Accounting

Gatton College of Business & Economics

Master of Science

The Master of Science in Accounting (MSACC) degree at the University of Kentucky offers students a program of advanced study in accounting. The program provides preparation for professional positions in public accounting, industry, and other organizations. When coupled with a bachelor's degree from an accredited college or university and satisfactory completion of prerequisites of undergraduate courses in accounting, the MSACC allows students to prepare for the CPA exam while they complete their graduate courses which are offered in lock step with the CPA exam. Specifically, the program's objectives are to:

- Help students develop communication and technology skills expected in the accounting profession;
- Enhance the accounting knowledge of students entering the accounting profession;
- Enable students to develop both leadership skills and teamwork in researching accounting issues;
- Enhance students' creative problem-solving skills and ability to think logically and analytically.

Admission Requirements

Most students are admitted into the MSACC program during the fall semester, and a few students can be admitted during the spring semester if circumstances dictate a later start. Applicants to the program must have an undergraduate degree from an accredited college or university and complete the Graduate Management Admission Test (GMAT). Applicants who have a GPA in accounting and overall of at least a 3.5 are exempted from the GMAT exam. Applicants will be evaluated for admission based on their undergraduate grade point averages (GPA), both overall and in accounting, their GMAT score if applicable, personal essay, 3 reference forms, and TOEFL score, if applicable. The required course prerequisites (3 credit hours each) for the MSACC program are: ACC 301 - Intermediate Accounting I; ACC 302 - Intermediate Accounting II; ACC 324 - Accounting Information Systems; ACC 403 - Auditing; ACC 407 - Concepts of Income Taxation; and ACC 418 - Cost Management. These courses must be based on US accounting standards and codes. Minimum admission requirements are as follows:

- Minimum overall GPA of 3.0
- Minimum undergraduate accounting GPA of 3.2
- Minimum GMAT score of 600, however, applicants can be accepted into the program with a GMAT score less than 600 if their GPA score is higher than the minimum specified above.
- International students must have a minimum TOEFL IBT score of 90 or IELTS score of 7, and no less than a 30 on the verbal converted score on the GMAT exam.

Degree Requirements

Students must complete at least thirty semester hours in courses carrying graduate credit. The MSACC degree requirements are:

1. A minimum of 21 semester hours of accounting courses, of which at least 15 semester hours must be in courses numbered at the "600" level.
2. The required courses include: ACC 507, ACC 516, ACC 601, ACC 603, ACC 617, ACC 621, ACC 624, and three graduate level electives outside of accounting (at least two of these courses must be at the 600 level).
3. A minimum of 21 semester hours must be in courses must be in courses reserved exclusively for graduate students (i.e., 600 level courses).
4. All graduate-level elective courses require approval in advance by the DGS of the MS Accounting program.

5. A minimum average GPA of 3.0 in all courses attempted for graduate credit after being admitted to The Graduate School.

The program generally follows a lock-step approach. Therefore, certain required courses are only offered in a fall semester; other required courses are only offered in a spring semester/first summer session. You can learn more about the MSACC program by going to the following web page address: http://gatton.uky.edu/programs/masters/master-science-accounting/

Doctor of Philosophy

The Business Administration program offers a Ph.D. degree with a concentration in Accounting. For more information, see the Business Administration program description.

Graduate Courses

ACC 507	Advanced Topics in Taxation	(3)
ACC 508	Controllership	(3)
ACC 516	Advanced Topics in Financial Reporting	(3)
ACC 600	Inquiry, Communication, and Leadership in Accounting	(3)
ACC 601	Research in Accounting Theory	(3)
ACC 603	Attest Function	(3)
ACC 608	Advanced Managerial Accounting	(3)
ACC 610	Not-For-Profit and Regulatory Accounting	(3)
ACC 617	Selected Topics in Taxation	(3)
ACC 619	Independent Study in Accounting	(1-3)
ACC 621	Understanding Financial Statements	(3)
ACC 624	Enterprise Information and Control Systems	(3)
ACC 627	Corporate Taxation	(3)
ACC 628	Financial/Managerial Accounting (May not be taken by MSACC students)	(3)
ACC 637	Taxation of Flow-Through Entities	(3)
ACC 647	Multijurisdictional Taxation	(3)
ACC 700	Topical Seminar in Accounting Research (Subtitle Required)	(1-3)
ACC 795	Independent Study in Accounting	(1-6)

Agricultural Economics

College of Agriculture, Food & Environment

The Department of Agricultural Economics provides programs leading to the degrees of Master of Science and the Doctor of Philosophy. Graduate Faculty in the department provide areas of emphasis in agricultural policy, price analysis, agricultural marketing, agribusiness, farm management, domestic and international economic development, and resource and production economics. Students must complete a core of courses in agricultural economics, economics and statistics.

Students holding degrees in agricultural economics are employed by academic institutions, local, state, and federal agencies that deal with agriculture, natural resources and economic development; private firms in the agricultural and business sectors; and agencies and governments of foreign countries. These agricultural economists conduct research, develop extension services, teach classes, and serve as managers and administrators in various types of firms and agencies.

Admission Requirements
Students entering the M.S. program are expected to have at least one course in each of the following areas: intermediate microeconomics, intermediate macroeconomics, calculus, and statistics. An undergraduate degree in economics is advantageous, as is a good background in mathematics. There are no minimum GPA or GRE requirements beyond those of the Graduate School, but such information, along with letters of recommendation, is used qualitatively in the admission decision.

Students entering the Ph.D. program are expected to have the following courses: at least a two-course calculus sequence, M.S. level microeconomic theory, M.S. level macroeconomic theory, and statistics theory. Some of these courses may be taken during the student's first semester. A Master's degree in a relevant discipline is generally required for entry into the Ph.D. program. In exceptional cases a student may be admitted directly to the Ph.D. program with only a Bachelor's degree. There are no minimum GPA or GRE requirements beyond those of the Graduate School, but such information, along with letters of recommendation, is used qualitatively in the admission decision.

Admission Requirements
The master's program is offered in either Plan A or Plan B. The thesis option (Plan A) requires a minimum of 24 hours of graduate credit, a research thesis and an oral final exam. Plan B requires a minimum of 36 hours of graduate credit and an oral final exam. In addition to the course work requirements, students in the Ph.D. program are required to take a comprehensive examination in microeconomics administered by the Department of Economics. Students also must complete a second-year research paper requirement as part of the preliminary examination requirements. The student must defend a dissertation prospectus during the preliminary oral examination. The ability to conduct original research in agricultural economics, documented through the completion of a dissertation, is required.

Graduate students have considerable flexibility to structure their program with respect to course work and research topics consistent with individual interests. Each student has a major professor and an advisory committee to assist in course work selection and in the thesis and dissertation research.

A graduate handbook is available that provides information regarding program content, degree options and available financial assistance.

Graduate Courses

AEC 441g	Agricultural Financial Management	(3)
AEC 445g	Introduction To Resource And Environmental Economics	(3)
AEC 503	Price Theory And Applications In Agricultural Economics	(3)
AEC 510	International Trade And Agricultural Marketing	(3)
AEC 531	Agricultural Price Analysis	(3)
AEC 532	Agricultural And Food Policy	(3)
AEC 545	Resource And Environmental Economics	(3)
AEC 580	Special Problems In Agricultural Economics	(1-3)
AEC 590	Introduction To Quantitative Economics I (Same As ECO 590)	(3)
AEC 606	Advanced Agricultural Marketing	(3)
AEC 610	International Trade In Agricultural Products	(3)
AEC 620	Advanced Production Economics I	(3)
AEC 622	Advanced Agribusiness Management Strategies	(3)
AEC 624	Advanced Quantitative Methods In Agricultural Economics	(3)
AEC 626	Agriculture And Economic Development (Same As ECO 674)	(3)
AEC 640	Advanced Agricultural Policy	(3)
AEC 645	Natural Resource Economics	(3)
AEC 653	Local Economic Development (Same As PA653)	(3)
AEC 661	Programming Models In Agricultural Economics	(3)
AEC 662	Quantitative Methods In Renewable Resource Management (Same As FOR 662)	(3)
AEC 724	Applied Econometrics	(3)
AEC 745	Environmental And Natural Resource Economics	(3)
AEC 748	Master's Thesis Research	(0)
AEC 749	Dissertation Research	(0)
AEC 768	Residence Credit For Master's Degree	(1-6)
AEC 767	Dissertation Residency Credit	(2)
AEC 769	Residence Credit For Doctor's Degree	(0-12)
AEC 780	Special Problems In Agricultural Economics	(1-3)
AEC 790	Residence Work In Agricultural Economics	(3-9)
AEC 796	Seminar: (Subtitle Required)	(3)

Anatomy & Neurobiology

College of Medicine

The Department of Neuroscience offers a graduate program leading to the Doctor of Philosophy degree in Anatomy and Neurobiology. Graduate study in anatomy and neurobiology is designed to prepare candidates for research careers in academics, industry, and government laboratories. Admission to the graduate program is competitive and is based upon academic background, professional recommendations, performance on the Graduate Record Examination (GRE), experience, and when possible, personal interviews. Students should have completed an undergraduate degree in biology, biochemistry, chemistry, engineering, mathematics, neurosciences, physics, pharmacy or psychology. Some students who have already completed an M.D. or D.M.D. degree may be interested in obtaining specific training in anatomy and neurobiology in order to complete their professional education. For traditional students with only an undergraduate degree, undergraduate courses in organic chemistry, physical chemistry, calculus, physics, and the biological sciences are highly recommended.

Students will have the opportunity to join faculty research programs across a spectrum of topics including: cellular and molecular neurobiology, neurodegenerative diseases and aging, brain and spinal cord injury, neuroendocrinology, and behavioral, cognitive and integrated neuroscience. The program of study is tailored to the individual background and career goals of the student and stresses an interdepartmental approach both in the selection of courses and in the pursuit of research. Students are expected to participate in graduate seminars, journal clubs, research seminars; to interact with visiting scholars; and to present the results of their research at local and national meetings. Teaching opportunities leading to a graduate certificate in Anatomical Sciences Instruction are also available. Financial aid is available to students accepted into the program.

Admission Requirements
Admission to the Ph.D. program in Anatomy and Neurobiology is through the Integrated Biomedical Sciences (IBS) Curriculum. Inquiries regarding admission should be directed to the Director, Integrated Biomedical Sciences Curriculum, University of Kentucky College of Medicine at www.mc.uky.edu/ibs/. For information about the Ph.D. program in Anatomy and Neurobiology, contact the Director of Graduate Studies, Department of Neuroscience. Information may also be obtained from the department Web site: http://neuroscience.med.uky.edu/.

Graduate Courses

ANA 503	Independent Work In Anatomy	(3)
ANA 511	Introduction To Human Anatomy	(5)
ANA 512	Microscopy And Ultrastructure	(4)
ANA 516	Selected Topics In Advanced Neuroscience	(3)
ANA 530	Combined Histology And Special Oral Microanatomy	(5)
ANA 534	Dental Gross Anatomy And Embryology	(5)
ANA 538	Dental Neuroanatomy	(2)
ANA 600	Seminar In Anatomy	(1)
ANA 605	Neurobiology Of Cns Injury And Repair (Same As Pgy 605)	(3)
ANA 609	Educational Strategies In The Anatomical Sciences	(3)
ANA 611	Regional Human Anatomy	(5)

ANA 612	Biology Of Aging (Same As Bio/Grn/Pgy 612)	(3)
ANA 625	Introduction To Functional Mri	(1)
ANA 629	Techniques Of Anatomical Research	(2)
ANA 631	Advanced Human Anatomy	(3-5)
ANA 636	Advanced Neuroscience	(3-5)
ANA 638	Developmental Neurobiology (Same As Bio/Pgy/Psy 638)	(3)
ANA 660	Biology Of Reproduction (Same As Asc 660 And Pgy 660)	(3)
ANA 662	Ultrastructural Anatomy	(2-5)
ANA 710	Aging Of The Nervous System (Same As Grn/Pgy/Pha 710)	(3)
ANA 748	Master's Thesis Research	(0)
ANA 749	Dissertation Research	(0)
ANA 767	Dissertation Residency Credit	(2)
ANA 768	Residence Credit For The Master's Degree	(1-6)
ANA 769	Residence Credit For The Doctor's Degree	(0-12)
ANA 780	Special Topics In Neurobiology	(1-3)
ANA 790	Research In Anatomy	(1-12)

Animal & Food Sciences

College of Agriculture, Food & Environment

The degrees of Master of Science (Plan A and Plan B) and Doctor of Philosophy are available in Animal and Food Sciences.

Admission Requirements
Applicants to the Master's program must have completed a four-year degree at an accredited institution of higher education, must have achieved at least a 3.00 GPA for all undergraduate courses, and must submit scores from the verbal, quantitative, and analytical portions of the Graduate Record Exam (GRE). Applicants must have completed these courses; 1 semester calculus or physics, 3 semesters biology/ physiology, 3 semesters chemistry (including 1 semester of organic chemistry or biochemistry). Additional courses in physiology, cell biology, microbiology, and anatomy are encouraged. Applicants for a Ph.D. program must be in the process of completing, or have already completed, an M.S. degree or equivalent. Applicants must complete the on-line graduate school application.

Degree Requirements
Programs in Animal Sciences are divided into the disciplinary areas of animal nutrition, reproduction, physiology, and food science. Special interests in beef or dairy cattle, horses, poultry, sheep and swine may be pursued within many of these areas. Programs in food science offer specialization in dairy technology, food chemistry, food microbiology, food safety, meat biochemistry, and meat processing.

Graduate Courses

ASC 404g	Sheep Science	(4)
ASC 408g	Swine Science	(2)
ASC 410g	Equine Sciences	(3)
ASC 420g	Dairy Cattle Science	(3)
ASC 564	Milk Secretion	(3)
ASC 601	Mammalian Endocrinology (Same As Pgy 601)	(3)
ASC 602	Micronutrient Metabolism (Same As Ns 602)	(4)
ASC 630	Advanced Meat Science (Same As Fsc 630)	(4)
ASC 660	Biology Of Reproduction (Same As Pgy/Ana 660)	(3)
ASC 664	Advanced Animal Breeding	(3)
ASC 680	Laboratory Methods In Nutritional Sciences	(4)
ASC 681	Energy Metabolism	(2)
ASC 682	Microbial Ecology Of Digestion	(4)
ASC 683	Protein Metabolism	(2)
ASC 684	Advanced Ruminant Nutrition	(3)
ASC 685	Mineral Metabolism	(2)
ASC 686	Advanced Nonruminant Nutrition	(3)
ASC 687	Vitamin Metabolism	(2)
ASC 688	Equine Nutrition	(2)
ASC 689	Physiology Of Nutrient Digestion And Absorption	(3)

ASC 690	Macronutrient Metabolism In Animals	(2)
ASC 748	Master's Thesis Research	(0)
ASC 749	Dissertation Research	(0)
ASC 767	Dissertation Residency Credit	(2)
ASC 768	Residence Credit For The Master's Degree	(1-6)
ASC 769	Residence Credit For The Doctor's Degree	(0-12)
ASC 771	Animal Science Seminar	(1)
ASC 780	Special Problems In Animal Derived Foods (Same As Fsc 780)	(1-4)
ASC 781	Special Problems In Genetics And Animal Breeding	(1-4)
ASC 782	Special Problems In Animal Nutrition	(1-4)
ASC 783	Special Problems In Reproductive Physiology (Subtitle Required)	(1-4)
ASC 790	Research In Animal Derived Foods (Same As Fsc 790)	(1-6)
ASC 791	Research In Genetics And Animal Breeding	(1-6)
ASC 792	Research In Animal Nutrition	(1-6)
ASC 793	Research In Reproductive Physiology (Subtitle Required)	(1-6)
FSC 434g	Food Chemistry	(4)
FSC 530	Food Microbiology	(5)
FSC 535	Food Analysis	(4)
FSC536	Advanced Food Technology	(4)
FSC 538	Food Fermentation And Thermal Processing	(4)
FSC 540	Food Sanitation	(3)
FSC 630	Advanced Meat Science (Same As Asc 630)	(4)
FSC 632	Foodborne Disease Agents	(3)
FSC 636	Food Packaging	(2)
FSC 638	Food Proteins	(3)
FSC 640	Food Lipids	(3)
FSC 642	Food Pigments	(3)
FSC 780	Special Problems In Animal Derived Foods (Same As Asc 780)	(1-4)
FSC 790	Research In Animal Derived Foods (Same As Asc 790)	(1-6)

Anthropology

College of Arts & Sciences

Since its inception in the 1960s, the graduate program has been nationally recognized as a leader in applied anthropology. We define applied anthropology as research with practical application and impact, but anchored in a rigorous foundation in anthropological theory and method, whether from socio-cultural, bio-cultural, medical, or archaeological perspectives. With grounding in core anthropological theory and method, we train our students to be skilled researchers who can traverse both academic and non-academic settings, bringing to their research a sound intellectual base, and skills for application and practice.

Master of Arts in Applied Anthropology

The M.A. degree in Applied Anthropology at UK is designed to train students to apply the theories, methods, and practices of anthropology to solve real world problems, and to prepare students for careers in different domains of application or for further graduate study. The program draws on the department's considerable research strengths in a variety of areas (see website for more information), and puts strong emphasis on training in theory, application, and proficiency in qualitative and quantitative research methods and skills. The M.A. in Applied Anthropology program has three Areas of Concentration – Archaeology, Cultural Anthropology and Medical Anthropology. Students must declare their area of concentration in their program application.

Degree Requirements

The degree completion requires 30 credits of coursework. The M.A. degree requires a written report based on the practicum. The report is written with the guidance of a committee of three faculty members. The final examination for the Master's degree is an oral presentation of the practicum project at the annual departmental practicum colloquium. There is no foreign language requirement for the Master's degree in applied anthropology.

Admissions Requirements

Upon acceptance into the program, students will be provided a list of background readings to help them prepare for their graduate work. Students are strongly encouraged to read and critically consider this body of work PRIOR to entering the program.

Archaeology Concentration

The Archaeology concentration is aimed at preparing students for careers in applied archaeological anthropology, including cultural resource management, museum and heritage studies, and public archaeology.

Students are expected to have archaeological field school training before starting graduate school. UKY offers one archaeological field school each summer, and students who have not participated in a field school will need to take it in addition to the required hours.

Plan of Study:

Course:	When taken:	Cr Hrs
ANT 525	1st semester	3
ANT 650	1st/2nd semester	3
ANT 651	2nd semester	3
3 courses in Archaeology (1 can be allied profession)	1st-3rd semesters	9
2 courses as approved by advisor/committee (may include ANT 790)	1-3rd semesters	6

ANT 760 - 6 credit hours practicum in applied anthropology	3rd semester	6
Total:		30

Cultural Anthropology Concentration

The Cultural Anthropology concentration is designed to prepare students for careers in various domains of application, including economic development, rural and urban development, business anthropology, public anthropology, human services, education, consulting and research, program monitoring and evaluation, and work with corporations, governmental and non-governmental organizations.

