF FAMILY/COMMUNITY HEALTH

- Susan Newfield - PhD (Texas Tech University)
Associate Professor

CHAIR - BECKLEY DIVISION

- Crystal Sheaves - PhD (West Virginia University)
Teaching Assistant Professor

CHAIR-CHARLESTON DIVISION

- Theresa Cowan - DHEd (A.T.Still University of Osteopathic Medicine and Health Professions)
Teaching Assistant Professor

CHAIR-WVU POTOMAC STATE (KEYSER CAMPUS)

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- Roger Carpenter - PhD (West Virginia University)
Associate Professor

DIRECTOR OF EVALUATION AND ACCREDITATION

- Catherine V. Nolan - EdD (West Virginia University)
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DIRECTOR, PHD PROGRAMS

- Laurie Theeke - PhD (West Virginia University)
Professor

DIRECTOR, MSN/DNP PROGRAMS

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DIRECTOR, CRNA PROGRAM

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Clinical Education Assistant Professor

DIRECTOR, UNDERGRADUATE PROGRAMS

- Joanne E. Watson - MSN (University of Virginia)
Clinical Education Assistant Professor

DIRECTOR OF SIMULATION

- Christy Barnhart - MSN (Waynesburg University)
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FACULTY

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- Jennifer Mallow - PhD (West Virginia University)
- Susan Newfield - PhD (Texas Tech University)
- Kari Sand-Jecklin - EdD (West Virginia University)
- Kesheng Wang - PhD (Augusta University)

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- Trisha Petite - PhD (West Virginia University)
- Suzy Walter - PhD (West Virginia University)

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- Marilyn Smith - PhD (University of Tennessee)

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- Lori Constantine - DNP (West Virginia University)
- Sandra Cotton - DNP (West Virginia University)
- Angel Smothers - DNP (West Virginia University)
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- Mike Frame - DMPNA (Marshall University)
- Susan McKenrick - MSN (West Virginia University)
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- Aaron Ostrowski - DNP (University of Pittsburgh)
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- Stephanie Young - MSN (West Virginia University)

CLINICAL INSTRUCTOR

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PNP Track Coordinator

CLINICAL EDUCATION PROFESSOR

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- P. Joy Maramba - DNP (West Virginia University)

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- Amy Coburn - PhD (West Virginia University)
- Jessica Matthews - MSN (West Virginia University)
- Danielle McGinnis - MSN (Waynesburg University)
- Amy Miner - MSN (Waynesburg University)
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- Joanne Watson - MSN (University of Virginia)

CLINICAL EDUCATION INSTRUCTOR

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- Amanda Edwards - MSN (West Virginia University)
- Katherine Hall - MSN (Duke University)
- Benjamin Klos - MSN (West Virginia University)
- Jaclyn Paugh - MSN (Marshall University)
- Brad Phillips - MSN (University of Toledo)
- Sarah Beth Stiles - MSN (Carlow University)
- Megan Weese - MSN (Duquesne University)
- Elizabeth Woodford - MSN (Excelsior College)
- Amber Ziese - MSN (Marshall University)

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- Terri Marcischak - DNP (West Virginia University)
- Diana L. McCarty - MSN (West Virginia University)
- Christine Mott - DNP (West Virginia University)
- Rebecca Smeltzer - DNP (Case Western Reserve University)
MSN Executive Focus/MBA Track Coordinator

COORDINATOR OF GLOBAL PROGRAMS

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Clinical Assistant Professor

LECTURERS

- Debbie Bellisario - MSN
- Francis Boyle - MSN (West Virginia University)
- Gina Greathouse - MSN (University of North Carolina)
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- Sarah Kennedy - BSN (West Virginia University)
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BECKLEY DIVISION - TENURE - ASSISTANT PROFESSOR

- Peggy Lambert Fink - PhD (West Virginia University)

BECKLEY DIVISION - CLINICAL EDUCATION ASSISTANT PROFESSORS

- Barbara Douglas - MSN (Wright State University)
- Mindy Harris - MSN (Marshall University)
- James Messer - MSN (University of Phoenix)
- Hillary Parcell - MSN (Marshall University)
- Crystal Sheaves - PhD (West Virginia University)
- Robin Spencer - MSN (Marshall University)

BECKLEY DIVISION - CLINICAL EDUCATION INSTRUCTOR

- Cynthia Clark - MSN (Chamberlain University)
- Dana Froble - MSN (Marshall University)
- Kelly Morton - MSN (Capella University)

BECKLEY DIVISION - LECTURER

- Debra Crowder
- Taylor Holland - BSN (West Virginia University)
- Kathleen Manchin - BSN (Marshall University)
- Nicole Messer - MSN (University of Phoenix)
- Kathy Talley
- Heather Wood - BSN (Liberty University)

CHARLESTON DIVISION-CLINICAL ASSISTANT PROFESSOR

- Jody Goard - DNP (Walden University)
- Jarena Kelly - DNP (West Virginia University)

- Laure Marino - DNP (The George Washington University)
- Teresa Ritchie - DNP (West Virginia University)

CHARLESTON DIVISION - CLINICAL EDUCATION ASSISTANT PROFESSOR

- Theresa Cowan - DHEd
- Veronica Gallo - PhD (West Virginia University)
- Evelyn Martin - DNP (West Virginia University)
- Melanie Whelan - PhD (West Virginia University)

CHARLESTON DIVISION-LECTURER

- Tracie Bonner - MSN (West Virginia University)

KEYSER DIVISION - ASSISTANT PROFESSOR

- April Shapiro - PhD (West Virginia University)

KEYSER DIVISION - CLINICAL EDUCATION INSTRUCTORS

- Heather Coddington - MSN (Capella University)
- Matthew Hottle - MSN (Walden University)
- Diana Niland - PhD (West Virginia University)
- Linda Shroyer - MSN (University of Maryland)

KEYSER DIVISION - LECTURER

- Mary Beth McCloud - PhD (Medical University of South Carolina)

DEAN EMERITUS

- Lorita Jenab - EdD (Columbia University)
- E. Jane Martin - PhD (University of Pittsburgh)

PROFESSOR EMERITUS

- Laurie Badzek - MSN/JD (University of DePaul)
- Susan Coyle - PhD (West Virginia University)
- June Larrabee - PhD (University of Tennessee)
- Nan Leslie - PhD (University of Pittsburgh)
- Susan H. McCrone - PhD (University of Utah)
- Gaynelle McKinney - MSN,ED (Indiana University)
- Georgia Narsavage - PhD (University of Pennsylvania)
- Alvita Nathaniel - PhD (West Virginia University)
- Barbara Nunley - PhD (University of Kentucky)

ASSOCIATE PROFESSOR EMERITUS

- Peggy Burkhardt - PhD (University of Miami)
Charleston Division
- Pamela Deiriggi - PhD (University of Texas)
- Imogene P. Foster - EdD (West Virginia University)
- Debra Harr - EdD (West Virginia University)
- Nancy A. Koontz - MSN (University of Maryland)
- Barbara Kupchak - PhD (University of Texas)
- Lois O'Kelley - MSN (Wayne State University)
- C. Lynn Ostrow - EdD (West Virginia University)
- Elisabeth Shelton - PhD (Widener University)
- Jane A. Shrewsbury - MN,ED (University of Pittsburgh)
- Patricia Simoni - EdD (West Virginia University)

ASSISTANT PROFESSOR EMERITUS

- Ann Cleveland - EdD (West Virginia University)
- Suzanne Gross - PhD (University of Texas)
- Dorothy M. Johnson - EdD (West Virginia University)

Degree Designation Learning Outcomes

BACHELOR OF SCIENCE IN NURSING (BSN)

Upon completion of the BSN program, graduates will:

CRITICAL THINKING: Employ scholarly inquiry and evidence-based reasoning and creativity in the process of assessment, interpretation, analysis, synthesis, evaluation, and inference as a basis for professional nursing practice.

NURSING INTERVENTIONS: Ensure quality care by applying theory, evidence-based clinical judgment and decision-making, and patient care technology in the delivery of safe and skilled nursing therapeutics with individuals, families, communities, and populations across the health-illness continuum.

PROFESSIONAL ROLE: Demonstrate knowledge, attitudes, professional values, personal qualities and behaviors consistent with the nursing roles of health care designer and coordinator, organization and system leader, and advocate for consumers and the nursing profession.

CARING: Provide empathetic, culturally sensitive, and compassionate care for individuals, families, communities, and populations that upholds moral, legal, and ethical humanistic principles.

COMMUNICATION: Integrate therapeutic, interpersonal, intraprofessional, interprofessional and informatics communication processes in professional nursing practice.

Academic Standards and Graduation Requirements

To be in good academic standing, students must:

- Maintain a cumulative grade point average of 3.0 or better in all college work attempted for pre-licensure programs and a 2.5 for RN-BSN students.
- Pass all nursing courses and non-nursing courses that count toward the degree with a grade of C or better

A student who receives a grade of D, F, or W in a required nursing course or pre- or co-requisite non-nursing course may repeat that course once and must earn a grade of C or better when the course is repeated. Students who repeat a nursing course or a pre- or co-requisite non-nursing course and earn a grade of D, F, or W will be dismissed from the school. A student may repeat only one nursing course. Students who do not maintain a cumulative GPA of 3.0 or better for pre-licensure programs and a 2.5 for the RN-BSN program will be placed on probation for one semester. Students on probation who do not raise their cumulative GPA to 3.0 or better for pre-licensure programs and a 2.5 for RN-BSN after one semester will be dismissed from the School of Nursing. Nursing courses and pre- and co-requisite courses in which students earn a grade of D, F, or W must be repeated prior to the student's progression to the next course(s) in the nursing sequence. Nursing courses must be repeated in the next fall or spring semester that the course is offered. Any general education course that is not a pre- or co-requisite of nursing courses and in which a grade of D or F has been earned must be repeated prior to graduation if it is to be counted toward graduation requirements.

The baccalaureate of science in nursing degree for the traditional BSN program is conferred upon completion of 122 hours and all required courses. The baccalaureate of science in nursing degree for the RN-BSN program is conferred upon completion of 120 hours and all required courses. The baccalaureate of science in nursing degree for the BS/BA-BSN second-degree students is conferred upon completion of 64 hours and all required courses.

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.

Bachelor of Science in Nursing, B.S.N.

Degree Offered

- Bachelor of Science in Nursing

Nature of the Program

The School of Nursing undergraduate program in nursing is recognized by health care agencies as providing excellent preparation for the nursing profession. Our graduates are in great demand and enjoy a large number of career opportunities. The BSN curriculum includes courses in the humanities, social sciences, basic sciences, and nursing science. The clinical component of nursing courses enables students to apply their learning to actual client, family, and community situations that warrant nursing intervention. The curriculum has been carefully designed to equip graduates to begin professional nursing practice with patients of all ages in any health care setting where there is a position for the professional nurse at the start of his or her career. The program also provides an excellent foundation for graduate study in nursing and in other fields.

The basic (traditional) baccalaureate program (BSN) is available for high school graduates who aspire to a career in nursing. The basic (traditional) BSN program can be completed in four years at WVU's Morgantown campus, at WVU Institute of Technology (Beckley), or at Potomac State College (Keyser).

Registered nurses can complete the BSN requirements online through a completely web-based RN-BSN program. Advising for the program can occur at WVU in Morgantown or at the Charleston division. Nursing courses for RN-BSN students are scheduled to provide opportunity for completion of degree requirements in three semesters of full-time study if non-nursing courses are already completed. The School of Nursing offers in-state tuition for all students enrolled in the RN-BSN program, regardless of residency.

A BS/BA to BSN accelerated (fast track) program is available for the college graduate with a bachelor's degree in a field other than nursing. Following eighteen months of continuous enrollment, students attain the BSN degree and are eligible to take the NCLEX-RN licensing examination. The BS/BA to BSN program is offered at WVU in Morgantown.

Further information about the BSN program or the MSN, DNP, and Ph.D. graduate programs in nursing may be obtained from the School of Nursing website at <http://nursing.hsc.wvu.edu/> or by contacting the WVU School of Nursing Office of Student Services, 6400 Health Sciences South, P.O. Box 9600, Morgantown, WV 26506-9600; telephone (304) 293-1386 or (toll free) 1-866-WVUNURS.

Criminal Background Checks

Students are required by clinical agencies to undergo a criminal background check and a drug screen prior to clinical experiences. Felony convictions, some serious misdemeanors, illicit drug use, or a positive drug screen may preclude participation in clinical rotations. This could, in turn, prevent the completion of clinical course requirements and completion of the nursing program.

Curriculum details are also available on the School of Nursing webpage: <http://nursing.hsc.wvu.edu/>.

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Nursing (<https://admissions.wvu.edu/academics/majors/nursing/>) major.

- Direct Admission to Basic Program (p. 895)
- Admission to Basic Program as Pre-Nursing or Other College Major (p. 896)
- Transfer (p. 896)

DIRECT ADMISSION TO BASIC (TRADITIONAL) BSN PROGRAM

Applicants are eligible to enter the BSN program as freshmen. Admission is based on a combination of high school grade point average and superscored composite ACT or total SAT scores. Students admitted directly into the nursing major as freshmen have until the end of summer session of the freshman year to complete the required freshman coursework with a grade of "C" or better.

High school students eligible for admission to the University may be admitted directly into nursing if they meet the following criteria (admission is also dependent upon space available):

- GPA of 3.8 or higher, + Math ACT score of 22 or SAT score of 540, + ACT Composite of 26 or SAT EBRW and Math of 1240
- GPA of 3.6-3.79 + Math ACT score of 22 or SAT score of 540, + ACT Composite of 28 or SAT EBRW and Math of 1310
- GPA refers to cumulative high school GPA

In addition, students must have completed the following high school credits required by the University:

UNITS (YEARS)

- 4 units of English (including courses in grammar, composition, and literature)
- 4 units of Social Studies/Fine Arts (any combination of Social Studies, Fine Arts or Humanities will fulfill the requirement; combination must include U.S. Studies/History)
- 3 units of college preparatory mathematics (units must be Algebra I or higher, Math I or higher and include Algebra II; Transitional Math for High School Seniors will also be accepted)

- 3 units of Science (recommended units include Biology, Chemistry, Physics, Anatomy and Environmental Science)
- 2 units of the same world language (American Sign Language is acceptable)

Priority application deadline is December 1st for the Morgantown campus.

Note: Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-date criteria (<http://nursing.hsc.wvu.edu/>).

ADMISSION TO GENERAL NURSING (PRE-NURSING)

If a student does not meet the nursing admission criteria to be directly admitted to the BSN program as a freshman, the student can apply for admission to Pre-Nursing.

To be admitted to the University as a general nursing (Pre-Nursing) major, high school students must meet the following criteria:

- GPA of 3.2 or higher + Math ACT score of 22 or SAT score of 540 + ACT Composite of 23 or SAT EBRW and Math of 1140
- GPA refers to cumulative high school GPA

ADMISSION TO THE BASIC (TRADITIONAL) BSN PROGRAM FROM GENERAL NURSING (PRE-NURSING) OR OTHER COLLEGE MAJOR

Pre-nursing students can apply for admission to the basic (traditional) BSN program as a sophomore after completion of at least one semester of college coursework with a minimum cumulative GPA of 3.0 and a C or better in all prerequisite freshman courses (dependent upon space available).

General nursing (Pre-Nursing) applicants are admitted to the School of Nursing as sophomores for either the Fall or Spring semesters. A completed application, including transcripts, for the basic (traditional) BSN program must be made by January 15 of the year the candidate wishes to be admitted for the fall semester and by May 15 to be admitted for the following spring semester. There are limited spaces available, and the best-qualified applicants are accepted. Applications are available online from the admissions website after December 1.

Students who have been dismissed from any nursing program (WVU or otherwise) are ineligible for admission to any of the WVU BSN programs; however, students who have received degrees or additional credentialing post-academic dismissal from a nursing program are eligible for admission to the BS/BA to BSN, RN-BSN, or graduate programs, provided they meet all other admission requirements and based on space available.

Note: Admission criteria are subject to change. Please see the School of Nursing website (<http://nursing.hsc.wvu.edu/>) for the most up-to-date criteria.

TRANSFER STUDENTS

Students with nursing credit from a nationally accredited nursing program in an accredited college or university are eligible for consideration for transfer admission by presenting a record of courses comparable to those required in this curriculum and meeting other School of Nursing admission requirements. These students must provide a statement of good standing from the nursing program in which they are currently enrolled. Acceptance and placement in the program are dependent on the individual's academic record and the number of spaces available. Transfer students must have a cumulative GPA of 3.0 for previous college coursework and must have earned at least a C in all nursing and pre- and co-requisite non-nursing courses, with no grade below a C in nursing courses. Only courses that are comparable to required courses in the BSN curriculum will be transferable. Nursing credits from a program that is not nationally accredited are not transferable. Transfer students are required to complete a transfer student orientation.

Acceptance and placement in the program is dependent on the individual's academic record and the number of spaces available in the program. Applications should be initiated three months prior to the beginning of the semester in which the applicant wishes to begin nursing courses. Transcripts and other required materials must be received no later than two months before the start of entering semester.

Students who have been dismissed from any nursing program (WVU or otherwise) are ineligible for admission to any of the WVU BSN programs; however, students who have received degrees or additional credentialing post-academic dismissal from a nursing program are eligible for admission to the BS/BA to BSN, RN-BSN, or graduate programs, provided they meet all other admission requirements and based on space available.

Note: Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-date criteria (<http://nursing.hsc.wvu.edu/>).

[Click here to view the Suggested Plan of Study \(p. 898\)](#)

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

ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Bachelor of Science in Nursing

A minimum GPA of 3.0 is required in all courses applied towards the degree.

Pre-requisite courses required with a grade of C- or better before enrollment in Sophomore nursing courses.

Choose one of the following (GEF 2B):		4
BIOL 102 & BIOL 104	General Biology and General Biology Laboratory	
BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory	
Choose one of the following (GEF 8):		4
CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 - Laboratory	
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory	
Choose one of the following (GEF 8):		4
CHEM 112 & 112L	Survey of Chemistry 2 and Survey of Chemistry 2 - Laboratory	
CHEM 116 & 116L	Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory	
ENGL 101	Introduction to Composition and Rhetoric (GEF 1)	3
PALM 107 or PSIO 107	Introduction to Human Anatomy and Physiology Introduction to Human Anatomy and Physiology	4
NSG 100	Introduction to Nursing	2
PSYC 101	Introduction to Psychology (GEF 4)	3
NSG 191	First-Year Seminar	1
Pre- or Co-requisites with enrollment of Sophomore courses. Must be completed with a C- or better.		
MATH 124	Algebra with Applications (GEF 3)	3
ENGL 102	Composition, Rhetoric, and Research (GEF 1)	3
MICB 200	Medical Microbiology	3
HN&F 171	Introduction to Human Nutrition (GEF 8)	3
PALM 207	Human Anatomy and Physiology 2	4
PSYC 241	Introduction to Human Development	3
STAT 211	Elementary Statistical Inference	3
SOCA 105	Introduction to Anthropology (GEF 7; is a pre or co-requisite to the first semester Junior year courses)	3
Nursing courses. Must be completed with a C- or better.		
NSG 211	Health Assessment & Communication	6
NSG 212	Foundations of Nursing Practice	6
NSG 250	Clinical Nursing Pharmacology	3
NSG 310	Maternal Infant Nursing & Women's Health Care	4
NSG 311	Alterations in Adult Health 1	6

NSG 312	Alterations in Adult Health 2	6
NSG 320	Child and Adolescent Health	4
NSG 350	Evidence Based Practice and Research	3
NSG 360	Ethics and Health Policy	3
NSG 411	Nursing in Complex Community Systems	7
NSG 412	Leadership in Complex Systems	7
NSG 450	Alterations in Mental Health	4
NSG 460	Care of the Critically Ill Patient	4
NSG 486	NCLEX Review	1
Select one of the following:		2
NSG 400	Spirituality and Health	
NSG 482	Palliative Care Nursing	
NSG 483	Holistic and Integrative Nursing	
NSG 484	Care of the Diabetic Patient	
NSG 485	Children With Complex Health Needs	
NSG 487	Movies and Mental Health	
NSG 488	Generics/Genomics in Health	
GEF Requirements 5 & 6		6
NSG 350, NSG 360, and NSG 411 will fulfill Writing and Communication Skills Requirement		
Total Hours		122

Suggested Plan of Study for Basic Nursing and Pre-Nursing Majors

Nursing courses must be taken in the sequence indicated in the Plan of Study and must be passed with a grade of C- or better before progressing to nursing courses in the next semester.

First Year

Fall	Hours	Spring	Hours
Select one of the following (GEF 8):		4 Select one of the following (GEF 8):	4
CHEM 111 & 111L		CHEM 112 & 112L	
CHEM 115 & 115L		CHEM 116 & 116L	
Select one of the following (GEF 2):		4 PALM 107	4
BIOL 102 & BIOL 104		ENGL 101 (GEF 1)	3
BIOL 115 & BIOL 116		STAT 211	3
NSG 100		2 PSYC 101 (GEF 4)	3
NSG 191		1	
MATH 124 (GEF3)		3	
	14		17

Second Year

Fall	Hours	Spring	Hours
PSYC 241		3 ENGL 102 (GEF 1)	3
PALM 207		4 HN&F 171 (GEF 8)	3
MICB 200		3 NSG 212	6
NSG 211		6 NSG 250	3
	16		15

Third Year

Fall	Hours	Spring	Hours
NSG 310		4 NSG 312	6
NSG 311		6 NSG 320	4
SOCA 105 (GEF 7)		3 NSG 360	3

NSG 350		3 GEF 5 or 6		3
		16		16
Fourth Year				
Fall	Hours	Spring		Hours
NSG 450		4 NSG 412		7
NSG 411		7 NSG 460		4
Nursing Elective		2 NSG 486		1
GEF 5 or 6		3		
		16		12

Total credit hours: 122

Major Learning Outcomes

BACHELOR OF SCIENCE IN NURSING

CRITICAL THINKING: Employ scholarly inquiry and evidence-based reasoning and creativity in the process of assessment, interpretation, analysis, synthesis, evaluation, and inference as a basis for professional nursing practice.

NURSING INTERVENTIONS: Ensure quality care by applying theory, evidence-based clinical judgment and decision-making, and patient care technology in the delivery of safe and skilled nursing therapeutics with individuals, families, communities, and populations across the health-illness continuum.

PROFESSIONAL ROLE: Demonstrate knowledge, attitudes, professional values, personal qualities and behaviors consistent with the nursing roles of health care designer and coordinator, organization and system leader, and advocate for consumers and the nursing profession.

CARING: Provide empathetic, culturally sensitive, and compassionate care for individuals, families, communities, and populations that upholds moral, legal, and ethical humanistic principles.

COMMUNICATION: Integrate therapeutic, interpersonal, intraprofessional, interprofessional and informatics communication processes in professional nursing practice.

Progression Requirements

DIRECT ADMISSION PROGRESSION REQUIREMENTS

All students in the basic (traditional) BSN program complete a common curriculum in the freshman year designed to provide the foundation for success in subsequent nursing courses. Students admitted directly to nursing as freshman must fulfill direct admission academic progression requirements to maintain advanced standing as a direct admission student and enter the sophomore level nursing courses. If students do not meet the standards in the freshman year, they will be moved to the Pre-Nursing major and will have the opportunity to enter the Pre-Nursing BSN program applicant pool for consideration for program re-entry and progression to the sophomore nursing courses.

Freshman year academic progression standards for direct admit students in the BSN program include:

- Maintaining good academic standing
- Completion of all prerequisite coursework with a C or better prior to the end of the summer term of the freshman year
- Maintaining a 3.0 overall GPA

Beginning in the 2021-2022 academic year, students directly admitted to the basic (traditional) BSN program will be required to have a 3.0 GPA or better at the end of the first semester, a cumulative 3.5 GPA or better at the end of the second semester of the freshman year, and complete all prerequisite courses with a C or better by the end of the summer semester of the freshman year in order to maintain advanced admission standing as a direct admit. If students do not meet the requirements in the freshman year, they will be moved to the Pre-Nursing major and will have the opportunity to enter the Pre-Nursing BSN applicant pool for consideration for program re-entry and progression to the sophomore nursing courses.

PRE-NURSING PROGRESSION REQUIREMENTS

Students admitted to Pre-Nursing complete a common curriculum in the freshman year designed to provide the foundation for success in subsequent nursing courses. While students are not required to maintain a GPA of 3.0 to remain in Pre-Nursing, any student who does not meet BSN admission requirements will not be eligible for admission to the BSN program. Pre-Nursing students must maintain good academic standing and a 2.5 GPA to stay in the Pre-Nursing major. If a student's GPA falls below 2.5, the student will be placed on probation for one semester. If the GPA remains below 2.5 in the next semester, the student will be dismissed from the Pre-Nursing major.

TRADITIONAL BSN AND BS/BA TO BSN PROGRESSION REQUIREMENTS

From entry into sophomore nursing courses to program completion, students must fulfill the following academic requirements to maintain good academic standing:

- must maintain an overall GPA of at least 3.0;
- must earn a C or better in required nursing courses, required pre- or co-requisite non-nursing courses, and all other courses counting toward the BSN degree;
- may repeat only once a nursing course or a required course in which a grade of D, F, W, or WU has been received;
- must complete with a C or better any required course in which a D, F, W, or WU has been received;
- may repeat only one nursing course throughout the curriculum.

Students who do not maintain an overall GPA of at least 3.0 will be placed on probation for one semester. Students who do not raise their GPA to 3.0 after one semester on probation will be dismissed from the School of Nursing.

The baccalaureate of science in nursing (BSN) degree for the traditional BSN program is conferred upon completion of the required 122 hours (per the progression plan), all required coursework, and community service and residency requirements.

RN-BSN PROGRESSION REQUIREMENTS

To maintain good academic standing, students:

- must maintain an overall GPA of at least 2.5;
- must earn a C or better in all required nursing and pre- or co-requisite non-nursing courses;
- must complete with a C or better any required course in which a grade of D, F, W, or WU has been received;
- may repeat only once a nursing course or any other required course;
- may repeat only one required nursing course in which a grade of D or F has been received.

Students who do not maintain an overall GPA of at least 2.5 will be placed on probation for one semester. Students who do not raise their GPA to 2.5 after one semester on probation will be dismissed from the School of Nursing.

The baccalaureate of science in nursing (BSN) degree for the RN-BSN program is conferred upon completion of the required 122 hours (per the progression plan), all required coursework, and community service and residency requirements.

BS/BA to BSN, B.S.N.

Degree Offered

- Bachelor of Science in Nursing

Nature of the Program

BS/BA TO BACHELOR OF SCIENCE

The BS-BA to BSN (fast track) program is an accelerated program for college graduates who wish to become a registered nurse with a bachelor's degree in nursing. It is designed for full-time study. After 18 months of continuous enrollment, successful students obtain the Bachelor of Science in nursing degree (BSN) and are eligible to take the licensing examination for registered professional nurses (NCLEX-RN).

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the BS/BA to BSN (<https://nursing.hsc.wvu.edu/students/undergraduate-programs/bsba-to-bachelor-of-science/>) major.

BS/BA TO BSN ADMISSION

Applicants for the BS/BA to BSN program must have a baccalaureate degree from an accredited college or university with an overall grade point average of 3.0, institutional grade point average of 3.0 and prerequisite GPA of at least 3.0.

The following prerequisite courses must be completed with a grade of C- or better prior to enrollment:

English Composition	6
Chemistry	3-4
Biology	3-4
Human Anatomy	3-4

Human Physiology	3-4
Microbiology	3-4
Statistics	3
Introductory Psychology	3
Introductory Sociology	3
Developmental Psychology Across the Lifespan	3
Human Nutrition	3
College Algebra	3

Application to the BS/BA to BSN program must be made by July 1 for admission to the program the following January. Acceptance and placement in the program are dependent upon space available in the program. There are limited spaces available and the most qualified applicants are accepted.

Application forms are available online after March 1 by from the admissions website. Students in the BS/BA to BSN program must meet the same academic standards as basic (traditional) BSN students and must complete the graduation requirements as specified for second-degree students.

Students entering the BSN or BS/BA to BSN program are required to participate in the WVU Health Sciences Center Student Computer Program. A laptop computer, will be issued to all students entering these programs. Please visit the School of Nursing website at <http://nursing.hsc.wvu.edu/academics/undergraduate-programs/bachelor-of-science/program-information/> for more information.

Students who have been dismissed from any nursing program (WVU or otherwise) are ineligible for admission to any of the WVU BSN programs; however, students who have received degrees or additional credentialing post-academic dismissal from a nursing program are eligible for admission to the BS/BA to BSN, RN-BSN, or graduate programs, provided they meet all other admission requirements and based on space available.

Note: Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-date criteria (<http://nursing.hsc.wvu.edu/>).

[Click here to view the Suggested Plan of Study \(p. 902\)](#)

The BS/BA to BSN Curriculum

Students must have earned a previous baccalaureate degree prior to enrollment in the BS/BA to BSN program. Students must have an institutional cumulative GPA of 3.0 or higher, a cumulative GPA of 3.0 or higher in required pre-requisite courses and an overall Institutional GPA of 3.0 or higher in all college level work ever attempted.

Students must maintain a cumulative GPA of 3.0 or higher through completion of degree.

All courses must be completed with a grade of a C- or better

NSG 211	Health Assessment & Communication	6
NSG 212	Foundations of Nursing Practice	6
NSG 250	Clinical Nursing Pharmacology	3
NSG 310	Maternal Infant Nursing & Women's Health Care	4
NSG 311	Alterations in Adult Health 1	6
NSG 312	Alterations in Adult Health 2	6
NSG 320	Child and Adolescent Health	4
NSG 350	Evidence Based Practice and Research	3
NSG 360	Ethics and Health Policy	3
NSG 411	Nursing in Complex Community Systems	7
NSG 412	Leadership in Complex Systems	7
NSG 450	Alterations in Mental Health	4
NSG 460	Care of the Critically Ill Patient	4
NSG 486	NCLEX Review	1
Select one of the following		2
NSG 480	Core Concepts in Gerontological Nursing	
NSG 482	Palliative Care Nursing	
NSG 483	Holistic and Integrative Nursing	
NSG 484	Care of the Diabetic Patient	
NSG 485	Children With Complex Health Needs	
NSG 487	Movies and Mental Health	

Total Hours

66

Suggested Plan of Study for BS/BA to BSN

First Semester	Hours
NSG 211	6
NSG 212	6
NSG 250	3
	15
Second Semester	Hours
NSG 310	4
NSG 311	6
NSG 350	3
	13
Third Semester	Hours
NSG 312	6
NSG 320	4
NSG 360	3
	13
Fourth Semester	Hours
NSG 411	7
NSG 450	4
Nursing Elective	2
	13
Fifth Semester	Hours
NSG 412	7
NSG 460	4
NSG 486	1
	12

Total credit hours: 66

Major Learning Outcomes

BACHELOR OF SCIENCE IN NURSING

CRITICAL THINKING: Employ scholarly inquiry and evidence-based reasoning and creativity in the process of assessment, interpretation, analysis, synthesis, evaluation, and inference as a basis for professional nursing practice.

NURSING INTERVENTIONS: Ensure quality care by applying theory, evidence-based clinical judgment and decision-making, and patient care technology in the delivery of safe and skilled nursing therapeutics with individuals, families, communities, and populations across the health-illness continuum.

PROFESSIONAL ROLE: Demonstrate knowledge, attitudes, professional values, personal qualities and behaviors consistent with the nursing roles of health care designer and coordinator, organization and system leader, and advocate for consumers and the nursing profession.

CARING: Provide empathetic, culturally sensitive, and compassionate care for individuals, families, communities, and populations that upholds moral, legal, and ethical humanistic principles.

COMMUNICATION: Integrate therapeutic, interpersonal, intraprofessional, interprofessional and informatics communication processes in professional nursing practice.

RN to BSN, B.S.N.

Degree Offered

- BS/BA to Bachelor of Science in Nursing

Nature of the Program

RN TO BACHELOR OF SCIENCE

The WVU School of Nursing RN to BSN program offers graduates of diploma and associate degree nursing programs the opportunity to complete requirements for the Bachelor of Science in Nursing degree (BSN) at the Charleston and Morgantown campuses. Nursing courses in the RN to BSN program are designed for completion in three semesters of full-time study. Alternate progression patterns are available for students needing to maintain 12 credit hours each semester and for students wishing to maintain part-time enrollment. All the courses are offered as web courses. The School of Nursing offers in-state tuition for all students enrolled in the RN-BSN program, regardless of residency.

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the RN to BSN (<https://online.wvu.edu/programs/nursing-r-n-to-b-s-n/>) major.