Plan of Study:

Course:	When taken:	Cr Hrs
ANT 525	1st semester	3
ANT 601	1st/2nd semester	3
ANT 660	2nd semester	3
3 courses in Cultural Anth (1 can be allied profession)	1st-3rd semesters	9
2 courses as approved by advisor/committee (may include ANT 790)	1-3rd semesters	6
ANT 760 - 6 credit hours practicum in applied anthropology	3rd semester	6
Total:		30

Medical Anthropology Concentration

The Medical Anthropology concentration is based on fundamental concerns with the study of social forces and health inequalities, and various programmatic endeavors and community-based responses to them. Participants in the program will receive training in ethnographic methods, community-based participatory research and/or program evaluation along with instruction in anthropological perspectives on health and the intersection of anthropology with public health.

Plan of Study:

Course:	When taken:	Cr Hrs
ANT 525	1st semester	3
ANT 601	1st/2nd semester	3
ANT 660	2nd semester	3
3 courses in Med Anth (1 can be allied profession)	1st-3rd semesters	9
2 courses as approved by advisor/committee (may include ANT 790)	1-3rd semesters	6
ANT 760 - 6 credit hours practicum in applied anthropology	3rd semester	6
Total:		30

Requirements for all M.A. Students

Practicum:

All M.A. students must enroll in 6 credit hours of ANT 760 (Practicum in Applied Anthropology). The practicum is expected to be the equivalent of a full time effort for at least one academic semester.

Departmental Presentation:

All M.A. students are required to write a report and to deliver a presentation at the annual departmental practicum colloquium as a condition of graduation.

Doctor of Philosophy

The PhD program in Anthropology consists of a minimum of 36 credit hours, plus a minimum of two semesters of ANT 767. Students must fulfill any and all other requirements of the Graduate School. An entering PhD student should complete required coursework by the end of the second year, and successfully defend a dissertation proposal and successfully complete the qualifying exams as early as the fifth semester, but no later than the tenth semester, after admission to the program. Upon acceptance into

the graduate program, a student will be assigned a graduate advisor who will review and approve all first year coursework, and in consultation with the DGS, evaluate requests for transfer of up to 9 credit hours of equivalent graduate-level coursework. Following the first year, all coursework will be approved by the student's committee.

Requirements in the Ph.D. program consist of: (1) three required courses - History of Theory (ANT 610) and a theory and a methods course in the student's designated sub-discipline, to be taken in the first year when available; (2) a course in Research Design (ANT 662), (3) an approved statistics course; (4) 7 courses (21 hours) of additional coursework, of which at least 1 course must be in an anthropological subdiscipline (archaeology, biological, cultural) other than the student's designated sub-discipline. Demonstrated competence by the student in reading or speaking one or more languages may be required by the student's committee. Students must complete and successfully defend to their committee a dissertation research proposal prior to the scheduling of the qualifying exams.

The MA/PhD Program

With the approval of the Graduate Committee and the Director of Graduate Studies, students without a Master's Degree may be admitted directly into the PhD program, and receive the MA following successful completion of the PhD qualifying exams. Students must take: (1) ANT 601, ANT 610 and ANT 660 or ANT 610, ANT 650 and ANT 651; (2) a statistics course at the 500+ level; and (3) a minimum of 15 additional credit hours of coursework in anthropology or cognate disciplines as approved by the student's committee.

Anthropology faculty members have research experience in the following areas: South and Southeast Asia, North and Sub-Saharan Africa, Middle East and North Africa, Europe, the former Soviet Union, Latin America, and North America, including the urban and rural U.S. and with specialization in studies of Appalachia. Members of the department participate in interdisciplinary research in the University's College of Agriculture, College of Medicine, College of Education, and School of Public Health. The Department of Behavioral Science includes anthropologists on its faculty, and students with interests in medical anthropology are encouraged to take behavioral science courses.

Graduate Courses

ANT 431G	Cultures And Societies Of Sub-Saharan Africa (Same As AAS 431G)	(3)
Ant 470G	Regional American Ethnography	(3)
ANT 515	Phonological Analysis (Same As ENG/LIN 515)	(3)
ANT 516	Grammatical Analysis (Same As ENG/LIN 516)	(3)
ANT 525	Applied Anthropology	(3)
ANT 532	Private Interests In The Public Domain:	(3)
ANT 534	The Southern Appalachians: A Sociological Inter-Pretation (Same As SOC 534)	(3)
ANT 541	Archaeological Method And Theory	(3)
ANT 543	Cultural Resource Management	(3)
ANT 545	Historical Archaeology	(3)
ANT 555	Eastern North American Archaeology	(3)
ANT 580	Advanced Topics In Anthropology	(3)
ANT 581	Independent Work In Anthropology	(1-4)
ANT 585	Field Laboratory In Archaeological Research	(3-6)
ANT 600	Practicum In Teaching Anthropology	(1)
ANT 601	Theories And Concepts In Anthropology	(3)
ANT 602	Seminar In Culture Dynamics	(3)
ANT 603	Human Biology In Context Of Sociocultural Change	(3)
ANT 604	Social Organization	(3)

ANT 610	History Of Anthropological Theory	(3)
ANT 620	Topics And Methods Of Evaluation (Same As EDP/EPE 620/SOC 622)	(3)
ANT 621	Advanced Topics And Methods Of Evaluation (Same As EDP/EPE 621)	(3)
ANT 637	Sociocultural Dimensions Of Economic Development (Same As SOC 637)	(3)
ANT 640	Science, Agriculture, And Development (Same As SOC 640)	(3)
ANT 641	Gender Issues In Development (Same As SOC 641)	(3)
ANT 645	Anthropology And Epidemiology (Same As BSC 645)	(3)
ANT 646	Global Health: People, Institutions And Change	(3)
ANT 650	Theory In Archaeology	(3)
ANT 652	Demographic Archaeology	(3)
ANT 653	Prehistoric Economics	(3)
ANT 654	Archaeology Of Political Systems	(3)
ANT 660	Ethnographic Research Methods	(3)
ANT 662	Research Design	(3)
ANT 684	Farming Systems Research Methods	(3)
ANT 691	Cultural Resource Management Clerkship	(1-3)
ANT 725	Seminar In Applied Anthropology	(3)
ANT 731	Seminar In Social And Political Dynamics	(3)
ANT 732	Seminar In Ecological Anthropology	(3)
ANT 733	Seminar In Symbols And Meaning	(3)
ANT 734	Seminar In Economic Anthropology	(3)
ANT 735	Seminar In Practice And Action	(3)
ANT 736	Culture, Environment And Development (Same As SOC 737)	(3)
ANT 737	Gender Anthropology	(3)
ANT 748	Master's Thesis Research	(0)
ANT 749	Dissertation Research	(0)
ANT 750	Graduate Field Study In Anthropology	(1-6)
ANT 760	Practicum In Applied Anthropology	(1-6)
ANT 765	Advanced Seminar In Medical Anthropology (Same As BSC 765)	(3)
ANT 766	Gender, Ethnicity And Health	(3)
ANT 767	Dissertation Residency Credit	(2)
ANT 768	Residence Credit For The Master's Degree	(1-6)
ANT 769	Residence Credit For The Doctor's Degree	(0-12)
ANT 770	Topical Seminar: (Subtitle Required)	(3)
ANT 774	Food And Food Security In A Changing World (Same As BSC 774)	(3)
ANT 775	Culture And Politics Of Reproduction	(3)
ANT 776	Seminar In Dependency Behavior (Same As BSC/SOC/PSY 776)	(3)
ANT 790	Research Problems In Anthropology	(1-6)

Applied Behavior Analysis

College of Education

The Master of Science in Applied Behavior Analysis (MS in ABA) is an on-campus only degree program that will train graduate students to provide behavioral consultation, support, and training to teachers, staff, parents, and individuals with challenging behaviors and/or intensive training needs.

The MS in ABA will provide opportunities for graduate students to work within schools*, homes, and/or other facilities that house individuals with challenging behaviors. In addition, graduate students will be exposed to individuals from diverse ethnic, socioeconomic, cultural, and disability backgrounds.

The program at the University of Kentucky (UK) will focus on children and youth with challenging behaviors from 2 years of age through 21 years of age. In addition, our focus will be on children and youth identified with Emotional and/or Behavioral Disorder (e.g., Oppositional Defiant Disorder, Bipolar Disorder, Intermittent Explosive Disorder), Autism Spectrum Disorder (ASD), Developmental Delay, Intellectual Disability, as well as other academic or mental health issues that affect the child's or youth's behavior.

The Behavior Analyst Certification Board (BACB) has accepted courses within the MS in ABA program as an "approved course sequence." In addition, students in the MS in ABA program will receive required supervision within the practicum setting. The approved course sequence and practicum/supervision requirements will prepare completers of the MS in ABA to sit for the Board Certified Behavior Analyst (BCBA) examination. More information regarding the BCBA examination and requirements can be found at www.bacb.com.

Admission Requirements

1. Applicants must hold a Bachelor's Degree in psychology, education, special education, social work, communication disorder, or a closely related field.
2. Applicants must have a minimum of a 3.0 undergraduate grade point average or a minimum of 3.25 graduate grade point average.
3. Applicants must take the Graduate Record Examination (GRE) and submit scores to the Graduate School; the Institution Code for the GRE for UK Graduate School is R1837. There are no specific GRE subtests required.
4. Applicants must secure three (3) letters of recommendations with one related to academic performance (e.g., from professor, advisor) and two related to the applicant's work with children and youth (e.g., from practicum supervisor, research supervisor).
5. Applicants must submit a writing sample of a scholarly paper (e.g., research paper, literature review completed in APA formatting).
6. Applicants must participate in an interview with program faculty.
7. Upon acceptance, applicants must satisfactorily pass a criminal background check (due to the nature of the work performed by behavior analysts).

Graduate Courses

AEDS 601*	Applied Behavior Analysis	(3)
EDS 612*	Advanced Practicum: Special Education	(1)
EDS 614*	Professional Ethics for Behavior Analysts I	(1)

EDS 633*	Single Subject Research Design	(3)
EDS 660	Overview Of Characteristics And Instructional Strategies For Individuals With ASD	(3)
EDS 603*	Behavior Consultation in the Schools	(3)
EDS 612	Advanced Practicum: Special Education	(1)
EDS 615*	Professional Ethics for Behavior Analysts II	(1)
EDS 630*	Advanced Methods for Teaching Students with Disabilities	(3)
EDS 661	Advanced Instructional Strategies for Students with ASD	(3)
EDS 612	Advanced Practicum: Special Education	(1)
EDS 616*	Professional Ethics for Behavior Analysts III	(1)
EDS 605	Practical Applications of Applied Behavior Analysis	(3)
EDS 612*	Advanced Practicum: Special Education	(1)
EPE 557	Gathering, Analyzing, And Using Educational Data	(3)
EDS 748	Master's Thesis Research	

Architecture

College of Design

Master of Architecture

The Master of Architecture is a first-professional graduate degree, accredited by the National Architecture Accrediting Board (NAAB). This two-year degree comprises the second part of a sequential "4+2" curriculum, in which a student obtains a four-year (non-professional) Bachelor of Arts in Architecture and concludes with the two-year, first-professional Masters of Architecture degree. Students who receive this degree are eligible to seek professional registration as an architect.

Admission Requirements

Applicants for admission to the master of architecture degree program must hold a bachelor of arts in architecture or a bachelor of architecture degree from a NAAB-accredited institution. Admission to the program is contingent on acceptance by the graduate school at the university of kentucky. Applicants are required to submit a portfolio, a personal essay on graduate expectations, transcripts, and gre scores. Students who do not hold a bachelor of arts in architecture or bachelor of architecture degree from the university of kentucky must submit three letters of recommendation as well. Admission to the program is based on a review of the submitted materials.

Degree Requirements

To obtain the Master of Architecture degree, students must complete 57 credit hours of graduate work as described in the curriculum below. Every student must complete a Master's Project in his or her area of concentration. Requirements for this degree are governed by and satisfy the accreditation requirements of the National Architecture Accrediting Board.

Graduate Courses

ARC 511	History And Theory Seminar: Pre-20th Century	(3)
ARC 512	History And Theory Seminar: Modern (Subtitle Required)	(3)
ARC 513	History And Theory Seminar: Contemporary (Subtitle Required)	(3)
ARC 514	History And Theory Seminar: Criticism And Theory (Subtitle Required)	(3)
ARC 515	History And Theory Seminar: Urban Forms (Subtitle Required)	(3)
ARC 533	Structural Design And Analysis II	(3)
ARC 534	Advanced Studies In Structural Systems	(3)
ARC 589	American Landscapes	(3)
ARC 599	Topics In Architecture	(3)
ARC 631	Building Systems Integration	(3)
ARC 632	Special Topics In Environmental Controls	(3)
ARC 634	Architectural Detailing	(3)
ARC 641	Professional Practice	(3)
ARC 642	Professional Internship	(3)
ARC 658	Design Studio VIII	(6)
ARC 659	Design Studio IX	(6)
ARC 699	Topics In Architecture	(3)

ARC 707	Digital Media: History And Theory	(3)
ARC 709	Master's Project In Digital Visualization	(9)
ARC 719	Master's Project In History/Theory/Criticism	(9)
ARC 729	Master's Project In Historic Preservation	(9)
ARC 735	Project Delivery	(3)
ARC 736	Building Codes And Design	(3)
ARC 738	Construction Specifications	(3)
ARC 743	Advanced Professional Practice	(3)
ARC 748	Master's Project Research	(3)
ARC 750	Design Studio X: Comprehensive Studio	(6)
ARC 759	Master's Project In Building Design	(9)
ARC 761	Special Problems In Town Design	(3)
ARC 769	Master's Project In Town Design	(9)
ARC 799	Topics In Architecture	(3)

Art Education

College of Fine Arts

The School of Art and Visual Studies offers graduate course work in three areas: Art Education, Art History and Visual Studies, and Art Studio. The Art Education area and the Art History and Visual Studies area confer the Master of Arts degree in an area of specialization. Studio degree recipients are awarded the Master of Fine Arts.

Master of Arts - Art Education

The Master of Arts in Art Education seeks to credential teachers for the following routes to Rank II and Rank I:

1. Candidates who hold a bachelor's degree and initial certification in Art Education can pursue the Masters of Arts in Art Education (Plan A, thesis option), which leads to Rank II advancement.
2. Candidates who hold a bachelor's degree and initial certification in Art Education can pursue the Masters of Arts in Art Education (Plan B, non-thesis option), which leads to Rank II advancement.
3. Candidates who hold a bachelor's degree and initial certification in Art Education can pursue the non-degree, fifth-year program that leads to Rank II advancement.
4. Candidates who hold Rank II may advance in rank to Rank I with completion of 30 credits beyond the Rank II.
5. Candidates who hold either a Rank II or a Rank I in Art Education may pursue a program leading directly to the Teacher Leader Endorsement.

Admission Requirements

Candidates admitted to the graduate program in Art Education are expected to have completed course work equivalent to an undergraduate major in Art Education (in no case less than 18 hours in Art Education and Education, 12 hours in Art History, and 18 hours in Art Studio). Prospective candidates who do not meet these requirements should seek the counsel of the Program Faculty Committee to make up deficits prior to acceptance into the program. In addition, candidates must submit for review by the Program Faculty Committee, a portfolio of recent artworks and professional writing and other evidence of professional attainment (or a 300-500 word statement of interest in advance studies in Art Education).

Application Procedure and Deadline

Because the Graduate School is the administrative unit for all graduate students and because the Art Education program is responsible for ensuring compliance with Kentucky Educational Professional Standard Board requirements and the execution of the academic curriculum, different application materials are required.

Application for admission to the Graduate School requires:

- Completed application form for the Graduate School (on-line application form available at http://gradschool.uky.edu.
- One official transcript sent by each institution of study previously attended.
- Official GRE scores.
- Application fee.

Application materials for the Art Education graduate program should be sent to the Graduate Advisor for Art Education (Art Department, 207 Fine Arts Building, University of Kentucky, Lexington, Kentucky 40506-0022) and be uploaded to our Otis-online-Electronic Portfolio which will be provided for you.

The application for a Masters in Art Education requires additional specific application materials to be included in the online application. They are as follows:

- An electronic portfolio of 10 recent artworks sent as a .pdf with an image key with title, date, size, and medium for each submitted work as part of that document. (maximum resolution 8" x 10" x 72 dpi – NO PowerPoint presentations). This may be uploaded as one document under "Writing Sample". If your files are too large, please resize them. If resizing them distorts them in any way, please mail a CD or DVD of your portfolio to Graduate Advisor (207 Fine Arts, School of Art & Visual Studies, University of Kentucky, Lexington, KY 40506-0022) by January 6.
- Time-based materials on DVD (QuickTime or DVD with menus – 10 minutes max) are too large to be uploaded and should be sent to the Graduate Advisor (207 Fine Arts, School of Art & Visual Studies, University of Kentucky, Lexington, KY 40506-0022) by January 6. Web address with the same materials, as a back up if the CD/DVD fails, will be considered. This may be uploaded as one document under "Writing Sample".
- A brief letter stating your goals for graduate study and your interest in being considered for an assistantship, fellowship, and or internship.
- Two letters of recommendation.
- Brief resume.

Application materials must be received no later than January 1st for fall semester and November 1st for spring semester admittance. Candidates wishing to be considered for a teaching assistantship should provide the Graduate Advisor for Art Education with an additional letter to indicate their interest and credentials for an assistantship by January 1.

Degree Requirements

Thesis Option: Successful candidates for the Master of Arts in Art Education must satisfactorily complete: (1) a thesis, an oral/written examination, the mid-point and exit portfolio reviews; (2) 30 credit hours of graduate course work to be divided as follows: (a) 12 -15 graduate credit hours in Art Education; (b) 9 – 12 graduate credit hours in Leadership; (c) 6 – 9 graduate credit hours in the Individual Program Support which may be taken as related course work in the College of Fine Arts, the College of Education or elsewhere in the University, as well as in the Department of Art. Students must have an approved proposal to proceed with their thesis work.

Non-Thesis Option: Successful candidates for the Masters of Arts in Art Education must satisfactorily complete the mid-point and exit portfolio reviews and 36 credit hours of graduate course work. At least 24 of the credit hours should be taken in the Department of Art and are to be divided as follows: (1) 12 – 15 graduate credit hours in Art Education, (2) 9 – 12 graduate credit hours in Leadership, and (3) 6 – 9 graduate credit hours in Individual Program Support which may be taken in related course work in the College of Fine Arts, the College of Education, or elsewhere in the University, as well as in the Department of Art. During the final semester, students must design and complete an independent scholarly project registering for A-E 695 under the supervision of their major professor with final approval from their master's committee.

In accordance with the Graduate Faculty rules, a final comprehension examination is required in both Plan A and Plan B.