RN TO BSN PROGRAM ADMISSION

Registered nurses that graduated from accredited associate degree or diploma nursing programs are admitted directly to the School of Nursing and RN to BSN Program. Acceptance and placement in the program are dependent upon the individual's academic record and upon the number of spaces available. An active, unencumbered RN license and a grade point average of 2.5 or better on all college work attempted are required to be eligible for consideration.

New graduates from accredited associate degree or diploma nursing programs that have not yet taken the NCELX-RN can be provisionally admitted with the condition that an active, unencumbered RN license is obtained prior to the day that midterm grades are due during their first semester in the program. If the provision is not satisfied by the deadline, the student will be dismissed from the program.

The School of Nursing offers in-state tuition for all students enrolled in the RN-BSN program, regardless of residency.

All Registered Nurses will transfer 50 hours of undifferentiated nursing credit. All RN to BSN students will be required to complete ENGL101, ENGL 102, STAT 211, PSYC 101, PSYC 241, and SOCA 101 or SOCA 105 (if not already taken) to fulfill the requirements. Advisors will work with students to identify courses already appearing on the transcript and then develop a plan to fulfill any remaining requirements and the 120 credit hours required for graduation.

For example:

120 credits (minimum required to graduate)

~~-50~~ undifferentiated nursing credits for RN license

70 credits remaining

~~-28~~ credits RN-BSN nursing courses (See program of study)

42 general education credits remaining*

*General education credits may be fulfilled by course work from associate degrees or other college work. For more information about General Education Foundations; see link below. For more information about course equivalence please see the following website: Transfer Course Equivalency System (http://admissions.wvu.edu/admissions/university-requirements/transfer_equivalency/). **PLEASE NOTE: The last consecutive 30 enrolled credits must be taken at WVU in order to meet residency requirements for graduation.**

Students who have been dismissed from any nursing program (WVU or otherwise) are ineligible for admission to any of the WVU BSN program; however, students who have received degrees or additional credentialing post-academic dismissal from a nursing program are eligible for admission to the BS/BS to BSN, RN-BSN, or graduate programs, provided they meet all other admission requirements and based on space available.

Note: Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-date criteria (<http://nursing.hsc.wvu.edu/>).

[Click here to view the Suggested Plan of Study \(p. 905\)](#)

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

ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

RN to BSN Curriculum

All Registered Nurses will transfer 50 hours of undifferentiated nursing credit. All RN to BSN students will be required to meet WVU's General Education Foundations Curriculum (GEF). If a student already holds a bachelors degree in another discipline, you will be required to complete ENGL 101, ENGL 102, STAT 211, PSYC 101, PSYC 241, and SOCA 101 or SOCA 105 (if not already taken) to fulfill nursing requirements. Advisors will work with students to identify courses already appearing on the transcript that meet GEF requirements, and then develop a plan to fulfill any remaining requirements.

Student must have a cumulative GPA of 2.5 or higher on college work attempted and carry an overall GPA of 2.5 or higher throughout through completion of degree. Note that the last 30 credit hours taken for the degree MUST come from WVU in order to meet residency requirements.

Overall GPA of 2.5 or higher is required through completion of degree

Cumulative GPA of 2.5 or higher on college work attempted is required

Transfer Credits

Undifferentiated nursing transfer credit	50
GEF 2, 5, 6, 7, 8	16
Additional elective transfer credit *	8

Required Courses

Must be completed with a grade of C- or better

ENGL 101	Introduction to Composition and Rhetoric (GEF 1)	3
ENGL 102	Composition, Rhetoric, and Research (GEF 1) **	3
PSYC 101	Introduction to Psychology (GEF 4) **	3
PSYC 241	Introduction to Human Development (GEF 8) **	3
SOCA 101 or SOCA 105	Introduction to Sociology (GEF 8) ** Introduction to Anthropology	3
STAT 211	Elementary Statistical Inference (GEF 3) **	3
NSG 333	Ethics in Nursing	3
NSG 361	Health Assessment	3
NSG 362	Clinical Health Promotion	3
NSG 373	Leadership in Organizations	3
NSG 372	Safety, Quality, and Information Technology	2
NSG 461	Health Policy for Professional Nursing Practice	3
NSG 475	Applied Research and Evidence Based Practice	4
NSG 465	Foundations of Research and Evidence Based Practice	3
NSG 471	Community Health Nursing: Theory and Interventions	4
Total Hours		120

* Used to meet minimum total credits of 120 for the degree.

** Transfer credit equivalent to the specific course is allowed.

*** 120 credit hours are required by WVU for awarding of an undergraduate degree

Suggested Plan of Study for Full Time RN-BSN: 3 Semesters

First Semester	Hours
Transfer credit *	
GEF	3
NSG 333	3
NSG 361	3
NSG 362	3
	12
Second Semester	Hours
NSG 461	3
NSG 465	3
NSG 373	3
NSG 372	2
	11
Third Semester	Hours
NSG 471	4
NSG 475	4
	8
Total credit hours: 31	

* Completion of transfer credit or courses to fulfill GEF requirement and reach a total of 120 credits is required.

Suggested Plan of Study for Part-Time RN-BSN: 2 Years/5 Semesters

First Year					
Fall	Hours	Spring	Hours	Summer	Hours
Transfer credit. *		NSG 373		3 GEF	3
NSG 333		3 GEF		3	
NSG 361		3			
		6		6	3
Second Year					
Fall	Hours	Spring	Hours	Summer	Hours
NSG 362		3 NSG 465		3 NSG 475	4
GEF		3 NSG 372		2 NSG 471	4
GEF		3 NSG 461		3	
		9		8	8
Total credit hours: 40					

* Completion of transfer credit or courses to fulfill GEF requirement and reach a total of 120 credits is required.

Major Learning Outcomes

RN TO BACHELOR OF SCIENCE IN NURSING

CRITICAL THINKING: Employ scholarly inquiry and evidence-based reasoning and creativity in the process of assessment, interpretation, analysis, synthesis, evaluation, and inference as a basis for professional nursing practice.

NURSING INTERVENTION: Ensure quality care by applying theory, evidence-based clinical judgment and decision-making, and patient care technology in the delivery of safe and skilled nursing therapeutics with individuals, families, communities, and populations across the health-illness continuum.

PROFESSIONAL ROLE: Demonstrate knowledge, attitudes, professional values, personal qualities and behaviors consistent with the nursing roles of health care designer and coordinator, organization and system leader, and advocate for consumers and the nursing profession.

CARING: Provide empathetic, culturally sensitive, and compassionate care for individuals, families, communities, and populations that upholds moral, legal, and ethical humanistic principles.

COMMUNICATION: Integrate therapeutic, interpersonal, intraprofessional, interprofessional and informatics communication processes in professional nursing practice.

Pharmacy

Degree Offered

- Doctor of Pharmacy (PharmD)

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 (PharmD) program comprises four years of professional study preceded by a minimum of two years of pre-pharmacy study at an accredited U.S. or foreign college/university 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. Additionally, positions are available in various government agencies, the pharmaceutical industry, long-term care, nuclear pharmacy, home health-care organizations and numerous other areas. Pharmacists are eligible for commissions in the armed forces and the U.S. Public Health Service. Furthermore, pharmacists may prepare for careers in teaching and research.

The WVU School of Pharmacy also offers two PhD programs in Pharmaceutical and Pharmacological Sciences and Health Services and Outcomes Research.

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)

Pre-Pharmacy

Nature of the Program

The primary objective of the Doctor of Pharmacy (PharmD) program is to educate practitioners for current and future roles in the profession of pharmacy. The PharmD program comprises four years of professional study preceded by a minimum of two years of pre-pharmacy coursework in a U.S. or foreign accredited college/university of arts and sciences. To prepare for the professional curriculum, students must complete a pre-pharmacy curriculum that emphasizes the biological and chemical sciences. Additionally, pre-pharmacy students must complete a variety of courses of their choosing in the arts, humanities, and social sciences. Students enter a competitive application process in the year prior to intended matriculation to the four year professional curriculum. Details regarding the pre-pharmacy course requirements are found on the major tab.

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.pharmacas.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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Pre-Pharmacy Curriculum Requirements

Biochemistry Requirement

Select one of the following: 3

AGBI 410	Introductory Biochemistry
BIOC 339	Introduction to Biochemistry

Biology Requirement

BIOL 115 & BIOL 116	Principles of Biology and Principles of Biology Laboratory (May fulfill GEF 2) *	4
BIOL 101 & BIOL 102 & BIOL 103 & BIOL 104	General Biology and General Biology and General Biology Laboratory ** and General Biology Laboratory **	8
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
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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 or BIOL 235	Elementary Physiology Human Physiology	4
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Public Speaking Requirement

WVUE 270	Effective Public Speaking	3
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Statistics Requirement

STAT 211 or ECON 225	Elementary Statistical Inference Elementary Business and Economics Statistics	3
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General University Orientation Requirement

PHAR 191	First-Year Seminar	1
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General Education Foundations

GEF Requirements 5, 6, 7		9
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Total Hours		70
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* Select BIOL 115 OR BIOL 101-104. BIOL 115 is preferred.

** BIOL 101, 102, 103, and 104 are equivalent to BIOL 115.

*** PHAR 191 and PHAR 199 course registration restricted for Direct Admit Pathway students only.

SUGGESTED PLAN OF STUDY**First Year**

Fall	Hours	Spring	Hours
BIOL 115 & BIOL 116		4 BIOL 117 & BIOL 118	4
CHEM 115 & 115L		4 CHEM 116 & 116L	4
MATH Requirement		3-4 ENGL 101	3
WVUE 270		3 STAT 211 or ECON 225	3
PHAR 191 or WVUE 191 ^{***}		1 GEF #5 PHAR 199 ^{***}	3 1,2
	15-16		18-19

Second Year

Fall	Hours	Spring	Hours
Select one of the following: AEM 341 AEM 401 MICB 200		3 Select one of the following: AGBI 410 BIOC 339 CHEM 234	3 3
CHEM 233		3 CHEM 236	1
CHEM 235		1 BIOL 235 or PSIO 241	3-4
ENGL 102		3 GEF #7	3
ECON 201		3	
GEF #6		3	
	16		13-14

Total credit hours: 62-65

Physical Activity and Sport Sciences

Degree Offered

- Bachelor of Science

Nature of the Program

Students in athletic training, coaching and performance science, health and well-being, multidisciplinary studies, physical education and kinesiology, sport and exercise psychology, and sport management examine the relationship of play, games, sport, athletics, fitness, and dance to our culture and cultures throughout the world. Their preparation includes the acquisition of knowledge and skills from a vast array of movement activities in addition to an understanding of associated physiological, biomechanical, sociological, psychological, historical, philosophical, and pedagogical principles.

Graduates in health and well-being will matriculate to professional programs (nursing, AT, PT, OT) or alternative careers in community health and well-being. Graduates in physical education and kinesiology are generally employed in educational, community, and private organizations as health and/or physical education teachers, sport instructors and/or physical activity specialists. Graduates in sport and exercise psychology and sport management are employed with professional and collegiate sport enterprises, fitness centers, recreation programs, sporting goods stores, or commercial sporting goods manufacturers, or pursue graduate training. Coaching and performance science graduates are employed as coaches, strength and conditioning specialists or applied sport scientists, and work in the health and fitness industry. Athletic training graduates often work in high school, college, professional, and health/medical facilities to help treat and prevent injury. Students graduating with a degree in multidisciplinary studies work throughout the sport industry, as they are able to develop knowledge and skills across the domains studied within the college and beyond.

Programs

Baccalaureate programs offered in the College of Physical Activity and Sport Sciences (CPASS) include athletic training, coaching and performance science, health and well-being, multidisciplinary studies, physical education and kinesiology, physical activity and well-being, sport and exercise psychology, and sport management. The College of Physical Activity and Sport Sciences has available to students, minors including:

- personal training
- sport and exercise psychology
- sport communication
- strength and conditioning
- scholastic sport coaching
- adventure sport leadership

Facilities

The College of Physical Activity and Sport Sciences is housed on the Evansdale Campus in the Health and Education Building. This building has nine technology based classrooms, active learning center, three large seminar/conference rooms, research space, sport psychology consulting laboratory, teacher behavior laboratory, multipurpose instructional room, an instructional fitness lab, Office of Student Success and faculty offices. Courses are also taught at the indoor track and sports area in the Shell Building and WVU Student Recreation Center; outdoor areas including tennis courts, grass and turf fields, and the outdoor track.

Credit Load Per Semester

The minimum workload per semester for a full-time student is twelve hours and the maximum workload per semester is twenty hours. However, an advisor may register a student as a part-time student if fewer than twelve hours are required to meet all requirements for the bachelor's degree. Other exceptions to these regulations may be requested through discussion with one's advisor.

Physical Education Basic Instruction

Physical education classes are open to all students at the University. A wide variety of team, individual, and leisure sports and recreational activities in the form of aquatics, fitness, martial arts, and outdoor adventure are offered. The motto of the Basic Instruction Program is "Play to be fit, and be fit to play" so the aims of the program are to develop:

- An appreciation of the body and its capacity to move
- Movement skills of games, sport, dance, and aquatics
- An appreciation of the value of continued activity throughout all age periods in an individual's life
- An understanding of the cultural significance of sport and dance
- Concepts of the physiological characteristics of sport and movement

All courses numbered PE 101–293 are at a beginner’s level unless otherwise specified. Repeating an activity is not allowed except at a more advanced level.

ADMINISTRATION

DEANS OFFICE

- Jack Watson - Ph.D. (Florida State University)
Interim Dean

ASSOCIATE DEAN

- Valerie Wayda - Ed.D. (West Virginia University)
Undergraduate and Academic Affairs

PROGRAM COORDINATORS

- Scott Barnicle - Ph.D. (University of Idaho)
Sport and Exercise Psychology
- Allison Hetrick, ATC - M.S. (University of Cincinnati)
Athletic Training
- Gary Lhotsky - Ed.D. (Florida State University)
Sport Management
- Michael Ryan - Ph.D. (West Virginia University)
Coaching and Performance Science
- Jeremy Yeats - Ph.D. (University of Northern Colorado)
Physical Education and Kinesiology

PROFESSORS EMERITI

- William Alsop
- Dallas Branch
- Dana Brooks
- Linda Carson
- J. William Douglas
- Andrew Hawkins
- Lynn Housner
- Andrew C. Ostrow
- Robert Wiegand
- Bruce Wilmoth
- Daniel Ziatz

Degree Designation Learning Outcomes

BACHELOR OF SCIENCE (BS)

The mission of the College of Physical Activity and Sport Sciences is to prepare our 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 majors in Athletic Training, Coaching and Performance Science, Health and Well-being, Multidisciplinary Studies, Physical Education and Kinesiology, Sport and Exercise Psychology, 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 Bachelor of Science degree programs in CPASS

- Participate in professional development activities to become engaged professionals within their community and professional field of practice
- Demonstrate the ability to utilize technology to advance their professional growth and practice
- Engage in diverse thinking and generation of ideas with the goal of promoting critical inquiry
- Demonstrate professional program competencies, where appropriate, aligned with national accreditation agencies

- Apply knowledge to promote healthy lifestyles

College of Physical Activity and Sport Sciences Minors

The College of Physical Activity and Sport Sciences offers seven different minors. To complete any minor, students must notify their department to declare a minor.

- Adventure Sports Leadership (http://catalog.wvu.edu/undergraduate/minors/adventure_sports_leadership/)
- Group Fitness (http://catalog.wvu.edu/undergraduate/minors/group_fitness/)
- Personal Training (http://catalog.wvu.edu/undergraduate/minors/personal_training/)
- Scholastic Coaching (http://catalog.wvu.edu/undergraduate/minors/athletic_coaching/)
- Sport and Exercise Psychology (http://catalog.wvu.edu/undergraduate/minors/sport__exercise_psychology/)
- Sport Communication (http://catalog.wvu.edu/undergraduate/minors/sports_communication/)
- Strength and Conditioning (http://catalog.wvu.edu/undergraduate/minors/strength__conditioning/)

Specialized Accreditation

The Athletic Training program within the College of Physical Activity and Sport Science has specialized accreditation through the Commission on Accreditation of Athletic Training Education (CAATE).

The Physical Education and Kinesiology program within the College of Physical Activity and Sport Science has specialized accreditation through the National Council on Accreditation of Teaching Education.

Health and Well-Being, B.A., B.S.

Degree Offered

- Bachelor of Arts
- Bachelor of Science

Students may not earn a B.A. and a B.S. in Health and Well-being.

Nature of the Program

If you are passionate about helping others and have an interest in a health sciences related career then consider channeling that vocation into a career!

This program offers both an option for students who wish to pursue either a professional degree in health science or an alternative career pathway for those interested in community health and well-being. The curriculum pulls from several disciplines including psychology, physiology, biology, chemistry, kinesiology, and more. Students can choose to complete either a Bachelor of Arts or a Bachelors of Science in Health and Well-being. Students complete the same coursework in year 1. By year 2 students select the degree path that meets their professional aspirations.

The **B.S. Health and Well-being** is designed for students who aspire to be an effective part of a health care team. The major allows students to take the pre-requisite courses necessary to gain admission into these graduate level professional programs such as nursing, athletic training, physical and occupational therapy, chiropractic, or other allied health related professions. This is a great degree program for the person who wants to understand the underlying cause of disease, analyze human behavior, and identify and/or implement change. Students completing this degree option can complete an area of emphasis in:

- Therapeutic Exercise and Rehabilitation.

The **B.A. Health and Well-being** prepares students for careers in community health promotion and comprehensive individual lifestyle management. Through a combination of coursework and experiential learning, students will develop the essential knowledge and skills to provide leadership and problem-solving abilities to interact with individuals and communities to promote and maintain healthy lifestyles. The focus of this degree program is to student health and well-being from different perspectives including physical health/well-being, emotional and mental health/well-being, and a healthy environment/health policy. Students completing this degree option can complete an area of emphasis in:

- Adventure and Outdoor Learning
- Aquatic Physical Activity
- Fitness
- Recreational Sport.

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the BA/BS in Health and Well-Being (<https://admissions.wvu.edu/academics/majors/health-and-well-being/>) major.

- Incoming First-Time Freshmen and First-Time Transfer students are admitted directly to the Health and Well-being major.
- Students admitted from other majors within WVU must be in good academic standing (2.0 GPA).
- Students transferring from another institution must be in good academic standing (2.0 GPA).

Health and Well-Being, B.A.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

GEF 1, 2, 5, 6, 7 & 8 (may vary depending on overlap)		27
PASS 191	First-Year Seminar	1
Community Well-being		
PSYC 101	Introduction to Psychology (GEF 4)	3
MATH 121	Intro Concepts Of Mathematics (GEF 3)	3
PET 124	Human Body: Structure and Function	2
PET 125	Principles of Human Movement	2
PET 175	Motor Development	2
PET 244	Motor Learning and Performance	2
ACE 375	Lifestyle and Weight Management	3
Complete one of the following courses:		3
COMM 304	Argumentation	
COMM 306	Organizational Communication	
COMM 308	Nonverbal Communication	
COMM 317	Communication and Aging	
COMM 342	Interpersonal Relationships & Technology	
COMM 404	Persuasion	
Health and Well-being		
PASS 110	Introduction to Health and Well-being Professions	2
HN&F 171	Introduction to Human Nutrition (GEF 2)	3

PE 224	Enhancing Health and Well-being	2
PASS 300	Career Exploration in Physical Activity and Sport Sciences	3
Complete one of the following		3
COUN 303	Introduction to Helping Professions	
PASS 359	Mindfulness for Health and Well-being	
EXPH 365	Exercise Physiology 1	3
SEP 383	Exercise Psychology	3
SEP 415	Physical Activity Promotion	3
PASS 401	Foundations of Health Education	3
PASS 402	Core Concepts in Health Education	3
PASS 403	Program Design, Implementation, and Evaluation for Health Educators	3
PASS 489	Capstone Experience in PASS	3
Dimensions of Health and Well-being Electives		9
General Electives and/or AoE (may vary depending on overlap; must take enough credits to total 120 credits in the program)		29
Optional Area of Emphasis		
Adventure and Outdoor Learning		
Aquatic Physical Activity		
Fitness		
Recreational Sport		
Total Hours		120

DIMENSIONS OF HEALTH AND WELL-BEING ELECTIVES

Physical Health and Well-Being

ATTR 121	Sport Injury Control and Management	3
HN&F 126	Society and Food	3
RPTR 145	Recreation Services for Special Populations	3
FDST 200	Food Science and Technology	3
HN&F 200	Nutrition/Activity/Health	3
PE 229	Fitness and Wellness	2
PET 349	Health-Optimizing Physical Education	3
HN&F 350	Cross-Cultural Cuisine	3
ACE 374	Fitness Field Testing	3
ACE 472	Methods of Personal Training	3

No more than two of the following:

PE 124	Fitness Walking	
PE 125	Aerobics	
PE 164	Weight Training	
PE 165	Conditioning	
PE 202	Intermediate Yoga	
PE 203	Yoga for Health and Wellness	

Emotional/Mental Health and Well-Being

CDFS 110	Families Across the Life Span	3
CDFS 112	Introduction to Marriage and Family	3
BIOL 122	Human Sexuality	3
SOWK 147	Human Diversity	3
SOWK 151	Introduction to Social Work	3
SOCA 207	Social Problems in Contemporary America	3
GERO 212	Introduction to Gerontology	3
SOCA 221	Families and Society	3
COUN 240	Introduction to Addiction Studies	3
COUN 350	Families & Addiction	3
DISB 380	Disability and the Family	3

CDFS 413	Stress in Families	3
CDFS 414	Adolescent Problems and Disorders	3
CDFS 432	Early Socio-Emotional Development	3
Health Policy and Healthy Environment		
MDIA 101	Media and Society	3
LARC 105	Introduction to Landscape Architecture, Environmental Design and Planning	3
PHIL 130	Current Moral Problems	3
DSGN 140	Sustainable Living	3
ENVP 155	Elements of Environmental Protection	3
ECON 201	Principles of Microeconomics	3
POLS 210	Law and the Legal System	3
ADV 215	Principles of Advertising	3
POLS 220	State and Local Government	3
POLS 230	Introduction to Policy Analysis	3
DSGN 280	Sustainable Design and Development	3
DISB 381	Lifespan Disability Policy	3
DISB 385	Disability and Society	3
JRL 450	Writing for Health Promotion	3
ECON 465	Health Economics	3
DISB 482	Disability in the Community	2

Areas of Emphasis Offered:

- Adventure and Outdoor Learning (p. 917)
- Aquatic Physical Activity (p. 918)
- Fitness (p. 919)
- Recreational Sport (p. 921)

Adventure and Outdoor Learning Area of Emphasis

A minimum grade of C- is required in AOE coursework.

Skills Sequence Coursework		6
Whitewater Paddling		
ADRC 111	Introduction to Whitewater Rafting	
ADRC 112	Whitewater Rafting Techniques	
ADRC 211	Introduction to Whitewater Raft Guiding	
ADRC 212	Swiftwater Rescue	
ADRC 311	Whitewater Raft Trip Leadership	
Rock Climbing		
ADRC 121	Introduction to Rock Climbing	
ADRC 122	Rock Climbing Techniques	
ADRC 221	Lead Climbing	
ADRC 222	Climbing Rescue Techniques	
ADRC 321	Rock Climbing Instructor Development	
Aerial		
RPTR 325	Challenge Course Facilitation	
RPTR 326	Canopy Tour Facilitation	
ACE 454	Advanced Sport Instruction Techniques	3
PASS 489	Capstone Experience in PASS	3
Total Hours		12

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 PSYC 101 (GEF 4)	3
PASS 110		2 PET 125	2
PET 124		2 HN&F 171 (GEF 2)	3
PASS 191		1 GEF 2	3
PE 224		2 Dimension of Hlth/WB Elective	3
GEF 6		3 Elective	1
Elective		2	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 PET 244	2
MATH 121 (GEF 3)		3 Complete one of the following	3
PET 175		2 COUN 303	
GEF 5		3 PASS 359	
ADRC Skill Courses		2 GEF 7	3
Elective		3 Dimension of Hlth/WB Elective	3
		RPTR 325	3
		16	14

Third Year

Fall	Hours	Spring	Hours
PASS 300		3 Select one of the following:	3
ACE 375		3 COMM 304	
SEP 383		3 COMM 306	
Dimension Hlth/WB Elective		3 COMM 308	
Elective		3 COMM 317	
		COMM 342	
		COMM 404	
		EXPH 365	3
		PASS 401	3
		ACE 454	3
		RPTR 326	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
PASS 402		3 PASS 403	3
SEP 415		3 Capstone	6
GEF 8		3 PASS 489	
ADRC Skill Course		1 GEF 8	3
Electives		5 Elective	3
		15	15

Total credit hours: 120

Aquatic Physical Activity Area of Emphasis

A minimum grade of C- is required in AOE coursework.

PE 175	Lifeguard Training	2
PET 324	Water Safety Instructorships	2
ACE 482	Certified Pool Operator	3
ACE 483	Aquatic Exercise Professional	3

PASS 489	Capstone Experience in PASS	3
Total Hours		13

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 PSYC 101 (GEF 4)	3
PASS 110		2 PET 125	2
PET 124		2 HN&F 171 (GEF 2)	3
PASS 191		1 GEF 2	3
PE 224		2 Dimension Hlth/WB Elective	3
GEF 6		3 Elective	2
Elective		1	
		14	16

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 PET 244	2
MATH 121 (GEF 3)		3 Complete one of the following	3
PET 175		2 COUN 303	
GEF 5		3 PASS 359	
PE 175		2 GEF 7	3
Elective		3 Dimensions Hlth/WB Elective	3
		GEF 8	3
		16	14

Third Year

Fall	Hours	Spring	Hours
PASS 300		3 Complete one of the following	3
ACE 375		3 COMM 304	
SEP 383		3 COMM 306	
Dimension Hlth/WB Elective		3 COMM 308	
PET 324		2 COMM 317	
Elective		1 COMM 342	
		COMM 404	
		EXPH 365	3
		PASS 401	3
		ACE 482	3
		Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
PASS 402		3 PASS 403	3
SEP 415		3 PASS 489	6
GEF 8		3 GEF 8	3
ACE 483		3 Elective	3
Elective		3	
		15	15

Total credit hours: 120

Fitness Area of Emphasis

A minimum grade of C- is required in AoE coursework.

ACE 373	Fitness Management	3
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ACE 374	Fitness Field Testing	3
ACE 472	Methods of Personal Training	3
ACE 476	Fitness Internship	3
Total Hours		12

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 PSYC 101 (GEF 4)	3
PASS 110		2 PET 125	2
PET 124		2 HN&F 171 (GEF 2)	3
PASS 191		1 GEF 2	3
PE 224		2 Dimension Hlth/WB Elective	3
GEF 6		3 Elective	1
Elective		2	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 PET 244	2
MATH 121 (GEF 3)		3 Complete one of the following	3
PET 175		2 COUN 303	
GEF 5		3 PASS 359	
Dimension Hlt/WB Elective		3 GEF 7	3
Elective		2 GEF 8	3
		Elective	3
		16	14

Third Year

Fall	Hours	Spring	Hours
PASS 300		3 Complete one of the following	3
ACE 375		3 COMM 304	
SEP 383		3 COMM 306	
Dimension Hlth/WB Elective		3 COMM 308	
ACE 373		3 COMM 317	
		COMM 342	
		COMM 404	
		EXPH 365	3
		PASS 401	3
		ACE 374	3
		Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
PASS 402		3 PASS 403	3
SEP 415		3 PASS 489	3
GEF 8		3 GEF 8	3
ACE 472		3 ACE 476	3
Elective		3 Elective	3
		15	15

Total credit hours: 120

Recreational Sport Area of Emphasis

A minimum grade of C- is required in AOE coursework.

ACE 256	Principles and Problems of Coaching	3
ACE 310	Coaching Pedagogy	3
ACE 430	Coaching Education Administration	3
PASS 489	Capstone Experience in PASS	3
Total Hours		12

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 PSYC 101 (GEF 4)	3
PASS 110		2 PET 125	2
PET 124		2 HN&F 171 (GEF 2)	3
PASS 191		1 GEF 2	3
PE 224		2 Dimension Hlt/WB Elective	3
GEF 6		3 Elective	1
Elective		2	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 PET 244	2
MATH 121 (GEF 3)		3 Complete one of the following	3
PET 175		2 COUN 303	
GEF 5		3 PASS 359	
ACE 256		3 GEF 7	3
Elective		2 GEF 8	3
		Dimension Hlth/WB Elective	3
		16	14

Third Year

Fall	Hours	Spring	Hours
PASS 300		3 Complete one of the following	3
ACE 375		3 COMM 304	
SEP 383		3 COMM 306	
Dimension Hlth/WB Elective		3 COMM 308	
ACE 310		3 COMM 317	
		COMM 342	
		COMM 404	
		EXPH 365	3
		PASS 401	3
		ACE 430	3
		Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
PASS 402		3 PASS 403	3
SEP 415		3 PASS 489	6
GEF 8		3 GEF 8	3

Electives	6 Elective	3
	15	15

Total credit hours: 120

Major Learning Outcomes

HEALTH AND WELL-BEING

The goal of the program is for students to graduate with the essential skills and knowledge to work effectively within community and organizational physical activity and well-being settings.

- **Content Knowledge**- Students will demonstrate knowledge and disciplinary concepts related to physical activity and well-being.
- **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 for designing, implementing and evaluating physical activity and well-being programs that address individual's needs determined by various forms of assessment.
- **Professionalism and Ethics** - Students will demonstrate professional behaviors, including commitment to excellence, valuing diversity and collaboration, service to others, techniques for lifelong learning, or applying to graduate school and/or professional programs to help advance their careers.
- **Technology** - Students will be able to demonstrate the use of different forms of technology to assess skills and provide meaningful feedback.

Health and Well-Being, B.S.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

GEFs: 1, 5, 6, 7 (may vary)		15
PASS 191	First-Year Seminar	1
Pre-Health Professions		
PSYC 101	Introduction to Psychology (GEF 4)	3
BIOL 101 & BIOL 103	General Biology and General Biology Laboratory (GEF 2)	4
BIOL 102 & BIOL 104	General Biology and General Biology Laboratory (GEF 8)	4
MATH 124	Algebra with Applications (GEF 3)	3
Select one of the following:		4

CHEM 110 & CHEM 111 & CHEM 111L	Introduction to Chemistry and Survey of Chemistry 1 and Survey of Chemistry 1 - Laboratory	
OR		
CHEM 115 & 115L	Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory	
PALM 200	Medical Terminology	3
PSYC 241	Introduction to Human Development (GEF 8)	3
Complete one of the following:		4
PSIO 241	Elementary Physiology	
PSIO 441	Mechanisms of Body Function	
BIOL 235 & BIOL 236	Human Physiology and Human Physiology: Quantitative Laboratory	
PALM 300	Introduction to Pathology	3
PASS 319	Basic Human Anatomy	4
PASS 339	Professional Immersion in Health and Well-being	3
EXPH 364	Kinesiology	3
Health and Well-being		
PASS 110	Introduction to Health and Well-being Professions	2
HN&F 171	Introduction to Human Nutrition (GEF 8)	3
PE 224	Enhancing Health and Well-being	2
PASS 300	Career Exploration in Physical Activity and Sport Sciences	3
Select one of the following:		3
COUN 303	Introduction to Helping Professions	
SEP 425	Psychological Aspects of Sport Injury	
EXPH 365	Exercise Physiology 1	3
SEP 383	Exercise Psychology	3
SEP 415	Physical Activity Promotion	3
PASS 401	Foundations of Health Education	3
PASS 402	Core Concepts in Health Education	3
PASS 403	Program Design, Implementation, and Evaluation for Health Educators	3
PASS 489	Capstone Experience in PASS	3
General Electives (Student could complete an AoE; AoE credits count towards electives)		29
Total Hours		120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 BIOL 101 & BIOL 103 (GEF 2)	4
PSYC 101 (GEF 4)		3 MATH 124 (GEF 3)	3
BIOL 102 & BIOL 104 (GEF 8)		4 HN&F 171 (GEF 8)	3
PASS 110		2 PE 224	2
PASS 191		1 Elective	3
Elective		2	
		15	15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 PALM 200	3
CHEM 115 & 115L		4 PSIO 241	4
GEF 5		3 PSYC 241 (GEF 8)	3

Elective	3 Elective	3
Elective	2 Elective	2
<hr/>		
	15	15

Third Year

Fall	Hours	Spring	Hours
PASS 300		3 PASS 319	4
EXPH 365		3 PASS 339	3
SEP 383		3 EXPH 364	3
Elective or AoE		3 PASS 401	3
Elective		2 Elective or AoE	3
<hr/>			
	14		16

Fourth Year

Fall	Hours	Spring	Hours
PALM 300		3 PASS 403	3
PASS 402		3 SEP 425 or COUN 303	3
SEP 415		3 PASS 489	3
GEF 6		3 GEF 7	3
Elective or AoE		3 Elective or AoE	3
<hr/>			
	15		15

Total credit hours: 120

Area of Emphasis Offered:

- Therapeutic Exercise and Rehabilitation

Therapeutic Exercise and Rehabilitation Area of Emphasis

A minimum grade of C- is required in AoE coursework.