Graduate Courses

A-E 515	Introduction To Art Therapy	(3)
A-E 525	The Elderly And The Arts	(3)
A-E 538	Advanced Arts And Crafts In The Elementary School	(3)
A-E 545	Topical Studies In Art Education (Subtitle Required)	(3)
A-E 576	Art In Middle Schools	(3)
A-E 577	Art In Secondary Schools	(3)
A-E 578	Art In Elementary Schools	(3)
A-E 579	Seminar In Art Education	(2)
A-E 645	Topical Research In Art Education (Subtitle Required)	(3)
A-E 665	Issues In Art Education	(3)
A-E 670	School And Community Art	(3)
A-E 675	Aesthetics And Design	(3)
A-E 680	History Of Art Education	(3)
A-E 685	Action Research In Art Education	(3)
A-E 695	Independent Work: Art Education	(1-3)
A-E 748	Master's Thesis Research	(0)
A-H 501	Museum Studies I: Introduction	(3)
A-H 502	Museum Studies II: Internship	(3)
A-H 504	Practical Issues In Art History (Subtitle Required)	(3)
A-H 524	Theory And Methods (Subtitle Required)	(3)
A-H 525	Studies In Genres And Media (Subtitle Required)	(3)
A-H 526	Art And The Artist In Society (Subtitle Required)	(3)
A-H 527	Interdisciplinary Approaches (Subtitle Required)	(3)
A-H 528	Topical Seminar In Art History And Visual Studies (Subtitle Required)	(3)
A-H 529	Topical Seminar In Architectural Or Design History (Subtitle Required)	(3)
A-H 555	Methods In Art History And Visual Studies	(3)
A-H 592	Aesthetics (Same As Phi 592)	(3)
A-H 598	Coordinate Study	(3)
A-H 604	Practical Problems In Art History (Subtitle Required)	(3)
A-H 624	Theory And Methods (Subtitle Required)	(3)
A-H 625	Problems In Genres And Media (Subtitle Required)	(3)
A-H 626	The Artist In Society (Subtitle Required)	(3)
A-H 627	Interdisciplinary Problems (Subtitle Required)	(3)
A-H 628	Art History And Visual Studies Topical Seminar (Subtitle Required)	(3)
A-H 629	Art History Topical Seminar In Architectural Or Design History (Subtitle Required)	(3)
A-H 738	Master's Portfolio Prepartion	(1-3)
A-H 748	Master's Thesis Research	(0)
A-H 768	Thesis Formulation And Preparation In Art History	(3)
A-H 780	Independent Work: Art History	(1-3)

A-S 510	Painting III	(3)
A-S 511	painting IV	(3)
A-S 520	Printmaking III	(3)
A-S 521	Printmaking IV	(3)
A-S 530	Advanced Drawing	(3)
A-S 540	Graphic Design: Publication Design	(3)
A-S 541	Graphic Design: Advanced Design	(3)
A-S 546	Intermedia (Subtitle Required)	(3)
A-S 550	Fiber III	(3)
A-S 551	Fiber IV	(3)
A-S 560	Sculpture III	(3)
A-S 561	Sculpture IV	(3)
A-S 570	Ceramics III	(3)
A-S 571	Ceramics IV	(3)
A-S 580	photography III	(3)
A-S 581	photography IV	(3)
A-S 584	Color Photography II	(3)
A-S 586	Nonsilver Photography II	(3)
A-S 596	Workshop	(1-6)
A-S 610	Painting V	(3)
A-S 611	Painting VI	(3)
A-S 620	Printmaking V	(3)
A-S 621	Printmaking VI	(3)
A-S 630	Graduate Drawing	(3)
A-S 650	Fiber V	(3)
A-S 651	Fiber VI	(3)
A-S 660	Sculpture V	(3)
A-S 661	Sculpture VI	(3)
A-S 670	Ceramics V	(3)
A-S 671	Ceramics VI	(3)
A-S 680	Photography V	(3)
A-S 681	Photography VI	(3)
A-S 710	Problems In Painting	(3)
A-S 720	Problems In Printmaking	(3)
A-S 730	Problems In Drawing	(3)
A-S 740	Problems In Fiber	(3)
A-S 750	Problems In Sculpture	(3)
A-S 767	M.F.A. Studio Thesis Project	(1-6)
A-S 770	Problems In Ceramics	(3)
A-S 777	Problems In Intermedia	(3)
A-S 779	Problems In Photography	(3)
A-S 780	Problems In Design	(3)
A-S 793	Graduate Studio Seminar	(1)
A-S 795	Independent Research	(1-3)
Art 748	Master's Thesis Research	(0)
Art 768	Residence Credit For Master's Degree	(1-6)

Art History & Visual Studies

College of Fine Arts

Master of Fine Arts

The Master of Arts in Art History & Visual Sudies prepares students with the course work, language skills, and research experience needed for further graduate study or work in arts organizations or educational settings. The curriculum is structured to provide both breadth and depth of inquiry through a variety of approaches to art history and, more broadly, visual studies. We recommend that courses be broadly selected to take full advantage of the multiple approaches, expertise, and insights of the faculty.

Admission Requirements

Experience suggests that applicants from a wide variety of educational backgrounds may earn a M.A. degree in Art History & Visual Studies. It is recommended that those without an undergraduate art history major consult with the art history & visual studies graduate advisor before applying. Depending on one's prior preparation, some students may be required to take selected preparatory courses that will not count toward the graduate degree requirements.

Application Procedures

The Graduate School, which is the administrative unit for all graduate students, and the Art History & Visual Studies graduate program, which is responsible for the academic curriculum, require different application materials. All application materials must be submitted through the online application, which is located at https://app.applyyourself.com/AYApplicantLogin/fl_ApplicantConnectLogin.asp?id=ukgrad.

Application materials for admission to the Graduate School include:

- Application form
- Copies of transcripts from all higher education institutions previously attended, which should be uploaded on the appropriate location of the online application. Domestic students are to self-report GPAs for each institution attended. (Tip: Convert transcripts on colored paper to white with black ink so as not to exceed the megabyte limitation on the online form.)
- GRE scores that you self-report in the appropriate location on the online application. (At the point of acceptance into the program, official GRE scores must be requested and sent directly from the Educational Testing Service (ETS) to the University of Kentucky; the Institution Code for the GRE for UK Graduate School is R1837).
- TOEFL scores and/or IELTS scores if an international student.
- Application fee.

Application materials for the Art History & Visual Studies graduate program are also to be submitted online on the graduate admissions application and include:

- Brief résumé.
- Personal statement that explains your interest in art history graduate study, experience, and plans.
- Sample of research, such as an undergraduate research paper. (Tip: If the research sample is greater than 2.5MB, please send a hardcopy directly to the Graduate Advisor in Art History & Visual Studies, School of Art & Visual Studies, 236 Bolivar Street, University of Kentucky, Lexington, KY 40506-0090.)
- Contact information in the form of email addresses for two recommenders who will be notified to submit their recommendations electronically to the online system.

Application Deadlines
January 1 - for all applicants, including those requesting an assistantship. Art History & Visual Studies traditionally has had two teaching assistantships and occasional research assistantships to award. Students who want to apply should send a separate letter in hardcopy form that indicates their interest in being considered for an assistantship to the Graduate Advisor in Art History & Visual Studies, School of Art & Visual Studies, 236 Bolivar Street, University of Kentucky, Lexington, KY 40506-0090.

Degree Requirements
Plan A - Thesis Option
Candidates who plan to continue study at the doctoral level should select Plan A. This option emphasizes art historical research, problem solving, and communication skills. Specifi requirements include:

1. Minimum of 30 credit hours of graduate course work.*
2. Foreign language reading competency in one foreign language (German often recommended).**
3. Satisfactory completion and oral defense of a thesis.

Plan B - Non-Thesis Option
Plan B emphasizes course work to deepen the candidate's foundation in art historical knowledge, theory, and methods. Candidates who plan careers in visual arts fields that do not require a Ph.D. - professional placements in galleries, museums, art organizations, arts administration, etc. - may want to select this option. Specific requirements include:

1. Minimum of 36 credit hours of graduate course work.*
2. Foreign language reading competency in one foreign language (German often recommended).**
3. Satisfactory completion of final comprehensive exam.

* Nine of the minimum 30 required credit hours may be taken in related areas such as anthropology, film studies, historic preservation, history, literature, philosophy, studio art, or women's studies.
**The foreign language competency requirement may be satisfied by any of the means established by the Graduate School.

Graduate Courses

A-E 515	Introduction To Art Therapy.	(3)
A-E 525	The Elderly and the Arts	(3)
A-E 538	Advanced Arts And Crafts In The Elementary School	(3)
A-E 545	Topical Studies In Art Education (Subtitle Required).	(3)
A-E 576	Art In Middle Schools	(3)
A-E 577	Art In Secondary Schools	(3)
A-E 578	Art In Elementary Schools	(3)
A-E 579	Arts And Humanities In Art Education	(3)
A-E 645	Topical Research In Art Education (Subtitle Required)	(3)
A-E 665	Issues In Art Education	(3)
A-E 670	School And Community Art	(3)
A-E 675	Aesthetics And Design	(3)
A-E 680	History Of Art Education	(3)
A-E 685	Action Research In Art Education	(3)
A-E 695	Independent Work: Art Education	(1-3)
A-E 748	Master's Thesis Research	(0)
A-H 501	Museum Studies I: Introduction	(3)
A-H 502	Museum Studies Ii: Internship	(3)
A-H 504	Practical Issues In Art History (Subtitle Required)	(3)
A-H 524	Theory And Methods (Subtitle Required)	(3)
A-H 525	Studies In Genres And Media (Subtitle Required)	(3)
A-H 526	Art And The Artist In Society (Subtitle Required)	(3)
A-H 527	Interdisciplinary Approaches (Subtitle Required)	(3)
A-H 528	Topical Seminar In Art History And Visual Studies (Subtitle Required)	(3)
A-H 529	Topical Seminar In Architectural Or Design History (Subtitle Required)	(3)
A-H 555	Methods In Art History And Visual Studies	(3)
A-H 592	Aesthetics (Same As Phi 592)	(3)
A-H 598	Coordinate Study In Art History And Visual Studies	(3)
A-H 604	Practical Problems In Art History (Subtitle Required)	(3)
A-H 624	Theory And Methods: (Subtitle Required)	(3)
A-H 625	Problems In Genres And Media (Subtitle Required)	(3)
A-H 626	The Artist In Society (Subtitle Required)	(3)
A-H 627	Interdisciplinary Problems (Subtitle Required)	(3)
A-H 628	Art History And Visual Studies Topical Seminar (Subtitle Required)	(3)
A-H 629	Art History Topical Seminar In Architectural Or Design History (Subtitle Required)	(3)
A-H 738	Master's Portfolio Preparation	(1-3)
A-H 748	Master's Thesis Research	(0)
A-H 768	Thesis Formulation And Preparation In Art History	(3)
A-H 780	Independent Work: Art History	(1-3)
A-S 510	Painting III	(3)
A-S 511	Painting IV	(3)
A-S 520	Printmedia: Topics (Subtitle Required)	(3)
A-S 521	Printmedia: Contemporary Practices	(3)
A-S 530	Advanced Drawing	(3)
A-S 540	Graphic Design: Publication Design	(3)
A-S 541	Graphic Design: Advanced Design	(3)
A-S 546	Intermedia Studio: (Subtitle Required)	(3)
A-S 550	Fiber III	(3)
A-S 551	Fiber IV	(3)
A-S 560	Advanced Hot Metals: Fabrication	(3)
A-S 561	Advanced Hot Metals: Casting	(3)
A-S 570	Ceramics III	(3)
A-S 571	Ceramics IV	(3)
A-S 580	Photography Projects I	(3)
A-S 581	Photography Projects II	(3)
A-S 584	Color Photography II	(3)
A-S 586	Nonsilver Photography II	(3)
A-S 596	Workshop	(1-6)
A-S 610	Painting V	(3)
A-S 611	Painting VI	(3)
A-S 620	Printmaking V	(3)
A-S 621	Printmaking VI	(3)
A-S 630	Graduate Drawing	(3)
A-S 650	Fiber V	(3)
A-S 651	Fiber VI	(3)
A-S 660	Sculpture V	(3)
A-S 661	Sculpture VI	(3)
A-S 670	Ceramics V	(3)

A-S 671	Ceramics VI	(3)
A-S 680	Photography V	(3)
A-S 681	Photography VI	(3)
A-S 710	Problems In Painting	(3)
A-S 720	Problems In Printmaking	(3)
A-S 730	Problems In Drawing	(3)
A-S 740	Problems In Fiber	(3)
A-S 750	Problems In Sculpture	(3)
A-S 767	M.F.A. Studio Thesis Project	(1-6)
A-S 770	Problems In Ceramics	(3)
A-S 777	Problems In Intermedia	(3)
A-S 779	Problems In Photography	(3)
A-S 780	Problems In Design	(3)
A-S 793	Graduate Studio Seminar	(3)
A-S 795	Independent Research	(1-3)
Art 748	Master's Thesis Research	(0)
Art 768	Residence Credit For Master's Degree	(1-6)

Art Studio

College of Fine Arts

Master of Fine Arts

The Master of Fine Arts (M.F.A.) degree in Art Studio is the terminal academic degree for studio artists and the required faculty credential for most institutions of higher learning. In addition to being fully qualified to teach at the college-level, M.F.A. graduates will possess the skills to pursue careers in commercial venues or as full-time practicing fine artists. Students enrolled in the M.F.A. program are encouraged to explore inter-disciplinary and cross-disciplinary mediums or concentrate upon a single media dependent upon the direction of their research.

Applications are reviewed only once per year for fall semester admittance. The deadline for all materials is January 6th. Artwork submitted must be substantial in quality, scope, and conceptual rigor.

Admission Requirements

While a B.A. or B.F.A. in studio art is the preferred preparatory degree for the M.F.A. program, students from a variety of educational backgrounds may apply. The determinate factor inadmittance to the program will be the quality of the submitted artwork.

Application Procedures

The Graduate School, which is the administrative unit for all graduate students, and the Art Studio graduate program, which is responsible for the academic curriculum, require different application materials.

Application for admission to the Graduate School requires:

- A completed application form for the Graduate School (on-line application form available at http://gradschool.uky.edu.
- One official transcript from all institutions previously attended.
- TOEFL scores and/or IELTS scores if an international student.
- Application fee.
- An electronic portfolio of 20 recent artworks sent as a .pdf with an image key with title, date, size, and medium for each submitted work as part of that document. (maximum resolution 8” x 10” x 72 dpi – NO PowerPoint presentations). This portfolio is to be uploaded as one document under the “Portfolio”; submission button. If your files are too large, please resize them. If sending timebased materials (such as video), pleaseinclude a link to your work on a website such as vimeo, personal site, or YouTube.
- A brief letter stating your goals for graduate study and your interest in being considered for an assistantship, fellowship, and or internship and can be uploaded using the “Personal Statement” submission button. A writing sample is not required ignore the prompt.
- A brief résumé uploaded via the CV submission prompt
- Three letters of recommendation uploaded via ApplyYourself

Degree Requirements

The M.F.A. degree will be awarded on the completion of 60 hours of graduate course work. Of these, 30 hours must be at or above the 600 level and 40 hours must be in graduate level courses:

Requirements:

- Art Studio - Students must take a minimum of 33 credit hours of Art Studio courses including A-S 793, Graduate Studio Seminar, required of M.F.A. candidates every fall semester of their residency.

- Art History - Students must take a minimum of 9 credit hours of Art History including three hours of A-H 650 Contemporary Art.
- Gallery Practicum - Students must take A-H 502 Museum Studies II: Internship.
- MFA Thesis - A total of 6 credits of A-S 799 (Studio Thesis Project) are required for the preparation and successful completion of a final one-person M.F.A. exhibition of studio work.

Other Requirements
- Up to 9 credit hours in related graduate courses may be taken outside the School of Art and Visual Studies or elsewhere in the University.
- A foreign language is not required, and the M.F.A. degree is offered only according to Plan B.

Graduate Courses

A-E 515	Introduction To Art Therapy.	(3)
A-E 538	Advanced Arts And Crafts In The Elementary School	(3)
A-E 545	Topical Studies In Art Education (Subtitle Required).	(3)
A-E 560	Museum Education	(3)
A-E 576	Art In Middle Schools	(3)
A-E 577	Art In Secondary Schools	(3)
A-E 578	Art In Elementary Schools	(3)
A-E 579	Arts And Humanities In Art Education	(3)
A-E 645	Topical Research In Art Education (Subtitle Required)	(3)
A-E 665	Issues In Art Education	(3)
A-E 670	School And Community Art	(3)
A-E 675	Aesthetics And Design	(3)
A-E 680	History Of Art Education	(3)
A-E 685	Action Research In Art Education	(3)
A-E 685	Teacher Leadership In Art Education	(3)
A-E 695	Independent Work: Art Education	(1-3)
A-E 748	Master's Thesis Research	(0)
A-H 501	Museum Studies I: Introduction	(3)
A-H 502	Museum Studies Ii: Internship	(3)
A-H 504	Practical Issues In Art History (Subtitle Required)	(3)
A-H 510	Art History And Visual Studies Honors Thesis	(3)
A-H 524	Theory And Methods	(3)
A-H 525	Studies In Genres And Media (Subtitle Required)	(3)
A-H 526	Art And The Artist In Society (Subtitle Required)	(3)
A-H 527	Interdisciplinary Approaches (Subtitle Required)	(3)
A-H 528	Topical Seminar In Art History And Visual Studies (Subtitle Required)	(3)
A-H 529	Topical Seminar In Architectural Or Design History (Subtitle Required)	(3)
A-H 555	Methods In Art History And Visual Studies	(3)
A-H 592	Aesthetics (Same As Phi 592)	(3)
A-H 598	Coordinate Study In Art History And Visual Studies	(3)
A-H 599	Experiential Education In Art History And Visual Studies	(3)
A-H 604	Practical Problems In Art History (Subtitle Required)	(1-6)
A-H 624	Theory And Methods: (Subtitle Required)	(3)
A-H 625	Problems In Genres And Media (Subtitle Required)	(3)
A-H 626	The Artist In Society (Subtitle Required)	(3)
A-H 627	Interdisciplinary Problems (Subtitle Required)	(3)
A-H 628	Art History And Visual Studies Topical Seminar (Subtitle Required)	(3)
A-H 629	Art History Topical Seminar In Architectural Or Design History (Subtitle Required)	(3)
A-H 650	Advanced Contemporary Art History	(3)
A-H 655	Advanced Research Methods In Art History And Visual Studies	(3)
A-H 738	Master's Portfolio Preparation	(1-3)
A-H 748	Master's Thesis Research	(0)
A-H 768	Thesis Formulation And Preparation In Art History	(3)
A-H 780	Independent Work: Art History	(1-3)
A-S 510	Painting III	(3)
A-S 511	Painting IV	(3)
A-S 520	Printmedia: Topics (Subtitle Required)	(3)
A-S 521	Printmedia: Contemporary Practices	(3)
A-S 530	Advanced Drawing	(3)
A-S 540	Graphic Design: Publication Design	(3)
A-S 541	Graphic Design: Advanced Design	(3)
A-S 546	Intermedia Studio: (Subtitle Required)	(3)
A-S 547	Digital Media Projects Capstone	(3)
A-S 550	Fiber III	(3)
A-S 551	Fiber IV	(3)
A-S 560	Advanced Hot Metals: Fabrication	(3)
A-S 561	Advanced Hot Metals: Casting	(3)
A-S 564	Digital Fabrication Projects (Subtitle Required)	(3)
A-S 567	Advanced Digital Fabrication Projects (Subtitle Required)	(3)
A-S 570	Ceramics III	(3)
A-S 571	Ceramics IV	(3)
A-S 580	Photography Projects I	(3)
A-S 581	Photography Projects II	(3)
A-S 584	Color Photography II	(3)
A-S 585	Industry Pathways And Practice	(3)
A-S 586	Nonsilver Photography II	(3)
A-S 587	Advanced Topics In Photography (Subtitle Required)	(3)
A-S 596	Workshop	(1-6)
A-S 610	Painting V	(3)
A-S 611	Painting VI	(3)
A-S 620	Printmaking V	(3)
A-S 621	Printmaking VI	(3)
A-S 630	Graduate Drawing	(3)
A-S 646	Advanced Intermedia Studio (Subtitle Required)	(3)
A-S 650	Fiber V	(3)
A-S 651	Fiber VI	(3)
A-S 660	Sculpture V	(3)
A-S 661	Sculpture VI	(3)
A-S 670	Ceramics V	(3)
A-S 671	Ceramics VI	(3)
A-S 680	Photography V	(3)
A-S 681	Photography VI	(3)
A-S 687	Graduate Topics In Photography (Subtitle Required)	(3)
A-S 710	Problems In Painting	(3)
A-S 720	Problems In Printmaking	(3)
A-S 730	Problems In Drawing	(3)
A-S 740	Problems In Fiber	(3)
A-S 750	Problems In Sculpture	(3)

A-S 770	Problems In Ceramics	(3)
A-S 777	Problems In Intermedia	(3)
A-S 779	Problems In Photography	(3)
A-S 780	Problems In Design	(3)
A-S 793	Graduate Studio Seminar	(3)
A-S 795	Independent Research	(1-3)
A-S 799	M.F.A. Studio Thesis Project	(1-6)
Art 748	Master's Thesis Research	(0)
Art 768	Residence Credit For Master's Degree	(1-6)

Arts Administration

College of Fine Arts

Master of Arts

The University of Kentucky prepares the next generation of arts leaders through its innovative online MA in Arts Administration. This degree is designed to serve a vibrant nonprofit arts and cultural industry that attracts more than 78 million Americans each year and generates $135 billion in economic activity annually that support 4.1 million jobs.