ATTR 121	Sport Injury Control and Management	3
ACE 469	Basic Strength/Condtnng-Coaches	3
ACE 473	Strength and Conditioning Coaching Techniques	3
ACE 487	Sport Specific Strngth/Condtnng	3
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Total Hours		12

Suggested Plan of Study**First Year**

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 BIOL 101 & BIOL 103 (GEF 2)	4
PSYC 101 (GEF 4)		3 MATH 124 (GEF 3)	3
BIOL 102 & BIOL 104 (GEF 8)		4 HN&F 171 (GEF 8)	3
PASS 110		2 PE 224	2
PASS 191		1 Elective	3
Elective		2	
<hr/>			
	15		15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 PALM 200	3
CHEM 115 & 115L		4 PSIO 241	4
ATTR 121		3 PSYC 241 (GEF 8)	3
GEF 5		3 GEF 6	3

Elective		1 Elective	3
		14	16
Third Year			
Fall	Hours	Spring	Hours
PASS 300		3 PASS 319	4
EXPH 365		3 PASS 339	3
SEP 383		3 EXPH 364	3
PASS 401		3 ACE 469	3
GEF 7		3 Elective	2
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
PALM 300		3 Select one of the following:	3
PASS 402		3 COUN 303	
SEP 415		3 SEP 425	
ACE 473		3 PASS 403	3
ACE 487		3 PASS 489	3
		Elective	3
		Elective	3
		15	15

Total credit hours: 120

Major Learning Outcomes

HEALTH AND WELL-BEING

1. Each student will demonstrate appropriate knowledge and competence in science and math based coursework.
2. Each student will communicate scientific information effectively through writing and speaking.
3. Each student will develop the professional attitudes, behaviors and skills needed to enroll in professional or graduate level degree granting programs.
4. Each student will recognize the requirements and criteria for being a competitive applicant for their health-related profession interest of choice, and reflect on their own level of competitiveness.

Coaching and Performance Science, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

This major prepares you for the dynamic industries of both high-performance athletics and recreational sport. As a profession, coaching has evolved well beyond merely teaching skills and strategy to athletes. Today, coaches need to evaluate and monitor athlete performance from the perspective of both a sport scientist and a sport pedagogist. The Coaching and Performance Science major is designed to prepare future coaches who will specialize in “on-field” coaching versus “off-field” coaching (e.g., strength and conditioning, athlete performance and recovery). Students will complete a concentration of coursework in one of three areas: Coaching and Leadership, Strength and Conditioning, or Applied Sport Science.

The Coaching and Leadership area focuses on the development of sport specific and underlying scientific content knowledge as well as the essential interpersonal and intrapersonal skills necessary for quality teaching and leadership within the sport context. The program challenges students to focus on their personal professional foundation and on-going development through the integration of applied sport science and hands-on application in coaching.

Strength and Conditioning area concentrates on the science of training, designing training prescriptions and the ability to coach both in and out of a weight room. Students participate in hands-on experiences performing and coaching strength exercises to peers as well as how to administer different strength and power tests in our instructional performance lab.

The Applied Sport Science area of emphasis focuses on athlete monitoring and performance assessment, allowing for an improved understanding of how athletes are responding to their training prescription and better overall steering of the training/recovery process. Students will participate in a variety

of hands-on learning opportunities in the WVU Rockefeller Neuroscience Institute's Human Performance Innovation Center; an applied sport science laboratory.

FACULTY

ASSOCIATE PROFESSORS

- Kristen Dieffenbach - Ph.D. (University of North Carolina - Greensboro)
- Valerie Wayda - Ed.D. (West Virginia University)

ASSISTANT PROFESSORS

- Samantha Ross - Ph.D. (University of Oregon)
- William (Guy) Hornsby III - Ph.D. (East Tennessee State University)

TEACHING ASSISTANT PROFESSOR

- Michael J. Ryan - Ph.D. (West Virginia University)
Program Coordinator
- Jeremy Yeats - Ph.D. (University of Northern Colorado)

ADJUNCT INSTRUCTORS

- Stephanie McWilliams - M.A. (Columbia University)
- Nancy Naternicola - M.S. (West Virginia University)
- Kimberly Zaph - M.S. (West Virginia University)

ASSOCIATE PROFESSOR EMERITUS

- Daniel Ziatz

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Coaching and Performance Science (<https://admissions.wvu.edu/academics/majors/coaching-and-performance-science/>) major.

Interested students are offered direct admission into the Coaching and Performance Science major. Across the first 3-4 semesters, students must complete a series of courses to meet Benchmark 1. Specifically, students must:

- Earn a grade of C- or higher in ACE 106, ACE 215, ACE 256, COMM 100 & COMM 102 (or COMM 104), HN&F 171, MATH 121 or STAT 111, PET 101, PET 124, PET 125, PET 175, PET 244;
- Achieve an overall GPA of 2.5 or higher.

Students who meet Benchmark 1 requirements can begin taking upper-level ACE prefix-courses (300 or higher) and other certification requirements to meet Benchmark 2 requirements. Specifically, students must:

- Earn a grade of C- or higher in ACE 310, ACE 410, ACE 468, ACE 469, and ACE 488;
- Submit documentation of Safe Sport certification.

Students who meet Benchmark 2 requirements complete remaining Coaching and Performance Science major requirements to graduate.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

COACHING AND PERFORMANCE SCIENCE

GEF Requirements (1, 2, 4, 6)	15
PASS 191 First-Year Seminar	1
Courses must be completed with a grade of C- or higher and an overall GPA of 2.5 or higher to meet Benchmark 1.	
Select one of the following (GEF 8):	3
COMM 100 & COMM 102 Principles of Human Communication and Fundamentals of Interpersonal Communication	
COMM 104 Public Communication	
ACE 106 Athletic Coaching Education	3
ACE 215 Sport for the Exceptional Athlete (GEF 7)	3
ACE 256 Principles and Problems of Coaching	3
HN&F 171 Introduction to Human Nutrition (GEF 2)	3
Select one of the following courses (GEF 3):	3
MATH 121 Intro Concepts Of Mathematics	
STAT 211 Elementary Statistical Inference	
PET 101 Games in American Culture (GEF 5)	3
PET 124 Human Body: Structure and Function	2
PET 125 Principles of Human Movement	2
PET 175 Motor Development	2
PET 244 Motor Learning and Performance	2
Courses must be completed with a grade of C- or higher and an overall GPA of 2.25 or higher to meet Benchmark 2.	
Select one of the following (GEF 8):	3
CDFS 110 Families Across the Life Span	
MATH 124 Algebra with Applications	
Select one of the following (GEF 8):	3
COMM 306 Organizational Communication	
COMM 316 Intercultural Communication	
ACE 265 Diversity and Sport	3
SEP 272 Psychological Perspectives of Sport	3
PASS 300 Career Exploration in Physical Activity and Sport Sciences	3
ACE 310 Coaching Pedagogy	3
EXPH 365 Exercise Physiology 1	3
ACE 410 Training Theories for Coaches	3
SM 426 Liability in Sport	3
ACE 468 Sport Movement Analysis	3
ACE 469 Basic Strength/Condtnng-Coaches	3
ACE 488 Practicum Coaching Exceptional Athletes	3
Complete one of the following Areas of Emphasis (AoE)	18
Coaching & Leadership	
Strength and Conditioning	
Applied Sport Science	

Electives (to reach 120 minimum for degree)	21
Proof of certifications *	
Total Hours	120

* Students must successfully take the four ACE and four PET prefix courses under Movement Science Block and earn a grade of C- or higher before taking any courses listed within the Coaching Pedagogy & Sport Science Block.

Areas of Emphasis Offered:

- Applied Sport Science (p. 928)
- Coaching and Leadership (p. 929)
- Strength and Conditioning (p. 930)

Applied Sport Science Area of Emphasis

STAT 211	Elementary Statistical Inference	3
EXPH 364	Kinesiology	3
ACE 453	Applied Sport Science Stats	3
ACE 457	Introduction to Sport Technology and Sport Science	3
ACE 458	Internship: Practicum & Data Collection	3
ACE 459	Internship: Practicum & Data Analysis	3
Total Hours		18

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 MATH 124 (GEF 8)	3
PET 101 (GEF 5)		3 PET 125	2
ACE 106		3 HN&F 171 (GEF 2)	3
PET 124		2 ACE 215 (GEF 7)	3
PET 175		2 GEF 2	3
PASS 191		1 Electives	2
		14	16

Second Year

Fall	Hours	Spring	Hours
Select one of the following (GEF 8):		3 STAT 211 (GEF 3)	3
COMM 100 & COMM 105		ACE 265	3
COMM 104		SEP 272	3
PET 244		2 COMM 306 or 316 (GEF 8)	3
ACE 256		3 Elective	3
GEF 4		3	
Electives		4	
		15	15

Third Year

Fall	Hours	Spring	Hours
PASS 300		3 ACE 310	3
EXPH 365		3 EXPH 364	3
ACE 457		3 ACE 469	3
ACE 468		3 ACE 488	3
Elective		3 Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 SM 426	3
ACE 410		3 ACE 459	3
ACE 453		3 GEF 6	3
ACE 458		3 Electives	6
Elective		3	
		15	15

Total credit hours: 120

Coaching and Leadership Area of Emphasis

LDR 201	Principles of Leadership	3
CDFS 412	Adolescent Development	3
CDFS 414	Adolescent Problems and Disorders	3
ACE 430	Coaching Education Administration	3
ACE 489	Practicum Coaching Youth Sport	3
ACE 491	Professional Field Experience	3
Total Hours		18

Suggested Plan of Study**First Year**

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 COMM 104 (GEF 8)	3
PET 101 (GEF 5)		3 PET 125	2
ACE 106		3 HN&F 171 (GEF 2)	3
PET 124		2 ACE 215 (GEF 7)	3
PASS 191		1 GEF 2	3
Elective		3 Elective	1
		15	15

Second Year

Fall	Hours	Spring	Hours
MATH 121 (GEF 3)		3 CDFS 110 (GEF 8)	3
PET 175		2 LDR 201	3
PET 244		2 ACE 265	3
ACE 256		3 SEP 272	3
GEF 4		3 COMM 306 or 316 (GEF 8)	3
Elective		2	
		15	15

Third Year

Fall	Hours	Spring	Hours
PASS 300		3 ENGL 102 (GEF 1)	3
ACE 310		3 ACE 469	3
EXPH 365		3 SM 426	3
ACE 468		3 ACE 488	3
Elective		3 Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ACE 410		3 CDFS 414	3
CDFS 412		3 ACE 491	3
ACE 430		3 GEF 6	3

ACE 489	3 Electives	6
Elective	3	
		<hr/>
		15
		<hr/>
		15

Total credit hours: 120

Strength and Conditioning Area of Emphasis

HN&F 200	Nutrition/Activity/Health	3
EXPH 364	Kinesiology	3
ACE 457	Introduction to Sport Technology and Sport Science	3
ACE 473	Strength and Conditioning Coaching Techniques	3
ACE 487	Sport Specific Strngth/Condtnng	3
ACE 475	Strength and Conditioning Internship	3

Total Hours		<hr/>	18
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Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 COMM 104 (GEF 8)	3
PET 101 (GEF 5)		3 HN&F 171 (GEF 2)	3
ACE 106		3 ACE 215 (GEF 7)	3
PET 124		2 STAT 211 or MATH 121 (GEF 3)	3
PASS 191		1 PET 125	2
Elective		3 Elective	1
		<hr/>	
		15	15

Second Year

Fall	Hours	Spring	Hours
MATH 124 (GEF 8)		3 HN&F 200	3
PET 175		2 ACE 265	3
PET 244		2 SEP 272	3
ACE 256		3 COMM 306 or 316 (GEF 8)	3
GEF 4		3 EXPH 364	3
Electives		2	
		<hr/>	
		15	15

Third Year

Fall	Hours	Spring	Hours
PASS 300		3 EXPH 365	3
ACE 310		3 ACE 469	3
ACE 468		3 ACE 488	3
ACE 457		3 GEF 2	3
Elective		3 Elective	3
		<hr/>	
		15	15

Fourth Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 SM 426	3
ACE 473		3 ACE 475	3
ACE 410		3 GEF 6	3
ACE 487		3 Electives	6
Elective		3	
		<hr/>	
		15	15

Total credit hours: 120

Major Learning Outcomes

COACHING AND PERFORMANCE SCIENCE

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 technical and tactical knowledge and concepts related to the pedagogy of coaching a variety of sports.
- **Reflection and Critical Thinking** – Students will demonstrate reflection and critical thinking in order to refine professional practice.
- **Programming and Assessment** – Students will demonstrate evidence-based knowledge for designing, implementing and evaluating practice plans that address individual student's needs determined by various forms of assessment.
- **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.

Multidisciplinary Studies

Degree Offered

- Bachelor of Multidisciplinary Studies (B.MdS.)

Nature of the Program

The CPASS Multidisciplinary Studies (MDS) program offers students the flexibility to create a program of study to meet their sport and physical activity related career aspirations. Students develop a breadth of knowledge in the areas of physical activity and sport sciences (PASS) by combining three minors of which two minors must be from CPASS.

The flexibility and potential course offerings available through this major will help students succeed in both traditional and non-traditional employment opportunities in sport and physical activity professions. CPASS offers students a variety of minors leading to an extensive number of career paths. It is important to know that the possibilities are only constrained by one's imagination.

The CPASS MDS provides:

- a personalized plan of study for the ideal career.
- students with the opportunity to turn their passion of physical activity or sport into a dream career.
- students with the academic flexibility to explore unique educational opportunities offered at the University.

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the CPASS Multidisciplinary Studies (<https://admissions.wvu.edu/academics/majors/multidisciplinary-studies-physical-activity-and-sport-sciences/>) major.

Interested students are admitted into the MDS-PASS major. Students must have a minimum overall GPA of 2.0 to graduate from WVU. Students who fall below this 2.0 GPA will be placed on academic probation and subject to additional requirements such as required meetings with academic advisers and a retention specialist, study halls and tutoring, meeting with peer advisers, and meetings with the CPASS academic standards committee.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Minimum GPA of 2.0

GEF Requirements	34
PASS 191 First-Year Seminar	1
PE Activities Courses	3
PASS 300 Career Exploration in Physical Activity and Sport Sciences *	3
A grade of C- or higher must be earned in all minor courses.	
CPASS Minor 1	15
CPASS Minor 2	15
Additional Minor	15
PASS 489 Capstone Experience in PASS	3
Electives (needed to reach 120 credit minimum)	31
Total Hours	120

* Students must meet the following benchmarks before taking PASS 300:

- Complete at least 18 credits of GEF coursework,
- Complete PASS 191 (or equivalent),
- Complete at least two credits of PE Activity coursework.

** No more than two practicums can be completed in any one semester of the MDS degree.

*** Students must complete at least 72 credit hours of 200-400 level coursework.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
PASS 191		1 GEF 2	4
GEF 1		3 GEF 6	3
GEF 5		3 GEF 8	3
GEF 7		3 PE Activity Course	1
PE Activity Course		1 Elective	3
Elective		3 Elective	1
		14	15

Second Year

Fall	Hours	Spring	Hours
GEF 3		3 GEF 1	3
GEF 4		3 PASS Minor 1	3
GEF 8		3 PASS Minor 1	3
GEF 8		3 PE Activity Course	1
Elective		3 Elective	3
		Elective	3
		15	16

Third Year

Fall	Hours	Spring	Hours
PASS 300		3 PASS Minor 1	3
PASS Minor 1		3 PASS Minor 2	3

PASS Minor 1	3	PASS Minor 2	3
PASS Minor 2	3	Minor 3	3
Elective	3	Elective	3
		15	15

Fourth Year

Fall	Hours	Spring	Hours
PASS Minor 2		3 PASS 489	3
PASS Minor 2		3 Minor 3	3
Minor 3		3 Minor 3	3
Minor 3		3 Elective	3
Elective		3 Elective	3
		15	15

Total credit hours: 120

Major Learning Outcomes

MULTIDISCIPLINARY STUDIES

The goals of the program is for students to graduate with the essential skills and knowledge necessary to prepare them for a career within the field of physical activity and sport sciences.

- to articulate issues relevant to physical activity and sport sciences.
- to understand the importance of interacting with their communities.
- to critically assess their marketability within the sport and physical activity industries.
- to develop personalized exposure to their career of interest.
- to build the propensity to acquire new knowledge and abilities which align with the accepted practice of a professional in physical activity and sport sciences.

Physical Education and Kinesiology, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

Physical Education and Kinesiology (PEK) program prepares students to teach, motivate, and shape the lives of Pre-K through adult learners in physical education, movement, wellness, and sport-based environments. The primary goal is to ensure our students understand the importance of and have the pedagogical skills to teach individuals to be physically literate or develop the ability to move with competence and confidence in a variety of different environments. Students can focus on physical education teaching certification where they will teach school physical education to individuals from preK-12th grades or students can focus on sport pedagogy and provide physical activity instruction to individuals across the developmental spectrum in commercial settings (i.e., YMCA, indoor and outdoor recreation centers/camps/resorts, fitness centers, campus recreation centers, aquatic centers, etc.). Students graduating in PEK are well prepared to deliver physical education and physical activity to individuals in school and community settings.

Program graduates are physical activity and wellness leaders in their school, communities, and states who promote healthy, active lifestyles for children and adults alike. The undergraduate PEK program is nationally accredited by the Council for the Accreditation of Educator Preparation (CAEP).

FACULTY

PROFESSOR

- Sean Bulger - Ed.D. (West Virginia University)
Associate Dean, Graduate Education

ASSOCIATE PROFESSOR

- Andrea Talliaferro - Ph.D. (University of Virginia)

ASSISTANT PROFESSORS

- Samantha Ross - Ph.D. (University of Oregon)
- 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)
Program Coordinator

PROFESSORS EMERITI

- Linda Carson
Ware Distinguished Professor
- Andrew Hawkins
- Lynn Housner
- Robert Wiegand

ASSOCIATE PROFESSOR EMERITUS

- Bruce Wilmoth

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Physical Education and Kinesiology (<https://admissions.wvu.edu/academics/majors/physical-education-and-kinesiology/>) major.

B.S. PHYSICAL EDUCATION AND KINESIOLOGY

Interested students are offered direct admission into the Physical Education and Kinesiology major. Across the first 3 semesters, students must complete a series of tasks to meet Benchmark 1. Specifically, students must:

- Earn a grade of C- or higher in PET 101, PET 124, PET 125, PET 167, PET 175, PET 244, PET 276;
- Achieve an overall GPA of 2.5 or higher;
- Take the Core Academic Skills for Educators (CORE) exam and submit scores;
- Earn ratings of "Acceptable" or better on the program's professionalism assessment;
- Satisfy all other requirements related to school access and safety (e.g., background checks, TB testing, minors on campus training).

Students who received passing scores on the CORE exam [a score of 156 or higher on Reading (test number or CDT Code 5712); a score of 162 or higher on Writing (test number or CDT Code 5722), and a score of 150 or higher on Mathematics (test number or CDT Code 5732)] will be in the **Physical Education Teaching track**. Students who took the CORE exam but did not receive passing scores in all three sub-areas will be in the **Sport Pedagogy track**. Students in the Sport Pedagogy track can continue to take the CORE exam until they receive passing scores. Students in both tracks must meet the requirements in Benchmark 2 by October 1st preceding the start of capstone experience in January. Benchmark 2 requirements are:

- Pass the Core Academic Skills for Educators (CORE) exam and submit scores;
- Pass the Physical Education (5091) PRAXIS II exam and submit scores; and,
- Complete and submit the WV Department of Education Student Teaching Permit.

Students in both tracks must meet Benchmark 3 before beginning coursework in the Capstone Experience. Students must

- Earn a grade of C- or higher in all PET and PASS courses;
- Achieve an overall GPA of 2.5 or higher;
- Earn ratings of "Acceptable" or better on the program's professionalism assessment; and,
- Satisfy all other requirements related to school access and safety (e.g., background checks, TB testing, minors on campus training).

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 GPA of 3.0, with no provisional admissions allowed. Additional criteria include acceptable performance on 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. 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 (2 PETE faculty and 1 academic adviser) and presented to the program faculty for a final admissions decision.

Click here to view the Suggested Plan of Study (p. 936)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

GEF (may vary depending on overlap)		29
PASS 191	First-Year Seminar	
ENGL 101	Introduction to Composition and Rhetoric (GEF 1)	
ENGL 102	Composition, Rhetoric, and Research (GEF 1)	
Foundations		16
PET 101	Games in American Culture (GEF 8; C- or higher required)	
PET 124	Human Body: Structure and Function (C- or higher required)	
PET 125	Principles of Human Movement (C- or higher required)	
PET 167	Introduction to Physical Education (C- or higher required)	
PET 175	Motor Development (C- or higher required)	
PET 244	Motor Learning and Performance (C- or higher required)	
PET 276	Special Physical Education (C- or higher required)	
PET CORE Block *		54
All students must earn a minimum grade of C- required in all PET and PASS CORE Block courses.		
And all students must maintain a minimum GPA of 2.5 or higher each semester.		
PET 228	Curriculum in Physical Education (Fulfills Writing and Communication Skills Requirement)	
PET 233	Pedagogy Theory and Application	
PET 346	Teaching Physical Activities 1	
PET 347	Teaching Physical Activities 2	
PET 349	Health-Optimizing Physical Education	
PET 350	Teaching Primary Physical Education	
PET 369	Teaching K-2 Physical Education	
PET 379	Teaching 3-5 Physical Education	
PET 441	Technology in Physical Education	
PET 447	Teaching Physical Activities 3 (Fulfills Writing and Communication Skills)	

PET 449	Teaching Physical Activities 4	
PET 477	Adapted Physical Education Practicum	
EXPH 365	Exercise Physiology 1	
RDNG 422	Reading in the Content Areas	
SPED 304	Special Education in Contemporary Society (GEF 4)	
PASS 401	Foundations of Health Education	
PASS 402	Core Concepts in Health Education	
PASS 403	Program Design, Implementation, and Evaluation for Health Educators	
Minor or Electives		9
Capstone Experience		12
Students complete one of the following tracks:		
Track 1 Physical Education Teaching **		
C&I 491	Professional Field Experience	
PET 487	Student Teaching: K-5 Physical Education	
PET 488	Student Teaching: 6-12 Physical Education	
PET 489	Student Teaching Seminar	
Track 2 Sport Pedagogy		
PET 491	Professional Field Experience	

Total Hours 120

- * Must meet Benchmark 1 to take PET CORE Block:
1. Earn a grade of C- or higher required in PET 101, PET 124, PET 125, PET 167, PET 175, PET 244, PET 276.
 2. Achieve an overall GPA of 2.5 or higher.
 3. Take Praxis I CORE exam and submit scores.
 4. Earn ratings of "Acceptable" or better on the program professionalism assessment in PET 276.
 5. Satisfy all other requirements related to school access and safety (e.g., background checks, TB testing, minors on campus training).
- ** Must meet Benchmark 2 by October 1st of Secondary School block coursework in order to be eligible for Track 1 Physical Education Teaching for Capstone Experience:
1. Pass all three sections of the Praxis I CORE exam and submit scores.
 2. Pass the Praxis II (5091) exam and submit passing scores.
 3. Complete and submit the WV Department of Education Student Teaching Permit.
- Students in Track 1 are required to complete, submit, and pass the edTPA assessment to complete their teacher education program, and to be recommended to the state of West Virginia for certification.
- *** Must meet Benchmark 3 prior to enrolling in the Capstone Experience courses, students must:
1. Earn a grade of C- or higher in all PET and PASS courses.
 2. Achieve an overall GPA of 2.5 or higher.
 3. Earn ratings of "Acceptable" or better on the program professionalism assessment across all Professional Block courses.
 4. Satisfy all other requirements related to school access and safety (e.g., background checks, TB testing, minors on campus training).

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
PET 124		2 PET 125	2
PET 167		3 PET 244	2
ENGL 101 (GEF 1)		3 GEF 3	3
PET 101 (GEF 8)		3 GEF 5	3
GEF 6		3 GEF 7	3
PASS 191		1 GEF 8	3
		15	16

Second Year

Fall	Hours	Spring	Hours
PET 175		2 PET 228	3
PET 276		2 PET 233	4

ENGL 102 (GEF 1)	3	PET 349	3
SPED 304 (GEF 4)	3	EXPH 365	3
GEF 2B	4	PASS 403	3
	14		16

Third Year

Fall	Hours	Spring	Hours
PET 350		2 PET 346	3
PET 369		3 PET 347	3
PET 379		3 PET 441	3
RDNG 422		3 PASS 402	3
PASS 401		3 Minor or Electives	4
Minor or Electives	1		
	15		16

Fourth Year

Fall	Hours	Spring	Hours
PET 447		3 PET 487 or 491	3
PET 449		3 PET 488 or 491	3
PET 477		3 PET 489 or 491	2
Minor or Electives		4 C&I 491 or PET 491	4
GEF 8		3	
	16		12

Total credit hours: 120

RECOMMENDATION FOR TEACHER CERTIFICATION

Students in Track 1 Physical Education Teaching must satisfy the following WV certification requirements for Physical Education, preK-adult.

1. Students must pass the Core Academic Skills for Educators (CORE) and PRAXIS II (5091 exam) in physical education prior to student teaching.
2. Students are required to complete, submit, and pass the edTPA assessment to complete their teacher education program, and to be recommended to the state of West Virginia for certification.

Note. Students interested in teaching in another state will need to meet their certification requirements. The inclusion of School Health courses is designed to prepare students for certification in Health following receipt of their initial certification in Physical Education.

Accelerated B.S./M.S. Degree Requirements

Minimum cumulative GPA of 3.0 is required.

GEF Requirements		22
PASS 191	First-Year Seminar	1
ENGL 101	Introduction to Composition and Rhetoric (GEF 1)	3
ENGL 102	Composition, Rhetoric, and Research (GEF 1)	3
Pre-Major Requirements		
PET 101	Games in American Culture	3
PET 124	Human Body: Structure and Function	2
PET 125	Principles of Human Movement	2
PET 167	Introduction to Physical Education	3
PET 175	Motor Development	2
PET 244	Motor Learning and Performance	2
PET 276	Special Physical Education	2
Major Requirements		
PET 228	Curriculum in Physical Education	3
PET 233	Pedagogy Theory and Application	4
PET 346	Teaching Physical Activities 1	3
PET 347	Teaching Physical Activities 2	3
PET 349	Health-Optimizing Physical Education	3

PET 350	Teaching Primary Physical Education	2
PET 369	Teaching K-2 Physical Education	3
PET 379	Teaching 3-5 Physical Education	3
PET 441	Technology in Physical Education	3
PET 447	Teaching Physical Activities 3	3
PET 449	Teaching Physical Activities 4	3
PET 477	Adapted Physical Education Practicum	3
PET 487	Student Teaching: K-5 Physical Education	3
PET 488	Student Teaching: 6-12 Physical Education	3
PET 489	Student Teaching Seminar	2
EXPH 365	Exercise Physiology 1	3
PASS 401	Foundations of Health Education	3
PASS 402	Core Concepts in Health Education	3
PASS 403	Program Design, Implementation, and Evaluation for Health Educators	3
RDNG 422	Reading in the Content Areas	3
SPED 304	Special Education in Contemporary Society (GEF 4)	3
C&I 491	Professional Field Experience	4
Total Hours		111

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
PET 101		3 PET 125	2
PET 124		2 PET 244	2
PET 167		3 GEF 3	3
ENGL 101 (GEF 1)		3 GEF 5	3
PASS 191		1 GEF 7	3
GEF 6		3 Minor or Elective	3
		15	16

Second Year

Fall	Hours	Spring	Hours
PET 175		2 PET 228	3
PET 276		2 PET 233	4
ENGL 102 (GEF 1)		3 PET 349	3
SPED 304		3 EXPH 365	3
GEF 2		4 PASS 403	3
		14	16

Third Year

Fall	Hours	Spring	Hours	Summer	Hours
PET 350		2 PET 346		3 PET 545	3
PET 369		3 PET 347		3 PET 565	3
PET 379		3 PET 441		3 PET 573	2
RDNG 422		3 PET 576		2	
PASS 401		3 PET 581		3	
		PASS 402		3	
		14		17	8

Fourth Year

Fall	Hours	Spring	Hours	Summer	Hours
PET 447		3 C&I 491		4 PET 515	3
PET 449		3 PET 587		3 PET 580	3
PET 477		3 PET 588		3 PET 585	2
PET 575		2 PET 589		2	

PET 583	3		
	14	12	8

Total credit hours: 134

NOTE: See Graduate Catalog for Master's degree requirements (M.S. in Physical Education Teacher Education, Accelerated Program).

Major Learning Outcomes

PHYSICAL EDUCATION AND KINESIOLOGY

THE GOAL OF THE PROGRAM IS FOR STUDENTS TO POSSESS THE SKILLS TO TEACH, MOTIVATE, AND SHAPE THE LIVES OF PREK TO ADULT LEARNERS IN PHYSICAL EDUCATION, MOVEMENT, WELLNESS, AND SPORT-BASED ENVIRONMENTS.

- **Content Knowledge** – Students will demonstrate knowledge and disciplinary concepts related to the promotion of physical education and physical activity.
- **Reflection and Critical Thinking** – Students will demonstrate reflection and critical thinking in order to refine professional practice.
- **Programming and Assessment** – Students will demonstrate evidence-based knowledge and skills (and best practices) for assessing student needs and for designing, implementing and evaluating lesson plans and programs.
- **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 enhance and assess student learning.

Sport and Exercise Psychology, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

If you would like to combine your love of sports and fitness with an interest in psychology, then you have found the perfect major. This program is designed to help students understand the impact of the mind on performance across many different performance based domains such as sport, performing arts, business, and the military.

Students interested in pursuing a career in sport and exercise psychology know that most jobs will require that they must first complete a graduate degree before entering the job market. Thus, the primary mission of the undergraduate major in sport and exercise psychology is to prepare students for graduate studies across a number of related disciplines. This program provides students with elective options that have allowed them to meet the entrance requirements necessary to be successful gaining admission into graduate programs related to sport and exercise psychology, counseling, physical therapy, occupational therapy, public health, public administration, exercise science, sport management, business, law, and many other disciplines.

What makes the undergraduate major in sport and exercise psychology unique? First, it is the only major of its kind in the state of West Virginia and one of the few undergraduate programs in the nation that allows students to specialize in sport and exercise psychology. Second, the curriculum contains a number of exciting and innovative courses, such as the Social Psychology of Sport, Performance Enhancement, Exercise Psychology, the Psychological Aspects of Sport Injury, Physical Activity promotion, and African Americans in Sport. Several of the courses in the curriculum can be used to meet requirements of the university's General Education Foundation program. Third, through our major's club and professional development courses, students will interact with graduate students in our highly acclaimed doctoral program, meet leading professionals in the field, attend student and professional conferences, have opportunities to conduct research, and participate in other student-centered professional and social activities. Further this program has six faculty members dedicated to providing a quality learning experience for students. Students often pursue employment to use their sport psychology training to help them work with athletes of all ages and ability levels, business executives, the military, and other related settings.

FACULTY

PROFESSORS

- Jack Watson - Ph.D. (Florida State University)
Interim Dean, CPASS
- Samuel Zizzi - Ed.D. (West Virginia University)
Associate Dean, Research

ASSOCIATE PROFESSOR

- Peter Giacobbi - Ph.D. (University of Tennessee - Knoxville)

ASSISTANT PROFESSORS

- Johannes Raabe - Ph.D. (University of Tennessee)
- Dana Voelker - Ph.D. (Michigan State University)

TEACHING ASSISTANT PROFESSOR

- Scott Barnicle - Ph.D. (University of Idaho)
Program Coordinator

PROFESSORS EMERITI

- Dana D. Brooks
- Edward Etzel, Jr.
- Andrew Ostrow

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Sport and Exercise Psychology (<https://admissions.wvu.edu/academics/majors/sport-and-exercise-psychology/>) major.