Ideal candidates for the M.A. include individuals who have experience in the arts or arts management and have the desire to supplement this experience with more in-depth training in the form of an advanced business and nonprofit arts-focused degree. These include persons who have graduated with a bachelor's degree in Arts Administration, the arts, or a related field and professionals with experience in the arts or arts management.

UK offers its M.A. in Arts Administration as a completely online program. This provides several benefits to UK graduate students:

- Flexibility - For working professionals, an online program is ideal to provide the flexibility needed to balance work, school and personal obligations.
- Time and location - There is no residency requirement. The program is designed for students to have equal access no matter where they are located
- Affordability - All students accepted into the Arts Administration M.A. program pay the in-state tuition rate regardless of residential location. Additionally, there are a number of financial aid options available to students who meet the requirements.
- Quality instruction - Students who attend online classes will receive the same quality instruction as those who would attend class on-campus.

Admission Requirements

The MA Program is open to qualified applicants who have earned a bachelor's degree from an accredited college or university in the United States or abroad. All candidates for admission are selected on the basis of undergraduate transcripts, academic and personal references, and related work experience. Applicants are expected to have a demonstrable commitment to the arts in at least one art form. This requirement can be satisfied in several ways including an undergraduate degree in an art form or arts-related field; professional experience in the arts; or extra-curricular activity in the arts.

All applicants whose native language is not English will be required to submit TOEFL or IELTS scores. The minimum acceptable TOEFL score is 550 (paper-based) 213 (computer-based), or 79 (internet-based). The minimum IELTS score is 6.5. Submitted scores must be no more than two years old.

Application Procedures

To apply ofr admission to the MA in Arts Administration, applications must be submitted online to the UK Gradute School. New graduate students are accepted in the fall and spring semester.

Athletic Training

College of Health Sciences

Master of Science

The master's degree in athletic training is designed to accommodate both NATA certified athletic trainers and NATA "certification eligible" athletic trainers. Course work and clinical experiences are designed to develop skills necessary to conduct research and increase proficiency in injury prevention, treatment, and rehabilitation. Graduates are prepared to become critical consumers of research and accepted clinical practices, advanced health care providers, and leaders in the clinical educational, and research endeavors of the profession.

Admission Requirements

Students interested in applying to the program can find additional information at the following site: https://www.uky.edu/chs/at. Applicants must meet the minimum requirements of The Graduate School, as well as the following requirements of the athletic training program: satisfactory scores on the Graduate Record Examination (GRE), a minimum undergraduate grade point average of 2.70 on a 4.00 grading scale, a baccalaureate degree in athletic training from a school accredited by a nationally recognized organization, two references, and an interview. Final admission recommendations are made on a competitive basis. Students must be elibible for current license to practice in Kentucky. Admission to the post-professional athletic training program is competitive and is based on availability of space and adequate faculty support. For additional information, contact:

Dr. Phillip Gibble, Director, Division of Athletic Training
phillip.gribble@uky.edu

Graduate Courses

AT 660	Directed Study in Athletic Training	(1-3)
AT 670	Scientific Inquiry in Athletic Training I	(2)
AT 671	Scientific Inquiry in Athletic Training II	(2)
AT 672	Scientific Inquiry in Athletic Training III	(2)
AT 673	Scientific Inquiry in Athletic Training IV	(2)
AT 680	Special Topics in Athletic Training (Subtitle Required)	(1-3)
AT 685	Principles and Application of Kinesiological Emg	(3)
AT 690	Orthopaedic Evaluation and Rehabilitation of the Upper Extremity	(4)
AT 692	Orthopaedic Evaluation of the Spine	(3)
AT 695	Orthopaedic Evaluation and Rehabilitation of the Lower Extremity	(4)
AT 700	Muscle Mechanics	(3)
AT 740	Musculoskeletal Anatomical Dissection	(3)

Behavioral Science

College of Medicine

The Department of Behavioral Science in the College of Medicine offers a PhD in Clinical and Translational Science, a mentored research training program to enable exceptional professionals with terminal professional health care degrees (e.g., physicians, nurses, dentists, pharmacists, public health professionals, MD/PhD students) to contribute well-reasoned original research contributions to the discovery of clinical health knowledge and its application. The Department also offers a graduate certificate in Clinical and Translational Science for faculty members, professionals in postgraduate training, graduate students, staff and practicing professionals who would like to develop the foundational skills needed to participate in clinical and translational research. These programs are described in more detail in this bulletin. Behavioral Science is not a degree program.

Additional information may also be obtained from the Department of Behavioral Science Web site (https://behavioralscience.med.uky.edu). Inquiries should be directed to the Director of Graduate Studies, Department of Behavioral Science.

Graduate Courses

BSC 607	Food Related Behaviors (Same AS NFS/ANT/NS 607)	(3)
BSC 625	Fundamentals Of Biostatistics For Clinical And Translational Research	(3)
BSC 626	Survey Of Health Psychology (Same As PSY 626)	(3)
BSC 645	Anthropology And Epidemiology (Same As ANT 645)	(3)
BSC 731	Methods And Technologies In Clinical And Translational Science	(3)
BSC 732	Interdisciplinary Protocol Development	(3)
BSC 733	Seminar In Clinical And Translational Science	(1)
BSC 745	Research Methods In Medical Behavioral Science	(3)
BSC 746	Research Ethics And Dilemmas	(3)
BSC 750	History Of Medicine Among African Americans: Implciations For Health Disparities	(3)
BSC 760	Aging, Health And Decision Making	(3)
BSC 763	Women's Trauma And Mental Health	(3)
BSC 764	Seminar In Health Inequities	(3)
BSC 765	Research Problems In Medical Anthropology (Same AS BSC 765)	(3)
BSC 766	Concepts In Medical Sociology (Same As SOC 766)	(3)
BSC 770	Psychosocial Issues In Health And Aging	(3)
BSC 772	Topical Seminar In Medical Behavioral Science	(1-3)
BSC 773	Psychosocial Oncology	(3)
BSC 774	Food And Food Security In A Changing World (Same As ANT 774)	(3)
BSC 776	Seminar In Dependency Behavior (Same As SOC/ANT/PSY 776)	(3)
BSC 777	Seminar In Mental Illness Concepts, Research And Policy (Same As SOC 777)	(3)
BSC 781	Health Related Behaviors: Models And Applications	(3)
BSC 782	Women Health And Aging (Same As GRN 782)	(3)
BSC 785	Comparative Health Care Systems (Same As SOC 785)	(3)
BSC 787	Biobehavioral Perspectives On Drug And Alcohol Abuse And Dependency	(3)
BSC 788	Drug Abuse Contemporary Theories And Issues	(3)
BSC 790	Research In Medical Behavioral Science	(1-6)

Biology

College of Arts & Sciences

The Biology Graduate Program offers Doctor of Philosophy and Masters of Science degrees (thesis and non-thesis) in Biology, but doctoral training is strongly emphasized. Master's training is not a prerequisite for admission into our doctoral program. Applicants are selected for admission based on their overall academic record, GRE scores, letters or recommendation, prior research experience, and on their expressed interest in our graduate program training areas or the research of the Biology Department faculty members.

Training
Graduate students are trained through a combination of formal coursework and research experience. Research training consists of work on a research project under the guidance of one or more of our faculty members. The specific research project is chosen in consultation with the faculty mentor and typically is closely related to the research interests of that lab. A one-credit Biology Graduate Student Orientation seminar course is required for all first year graduate students admitted into the Biology program. All students must complete a set of common requirements for the Biology Graduate Program, including seminar courses, research, a qualifying exam (for Ph.D. candidates), and an exit exam (thesis defense for Ph.D. and Plan A M.S.). Additional coursework depends on the area of specialization and is determined with input from the faculty mentor and student's advisory committee and the training program. The training programs include Environmental and Evolutionary Biology (EEB), Molecular, Cellular and Developmental Biology (MCDB), and Tailored Training (TT).

Environmental and Evolutionary Biology Training Program
The Environmental and Evolutionary Biology group supports education and research on the interactions between organisms and their environment from an evolutionary perspective. This includes the study of micro- and macro-evolutionary processes; the physiological, developmental, and behavioral adaptations of individual organisms; predator-prey, mutualistic, and competitive interactions; and community and ecosystem relationships. Faculty members conduct research exploring both basic underlying principles and specific applied consequences of ecological interactions. The group's core philosophy is that major advances in understanding how organisms evolve and function in changing ecological systems are achieved in an interactive, interdisciplinary research environment involving diverse conceptual and methodological approaches. Students achieve this through coursework, topical seminars, weekly research seminars, and research projects guided by their major advisor and thesis committee.

Molecular, Cellular and Developmental Biology Training Program
Molecular, Cellular and Developmental Biology (MCDB) training focuses on fundamental cellular and developmental processes such as gene expression, cell proliferation, cell signaling, development, neural function, aging, and behavior. We apply biochemical, genetic, physiological, and molecular techniques to resolve outstanding issues in biology and use a diverse set of experimental organisms (e.g. fungi, cultured cells, and complex animals ranging from the fruit fly to mouse). Entering MCDB students rotate through two different laboratories before selecting a research mentor near the end of the first year of study. Students participate in weekly research and literature seminars and are guided in the selection of other formal course work in order to best prepare for their thesis/dissertation studies. The faculty and students in the MCDB group interact closely with each other, with colleagues elsewhere on our campus, and with scientists worldwide to achieve a stimulating research atmosphere. Our program successfully prepares students for scientific research careers in academic, industrial and governmental settings.

Tailored Training
The Tailored Training program provides great curricular flexibility. The principal difference between Tailored Training and training in the MCDB and EEB programs is that there are no set course requirements, other than the minimum requirements set by the Biology Graduate Program. The mentor and advisory committee work together with the student to customize a curriculum that best suits the needs, interests, and goals of the student. This may be particularly advantageous for students whose primary interests encompass areas outside of or across the other training programs. The curriculum is unique to each student, but not isolating. The student is encouraged to participate in relevant seminars, journal clubs, or other activities attended by students in the MCDB and EEB training programs or in other University graduate training programs. Students admitted through the Tailored Training option enter the Biology Graduate Program directly into the lab of their research mentor. Applicants interested in admission through this mechanism should contact the faculty member with whom they wish to train and also indicate their lab of choice in the Biology application. Faculty members offering Tailored Training will indicate this option on their web pages.

Financial Support
Full financial support is offered to all Ph.D. and Plan A M.S. students accepted for graduate admission; no financial aid application is required. Support may include teaching assistantships and fellowships provided by the university and department, research assistantships offered by faculty mentors, interdisciplinary traineeships and fellowships or extramural research fellowships to individual students.

Admission Requirements
Anyone with a bachelor's degree from an accredited college or university may apply for admission to the Biology Graduate Program at either the MS or Ph.D. levels. Applicants are generally expected to have an undergraduate grade point average of at least 3.0 (out of 4.0), a combined verbal and quantitative Graduate Record Examination score of at least 1100 (old scoring system) or 300 (new scoring system) and, for non-native English speakers, a TOEFL score of at least 550 on paper based test or 213 on the computer-based test (CBT) or 79 on internet-based test (IBT). Our GRE institution code is 1837 and Department Code is 0206. We encourage completed applications by January 1 although applications will continue to be reviewed until all positions are filled.

Prerequisite college-level coursework includes one year of physics, two years of chemistry, one semester of calculus, one year of general biology, and upper-level courses providing a working knowledge of contemporary biology. Every student entering the Biology Graduate Program is presented with the Graduate School Bulletin at orientation to familiarize the students with UK Graduate School policy. In addition, each student is provided with a copy of the Rules, Regulations & Policies for the Biology Graduate Program which describes the Departmental rules governing the Biology Graduate Program.

The Biology Graduate Program application is available online. This application and additional information about the Biology Graduate Program can be found at the Program website: http://bio.as.uky.edu/grad-program.

Graduate Courses

A&S 500	Special Topics Course (Animal Senses; Stem Cells & Tissue, Engineering; Homeostasis)	(1-4)
Bio 401g	Special Topics In Biology:Elementary, Middle School & High School Teachers	(1-4)
Bio 430g	Plant Physiology	(3)
Bio 452g	Laboratory In Ecology	(2)
Bio 494g	Immunobiology (Same As Mi 494g)	(3)
Bio 502	Principles Of Systems, Cellular & Molecular Physiology (Same As Pgy 502)	(5)
Bio 507	Biology Of Sleep And Circadian Rhythms	(3)
Bio 508	Evolution	(3)

Bio 510	Recombinant Dna Techniques Laboratory	(4)
Bio 520	Bioinformatics (Same As Inf 520)	(3)
Bio 529	Developmental Biology	(3)
Bio 530	Biogeography And Conservation (Same As Geo 530)	(3)
Bio 535	Comparative Neurobiology And Behavior (Same As Pgy 535)	(3)
Bio 542	Histology	(5)
Bio 550	Comparative Physiology	(3)
Bio 551	Life Cycle Ecology Of Flowering Plants	(4)
Bio 555	Vertebrate Zoology	(5)
Bio 559	Ornithology	(4)
Bio 560	Environmental Physiology And Toxicology (Same As Tox 560)	(4)
Bio 561	Insects Affecting Human And Animal Health (Same As Ent 561)	(3)
Bio 563	Parasitology (Same As Ent 563)	(4)
Bio 564	Insect Taxonomy (Same As Ent 564)	(4)
Bio 568	Insect Behavior (Same As Ent 568)	(3)
Bio 570	Invertebrate Zoology	(4)
Bio 575	Plant Anatomy And Morphology	(4)
Bio 601	Special Topics In Molecular And Cellular Genetics (Bch/Mi/Pls/Ppa 601)	(1)
Bio 606	Conceptual Methods In Ecology And Evolution (Same As Ent/For 606)	(3)
Bio 607	Advanced Evolution (Same As Ent/For 607)	(2)
Bio 608	Behavioral Ecology And Life Histories (Same As Ent/For 608)	(2)
Bio 609	Population And Community Ecology (Same As Ent/For 609)	(2)
Bio 612	Biology Of Aging (Same As Ana/Grn/Pgy 612)	(3)
Bio 615	Molecular Biology (Same As Mi/Bch 615)	(3)
Bio 620	Plant Molecular Biology (Same As Pls 620)	(3)
Bio 621	Topics In Modern Biology (Advanced Genetics; Population Biology; Biometry; Membrane Biophysics)	(1-3)
Bio 622	Physiology Of Plants I (Same As Pls/For 622)	(3)
Bio 623	Physiology Of Plants II (Same As Pls/For 623)	(3)
Bio 625	Insect-Plant Relationships (Same As Ent 625)	(3)
Bio 635	Insect Physiology And Internal Morphology (Same As Ent 635)	(4)
Bio 638	Developmental Neurobiology (Same As Ana/Pgy/Psy 638)	(3)
Bio 650	Animal Physiology Laboratory (Same As Pgy 650)	(2)
Bio 665	Insect Ecology (Same As Ent 665)	(3)
Bio 684	Phylogenetic Systematics (Same As Ent 684)	(3)
Bio 685	Advanced Immunobiology (Same As Mi 685)	(3)
Bio 707	Contemporary Topics In Immunology	(2)
Bio 720	Microbial Structure And Function (Same As Mi/Obi 720)	(4)
Bio 740	Mammalian Radiation Biology (Same As Rm 740)	(2)
Bio 748	Master's Thesis Research	(0)
Bio 749	Dissertation Research	(0)
Bio 767	Dissertation Residency Credit	(2)
Bio 768	Residence Credit For Master's Degree	(1-6)
Bio 769	Residence Credit For Doctor's Degree	(0-12)
Bio 770	Seminar In Biology (Subtitle Required)	(1)
Bio 772	Seminar In Microbiology (Same As Mi 772)	(0-1)
Bio 773	Seminar In Plant Physiology (Same As Pls 773)	(1)
Bio 782	Advanced Virology (Same As Vs 782)	(3)
Bio 790	Mentoring Undergraduate Research In Biology	(1)
Bio 795	Research In Biology	(1-9)

Biomedical Engineering

College of Engineering

The Department of Biomedical Engineering offers master's and doctoral degrees in addition to a minor in Biomedical Engineering. The graduate programs emphasize the application of engineering principles to the areas of medicine and biology and covers the broad aspects of mechanics, materials, fluids, optics, signal processing, systems analysis, instrumentation, physiology, cellular processes, and laboratory experimentation. Students in the program are provided with educational and research opportunities through the facilities and faculty of the Department and its ideal geographic location and close ties with other units of the University, ranging from engineering to basic science to clinical departments.