All students are directly admitted into the SEP program. However, to be eligible to take upper level SEP courses (SEP Professional Block), students must meet the following benchmark criteria:

- SEP 210 (Need a grade of B or better)
- SEP 271 (Need a grade of B or better)
- SEP 272 (Need a grade of B or better)
- PSYC 101 (Need a grade of C or better)
- SOCA 101 (Need a grade of C or better)
- Minimum required GPA – 2.5 Cumulative GPA

Click here to view the Suggested Plan of Study (p. 941)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Minimum GPA of 2.5 required.

Minimum grade of C- in all required courses unless otherwise noted.

GEF 1, 5, & 6 (may vary depending on overlap)		12
PASS 191	First-Year Seminar	1
Benchmark Requirements *		
Must maintain at least a 2.5 GPA.		
SEP 210	Professional Issues in Sport and Exercise Psychology 1 (Minimum grade of B-)	1
SEP 271	Sport in American Society (Minimum grade of B-; GEF 8)	3
SEP 272	Psychological Perspectives of Sport (Minimum grade of B-; GEF 4)	3
PSYC 101	Introduction to Psychology (Minimum grade of C-)	3
SOCA 101	Introduction to Sociology (Minimum grade of C-)	3
Applied Area Requirements		
ACE 256	Principles and Problems of Coaching	3
ATTR 121	Sport Injury Control and Management	3
COUN 303	Introduction to Helping Professions	3
EXPH 364	Kinesiology	3
EXPH 365	Exercise Physiology 1	3
MATH 124	Algebra with Applications (GEF 3, Minimum grade of D-)	3
PET 175	Motor Development	2
SEP 373	African Americans in Sports (GEF 7)	3
SEP 312	Professional Issues in Sport Psychology 3	1
SEP 383	Exercise Psychology	3
SEP 385	Social Psychology of Sport	3
SEP 425	Psychological Aspects of Sport Injury	3
SEP 474	Sport Studies Research Methods	3
Select one of the following:		3
SEP 493	Special Topics	
SEP 420	Sport Performance Enhancement	
SEP 415	Physical Activity Promotion	
SEP 430	Cross Cultural Perspectives in Sport and Society	
Foundation Requirements		
BIOL 102 & BIOL 104	General Biology and General Biology Laboratory (GEF 2)	4
PSYC 241	Introduction to Human Development (GEF 8)	3
PSYC 251	Introduction to Social Psychology (GEF 8)	3
PSYC 281	Introduction to Abnormal Psychology	3
Sociology (SOCA) 200-400 Level Elective		3
Electives (to reach 120 minimum for degree)		39
Total Hours		120

* Students must complete all Benchmark Requirements with appropriate grades, maintain at least a 2.5 GPA in order to move on and take upper-level SEP courses.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 BIOL 102 & BIOL 104 (GEF 2)	4
PSYC 101		3 PSYC 241	3
SOCA 101		3 SEP 271 or 272	3
SEP 272 or 271		3 SEP 210	1

GEF 6		3 GEF 5	3
PASS 191		1	
		16	14
Second Year			
Fall	Hours	Spring	Hours
ACE 256		3 PSYC 281	3
ENGL 102 (GEF 1)		3 ATTR 121	3
MATH 124 or 122 (GEF 3)		3 PET 175	2
PSYC 251		3 GEF 7	3
Elective or Minor Course		3 Elective or Minor Course	4
		15	15
Third Year			
Fall	Hours	Spring	Hours
COUN 303		3 EXPH 365	3
EXPH 364		3 SEP 385	3
SEP 312		1 SEP 425	3
SEP 383		3 Elective or Minor Course	6
Sociology Elective 200 level		3	
Elective or Minor Course		3	
		16	15
Fourth Year			
Fall	Hours	Spring	Hours
SEP 415		3 SEP 474	3
Elective or Minor Course		12 Elective or Minor Course	11
		15	14

Total credit hours: 120

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 for a career in the field of sport and exercise psychology and to help them gain admission into graduate school in a program of their choice. This is a graduate school preparatory program, with students attending graduate programs in sport and exercise psychology, exercise science, human services, and public health fields.

- **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 student needs and for designing, implementing and evaluating performance across domains.
- **Professionalism and Ethics** - Students will demonstrate professional behaviors, including commitment to excellence, valuing diversity and collaboration, service to others, techniques for lifelong learning, and will develop the knowledge and skills necessary to allow them to be successful with regard to applying to graduate school to help advance their careers.
- **Technology** - Students will be able to demonstrate the use of different forms of technology to assess skills and provide meaningful feedback.

Sport Management, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

Since its inception in 1981, the WVU Sport Management undergraduate program has prepared students to work behind the scenes of the sport industry, one of the fastest growing industries in the US.

The curriculum has received national and international recognition as one of the best of its kind. Students are required to complete a minimum of three credit hours of internship. This “hands-on” experience is mutually beneficial, as the internship provides the student an opportunity to learn the sport business while the sport organization evaluates a potential future employee. In essence, the internship has become the cornerstone of a student’s

learning experience. The curriculum is multidisciplinary. Students are required to complete courses from many other schools and colleges across campus including Journalism, Communications, Business and Economics, and Arts and Sciences. There are five full-time faculty dedicated to making your academic experiences within the College of Physical Activity and Sport Sciences the best they can possibly be.

FACULTY

ASSOCIATE PROFESSORS

- Gonzalo Bravo - Ph.D. (Ohio State University)
- Dennis Floyd Jones - Ph.D. (University of Pittsburgh)
- Cindy Lee - Ph.D. (The Ohio State University)

TEACHING ASSOCIATE PROFESSOR

- Gary Lhotsky - Ed.D. (Florida State University)
Program Coordinator

TEACHING ASSISTANT PROFESSOR

- Justin Wartella - Ph.D. (University of Nevada-Las Vegas)

ADJUNCT INSTRUCTORS

- Tangel Cheatham - M.Ed. (University of Oklahoma)
- Grant Dovey - M.S. (West Virginia University)
- Christopher Miller - J.D. (West Virginia University)
- Sandra West - M.S. (University of Miami)

ASSOCIATE PROFESSOR EMERITUS

- Dallas Branch

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Sport Management (<https://admissions.wvu.edu/academics/majors/sport-management/>) major.

Direct Admission Criteria

Incoming freshmen students who have earned a high school overall gpa of a 3.0 and an ACT score of 21 or higher or a SAT score of 1080 or higher (combined Evidence Based Reading/Writing and Math) will be directly admitted into the major.

Transfer students must meet the following requirements for direct admission into the major. They must have a 2.6 or higher gpa with 30 or more credit hours completed.

If students do not meet the minimum requirements for direct admission, they will be admitted into the pre-sport management major. They will be eligible for admission into the Sport Management major after completing at least 30 credit hours with an overall gpa of 2.6 or higher.

All students must be admitted to Sport Management major in order to being eligible to take upper level (300/400) Sport Management courses.

[Click here to view the Suggested Plan of Study \(p. 945\)](#)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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.

Curriculum Requirements

A grade of C- or higher must be earned in all courses unless otherwise noted.

A minimum GPA of 2.5 is required in all courses.

GEF 1, 2, 5, & 6 (may vary depending on overlap)	12
PASS 191 First-Year Seminar	1
Pre-major Requirements	
ENGL 101 Introduction to Composition and Rhetoric (Minimum grade of C-)	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	
Select one of the following (C- or Higher):	3
ACCT 200 Survey of Accounting	
ECON 200 Survey of Economics	
ECON 201 Principles of Microeconomics	
MDIA 101 Media and Society (GEF 8, C- or higher)	3
SM 167 Introduction to Sport Management (B- or higher)	3
Applied Area Requirements	
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 370 Sport Finance and Economics	3
SM 375 Sport in the Global Market (GEF 7)	3
SM 380 History and Philosophy of Sport	3
SM 387 Issues in Sport Studies	3
SM 425 Sport Facility and Event Management	3
SM 426 Liability in Sport	3
SM 485 Sport Management	3
SM 486 Sport Marketing & Sales	3
SM 491 Professional Field Experience	3
BCOR 350 Principles of Marketing	3
BCOR 370 Managing Individuals & Teams	3
CS 101 Intro to Computer Applications (GEF 2)	4
COMM 306 Organizational Communication	3
Select one of the following:	3
ECON 200 Survey of Economics	
ECON 201 Principles of Microeconomics	

ACCT 200	Survey of Accounting	
PR 215	Introduction to Public Relations	3
Advisor Approved Electives		6
Minor Courses or Free Electives		23
20 Hours of community service documented through iServe		
Pre-Assessment of SM knowledge completed		
Post-Assessment of SM knowledge completed		
Total Hours		120

ADVISOR APPROVED ELECTIVES

ACE 256	Principles and Problems of Coaching	3
ADV 215	Principles of Advertising	3
COMM 316	Intercultural Communication	3
DISB 385	Disability and Society	3
ECON 202	Principles of Macroeconomics	3
LDR 201	Principles of Leadership	3
PHIL 212	Philosophy of Sport	3
POLS 240	Introduction to Public Administration	3
RPTR 142	Introduction to Recreation, Parks and Tourism	2
SM 275	The Olympic Games	3
SOWK 147	Human Diversity	3

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 (GEF 8):		3 ECON 200, 201, or ACCT 200	3
COMM 100 & COMM 102		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 ACCT 200, ECON 200, or ECON 201	3
Select one of the following (GEF 3):		3 BCOR 350 or 370	3
MATH 121		SM 350	2
MATH 124		SM 355	1
COMM 306		3 SM 380	3
SEP 272 (GEF 8)		3 Elective or Minor Course	3
GEF 2		3	
		15	15

Third Year

Fall	Hours	Spring	Hours
BCOR 370 or 350		3 SM 370	3
SM 340		3 SM 375 (GEF 7)	3
SM 345		2 Elective or Minor Course	9
SM 491		3	

Elective or Minor Course	3		
	14		15
Fourth Year			
Fall	Hours	Spring	Hours
SM 387		3 SM 486	3
SM 425		3 SM 491	3
SM 426		3 Elective or Minor Course	8
SM 485	3		
Elective or Minor Course	3		
	15		14

Total credit hours: 120

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
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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			9
				15	

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 to work effectively within the profession of sport management. This is a very diverse profession with many different opportunities.

- **Content Knowledge**- Students will demonstrate knowledge and disciplinary concepts related to 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 for designing, implementing and evaluating sport management programs that address individual's needs determined by various forms of assessment.
- **Professionalism and Ethics** - Students will demonstrate professional behaviors, including commitment to excellence, valuing diversity and collaboration, service to others, techniques for lifelong learning, or applying to graduate school and/or professional programs to help advance their careers.
- **Technology** - Students will be able to demonstrate the use of different forms of technology to assess skills and provide meaningful feedback.

Public Health

Degree Offered

- Bachelor of Science

Nature of the Program

The School of Public Health offers two Bachelor of Science degree programs: BS in Public Health and BS in Health Services Management and Leadership (HSML) which are typically completed in a four-year period. .

BS IN PUBLIC HEALTH OVERVIEW

The Public Health program allows students to select from three Areas of Emphasis, which is a track or focus area within the degree. Every student must complete at least one Area of Emphasis from the following: 1) Community and Population Health, 2) Public Health Sciences, or 3) Patient Navigation.

Graduates of the Public Health program are prepared for entry-level positions in a wide array of agencies involved in public and private health, including local, regional and state health departments, consulting and advocacy organizations, healthcare organizations, and government agencies, as well as entry into select graduate and professional programs. The selected Area of Emphasis can help students better prepare to meet specific professional goals.

BS IN HEALTH SERVICES MANAGEMENT AND LEADERSHIP

Students in this program will acquire the knowledge and skills to become health services managers, who oversee day-to-day operations; set and carry out policies, goals, and procedures; evaluate the quality of the staff's work; and develop reports and budgets for health-related and clinical agencies and departments.

The HSML program will provide students with an understanding of public and population health, as well as specific courses preparing them for entry level positions in health services management and administration, or for further professional education.

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, Sweden)
Associate Professor, Department of Social and Behavioral Sciences

DIRECTOR FOR 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; 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

Admissions

BS IN PUBLIC HEALTH

The WVU School of Public Health (SPH) admits students into the Bachelor of Science in Public Health program via direct admission for both first time freshmen and external transfers for fall and spring semesters. Additionally, WVU students may transfer into School of Public Health undergraduate programs if they meet the academic standards. Please see program-specific catalog page for admission requirements.

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Public Health (<https://admissions.wvu.edu/academics/majors/public-health/>) major.

Degree Designation Learning Outcomes

Bachelor of Science in Public Health

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

1. Demonstrate a strong foundation of knowledge about the history, philosophy, core values, concepts, and functions of public health in the US and globally.
2. Determine appropriate public health processes, approaches, and interventions needed to address health-related needs and concerns of specific populations.
3. Illustrate how socio-economic, behavioral, biological, and environmental factors impact human health, contribute to health disparities, and can be affected by promotion and protection programs.
4. Communicate public health information to diverse audiences through a variety of mediums.
5. Apply evidence-based and ethical approaches to identifying, collecting, using, analyzing, and disseminating public health data and information.
6. Differentiate the basic concepts of legal, ethical, economic, and regulatory dimensions of health and how they influence the US health system and public health policy.

Areas of Emphasis

Community and Population Health Area of Emphasis

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

1. Demonstrate the key aspects of communicating, promoting and advocating for health.
2. Apply appropriate theories, methods, strategies, and policies to health protection and promotion programs that target specific populations.

Public Health Sciences Area of Emphasis

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

1. Illustrate how biological, environmental, and occupational factors impact the health status of individuals and populations.
2. Apply biostatistical and epidemiologic methods to identify and analyze public health issues.

Patient Navigation Area of Emphasis

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

1. Demonstrate effective communication skills with members of the patient care team, including those that may not traditionally be included in this team (e.g., social workers, food pantries, transportation, childcare)

2. Summarize how quality of life and care can be improved via multiple systems and processes.
3. Implement chronic disease management techniques and constructs.

Bachelor of Science in Health Services Management and Leadership

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

1. Demonstrate a strong foundational knowledge of the history, principles, theories, frameworks, and current issues in public health.
2. Describe health and health care dynamics, including the structures, policies, processes and institutions that make up the U.S. healthcare system.
3. Manage the basic human, fiscal, and physical resources needed for accomplishing organizational goals.
4. Articulate a personal management philosophy that integrates health services management and leadership concepts, knowledge, and skills.
5. Apply principles and practices of health services management and leadership to identify and solve organizational problems.

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.

Health Services Management and Leadership, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

Health service managers are typically responsible for planning, coordinating and directing the delivery of quality service to those receiving services in hospitals, clinics, and other health-related organizations. This includes responsibility for many of the operational duties in these settings, including overseeing the training and recruitment of staff, following and maintaining budgetary and fiscal records, and managing daily operations.

This program aims to be certified by the Association of University Programs in Health Administration (AUPHA) in the future. Certified undergraduate programs are recognized for having withstood the rigors of peer review in which curricula, faculty, and educational outcomes are critically examined by peer review. External stakeholders look at certification as a way to distinguish a program from its peers.

PREPARING STUDENTS FOR FUTURE OPPORTUNITIES

Graduates of the Bachelor of Science in Health Services Management and Leadership program can expect to be employed in clinical/administrative healthcare, health services, and population health settings (like health departments) and to be strong candidates for Master of Public Health and Master of Health Administration programs.

Admissions

The WVU School of Public Health (SPH) admits students into the Bachelor of Science in Health Services Management and Leadership program for fall and spring semesters.

NEW FRESHMAN ADMISSIONS

Students are eligible for **direct freshman admission** into the Health Services Management and Leadership program if they meet these minimum guidelines:

- 3.0 Cumulative High School GPA **and** minimum ACT score of 21 (superscored)

OR

- 3.0 Cumulative High School GPA **and** minimum, SAT of 1080 (superscored)

Students are eligible for admission into **Pre-Health Services Management and Leadership** program in the School of Public Health if they meet these minimum guidelines:

- 3.0 Cumulative High School GPA and a minimum ACT score of 19 (superscored)

OR

- 3.0 Cumulative High School GPA and a minimum SAT score of 1010 (superscored)

EXTERNAL TRANSFER STUDENTS

Students who have completed undergraduate credits at another institution wishing to transfer into WVU and the Health Services Management and Leadership program who meet the transfer admission requirements of a **minimum cumulative GPA of 3.0** should apply to WVU as transfer students and will be accepted directly into the program by WVU Admissions.

INTERNAL (WVU) STUDENTS WISHING TO CHANGE THEIR MAJOR

Students who have completed at least one semester of undergraduate coursework at WVU or another institution of higher education prior to seeking admission to the Health Services Management and Leadership program are eligible if they 1) meet the admission requirements of a **minimum cumulative GPA of 3.0** and 2) **meet with an SPH advisor** or attend a public health information session.

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

A cumulative GPA of 3.0 is required.

General Education Foundations Requirements		34
First Year Seminar		
PUBH 191	First-Year Seminar	1
Core Foundational Coursework		
PUBH 101	Introduction to Public and Community Health	3
PUBH 200	Introduction to Public Health Careers and Information	1
PUBH 201	Global Perspectives of Public Health	3
PUBH 202	Social Determinants of Health	3
PUBH 205	Writing for Public Health Audiences	3
PUBH 211	Biostatistics for Population Health	3
PUBH 222	Epidemiology for Public Health	3
PUBH 233	The US Healthcare System: Structures and Incentives	3
Health Services Management and Leadership Major		
PUBH 230	Introduction to Health Administration	3
PUBH 258	Terminology and Communication for Health Professionals	3
PUBH 311	Health Research Data Management and Reporting	3
PUBH 331	Introduction to Health Policy	3
PUBH 338	Public Health Project Management	3
PUBH 438	Managing Quality Improvement in Healthcare	3

PUBH 439	Financials Tools for Health Administration	3
PUBH 440	Health Systems Leadership	3
PUBH 464	Ethical, Legal and Financial Issues in Healthcare	3
Select one of the following:		3
PUBH 260	Principles of Patient Navigation	
PUBH 325	Introduction to Injury Prevention	
PUBH 334	Emergency Preparedness for Public Health	
PUBH 337	Climate Change and Public Health	
PUBH 427	Introduction to Outbreak Investigation	
Required Field Experience and Capstone Courses		9
Minimum grade of C- is required.		
PUBH 400	Field Placement Preparation Seminar	
PUBH 482	Health Management Internship	
PUBH 489	School of Public Health Undergraduate Capstone	
General Electives		24
Total Hours		120

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
PUBH 191		1 PUBH 201	3
PUBH 101		3 PUBH 202	3
PUBH 200		1 GEF 3	3
General Education/Minor/General Electives		9 General Education/Minor/General Electives	6
		14	15

Second Year

Fall	Hours	Spring	Hours
PUBH 211		3 PUBH 205	3
PUBH 233		3 PUBH 222	3
ENGL 101		3 ENGL 102	3
General Education/Minor/General Electives		6 General Education/Minor/General Electives	6
		15	15

Third Year

Fall	Hours	Spring	Hours
PUBH 230		3 PUBH 258	3
PUBH 331		3 PUBH 311	3
PUBH 338		3 PUBH Elective	3
General Education/Minor/General Electives		6 General Education/Minor/General Electives	6
		15	15

Fourth Year

Fall	Hours	Spring	Hours
PUBH 400		1 PUBH 440	3
PUBH 438		3 PUBH 482	6
PUBH 439		3 PUBH 489	2
PUBH 464		3 General Education/Minor/General Electives	4
General Education/Minor/General Electives		6	
		16	15

Total credit hours: 120

Major Learning Outcomes

HEALTH SERVICES MANAGEMENT AND LEADERSHIP

Graduates of the Health Services Management and Leadership program will:

1. Demonstrate a strong foundational knowledge of the history, principles, theories, frameworks, and current issues in public health.
2. Describe health and health care dynamics, including the structures, policies, processes and institutions that make up the U.S. healthcare system.
3. Manage the basic human, fiscal, and physical resources needed for accomplishing organizational goals.
4. Articulate a personal management philosophy that integrates health services management and leadership concepts, knowledge, and skills.
5. Apply principles and practices of health services management and leadership to identify and solve organizational problems.

Public Health, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

Public health is one of the fastest growing majors in undergraduate education and covers the five core public health disciplines: biostatistics, environmental health sciences, epidemiology, health policy and management, and social and behavioral sciences.

The public health major emphasizes problem solving skills, critical thinking, practical application, career exploration and an understanding of both clinical- and population-based ethics. Early in the program, students will build a strong foundation of knowledge in the natural and social sciences and become familiar with cultural and socioeconomic differences among populations. Further study will provide students with the knowledge and skills needed to identify evidence-based techniques for disease prevention and promotion of health, both in the US and from a global perspective.

Graduates of the public health program are prepared for entry-level public health positions in a wide array of agencies involved in public and private health, including local, regional and state health departments, consulting and advocacy organizations, healthcare organizations, and government agencies, as well as entry into select graduate and professional programs. An Area of Emphasis (AOE) is a focus area within the degree. Every student must complete at least one Area of Emphasis. The selected Area of Emphasis can help students better prepare to meet specific professional goals.

AREAS OF EMPHASIS (AOE)

Each Area of Emphasis comprises 15 credit hours, typically completed during the last two years in the program.

The **Public Health Sciences Area of Emphasis** prepares students for entry level positions dealing with occupational and environmental health, as well as entry into graduate programs in public health sciences (specifically epidemiology, environmental and occupational health and biostatistics [with additional math/stats courses]).

The **Community and Population Health Area of Emphasis** prepares students to sit for the Community Health Education Certification (CHES) exam and for entry level positions in program management and community health education, as well as entry into graduate programs in the social sciences, policy and administration, and public health graduate programs.

The **Patient Navigator Area of Emphasis** prepares students to become members of health care teams that help individuals overcome barriers to quality care, including access, literacy, transportation and more. Patient Navigators (PNs) assist individuals in reducing and eliminating barriers to health care access and in negotiating complex health delivery systems. Typically, PNs are employed by health delivery systems, including primary care, specialty care and managed care.

Admissions

Due to Covid-19 – Admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Public Health (<https://admissions.wvu.edu/academics/majors/public-health/>) major.

GUIDELINES FOR THE SCHOOL OF PUBLIC HEALTH'S UNDERGRADUATE PROGRAM

The WVU School of Public Health (SPH) admits students into the Bachelor of Science in Public Health program for fall and spring semesters.

New Freshman Admissions

Students are eligible for **direct freshman admission** if they meet these minimum guidelines:

- 2.75 Cumulative High School GPA
- **AND**
- ACT and SAT test scores that meet or exceed WVU minimum standards

Students are eligible for admission into the Center for Learning, Advising and Student Success and the **pre-public health** program if they meet these minimum guidelines:

- 2.00 Cumulative High School GPA
- **AND**
- ACT and SAT test scores that meet or exceed WVU minimum standards

Internal (WVU) transfer students who have completed undergraduate coursework at WVU or another institution of higher education prior to applying to the Public Health major are eligible if they meet the following minimum guidelines and attend a public health information session:

- 2.5 Cumulative Undergraduate GPA

External transfer students

Students who have completed undergraduate credits at another institution wishing to transfer into WVU who meet the transfer admission GPA should apply to WVU as transfer students and will be accepted directly into the program by WVU Admissions.

- 2.5 Cumulative Undergraduate GPA

Click the link below to view the corresponding AOE requirements and Suggested Plans of Study.

- Community and Population Health (p. 958)
- Patient Navigation (p. 957)
- Public Health Sciences (p. 956)

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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research 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

Students are required to maintain a cumulative and major GPA of 2.5

General Education Foundations Requirements		34
Core Foundational Coursework		
PUBH 191	First-Year Seminar	1
PUBH 101	Introduction to Public and Community Health	3
PUBH 200	Introduction to Public Health Careers and Information	1

PUBH 201	Global Perspectives of Public Health	3
PUBH 202	Social Determinants of Health	3
PUBH 205	Writing for Public Health Audiences	3
PUBH 211	Biostatistics for Population Health	3
PUBH 222	Epidemiology for Public Health	3
PUBH 233	The US Healthcare System: Structures and Incentives	3
Discipline-Specific Selectives		9
Select three of the following:		
PUBH 243	Issues in Environmental Health	
PUBH 331	Introduction to Health Policy	
PUBH 352	Introduction to Social and Behavioral Science and Practice	
PUBH 338	Public Health Project Management	
Public Health Issues Selectives		6
Select two of the following:		
PUBH 230	Introduction to Health Administration	
PUBH 260	Principles of Patient Navigation	
PUBH 325	Introduction to Injury Prevention	
PUBH 427	Introduction to Outbreak Investigation	
PUBH 334	Emergency Preparedness for Public Health	
PUBH 337	Climate Change and Public Health	
PUBH 458	Public Mental Health	
Culminating Experience Coursework		
PUBH 400	Field Placement Preparation Seminar	1
PUBH 489	School of Public Health Undergraduate Capstone	2
Select one of the following: *		4
PUBH 481	Public Health Field Experience	
PUBH 486	Patient Navigation Agency Rotation	
Area of Emphasis Requirements		15
Electives		26
Community Service Requirement **		
Total Hours		120

* Students in Community and Population Health or Public Health Sciences AoEs must complete PUBH 481. Students in the Patient Navigation AoE must complete PUBH 486.

** Undergraduate Public Health majors are required to complete a minimum of 50 hours of community service, documented through iServe in the WVU Office of Service and Learning.

PUBLIC HEALTH SCIENCES AREA OF EMPHASIS REQUIREMENTS

A minimum of 2.5 GPA in all courses.

PUBH 311	Health Research Data Management and Reporting	3
PUBH 423	Introduction to Modern Epidemiologic Research	3
PUBH 442	Public Health in the Workplace	3
PUBH 241	Biological Basis of Public Health	3
PUBH 243	Issues in Environmental Health	3
Total Hours		15

SUGGESTED PLAN OF STUDY FOR PUBLIC HEALTH SCIENCES AREA OF EMPHASIS

First Year

Fall	Hours	Spring	Hours
PUBH 101		3 PUBH 201	3
PUBH 191		1 PUBH 202	3
PUBH 200		1 GEF 3	3

General Education or Minor or General Elective Courses		9 General Education or Minor or General Elective Courses	6
		14	15
Second Year			
Fall	Hours	Spring	Hours
PUBH 211		3 PUBH 205	3
ENGL 101 (GEF 1)		3 PUBH 222	3
PUBH 233		3 ENGL 102 (GEF 1)	3
General Education or Minor or General Elective Courses		6 General Education or Minor or General Elective Courses	6
		15	15
Third Year			
Fall	Hours	Spring	Hours
Group A Discipline-specific Selective		3 Group A Discipline-specific Selective	3
Group A Discipline-specific Selective		3 AOE Course	3
AOE Course		3 AOE Course	3
General Education or Minor or General Elective Courses		6 General Education or Minor or General Elective Courses	6
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
PUBH 400		1 PUBH 481	4
AOE Course		3 PUBH 489	2
Group B Issues in Public Health Selective		3 AOE Course	3
General Education or Minor or General Elective Courses		9 Group B Issues in Public Health Selective	3
		General Education or Minor or General Elective Courses	3
		16	15

Total credit hours: 120

PATIENT NAVIGATION AREA OF EMPHASIS REQUIREMENTS

A minimum of 2.5 GPA in all courses.

PUBH 260	Principles of Patient Navigation	3
PUBH 360	Health Navigation: Prevention and Community Health	3
PUBH 258	Terminology and Communication for Health Professionals	3
PUBH 464	Ethical, Legal and Financial Issues in Healthcare	3
PUBH 465	Patient Navigation Strategies: Case Planning	3
Total Hours		15

SUGGESTED PLAN OF STUDY FOR PATIENT NAVIGATION AREA OF EMPHASIS

First Year

Fall	Hours	Spring	Hours
PUBH 101		3 PUBH 201	3
PUBH 191		1 PUBH 202	3
PUBH 200		1 GEF 3	3
General Education or Minor or General Elective Courses		9 General Education or Minor or General Elective Courses	6
		14	15

Second Year

Fall	Hours	Spring	Hours
PUBH 211		3 PUBH 205	3
ENGL 101 (GEF 1)		3 PUBH 222	3
PUBH 233		3 ENGL 102 (GEF 1)	3
General Education or Minor or General Elective Courses		6 General Education or Minor or General Elective Courses	6
		15	15

Third Year

Fall	Hours	Spring	Hours
Group A Discipline-specific Selective		3 Group A Discipline-specific Selective	3
Group A Discipline-specific Selective		3 AOE Course	3
AOE Course		3 AOE Course	3
General Education or Minor or General Elective Courses		6 General Education or Minor or General Elective Courses	6
		15	15

Fourth Year

Fall	Hours	Spring	Hours
PUBH 400		1 PUBH 481	4
AOE Course		3 PUBH 489	2
Group B Issues in Public Health Selective		3 AOE Course	3
General Education or Minor or General Elective Courses		9 Group B Issues in Public Health Selective	3
		General Education or Minor or General Elective Courses	3
		16	15

Total credit hours: 120

COMMUNITY AND POPULATION HEALTH AREA OF EMPHASIS REQUIREMENTS**A minimum of 2.5 GPA in all courses.**

PUBH 311	Health Research Data Management and Reporting	3
PUBH 352	Introduction to Social and Behavioral Science and Practice	3
PUBH 353	Mastering Health and Wellness	3
PUBH 454	Introduction to Public Health Research Methods	3
SRVL 300	Intro to WVU Peer Advocates	3
Total Hours		15

SUGGESTED PLAN OF STUDY FOR COMMUNITY AND POPULATION HEALTH AREA OF EMPHASIS**First Year**

Fall	Hours	Spring	Hours
PUBH 101		3 PUBH 201	3
PUBH 191		1 PUBH 202	3
PUBH 200		1 GEF 3	3
General Education or Minor or General Elective Courses		9 General Education or Minor or General Elective Courses	6
		14	15

Second Year

Fall	Hours	Spring	Hours
PUBH 211		3 PUBH 205	3
ENGL 101 (GEF 1)		3 PUBH 222	3
PUBH 233		3 ENGL 102 (GEF 1)	3
General Education or Minor or General Elective Courses		6 General Education or Minor or General Elective Courses	6
		15	15

Third Year

Fall	Hours	Spring	Hours
Group A Discipline-specific Selective		3 Group A Discipline-specific Selective	3
Group A Discipline-specific Selective		3 AOE Course	3
AOE Course		3 AOE Course	3
General Education or Minor or General Elective Courses		6 General Education or Minor or General Elective Courses	6
		15	15

Fourth Year

Fall	Hours	Spring	Hours
PUBH 400		1 PUBH 481	4
AOE Course		3 PUBH 489	2
Group B Issues in Public Health Selective		3 AOE Course	3
General Education or Minor or General Elective Courses		9 Group B Issues in Public Health Selective	3
		General Education or Minor or General Elective Courses	3
		16	15

Total credit hours: 120

Major Learning Outcomes**PUBLIC HEALTH MAJOR**

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

1. Demonstrate a strong foundation of knowledge about the history, philosophy, core values, concepts, and functions of public health in the US and globally. (*overview*)
2. Determine appropriate public health processes, approaches, and interventions needed to address health-related needs and concerns of specific populations. (*population health*)
3. Illustrate how socio-economic, behavioral, biological, and environmental factors impact human health, contribute to health disparities, and can be affected by promotion and protection programs. (*determinants of health*)
4. Communicate public health information to diverse audiences through a variety of mediums. (*communication*)
5. Apply evidence-based and ethical approaches to identifying, collecting, using, analyzing, and disseminating public health data and information. (*information*)
6. Differentiate the basic concepts of legal, ethical, economic, and regulatory dimensions of health and how they influence the US health system and public health policy. (*policy and US government*)

AREAS OF EMPHASIS**COMMUNITY AND POPULATION HEALTH AREA OF EMPHASIS**

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

1. Demonstrate the key aspects of communicating, promoting and advocating for health.
2. Apply appropriate theories, methods, strategies, and policies to health protection and promotion programs that target specific populations.

PUBLIC HEALTH SCIENCES AREA OF EMPHASIS

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

1. Illustrate how biological, environmental, and occupational factors impact the health status of individuals and populations.
2. Apply biostatistical and epidemiologic methods to identify and analyze public health issues.

PATIENT NAVIGATION AREA OF EMPHASIS

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

1. Demonstrate effective communication skills with members of the patient care team, including those that may not traditionally be included in this team (e.g., social workers, food pantries, transportation, childcare)
2. Summarize how quality of life and care can be improved via multiple systems and processes.
3. Implement chronic disease management techniques and constructs.

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