Areas of research include cardiac arrhythmia, cardiopulmonary control, magnetic resonance imaging, biomedical optics, orthopedic biomaterials and bone tissue engineering, and orthopedic biomechanics. The Department is housed in the centrally located Robotics and Manufacturing Building which makes it convenient for multidisciplinary research. Faculty and staff of the Department collaborate with investigators from other units of the University, including Anatomy & Neurobiology, Biochemistry, Biology, the Markey Cancer Center, Cardiovascular Medicine, Cardiothoracic Surgery, Center for Applied Energy Research, Chemical Engineering, Chemistry, Electrical Engineering, Mathematics, Mechanical Engineering, Neonatology, Nephrology, Neurosurgery, Oral Surgery, Orthopaedic Surgery, Otolaryngology, Pediatric Cardiology, Periodontics, Pharmacy, Physiology, and Plastic Surgery. Department faculty and staff provide opportunities and support for graduate students, medical residents, and selected undergraduates. Graduates of the program enter careers in research institutes, academia, hospitals, and the biomedical field.

Admission Requirements
Entering students are expected to have a baccalaureate degree in engineering. Some course work in the biological sciences is desirable but not required. Applicants with degrees purely in the physical or biological sciences may be required to complete select course work in the undergraduate engineering curriculum before being admitted to the graduate program. Admission to the biomedical engineering graduate program normally requires a GPA of at least 3.0/4.0 for all graduate and undergraduate work and Graduate Record Examination scores of ≥156 (Quantitative), ≥154 (Verbal) and ≥4.0 (Analytical). Additional application materials to be submitted to the Department include a statement describing your reasons for wanting to pursue graduate education in Biomedical Engineering and letters of recommendation from (3) faculty members who are familiar with your academic record. There is no specific form that is required for these letters. Satisfying the above requirements does not guarantee admission to the biomedical engineering graduate program.

Master of Science

The Master of Science degree provides students with a combination of experiences in basic research, design, development, and practical applications. The M.S. degree requires successful completion of the core curriculum (26 credit hours) plus an accepable thesis. In special cases, a non-thesis option consisting of 31 credit hours is available for students with significant previous research or design experience or those who are concurrently employed in a biomedical engineering related industry. Enrollment in the non-thesis option requires approval of the Director of Graduate Studies and must be requested within the student's first 9 credit hours of graduate course work.

Core M.S. Curriculum

BME 530	Biomedical Instrumentation	(3)
BME 605	Biomedical Signal Processing	(3)
BME 661	Biomaterials Science and Engineering	(3)
BME 6XX	Biomechanics Elective	(3)
BME XXX	BME Technical Elective	(3)
BME 772	Seminar	(0)
BME 640	Ethics in BME and Science	(1)
PGY 412G	Principles of Human Physiology	(4)
	Math Elective	(3)
	Technical Elective	(3)

Professional Master of Biomedical Engineering

The Professional Master of Biomedical Engineering degree seeks to develop a unique combination of managerial, technical and leadership skills for those who will direct the future course of biomedical technology. The P.B.M.E. degree requires successful completion of 42 credits, including the capstone Advanced Study Project, and a summer internship.

Core P.B.M.E. Curriculum

BME XXX	BME Technical Electives	(9)
BME 642	Navigational Guides for Biomedical Product Designs	(2)
BME 766	Advanced Study Project	(3)
BME 772	Seminar	(0)
BME 777	Advanced Study Project	(3)
HA 601	Healthcare System Overview	(3)
HA 602	Strategic Planning and Management of Healthcare Organizations	(3)
HA 621	Quantitative Methods of Research	(3)
HA 637	Health Finance	(3)
MKT 600	Marketing Management	(3)
PA 623	Decision Analysis	(3)
PA 642	Public Organ Theory and Behavior	(3)
PGY 412G	Principles of Human Physiology	(4)

Doctor of Philosophy

The Doctor of Philosophy is a research degree granted on the basis of broad knowledge of engineering applications in biology and medicine and an in-depth study in a specific area leading to a dissertation reflecting original and independent work by the candidate. Applicants to the Ph.D. program are generally expected to have a master's degree. Under special circumstances, exceptional students may bypass the M.S. and be admitted directly to the Ph.D. program upon approval of the biomedical engineering faculty. Courses for advanced study are determined in consultation with an advisory committee and will be selected from the areas of engineering, mathematics, life sciences, and chemistry.

To earn a Ph.D. degree, students must:

1. Meet the requirements of the Graduate School.
2. Succesfully complete PGY 502.
3. Pass the Qualifying Examination. This exam, consisting of written and oral components, is designed and administered by the student's Doctoral Advisory Committee.

4. Present and satisfactorily defend a dissertation documenting independent and comprehensive scholarship.

Further information about the graduate programs may be obtained by writing to the Director of Graduate Studies, Department of Biomedical Engineering, 522 RMB, 143 Graham Avenue, University of Kentucky, Lexington, KY 40506-0108, by e-mail at bmedgs@uky.edu, or by visiting our web site at http://www.engr.uky.edu/cbme/future-students/programs/phd/.

Graduate Courses

BME 481g	Topics in Biomedical Engineering (Subtitle Reflects Specialization)	(3)
BME 501	Foundations of Biomedical Engineering	(3)
BME 530	Biomedical Instrumentation	(3)
BME 579	Neural Engineering: Merging Engineering with Neuroscience (Same as EE 579)	(3)
BME 605	Biomedical Signal Processing I	(3)
BME 610	Biomedical Control Systems I	(3)
BME 615	Biomedical Signal Processing II	(3)
BME 620	Biomedical Control Systems II	(3)
BME 625	Analysis of Nonlinear Biomedical Systems	(3)
BME 630	Magnetic Resonance in Biomedicine	(3)
BME 635	Magnetic Resonance Instrumentation and Measurement	(3)
BME 641	Practices of Biomedical Engineering	(3)
BME 642	Navigational Guides for Biomedical Product Development	(3)
BME 661	Biomaterials Science and Engineering	(3)
BME 662	Tissue-Implant Interface	(3)
BME 670	Biomechanics I	(3)
BME 672	Musculoskeletal Biomechanics	(3)
BME 680	Advanced Topics in Biomechanics	(3)
BME 682	Advanced Topics in Orthopaedic Biomechanics	(3)
BME 685	Biofluid Mechanics	(3)
BME 690	Research in Biomedical Engineering (Subtitle Reflects Specialization)	(1-3)
BME 699	Special Topics in Biomedical Engineering (Subtitle Reflects Specialization)	(1-3)
BME 748	Master's Thesis Research	(0)
BME 749	Dissertation Research	(0)
BME 766	Management of Technology	(3)
BME 767	Dissertation Residency Credit	(2)
BME 768	Residence Credit for the Master's Degree	(1-6)
BME 769	Residence Credit for the Doctoral Degree	(0-12)
BME 772	Seminar	(0)
BME 774	Graduate BME Seminar	(0-1)
BME 781	Special Problems in Biomedical Engineering	(1-3)

Biosystems & Agricultural Engineering

College of Engineering

The Biosystems and Agricultural Engineering Department offers programs leading to the M.S. (Plan A and Plan B available) and the Ph.D. degree.

Admission Requirements
Admission into the M.S. graduate program of the Biosystems and Agricultural Engineering Department requires the concurrence of the Department Graduate Committee, and the Director of Graduate Studies, and the Department Chair and the availability of an advisor for the student. The Biosystems and Agricultural Engineering Graduate Committee reviews the applicant's three letters of recommendation, resume, statement of professional objective and transcripts with special emphasis given to the science and mathematics area. The department requires a minimum grade point average of 2.8 and a GRE score of at least 1500. An engineering B.S. degree from an ABET-accredited engineering program (or international equivalent) is generally required, however, non-engineering students may be admitted by agreeing to take additional undergraduate courses specified by the graduate committee. Exceptions to these requirements are considered on a case-by-case basis, taking into account the materials described above as well as GRE scores.

Admission into the Ph.D. graduate program of the Biosystems and Agricultural Engineering Department requires the concurrence of the Department Graduate Committee, the Director of Graduate Studies, and the Department Chair, and the availability of an advisor for the student. The Biosystems and Agricultural Engineering Graduate Committee reviews the applicant's previous graduate record, three letters of recommendation, resume, statement of professional objective, and transcripts with special emphasis given to the science and mathematics area. The department requires a minimum grade point average of 3.2 on all previous graduate work for unconditional admission. Exceptions to these requirements are considered on a case-by-case basis, taking into account the materials described above as well as GRE scores. Ph.D. students are admitted into candidacy after they have successfully completed the Qualifying Exam.

Degree Requirements
The objectives of the Biosystems and Agricultural Engineering graduate program are to develop and strengthen:

1. the ability to plan and conduct research and design involving the application of engineering science to biological and agricultural systems.
2. an understanding of mathematical, physical, and biological sciences that enables critical assessment of scientific literature in these and related fields.
3. the skills required to use precision instruments, techniques and computers in research and design.
4. the ability to make sound engineering and management decisions.
5. the ability to teach college level courses in Biosystems and Agricultural Engineering, particularly at the doctoral level.

Graduate students will combine courses in Biosystems and Agricultural Engineering, other engineering fields, the physical sciences, and the biological sciences to develop a program of study that facilitates these objectives. The advanced degrees, however, are primarily research degrees awarded for significant creative research accomplishment, not for the completion of a specified number of courses. Therefore, the program normally concentrates on a strong thesis or dissertation problem completed under the supervision of the graduate faculty of the department. A design-oriented, non-thesis option is also available for the master's degree.

Graduate Courses

BAE 435G	Waste Management For Biosystems	(3)
BAE 438G	Fundamentals Of Groundwater Hydrology (Same As CE 460)	(3)
BAE 502	Modeling Of Biological Systems	(3)
BAE 513	Soil Dynamics In Tillage And Traction	(3)
BAE 515	Fluid Power Systems	(3)
BAE 517	Off-Road Vehicle Design	(3)
BAE 532	Introduction To Stream Restoration	(3)
BAE 536	Fluvial Hydraulics (Same As CE 546)	(3)
BAE 537	Irrigation And Drainage Engineering	(3)
BAE 538	Applications For Water Resources	(3)
BAE 545	Engineering Hydraulics (Same As CE 549)	(3)
BAE 549	Food And Bioprocess Engineering	(3)
BAE 556	Solid And Hazardous Waste Management (Same As CE 556)	(3)
BAE 569	Water Resources System Design (Same As CE 569)	(4)
BAE 580	Heating, Ventilating And Air Conditioning (Same As ME 580)	(3)
BAE 581	Physics Of Plant And Animal Environments	(3)
BAE 599	Topics In Agricultural Engineering	(2-3)
BAE 618	Advanced Plant, Soil, And Machinery Relationships	(3)
BAE 625	Topics In Advanced Environment Control And Analysis (Subtitle Required)	(3)
BAE 638	Groundwater Hydrology (Same As CE 660)	(3)
BAE 642	Open Channel Flow (Same As CE 642)	(3)
BAE 648	Energy And Mass Transfer In Agricultural Processing	(3)
BAE 653	Water Quality In Surface Waters (Same As CE 653)	(3)
BAE 658	Instrumentation For Engineering Research	(3)
BAE 660	Similitude In Engineering	(3)
BAE 665	Water Resources Systems (Same As CE 665)	(3)
BAE 667	Stormwater Modeling (Same As CE 667)	(3)
BAE 748	Master's Thesis Research	(0)
BAE 749	Dissertation Research	(0)
BAE 750	Special Problem.S In Agricultural Engineering	(1-3)
BAE 767	Dissertation Residency Credit	(2)
BAE 768	Residence Credit For Master's Degree	(1-6)
BE 769	Residence Credit For Doctor's Degree	(0-12)
BAE 775	Seminar	(0)
BAE 795	Thesis	(0)
AEN 463G	Agricultural Safety And Health	(3)
AEN 647	System Optimization I (Same As ME 647)	(3)
AEN 680	Biochemical Engineering (Same As CME 680)	(3)

Business Administration

Gatton College of Business & Economics

The Gatton College of Business and Economics offers the Master of Business Administration and the Doctor of Philosophy in Business Administration degrees. Faculty participating in the M.B.A. and the Ph.D. programs are members of the School of Accountancy, the Department of Finance and Quantitative Methods, the Department of Management, the Department of Marketing and Supply Chain, and the Department of Economics. A description of the graduate programs and graduate faculty in Accounting and in Economics can be found in those sections of this Bulletin.

Master of Business Administration

Gatton's One Year option is an intensive, cross-disciplinary, hands-on experience that will prepare you to be a leader in business and the community. Our curriculum incorporates a number of the core business processes, including marketing, management, and finance; as well as the more technical business courses such as accounting, quantitative analysis, operations management (supply chain), global management, and data analysis. Additionally, you will cover those critical areas that the corporate world values, including leadership, communication and presentation skills, ethics, and strategic thinking. All of this takes place in highly interactive, action-based courses and learning laboratories situated in the corporate setting through Project Connect which is a built in internship with companies in the area delivered in a team setting.

The Professional Evening M.B.A. program is a program designed for the working professional seeking to improve their business acumen and expand their soft skills. Modeled by the more traditional learning environment, evening students will study with first-rate professors who are leaders in their fields. In as little as two years, a student in the Professional Evening M.B.A. program will graduate with an advanced degree designed to broaden and enhance their skill set in order to be more competitive in the business world.

Admission Requirements

Prerequisites for the Professional Evening M.B.A. program include undergraduate accounting and economic courses. These prerequisites can be satisfied as listed below. Prerequisites may be satisfied by:

1. Passing the required courses (ACC 201 and ACC 202, ECO 201 and ECO 202) at the University of Kentucky;
2. Passing the similar courses at another accredited university, including KCTCS;
3. Passing B&E 223, Introduction to the Economics of Business and passing B&E 221 and B&E 222 Accounting courses offered in the Summer Session;
4. Passing college-level proficiency (CLEP) examinations;
5. Successfully completing correspondence courses or
6. Passing Ivy Software.

In addition to satisfying required course prerequisites, applicants should possess a four-year undergraduate degree (or its equivalent) with a minimum cumulative grade point average (GPA) of 2.75 / 4.00 scale. The Graduate Management Admission Test (GMAT) or the Graduate Record Exam (GRE) is required for admission in the M.B.A. program. Exceptions (at our discretion) to this requirement are students presently in law, medicine, or pharmacy schools, or licensed attorneys, medical doctors or pharmacists with a PharmD degree, and also persons having a doctoral degree from an accredited university. Further, students with professional work experience and/or professional leadership certifications (such as C.P.A.), plus satisfactory academic achievement as evidence by a minimum G.P.A. of 3.0 may be exempt from taking

the admissions test at the discretion of the Admissions Committee. International students must present a Test of English as a Foreign Language (TOEFL) with an overall minimum score of 550 written and 213 computer. The exception for the TOEFL test is for those students who hold a degree from a U.S. institution of higher education. All international students who are not permanent residents of the U.S. must present a Test of Written English (TWE) with a score of 4.5 or higher.

Subject to the exceptions stated above, no student will be admitted to either the One Year or Professional Evening M.B.A. program before the completion of the GMAT or GRE and the completion of the prerequisites.

The mission of the M.B.A. program is to educate, train and equip graduates with the essential skills for entry and mid-level management positions in a variety of organizations and industries. Specifically, the program is designed to provide:

1. The ability to think creatively and strategically about complex real world business problems.
2. An appreciation of ethical and societal responsibilities.
3. A multidisciplinary and global perspective.
4. Analytical, critical and logical reasoning skills.
5. Strong written and oral communication skills.
6. Entrepreneurial and business assessment skills.
7. Innovation and creativity in the workplace.

The One Year M.B.A. program consists of 51 credit hours while the Professional Evening M.B.A. program of study requires 36 semester credit hours of work.

One Year Program

DIS 651	Quantitative Analysis	(3)
ECO 610	Managerial Economics	(3)
MGT 697	Leadership, Communications & Ethics	(3)
MBA 630	Professional Development	(1)
MBA 640	Project Connect I	(4)
ACC 628	Managerial/Financial Accounting	(3)
MKT 600	Marketing Management	(3)
MGT 610	Global Management	(3)
FIN 600	Corporate Financial Policy	(3)
MKT 601	Marketing Research	(3)
Elective *		
MBA 642	Project Connect II	(4)
FIN 645	Corporate Investment & Financing Policy	(3)
DIS 612	Supply Chain Operations	(3)
MGT 612	Negotiation and Conflict Resolution	(3)
MGT 611	Managing Effective Organizations	(3)
MGT 699	Business Policy & Strategy (Capstone)	(3)

*A 600-level courses approved by the Director of Graduate Studies

Professional Evening MBA Program - 2 or 3 Year Part-time Program

ACC 628	Financial / Managerial Accounting	(3)
ECO 610	Managerial Economics	(3)
MGT 611	Organizational Behavior	(3)
FIN 600	Corporate Financial Policy	(3)
DIS 651	Quantitative Analysis for Decisions	(3)
MKT 600	Marketing Management	(3)
DIS 612	Supply Chain Management	(3)
MGT 610	Global Business Management	(3)
MKT 601	Marketing Research	(3)
MGT 612	Structured Problem Solving in Business	(3)
MGT 699	Business Policy & Strategy II	(3)

Students are required to have a minimum B grade average to graduate. Students receiving two grades of C or one grade of E may be subject to dismissal from the M.B.A. program.

B.S. in Engineering/M.B.A.

An opportunity to study for an M.B.A. degree while pursuing a Bachelor of Science in Engineering degree is offered to eligible students admitted to the College of Engineering.

J.D./M.B.A. Option

The College of Business and Economics and the College of Law offer the opportunity to obtain the Master of Business Administration (M.B.A.) and Juris Doctor (J.D.) degrees in a dual degree program. Because both schools recognize that some aspects of business and law are compatible and interrelated, students can obtain both degrees in less time than if the degrees were pursued separately. As a result, students gain marketable skills and specialized employment opportunities in less time than might otherwise be required. Students interested in the J.D./M.B.A. program must apply to both the College of Law and the Graduate School. These students may enroll in either the One Year or Professional Evening programs.

M.D./M.B.A.

Through an agreement with the College of Medicine, the Gatton College admits eligible students to pursue the M.B.A. degree jointly with the M.D. degree. Students interested in this program must apply to the College of Medicine as appropriate and also to the Graduate School. Students interested in the joint degree will enroll in the One Year program between their third and fourth year of Medical School.

Pharm.D./M.B.A.

Through an agreement with the College of Pharmacy, the Gatton College admits eligible students to pursue the M.B.A. degree jointly with the Pharm.D. degree. Students interested in this program must apply to the College of Pharmacy as appropriate and also to the Graduate School. Students interested in the joint degree will enroll in the Professional Evening program between their first and second year of Pharmacy School.

Application for Admission

Students who wish to apply for admission to the M.B.A. program in the Gatton College of Business and Economics should submit an online application to the Graduate School.
http://gradschool.uky.edu/welcome-university-kentucky

Doctor of Philosophy

The mission of the doctoral program is to prepare students for successful academic careers at institutions of higher learning within the USA and also internationally. To accomplish this mission, the program prepares graduates to comprehend and evaluate research, to perform research which advances knowledge and to provide effective instruction, all within a business-related discipline and in a supportive collegial environment. Specifically, the program is designed to provide:

- An academic understanding of the philosophies and basic methodological issues of academic inquiry.
- An understanding of the theorectical foundations and state-of-the-art research methods in a specific discipline.
- The ability to design and execute substantive research projects.
- The ability to communicate research findings to diverse audiences.

Admissions Requirements

1. The Ph.D. is designed to provide specialization beyond the master's level, but applicants without master's degrees will be considered if suitably qualified. The educational background of candidates is reviewed by the faculty in the student's major area to identify any deficiencies.
2. Applicants with previous graduate credits are evaluated according to the following rules, but each case is individually examined by the faculty of the appropriate business department. A minimal grade point average of 3.2/4.0 is required on all previous graduate credits. Also, students without GMAT scores must take the exam and submit scores before an admission decision can be made. In some areas and at the discretion of the Director of Graduate Studies, the GRE may be accepted as an alternative to the GMAT.

Unless the most recently awarded degree is from an accredited university within the USA, applicants whose native language is not English must submit proof of English ability (TOEFL or IELTS) with scores meeting at least the minimum requirements of the Graduate School.

Degree Requirements

Minimum requirements for the doctoral degree are a total of 40 hours of graduate level coursework and successful completion of the Qualifying Examination followed by registration for a minimum of 2 consecutive semesters for dissertation residency credit.

Core Requirements

- 3 credit hours in research methodology
- 6 credit hours in theoretical foundations
- 9 credit hours in research tools (including statistics)
- 1 credit hour in techniquest for business education

Total credit hours in the core 19

Major Field Requirements

The major field consists of at least 21 hours of graduate credit course work including at least 12 credit hours of 700 level courses exclusive of the core. Currently available major fields include:

- Accounting
- Finance and Quantitative Methods
- Management
- Marketing and Supply Chain

All course work must be approved by the Director of Graduate Studies. Written and oral comprehensive examinations are required in the major field.

Post Qualifying Examination Requirements

- A dissertation based on original research on a significant topic is required. The dissertation is defended in an oral examination.
- 2 consecutive semesters (4 credit hours minimum) of dissertation research residence credit.

Maintenance of Good Standing

- A minimum average of grade of B for graduate credit and in all courses after being admitted to the Graduate School must be maintained.
- Doctoral students obtaining two grades of C are subject to dismissal from the program regardless of the number of offsetting A's.
- Doctoral students obtaining an E grade are subject to dismissal from the program.
- A student failing the Qualifying Exam is subject to dismissal.
- A student may be dismissed from the program after successfully passing the Qualifying Examination if in the judgment of the student's Advisory Committee he/she is not making satisfactory progress toward the completion of a dissertation.

Students who wish to apply for admission to the Ph.D. program should submit an online application to the Graduate School https://app.applyyourself.com/AYApplicantLogin/fl_ApplicantConnectLogin.asp?id=ukgrad. For detailed admission information, visit the Gatton College web site www.gatton.uky.edu, call 859.257.3592, or write to

The Office of the Associate Dean
235 Gatton College of Business and Economics
University of Kentucky
Lexington, KY 40506-0034

Graduate Courses

ACC 700	Topical Seminar in Accounting Research (Subtitle Required)	(1-3)
ACC 795	Independent Study in Accounting	(1-6)
BA 601	Total Quality Management	(3)
BA 610	Global Business Management	(3)
BA 700	Teaching Methods in Business (Same as ECO 700)	(1)
BA 749	Dissertation Research	(0)
BA 762	Research Methodology	(3)
BA 767	Dissertation Residency Credit	(2)
BA 768	Residence Credit for the Master's Degree	(1-6)
BA 769	Residence Credit for the Doctor's Degree	(0-12)
DIS 506	Productivity and Quality Control	(3)
DIS 520	Advanced Business Data Processing and Information	(3)
DIS 600	Production Management	(3)
DIS 611	The Management of Computer Integrated Manufacturing	(3)
DIS 620	Management Information Systems in Decision Making	(3)
DIS 621	Business Expert Systems	(3)
DIS 622	Business Data Systems Analysis and Design	(3)
DIS 623	Business Decision Support Systems	(3)
DIS 624	Management of Information Resources	(3)
DIS 651	Quantitative Analysis in Business Decision Making	(3)
DIS 695	Individual Work in DSIS	(3)
DIS 700	Topics in Operations Management	(3)
DIS 720	Management Information Systems Theory	(3)
DIS 753	Seminar in Management Science	(3-6)
DIS 780	Studies in Decision Science and Information Systems	(3)
DIS 790	Special Topics in Management Decision Systems (Subtitle Required)	(3)

FIN 695	Individual Work in Finance	(1-6)
FIN 700	Seminar in Financial Theory	(3)
FIN 701	Seminar in Financial Theory II	(3)
FIN 745	Seminar in Managerial Finance	(3)
FIN 750	Seminar in Investment Theory	(3)
FIN 763	Research, Design and Analysis (Same as MGT/MKT 763)	(3)
FIN 780	Seminar in Financial Institutions	(3)
FIN 791	Seminar in Finance (Subtitle Required)	(1-3)
FIN 795	Independent Work in Finance	(1-6)
MGT 608	Comparative International Management	(3)
MGT 610	Global Management	(3)
MGT 611	Organizational Behavior (Same as MFS 611)	(3)
MGT 612	Structured Problem Solving in Business	(3)
MGT 620	Personnel and Industrial Relations	(3)
MGT 624	Management of Information Resources (Same as DIS 624)	(3)
MGT 640	Legal and Regulatory Environment	(3)
MGT 641	Legal Issues in the Accounting Profession	(3)
MGT 695	Individual Work in Management	(1-6)
MGT 697	Top Management Leadership in the Contemporary Business Environment	(3)
MGT 699	Business Policy and Strategy II	(3)
MGT 700	Administrative Science	(3)
MGT 712	Organizations and Individual Behavior	(3)
MGT 713	Seminar in Advanced Organization Theory	(3)
MGT 714	Seminar in Management Theory and Policy	(3)
MGT 763	Research, Design and Analysis (Same as MKT/FIN 763)	(3)
MGT 780	Special Topics in Management	(3)
MGT 781	Independent Work in Management	(1-6)
MGT 795	Social Networks and Organizations	(3)
MGT 796	Social Network Analysis	(3)
MKT 600	Marketing Management	(3)
MKT 601	Marketing Research	(3)
MKT 621	Product Management	(3)
MKT 622	Sales Management	(3)
MKT 623	Marketing in Service and Nonprofit Organizations	(3)
MKT 624	International Marketing Management	(3)
MKT 695	Individual Work in Marketing	(1-6)
MKT 700	Seminar in Marketing Management	(3)
MKT 710	Seminar in Consumer Behavior	(3)
MKT 720	Seminar in Marketing Theory	(3)
MKT 763	Research, Design and Analysis (Same as MGT/FIN 763)	(3)
MKT 771	Seminar in Business Administration	(3)
MKT 781	Independent Work in Marketing	(1-6)

Note: See also course listings under the Accounting and Economics programs in this bulletin.

Chemical Engineering

College of Engineering

The Department of Chemical and Materials Engineering offers programs leading to the M.S. and Ph.D. degrees in Chemical Engineering, with research specialization in the following areas:

- Biomaterials
- Drug Delivery
- Energy and Batteries
- Environmental Engineering
- Interfacial Engineering
- Materials Synthesis and Nanomaterials
- Membranes/Advanced Separations
- Molecular Dynamics
- Nanomaterials
- Polymer Science and Engineering
- Process Design
- Water Treatment

Admission Requirements
Admission to the M.S. and Ph.D. degree programs is on a competitive basis, and financial assistance is available through teaching and research assistantships, as well as a limited number of fellowships. Applicants should have a minimum grade point average of 3.0/4.0 on all undergraduate work, and should hold a Bachelor of Science degree in Chemical Engineering or its equivalent. Meeting the minimum requirements does not guarantee admission, as acceptance is on a competitive and space-available basis. Students with undergraduate majors not in chemical engineering (for example, chemistry or physics) may be eligible for direct admission into the M.S. or Ph.D. graduate programs; these individuals are expected to complete a program of selected undergraduate core courses during their first year of study.

Master of Science

The M.S. degree in Chemical Engineering requires 24 hours of course work, plus completion of an acceptable thesis (Plan A). This course work includes the chemical engineering graduate core, which is comprised of CME 505, CME 620, CME 630, CME 650, and a graduate-level mathematics elective. In certain exceptional cases (as determined by the faculty), a non-thesis M.S. may be undertaken (Plan B). The non-thesis option requires 30 hours of course work which includes the chemical engineering core, as well as 3 hours of CME 780 (Special Problems in Chemical Engineering). The non-thesis option is only available to those students with prior research or industrial experience. For both Plan A and Plan B, at least half of all graduate course work must be at the 600 level or above.

Doctor of Philosophy

The Ph.D. degree is a research degree granted on the basis of broad knowledge of chemical engineering and specialized study in a specific area of interest. The student must conduct original and significant research and must submit and defend a dissertation based on that research. Course work requirements include the chemical engineering graduate core, and additional courses so as to fulfill the pre-candidacy residency requirements set forth by the Graduate School; the plan of study is developed by the student in consultation with the research advisor and the Director of Graduate Studies. Advancement to doctoral candidacy is contingent upon successful completion of both the written and oral portions of the Qualifying Examination. The written portion addresses three fundamental areas of the chemical engineering

discipline: Kinetics and Reactor Design, Thermodynamics, and Transport. The oral portion consists of a presentation and defense of the student's proposed dissertation research; a prospectus prepared by the student must be submitted to the doctoral advisory committee prior to the examination. There is no language requirement for the M.S. or Ph.D. degrees in Chemical Engineering.

A wide selection of research topics is available under the direction of the Chemical Engineering faculty. Recent graduate-level elective courses include Biochemical Engineering, Biomedical Micro & Nanotechnology, Computational Materials Science, Drug Delivery, Energy Systems, Interfacial Engineering, Membrane Science and Technology, and Polymer Processing.

For more information please contact the Director of Graduate Studies.

Graduate Courses

CME 404G	Polymeric Materials (Same As Mse 404G)	(3)
CME 505	Analysis Of Chemical Engineering Problems	(3)
CME 550	Chemical Reactor Design	(3)
CME 554	Chemical And Physical Processing Of Polymer Systems (Same As ME/MFS/MSE 554)	(3)
CME 556	Introduction To Composite Materials (Same As ME/MSE 556)	(3)
CME 580	Design Of Rate And Equilibrium Processes For Water Pollution Control	(3)
CME 599	Topics In Chemical Engineering	(3)
CME 620	Equilibrium Thermodynamics	(3)
CME 622	Physics Of Polymers (Same As MSE 622)	(3)
CME 630	Transport I	(3)
CME 650	Advanced Chemical Reactor Design	(3)
CME 680	Biochemical Engineering (Same As BAE 680)	(3)
CME 748	Master's Thesis Research	(0)
CME 749	Dissertation Research	(0)
CME 767	Dissertation Residency Credit	(2)
CME 768	Residence Credit For The Master's Degree	(1-6)
CME 769	Residence Credit For The Doctor's Degree	(0-12)
CME 771	Seminar	(0)
CME 779	Membrane Sciences Colloquium (Same As Bch/Che/Pha/Phr 779)	(1)
CME 780	Special Problems In Chemical Engineering	(1-3)
CME 790	Research In Chemical Engineering	(1-9)

Chemistry

College of Arts & Sciences

The Department of Chemistry offers the Master of Science and the Doctor of Philosophy degrees. Plan A or B may be used to satisfy the requirements for the M.S. degree. Areas of specialization in chemistry are analytical, biological, inorganic, organic, physical, and radionuclear. All candidates for the Ph.D. degree are required to serve as a teaching assistant for one semester.

Admission Requirements
Apart from the admissions standards set for all departments by the Graduate School, the only specific departmental requirement for admission to the Graduate Program in Chemistry is an undergraduate degree in chemistry or its equivalent (with sufficient sampling of courses pertaining to the main chemistry disciplines). The Chemistry Department asks applicants to submit three letters of recommendation, and considerable weight in each admission decision is given to these written evaluations from the applicant's instructors and mentors. A list of unofficial metrics used to rank applications can be found at the Chemistry Department's Admission webpage. Teaching Assistantships are generally only offered to entering students seeking the Ph.D. degree; entering applicants targeting a M.S. degree are usually not offered financial support. An effort is made to match applicant interests with available research programs. Applicants for whom exceptions to the above-stated policies seem warranted are subject to special consideration by the Graduate Recruitment Committee. As part of the course requirements for both the M.S. and the Ph.D. degrees, all students must normally take four "core" courses. The student selects one course which best meets career objectives in each of four of the five areas of chemistry (analytical, biological, inorganic, organic, and physical) from a pair of such courses: CHE 524 or 626, CHE 550 or 552, CHE 510 or 514, CHE 535 or 538, CHE 547 or 548, respectively.

All new graduate students must take proficiency examinations in analytical, biological, inorganic, organic, and physical chemistry. The results of these examinations are used as a guide in establishing the student's program of courses. Students who do very well on any particular examination may bypass the core course in that area.

Doctor of Philosophy

Doctoral degrees are earned in the Department of Chemistry after a student has carried out productive and independent research on a problem that is of significant chemical interest. It is expected that the results of the dissertation work will be published in refereed scientific journals. All Graduate School requirements must be met. Subject to approval of the student's Advisory Committee, course work for the Ph.D. degree shall normally include four "core" courses and 8 credits of advanced or specialty courses. At least 3 credit hours must be in courses outside of the student's main area of interest.

The Qualifying Examination consists of a written and an oral part. The written component of the Qualifying Examination consists of a series of cumulative examinations designed to test the application of fundamental principles and reasoning to literature or research problems. Scores of 3, 2, 1, or 0 can be obtained on each examination. Examinations in the areas of Analytical, Inorganic, Biological, Organic, and Physical Chemistry are given eight times per year, and a Ph.D. student must score eight points (with half of those points requiring a score of 2 or better) within two years in order to take the oral part of the Qualifying Examination.

Master of Science

Plan A (Thesis): All Graduate School requirements must be met. In addition to four "core" courses, advanced or specialty courses relevant to a student's career objectives are taken to total a minimum of 24 credits. Successful defense of a thesis describing original research of a caliber that could result in publication in refereed scientific journals is required of all M.S. Plan A students.

Plan B (Non-Thesis): Students in the Department of Chemistry may satisfy the requirements for an M.S. degree by using Plan B, a coursework M.S. degree. Students wishing to follow this plan must present for the approval of the Graduate Program Committee a program of courses that satisfies the Committee and meets all Graduate School requirements. This program of courses must meet distribution requirements within four of the five areas of chemistry and include 6 or more credits of courses outside of Chemistry that are relevant to the student's career goals.

For further information on any degree program in Chemistry, contact the Director of Graduate Studies at dgs.chemistry@uky.edu.

Graduate Courses

CHE 410g	Inorganic Chemistry	(2)
CHE 440g	Physical Chemistry I	(4)
CHE 442g	Physical Chemistry Ii	(3)
CHE 446g	Physical Chemistry For Engineers	(3)
CHE 510	Advanced Inorganic Chemistry	(3)
CHE 514	Descriptive Inorganic Chemistry	(3)
CHE 524	Chemical Instrumentation	(4)
CHE 526	Chemical Separations	(2)
CHE 532	Spectrometric Identification Of Organic Compounds	(2)
CHE 535	Synthetic Organic Chemistry	(3)
CHE 538	Principles Of Organic Chemistry	(3)
CHE 547	Principles Of Physical Chemistry I	(3)
CHE 548	Principles Of Physical Chemistry Ii	(3)
CHE 550	Biological Chemistry I	(3)
CHE 552	Biological Chemistry Ii	(3)
CHE 553	Chemistry And Molecular Biotechnology	(3)
CHE 555	Homonuclear Nmr	(3)
CHE 558	Hormone Receptors And Cell Signals	(3)
CHE 559	Intermolecular Forces: From Molecules To Materials	(3)
CHE 565	Environmental Chemistry	(3)
CHE 580	Topics In Chemistry	(1-3)
CHE 610	Chemistry Of The Transition Metals	(3)
CHE 612	Inorganic Chemistry Of The Non-Metals	(3)
CHE 614	Organotransition Metal Chemistry	(3)
CHE 616	Nuclear Chemistry	(3)
CHE 620	Electrochemical Methods Of Analysis	(3)
CHE 623	Chemical Equilibrium And Data Analysis	(3)
CHE 625	Optical Methods Of Analysis	(3)
CHE 626	Advanced Analytical Chemistry	(3)
CHE 633	Physical Organic Chemistry	(3)
CHE 640	Chemical Crystallography	(3)
CHE 643	Spectroscopy And Photophysics	(3)
CHE 646	Chemical Kinetics	(3)
CHE 666	Proteomics And Mass Spectrometry	(3)
CHE 668	Symmetry And Chemical Applications	(3)
CHE 710	Topics In Inorganic Chemistry	(2-4)
CHE 736	Topics In Organic Chemistry	(2-4)
CHE 746	Topics In Physical Chemistry	(2-4)
CHE 748	Master's Thesis Research	(0)
CHE 749	Dissertation Research	(0)
CHE 767	Dissertation Residency Credit	(2)
CHE 768	Residence Credit For The Master's Degree	(1-6)
CHE 769	Residence Credit For The Doctor's Degree	(0-12)
CHE 772	Seminar In Chemistry Instruction	(1)
CHE 776	Graduate Seminar	(1)
CHE 779	Membrane Sciences Colloquium (Same As Cme/Phr/Bch/Pha 779)	(1)
CHE 780	Individual Work In Chemistry	(1-5)
CHE 790	Research In Chemistry	(1-12)

Civil Engineering

College of Engineering

The Department of Civil Engineering offers the Master of Science in Civil Engineering (Plan A and Plan B available), and Ph.D. with specialization in the following areas:

Civil Engineering Materials
Construction Engineering and Management
Environmental Engineering
Geotechnical Engineering
Hydraulics Engineering
Structural Engineering
Transportation Engineering
Water Resources Engineering

These areas utilize courses from other departments and such inter-departmental programs are encouraged. Mechanical Engineering, Chemical Engineering, Agricultural Engineering, Mining Engineering, Mathematics, Computer Science, Geology, Biology, and Chemistry are some of the departments whose offerings contribute to the programs in Civil Engineering.

For the Master of Science in Civil Engineering (M.S.C.E.) degree Plan A, 24 credit hours of course work and a thesis are required to fulfill degree requirements. For the Master of Science in Civil Engineering (M.S.C.E.) degree Plan B, a minimum of 30 credit hours of graduate work are required, including at least 3 credit hours of independent work. The requirement for independent work may be satisfied by either taking an approved curriculum of courses which contain integral independent study components totaling a minimum of 3 credit hours, or by completing at least three credit hours of CE 790 and/or CE 791.

Students who wish to complete the independent work requirement by choosing from an approved curriculum of courses containing integral independent study components, shall present a plan of study which satisfies this requirement, and all other Graduate School requirements, to the Director of Graduate Studies for approval before the completion of 12 credit hours of graduate course work. Preferably this should occur no later than the end of the first semester of graduate residence. The requirement for all independent work must be satisfied under the direction of one faculty member (for students choosing a CE 790 and/or CE 791), or several faculty members (for students following an approved curriculum of courses), who will assign, monitor, and evaluate the student's work as part of the specific course. Written reports will usually represent the work product to be evaluated.

All students must pass a Final Examination as specified by the rules of the Graduate School. The contents and style of the examination, and the evaluation of the student's performance, are the responsibility of a Graduate Faculty committee appointed by the Dean of the Graduate School. The Ph.D. degree has no formal course requirement, but students must pass the Qualifying Examination before entering candidacy. There is no language requirement for the M.S.C.E. and Ph.D. degrees in Civil Engineering.

Admission Requirements
In addition to satisfying general Graduate School and College of Engineering admissions requirements (a GPA of 2.8/4.0 on all undergraduate work is normally required), applicants for admission to the M.S.C.E., and Ph.D. degree programs in Civil Engineering must have been awarded a Bachelor of Science degree

from an engineering program accredited by the Accrediting Board for Engineering and Technology (ABET). This requirement may be waived for applicants who have been awarded bachelor's degrees other than in engineering or from unaccredited engineering programs (including those offered by foreign institutions) if the applicant has received an acceptable score on the Graduate Record Examination (GRE).

Students with undergraduate majors not in engineering must also take a certain number of undergraduate remedial courses. Neither the M.S.C.E. degree nor the Ph.D. degree in Civil Engineering will be conferred unless the candidates have successfully completed, during their undergraduate and/or graduate careers, at least one basic course in at least four of the following seven areas: civil engineering materials, construction engineering and management, environmental engineering, geotechnical engineering, hydraulics and water resources engineering, structural engineering, and transportation engineering.

Another admission requirement is a minimum combined verbal and quantitative scores of GRE as follows: 1000 (300: New GRE), and 1100 (330: New GRE) for Master's and Ph.D. degree applicants, respectively. Scores on the analytical portion are not considered. Foreign applicants whose native language is other than English must take the Test of English as a Foreign Language (TOEFL) and score at least 550 (Computer Based TOEFL: 213, iBT TOEFL: 80).

The Department of Civil Engineering has many well-equipped laboratories with active research programs in most areas. The research programs provide financial assistance for graduate students. In addition, financial assistance is available through teaching assistantships, fellowships, and scholarships.

Information about the graduate program in Civil Engineering can be obtained by writing the Director of Graduate Studies, Department of Civil Engineering.

Graduate Courses

CE 461G	Hydrology	(3)
CE 471G	Soil Mechanics	(4)
CE 486G	Reinforced Concrete Structures	(3)
CE 487G	Steel Structures	(3)
CE 508	Design And Optimization Of Construction Operations	(3)
CE509	Control Of The Construction Project	(3)
CE517	Boundary Location Principles	(3)
CE 525	CE Applications Of Geographic Information Systems	(3)
CE 531	Transportation Facilities Design And Operations	(3)
CE 533	Railroad Facilities Design And Analysis	(3)
CE 534	Pavement Design, Construction And Management	(3)
CE 539	Transportation Systems Design	(3)
CE 541	Intermediate Fluid Mechanics (Same As BAE 541)	(3)
CE 542	Introduction To Stream Restoration (Same As BAE 532)	(3)
CE 546	Fluvial Hydraulics (Same As BAE 536)	(3)
CE 547	Watershed Sedimentation (Same As BAE 547)	(3)
CE 549	Engineering Hydraulics(Same As BAE 545)	(3)
CE 551	Water And Wastewater Treatment Engineering	(3)
CE 553	Environmental Consequences Of Energy Production (Same As EGR 553)	(3)
CE 555	Microbial Aspects Of Environmental Engineering	(3)
CE 568	GIS Applications For Water Resources (Same As BAE 538)	(3)
CE 579	Geotechnical Engineering	(3)
CE 581	Civil Engineering Materials Ii	(3)

CE 582	Advanced Structural Mechanics	(3)
CE 584	Design Of Timber And Masonry Structures	(3)
CE 585	Civil Engineering Failure	(3)
CE 586	Prestressed Concrete	(3)
CE 589	Design Of Structural Systems	(3)
CE 599	Topics In Civil Engineering (Subtitle Required)	(1-4)
CE 602	Construction Project Management	(3)
CE 605	New Engineering Enterprises	(3)
CE 621	Introduction To Finite Element Analysis	(3)
CE 631	Urban Transportation Planning	(3)
CE 633	Air Transport Engineering	(3)
CE 634	Traffic Characteristics	(3)
CE 635	Highway Safety	(3)
CE 642	Open Channel Flow (Same As BAE 642)	(3)
CE 643	Mechanics Of Sediment Transport	(3)
CE 651	Fundamentals Of Water Quality Control I	(3)
CE 652	Fundamentals Of Water Quality Control Ii	(3)
CE 653	Water Quality In Surface Waters (Same As BAE 653)	(3)
CE 655	Water Sanitation And Health	(3)
CE 662	Stochastic Hydrology (Same As BAE 667)	(3)
CE 664	Watershed Management	(3)
CE 665	Water Resources Systems	(3)
CE 667	Stormwater Modeling	(3)
CE 671	Advanced Soil Mechanics	(3)
CE 672	Landfill Design	(3)
CE 673	Stability Of Earth Slopes	(3)
CE 676	Groundwater And Seepage	(3)
CE 679	Geotechnical Earthquake Engineering	(3)
CE 681	Advanced Civil Engineering Materials	(3)
CE 682	Advanced Structural Analysis	(3)
CE 684	Slab And Folded Plate Structures	(3)
CE 686	Advanced Reinforced Concrete Theory	(3)
CE 687	Advanced Metal Structures	(3)
CE 699	Topics In Civil Engineering (Subtitle Required)	(1-4)
CE 748	Master's Thesis Research	(0)
CE 749	Dissertation Research	(0)
CE 767	Dissertation Residency Credit	(2)
CE 768	Residence Credit For Master's Degree	(1-6)
CE 769	Residence Credit For Doctor's Degree	(0-12)
CE 779	Advanced Geotechnical Engineering	(3)
CE 782	Dynamics Of Structures	(3)
CE 783	Structural Finite Element Analysis	(3)
CE 784	Shell Structures	(3)
CE 790	Special Research Problems In Civil Engineering	(1-6)
CE 791	Special Design Problems In Civil Engineering	(1-6)

Classics

College of Arts & Sciences

The M.A. program in Classics in the Department of Modern and Classical Languages, Literatures, and Cultures offers a degree with courses in Greek and Latin languages, literatures and cultures, as well as allied offerings in ancient and medieval history, ancient and medieval philosophy, archaeology, Greek and Roman art, Early Christian studies, and Renaissance studies. The mission of the M.A. Program is to train classicists who would become Latin teachers, or who, having obtained a solid knowledge of the classical languages (active knowledge of Latin is offered through the program), would pursue a Ph.D. degree in Classics, History, Philosophy, Divinity, or other related fields.

Normally the M.A. program is completed in two years of full-time study. It is offered under both Plan A (thesis) and Plan B (non-thesis) options. An exit reading exam is required for both plans of study.

For additional information and details about the M.A. in Classics, including an opportunity for a concurrent degree with Teaching World Languages, contact the Director of Graduate Studies, and check the web site of the program: http://mcl.as.uky.edu/ma-classics.

Admission Requirements
The requirements for admission to the program in Classics are (a) an undergraduate grade point average of 3.0 or above on a 4.0 scale, (b) competence in one of the classical languages (Latin or Greek) and at least basic competence in the other, and (c) a combined score of 297 (new scoring) / 1000 (old scoring) on any two of the three parts of the Graduate Record Examination (GRE). The Director of Graduate Studies may admit students with lower GRE socres or an undergraduate grade point average below 3.0 if, on the basis of a student's last two years of work, Classics grades, or general academic competence. An undergraduate major in Classics, Latin, or Greek is not required for admission, but the Program suggests that entering students should have completed at least six semesters of either Latin or Greek and four semesters of the other language. Students lacking sufficient preparation in one of the classical languages may be required to remedy such deficiencies by taking undergraduate courses.

The following documents should be submitted to the Apply Yourself online application system (https://app.applyyourself.com/AYApplicantLogin/fl_ApplicantConnectLogin.asp?id=ukgrad) by February 1, if the applicant is seeking financial aid, or before April 30 otherwise:

1. A one page statement describing the applicant's reasons for seeking a Master's degree. If an applicant wants to be considered for financial aid (i.e., a fellowship or an assistantship), this is to be indicated in the opening sentence of the personal statement.
2. A list of Latin and Greek works read with approximate number of lines.
3. Transcripts.
4. GRE scores.
5. Three letters of reference (normally from former teachers).

Graduate Courses

CLA 450G	Special Topics in Classical Studies (Subtitle Required)	(3)
CLA 462G	Topics in Classical Literature (Subtitle Required)	(3)

CLA 480G	Studies in Greek and Latin Literature (Subtitle Required)	(3)
CLA 501	Latin Composition	(3)
CLA 509	Roman Law (Same as HIS 509)	(3)
CLA 521	Advanced Composition and Reading	(3)
CLA 524	The Latin Literature of the Republic (Subtitle Required)	(3)
CLA 525	The Latin Literature of the Empire (Subtitle Required)	(3)
CLA 528	Late Antique & Post-Imperial Latin Literature (Subtitle Required)	(3)
CLA 551	Greek Poetry and Drama (Subtitle Required)	(3)
CLA 555	Greek Prose (Subtitle Required)	(3)
CLA 580	Independent Work in Classics	(3)
CLA 611	Latin of the Later Roman Empire and Early Middle Ages	(3)
CLA 612	Latin from the Later Middle Ages to the Modern World	(3)
CLA 615	Manuscript Cultures (Same as HIS 615)	(3)
CLA 616	Paleography (Same as HIS 616)	(3)
CLA 630	Seminar in Classical Literature and Culture (Subtitle Required)	(3)
CLA 624	Seminar in the Latin Literature of the Republic (Subtitle Required)	(3)
CLA 625	Seminar in the Latin Literature of the Empire (Subtitle Required)	(3)
CLA 628	Seminar in Late Antique & Post-Imperial Latin Literature (Subtitle Required)	(3)
CLA 651	Seminar in Greek Poetry and Drama (Subtitle Required)	(3)
CLA 655	Seminar in Greek Prose (Subtitle Required)	(3)
CLA 695	Independent Work	(1-3)
CLA 748	Master's Thesis Research	(0)
CLA 768	Residence Credit for Master's Degree	(1-6)
CLA 790	Research in the Teaching of Classical Languages	(3)

Clinical & Translational Science

College of Medicine

The Department of Behavioral Science in the College of Medicine, in affiliation with the University of Kentucky Center for Clinical and Translational Science, offers a Ph.D. program in Clinical and Translational Science (CTS). The academic discipline focuses on acceleration of the translation of basic science advances to tangible improvements in public health. This interdisciplinary program is designed to expand research career opportunities for exceptional professionals with terminal professional health care degrees (e.g., physicians, nurses, dentists, pharmacists, public health professionals). Students enrolled in the MD/PhD Program are also eligible for admission.

The primary emphasis of the program is mentored research training to permit scholars to create well-reasoned original research contributions to the discovery of clinical health knowledge and its application. An interdisciplinary PhD Advisory Committee will play a prominent role in coordinating the individualized curriculum, research training and career development of the scholars in the program, based on scholar interest and background. A major professor (i.e., primary mentor), with the support of the Advisory Committee, will oversee research training and career development. A minimum of one faculty member in the Department of Behavioral Science who is a full member of the graduate faculty will serve as a primary or co-mentor. Other members of the Advisory Committee will be selected based on their abilities to support elements of the interdisciplinary research interests and career trajectories of the scholar, regardless of departmental affiliation.

Admission Requirements

Admission to the program is generally limited to 1) applicants with terminal health professional degrees with appropriate domestic licensure to practice and 2) students in the MD/PhD Program. Other students may apply to the program with consent of the Director of Graduate Studies.

Admission to the PhD in CTS program is through the Department of Behavioral Science. Inquiries about the Ph.D. program should be directed to the Director of Graduate Studies, Department of Behavioral Science. Additional information may also be obtained from the Web sites of the Department of Behavioral Science (http://behavioralscience.med.uky.edu) and Center for Clinical and Translational Science (http://ccts.uky.edu/ccts/phd-translational-science).

Curriculum

Scholars with a terminal health professional degree (or enrolled in the MD/PhD Program) are required to complete 18 credit hours of coursework to establish pre-qualifying residency status. This coursework typically consists of core competency-based courses in clinical and translational science (typically 13 credit hours) and tailored coursework developed in consultation with the major professor and advisory committee (minimum of 5 credit hours). The tailored portion of the curriculum will be designed to provide training needed for the scholar to lead interdisciplinary CTS research teams and/or sustain independent research programs that promote innovation and new discovery.

Core Curriculum

BSC 731	Methods and Technologies in CTS	(3)
BSC 732	Interdisciplinary Protocol Development	(3)
BSC 733	Seminar in CTS	(1-3)
BSC 534	Ethics and Responsibility in Clinical Research	(3)
BSC 772	Fundamentals of Biostatistics for Clinical and Translational Research	(3)
BSC 790	Research in Medical Behavioral Science	(1-6)

Additional credit hours selected from graduate courses offered by health sciences colleges or related disciplines.

Clinical Research Design

College of Public Health

This program is designed for practicing health care professionals (MDs, DMDs, Pharm.D.s, Clinical Psychologists, etc.) and those pursuing a terminal PhD in fields like pharmacy, nursing, and psychology, who wish to enhance their translational research skills, and knowledge of population-based health and clinical trials. Clinicians with academic appointments at the University of Kentucky (UK) and physicians off-campus, including community-based physicians who wish to participate in clinical research, will be targeted for this program.

Program Requirements
Students will complete a minimum of 31 credit hours of study. The core curriculum consists of 13 hours comprising five courses, two each in epidemiology and biostatistics, and a one-credit-hour course that will serve as a broad introduction to public health. Students will also complete a minimum of 12 credit hours of electives. In addition, a three-credit-hour practicum in mentored research and three credit hours of thesis research are required.

Core Curriculum (15 hours)

CPH 605	Introduction to Epidemiology	(3)
STA 580	Biostatistics I	(3)
CPH 712	Advanced Epidemiology	(3)
CPH 630	Biostatistics II	(3)
CPH 663	Introduction to Public Health Practice	(3)

Electives (10 hours - selections to be approved by DGS)

CPH 665	Ethical Issues in Clinical Research	(3)
CPH 664	Biostatistics in Clinical Trials	(3)
CPH 612	Infectious Disease Epidemiology	(3)
CPH 616	Cardiovascular Epidemiology	(3)
CPH 618	Epidemiology of Aging	(3)
CPH 631	Design and Analysis of Health Surveys	(3)
CPH 632	Mixed Models in Public Health	(3)
CPH 636	Data Mining	(3)
CPH 647	Research Methods	(3)
CPH 711	Chronic Disease Epidemiology	(3)
CPH 718	Molecular Epidemiology	(3)
CPH 669	Methods and Technologies in Clinical Translational Research	(3)
CPH 670	Interdisciplinary Protocol Development	(2)
CPH 671	Seminar in Clinical /Translational Science	(1)

Mentored Research and Master's Thesis (Plan A)

CPH 779	Independent Studies in Public Health: Mentored Research	(3)
CPH 778	Special Topics in Public Health: Thesis Research	(3)

Total: 31 credit hours

Communication Sciences & Disorders

College of Health Sciences

The Division of Communication Sciences & Disorders at the University of Kentucky offers a two-year master's degree program in speech-language pathology. The program is accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association. Students who complete the program will typically meet the academic and clinical training requirements for the American Speech-Language-Hearing Association's (ASHA) Certificate of Clinical Competence in Speech-Language Pathology and for licensure in Kentucky and in most states with licensure requirements.

The length of a student's program depends upon the certification options selected, the student's educational background, and the number of credits completed each semester. Students with an undergraduate major in communication sciences & disorders will typically complete the program in six semesters of full-time study. Students entering without an undergraduate major in communication sciences & disorders will need eight semesters of course work including prerequisite courses to complete the program. Additional information regarding prerequisite coursework is available from the Director of Graduate Studies.

During the first full year of the graduate program, students typically complete course work and clinical practicum at the UK Communications Disorders Clinic. During the second year, students are assigned to clinical rotations in a variety of settings, including medical or rehab facilities, agencies providing services to children (e.g., public schools, preschools, clinics), and agencies in one of Kentucky's Area Health Education Center (AHECs) regions. Successful completion of a comprehensive examination or thesis is required for all degree candidates.

Admission Requirements
Students who are admitted to the program typically have at least a 3.0 undergraduate GPA. To be considered for admission, students must also submit Graduate Record Examination scores (verbal, quantitative, and writing). Students with a bachelor's degree in communication disorders begin the program in the second summer semester. Students with bachelor's degree in another field of study begin the program in the fall semester. Admission deadline is January 15 for domestic applicants for concurrent summer or fall start. Deadline for international applicants is March 15 for following year start.

CSD 621	Alternative & Augmentative Communication	(3)
CSD 647	Lang. Disorders in Dev. Young Individuals	(3)
CSD 648	Lang. Disorders in School-Age Populations	(3)
CSD 661	Phonological Development & Disorders	(3)
CSD 670	Voice Disorders	(3)
CSD 674	Disorders of Fluency	(3)
CSD 675	Low Incidence Disorders	(1-3)
CSD 677	Aphasia & Related Disorders	(3)
CSD 701	Research Methods in Communication Sciences & Disorders	(3)
CSD 710	Cognitive Communication Disorders	(3)
CSD 744	Adult Swallowing and Motor Speech Disorders	(3)
CSD 745	Pediatric Swallowing and Motor Speech Disorders	(3)
CSD 748	Master's Thesis Research (Optional)	(0)
CSD 768	Residence Credit for the Master's Degree (Optional)	(6)

To receive the M.S. degree and also fulfill the American-Speech-Language-Hearing Association certification requirements, the student will be required to successfully complete:

- 33 semester hours of didactic coursework in Communication Sciences & Disorders
- 3 semester hours of clinical orientation (CSD 654)
- 2 semester hours of clinical practicum supervised by UK CSD Faculty (CSD 657)
- 1 semester hour of a graduate level elective
- 21-30 semester hours of clinical rotations (CSD 659)
- A thesis option or pass comprehensive examinations

Graduate Courses

CSD 520	Introduction To Manual Communication	(2)
CSD 521	Non-Speech Communication	(3)
CSD 571	Neural Bases Of Speech, Language, And Hearing	(3)
CSD 591	Aural Rehabilitation	(3)
CSD 610	Ethics In Clinical Sciences Research (Same As Cls/Pt/Ras 610)	(1)
CSD 621	Alternative And Augmentative Communication	(3)
CSD 647	Language Disorders In Developmentally Young Individuals	(3)
CSD 648	Language Disorders In School-Age Populations	(3)
CSD 654	Clinical Orientation In Communication Sciences & Disorders	(3)
CSD 655	Advanced Diagnostic Procedures In Speech-Language Pathology	(3)
CSD 657	Clinical Practicum In Speech-Language Pathology	(1-3)
CSD 659	Clinical Rotation In Speech-Language Pathology	(3-6)
CSD 670	Voice Disorders	(3)
CSD 671	Applied Phonology: Development And Disorders	(3)
CSD 674	Disorders Of Fluency	(3)
CSD 675	Low Incidence Disorders	(1-3)
CSD 701	Research Methodology In Communication Sciences & Disorders	(3)
CSD 706	Advanced Audiological Issues In Pediatrics	(3)
CSD 708	Advanced Audiological Issues In Geriatrics	(3)
CSD 744	Adult Swallowing And Motor Speech Disorders	(3)
CSD 745	Pediatric Swallowing And Motor Speech Disorders	(3)
CSD 747	Seminar In Language Development In Children	(3)
CSD748	Master's Thesis Research	(0)
CSC 768	Residence Credit For The Master's Degree	(1-6)
CSD 772	Advanced Seminar In Aphasia	(3)
CSD 773	Seminar In Motor Speech Disorders	(3)
CSD 774	Seminar In Adult Speech And Language	(3)
CSD 775	Seminar In Literate Language	(3)
CSD 789	Independent Study In Communication Sciences & Disorders	(1-6)

Communication

College of Communication & Information

The College of Communications and Information offers programs leading to the Master of Arts (either Plan A or Plan B) and Doctor of Philosophy degrees in Communication. The program offers special opportunities for students to apply communication theory and research across many contexts. Students may develop a program of study emphasizing (or combining) research areas such as health communication, information studies, instructional communication, media and mass communication, risk and crisis communication as well as strategic and organizational communication. The program is designed to serve the needs of students whose goals may include teaching and academic research, professional research, or communication careers in the media or other organizations.

Students pursuing work in health communication are encouraged to develop interdisciplinary programs involving the Department of Behavioral Science, the College of Medicine, as well as the Colleges of Dentistry, Health Sciences, Pharmacy, and Nursing. Communication also participates in interdisciplinary research programs with the Center for Prevention Research, the Sanders-Brown Center for Aging, and a variety of other health-related departments and institutes.

Admission Requirements
Students with an undergraduate degree from a fully accredited institution of higher learning and a grade point average of 3.0 on a 4.0 scale are admissible to the graduate program. Only students who have previously completed a master's degree may apply for admission into the doctoral program. Master's degree applicants are expected to have had at least twelve hours of appropriate undergraduate work in communication. Students with degrees in areas not directly related to communication are encouraged to apply, but they may be required to take course work without graduate credit. Should the Admissions Committee feel there is a deficiency in the applicant's studies, it may require enrollment in specific undergraduate courses. Courses taken to remove a deficiency cannot be counted towards the master's degree. In some cases, successful professional experience in a communication field will be considered in admitting students to the program.

Applicants must complete the University of Kentucky's Graduate School online-application and pay the application fee. Per the Graduate School's instruction, all applicants are required to submit official scores on the Graduate Record Examination and official transcripts of all work taken at and beyond the college level. Students whose native language is not English must also submit an official score of at least 550 (or 213 on the computer version or 79 on the internet-based version) of the Test of English as a Foreign Language (TOEFL) or a minimum of 6.5 of the International English Language Testing Service (IELTS). Additionally, all applicants must submit to the College of Communications and Information Studies Graduate Admissions office: (1) transcripts of all work taken at the college level (unofficial or photocopies are acceptable), (2) at least three letters of recommendation focusing on their academic abilities accompanied by the supplied Reference Form and (3) the completed Application Essay indicating why they want to pursue a graduate degree with their reasons for applying to the program. No additional forms are required for financial assistance consideration—all applicants will be considered for funding at the time of review.

The Admissions and Financial Aid Committee will review only completed admission files after January 5 of each year. Applications must have their completed file on record with the Associate Dean for the Graduate Programs in Communication by the deadline in order to be considered for fall admission. New graduate

students are permitted to enroll only during the fall semester.

Exceptions will be made only because of circumstances beyond the control of the applicant. This deadline does not apply to: (1) UK undergraduate students in the College of Communications and Information Studies applying as University Scholars, who may be admitted for summer, fall or spring semesters, and (2) current students in the M.A. Program in Communication or the M.L.S., M.S.L.S or M.S. in ICT.

Master of Arts

The M.A. program requires that every student become familiar with the important theories and concepts and the principal investigation methods used to expand knowledge of communication. All students are required to complete 30 credit hours to complete the Master of Arts degree. Students will be required to take 12 core credit hours consisting of Communication Theory (CJT 651), and Communication Research Methods (CJT 665), plus Statistics 570 (or its equivalent as determined by the Associate Dean for Graduate Studies). In addition, all students will be required to take either Interpersonal Communication (CJT 631) or Mass Communication (CJT 608 or CJT 645). Students may choose from either the Plan A (Thesis option) or Plan B (non-thesis) options to complete their Masters degree requirements.

Plan A: Students choosing Plan A will take a minimum of 24 credit hours of actual course work, and write a thesis (Note: the six thesis credits must be taken under CJT 768 - Residence Credit for the Master's degree). All students will also complete an oral examination in defense of the thesis.
Plan B: Students choosing Plan B, will take a minimum of 30 hours of course work, followed by a written and oral examination over the student's program.

At least 21 credit hours of the minimum requirements for the master's degree must be from offerings within the College of Communications and Information studies (both Plan A and Plan B). Plan A students may include six hours of CJT 768 in the 21 hours, since the thesis involves work in an area of communication. Also, at least 15 credit hours of the minimum requirements must be in courses at the 600 and 700 levels (both Plan A and Plan B). Plan A students may include six hours of CJT 768 in the 21 hours. No more than three credit yours in Plan A and 6 credit hours in Plan B (of the minimum requirements) may be earned in directed study, directed reading, or internship courses (e.g., CJT 696, CJT 700, CJT 781, and CJT 790).

Students without previous course work in communication may be required to take undergraduate work that does not count toward graduate credit, as determined by the Admissions Committee. Individuals without significant practical experience are strongly encouraged to take CJT 696 - Internship in Communication, which could include opportunities to work with external agencies and funded projects, both within and outside the university.

Doctor of Philosophy

The Ph.D. program emphasizes communication as a social science. Graduates are prepared for university positions and careers in government, the media and other organizations as researchers, consultants and policy makers. Students must demonstrate general knowledge of communication across various contexts, as well as competence in a core area of specialization. Current core areas include health communication, information studies, instructional communication, media and mass communication, risk and crisis communication as well as strategic and organizational communication.

Students must demonstrate a thorough grasp of communication theory and research methods and must take course work in a cognate area outside of Communication. Proficiency in a foreign language is not required for successful completion of the Ph.D. in Communication. A student's advisory committee may, however, stipulate certain graduate-level courses in another language for the student's program that are consistent with the objectives of the student's program. The required curriculum is as follows:

Fall Semester: Year 1

CJT 651	Communication Theory
CJT 664	Qualitative Methods in Communication Research
STA 570	(or other advanced statistics course)

Spring Semester: Year 1

CJT 631	Proseminar in Interpersonal Communication OR
CJT 645	Proseminar in Mass Communication
CJT 665	Quantitative Methods in Communication Research

Fall Semester: Year 2

CJT 751	Advanced Topics in Communication Theory Construction

All students are also required to complete at least 3 credit hours of CJT 790 (Research Problems in Communication) by the last semester of course work.

The Associate Dean for Graduate Programs, in consultation with the Graduate Review committee, can waive any of the above requirements for a student who has previously taken the same or equivalent course at UK or another university for graduate credit. Each student works with a major professor and an advisory committee to plan course work and complete the dissertation. The committee also administers the qualifying examination and the final oral examination. The qualifying examination consists of a written and oral examination over general communication theory, the core area of specialization, research methods/statistics and the cognate area.

Graduate Courses

CJT 608	Mass Communications And Society	(3)
CJT 615	Proseminar In Communication And Information Systems	(3)
CJT 619	Proseminar In International/Intercultural Communication	(3)
CJT 625	Proseminar In Organizational Communication	(3)
CJT 630	Proseminar In Mass Media Law And Public Policy	(3)
CJT 631	Proseminar In Interpersonal Communication	(3)
CJT 637	Information Technology	(3)
CJT 638	Internet Technologies And Information Services	(3)
CJT 640	Health Sciences Libraries	(3)
CJT 645	Preseminar In Mass Communication Theory	(3)
CJT 650	Communication, Language And Culture	(3)
CJT 651	Communication Theory	(3)
CJT 664	Qualitative Methods In Communication Research	(3)
CJT 665	Quantitative Methods In Communication Research	(3)
CJT 668	Information Systems Design	(3)
CJT 671	Proseminar In Health Communication	(3)
CJT 682	Communication And Persuasion	(3)
CJT 684	Proseminar In Instructional Communication	(3)
CJT 685	Seminar: Preparing Future Faculty For The Multicultural Classroom	(1)
CJT 686	Practicum In Preparing Future Faculty	(1)
CJT 690	Special Topics In Library And Information Science	(3)
CJT 696	Internship In Communication	(3)
CJT 700	Directed Reading In Communication	(1-3)
CJT 719	Seminar In International/Intercultural Communication (Subtitle Required)	(3)

CJT 725	Seminar In Organizational Communication (Subtitle Required)	(3)
CJT 730	Seminar In Mass Media And Public Policy (Subtitle Required)	(3)
CJT 731	Seminar In Interpersonal Communication (Subtitle Required)	(3)
CJT 748	Master's Thesis Research	(0)
CJT 749	Dissertation Research	(0)
CJT 751	Advanced Topics In Communication Theory Construction (Subtitle Required)	(3)
CJT 765	Advanced Seminar In Communication Research Methods	(3)
CJT 767	Dissertation Residency Credit	(2)
CJT 768	Residence Credit For The Master' Degree	(1-6)
CJT 769	Residence Credit For Doctor's Degree	(0-12)
CJT 771	Seminar In Health Communication	(3)
CJT 775	Seminar In Health Communication Campaigns	(3)
CJT 780	Special Topics In Communication (Subtitle Required)	(3)
CJT 781	Directed Study In Communication	(1-6)
CJT 790	Research Problems In Communication	(1-6)

With The Consent Of The Instructor And The Associate Dean Of Graduate Studies, Students May Also Choose 500 Level Courses From The List Below To Include In Their Program Of Study.

COM 525	Organizational Communication	(3)
COM 555	Cyberspace And Communication (Same As TEL 555)	(3)
COM 571	Health Communication	(3)
COM 581	Studies In Small Group Communication Contexts	(3)
COM 584	Teaching Of Speech Communication	(3)
COM 591	Special Topics In Communication (Subtitle Required)	(1)
ISC 541	Critical Topics In Integrated Strategic Communication (Subtitle Required)	(3)
ISC 543	Regulation Of Strategic Communication	(3)
JOU 531	Media Law And Ethics	(3)
JOU 532	Ethics Of Journalism And Mass Communication	(3)
JOU 535	History Of Journalism	(3)
TEL 504	Media Organizations	(3)
TEL 510	Media Economics	(3)
TEL 520	Social Effects Of The Mass Media	(3)
TEL 525	Theory Of Multimedia	(3)
TEL 530	Pro-Seminar In Telecommunications	(3)
TEL 555	Cyberspace And Communication (Same As Com 555)	(3)
TEL 590	Advanced Telecommunications Topical Seminar (Subtitle Required)	(3)
CSD748	Master's Thesis Research	(0)
CSC 768	Residence Credit For The Master's Degree	(1-6)
CSD 772	Advanced Seminar In Aphasia	(3)

CSD 773	Seminar In Motor Speech Disorders	(3)
CSD 774	Seminar In Adult Speech And Language	(3)
CSD 775	Seminar In Literate Language	(3)
CSD 789	Independent Study In Communication Sciences & Disorders	(1-6)

Community & Leadership Development

College of Agriculture, Food & Environment

The Department of Community and Leadership Development offers the Masters of Science degree in Community and Leadership Development (CLD). The program's interdisciplinary base and range of engaged experiences support the growth of knowledgeable, skillful, and creative leaders. Graduates are therefore prepared to address the needs and concerns of communities of place, of interest (e.g., non-profit organizations) and of practice (e.g., schools and advocacy organizations). Coursework and training are grounded in the philosophical foundations of leadership, community, community communication, social science inquiry and formal and non-formal educational scholarship and practice.

The CLD graduate program accommodates a wide variety of individuals from diverse settings such as administration, nonprofit organizations, communications, public service, schools, adult education, social services and Cooperative Extension. The program is organized around a strong experiential education, learner-centered core, designed to be practical, engaging and thought provoking. Through the selection of enrichment areas that draw upon courses from across the university, students have considerable flexibility in planning a program that will meet their individual professional goals.

The Community and Leadership Development Master's requires the following core courses:

- CLD 620 Graduate Study in CLD (1)
- CLD 686 Research Design (3)
- CLD 684 Statistical Analysis in CLD or Qualitative Research Methods course (3)
- CLD 630 Individual and Group Dynamics (3)
- CLD 610 Experiential Education: Process and Practice or
- CLD 670 Community Engagement (3)

One of the following:

- CLD 671 Advanced Methods of Teaching
- CLD 685 Advanced Community Development Theory and Practice
- CLD 675 Theoretical Foundations of Communication and Community
- CLD 660 Advanced Leadership Theory and Practice (3)
- CLD 768 Thesis or
- CLD 758 Creative Component (Non-Thesis Option) (3)

Total (19)

Students will then complete a minimum of an additional 11 hours of graduate course work within a supporting enrichment area. Students will work with their Advisory Committees to identify the courses that best suit their professional interests. Sample of Enrichment Areas:

- Community Development
- Leadership Development
- Non-formal (Community-based, Agency-based)
- Agricultural Education and other Agricultural areas of interest (with a social science emphasis – e.g., horticulture's role in urban gardening)
- Rural Studies
- Community Communication

Admission
The University of Kentucky is committed to a policy of providing educational opportunities to all qualified students regardless of economic or social status. The University will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, marital status, age, veteran status or physical or mental disability.

Admission to the Master's program in Community and Leadership Development is based on a combination of the following: undergraduate GPA (cumulative 2.75 and above), three letters of reference (only one letter can be written by a CLD faculty member), GRE scores the fit between the applicant's personal/professional experiences and goals and the program's focus and resources, and, in some cases, a personal interview. See the MS-CLD website http://www.uky.edu/Ag/CLD/cld-grad.html for materials required for a complete application packet.

Applicants for the MS-CLD program pursuing the MIC (Masters with Initial Certification for Agricultural Education for Grades 5-12) need to contact the CLD Director of Graduate Studies for additional admission procedures.

Applicants for the MS-CLD program without MIC Option
Candidates for the MS-CLD program must have a minimum undergraduate GPA of 2.75 and graduate GPA of 3.0 to be eligible for admission to the Graduate School. Graduate Record Examination (GRE) scores are required for all applicants. International students must also take the TOEFL examination, with a minimum score of 550 (213 on the computer-based test) required by the Graduate School.

Candidates for the MS-CLD program must have a minimum undergraduate GPA of 2.75 and graduate GPA of 3.0 to be eligible for admission to the Graduate School. Graduate Record Examination (GRE) scores are required for all applicants. Please note that GRE scores are one of several materials used to select students for admission. International students must also take the TOEFL examination, with a minimum score of 550 (213 on the computer-based test) required by the Graduate School.

Applicants for the MIC Option
Candidates in the graduate initial certification program must apply for admission to the Graduate School and to the Teacher Education Program. They must have a minimum undergraduate GPA of 2.75 to be eligible for admission to the Graduate School. In addition, they must submit passing scores on PRAXIS Core Academic Skills for Educators (CASE). A minimum 156 score on the reading portion, a minimum 150 score on the mathematics portion, and a minimum 162 score on the writing portion are required. Graduate candidates may use the GRE as the basic test requirement.

Candidates must submit an application packet and successfully complete the admission interview with program faculty. The application packet must be on file prior to the admission interview and includes the following items:
- Candidate demographic information
- Official transcripts
- PRAXIS I/GRE scores
- Standards self-assessment
- Character and Fitness Review
- Reference forms (3)
- Current resume
- Writing sample

Application Requirements

- Application Letter indicating motivation for pursuing MS-CLD and fit with faculty research interests and areas of practice. Students seeking department funding should indicate their interest in being considered in their letter.
- Current Resume
- Narrative accompanying resume that includes a description of applicant's experience regarding:
  - -Professional responsibilities and accomplishments
  - -Leadership development program design and implementation
  - -Specific accomplishments in leading community-based initiatives
  - -Grants awarded and implemented
  - -Professional/leadership certifications
  - -Professional trainings/courses and/or credentials
- Undergraduate/graduate transcripts
- GRE Scores
- 3 Recommendation letters (Only 1 can be written by a CLD faculty member)
- TOEFL/IELTS scores (International applicants only)

Funding

It is the policy of the Department to try to provide funding for as many qualified students as possible upon entry into the graduate program. Those students who do not receive funding upon entry are eligible to be considered for funding in the following year. Decisions about funding are made in yearly evaluations of graduate student progress, academic performance, and participation in departmental life (e.g., attending departmental colloquium and talks).Students must make systematic progress toward their degrees and meet professional expectations of their TA/RA responsibilities to ensure continued funding.

The CLD Department has a limited number of half-time service (20 hours per week) teaching and research assistantships to support qualified students in the Master's program. The actual number of available assistantships varies from year to year. Funding decisions are made subsequent to admission decisions. Students wishing to be considered for departmental funding need to express this interest in their Application Letter.

The Department of Community and Leadership Development has a limited number of graduate assistantships to support qualified students in the Master's program. Other units on campus also offer potential sources of funding. Those students who do not receive funding upon entry into the program are eligible for consideration in subsequent years. Decisions about funding are made in annual evaluations of student performance. Students must make systematic progress toward their degrees to ensure continued funding for the second year of study. Students will not receive more than two years of departmental support.

Graduate Courses

CLD 610	Experiential Education: Process And Practice	(3)
CLD 620	Introduction To Graduate Study	(1)
CLD 630	Individual And Group Dynamics	(3)
CLD 640	Science, Agriculture And Development	(3)
CLD 650	Applied Community Communications	(3)
CLD 660	Advanced Leadership Theory And Practice	(3)
CLD 665	Program Development And Evaluation	(3)
CLD 670	Community Engagement	(3)
CLD 671	Advanced Methods In Teaching	(3)
CLD 675	Theoretical Foundations Of Communication And Community	(3)

CLD 676	Supervision In Agricultural Education	(3)
CLD 678	College Teaching Of Agriculture, Natural Resources& Human Sciences	(3)
CLD 684	Statistical Analysis In CLD	(3)
CLD 685	Community Development: Theory And Practice	(3)
CLD 686	Research Design	(3)
CLD 691	Soc Of Food And Agriculture	(3)
CLD 748	Thesis Research In CLD	(0)
CLD 758	Creative Component	(3)
CLD 768	Residence Credit For The Master's Degree	(1-6)
CLD 775	Topical Seminar In CLD	(3)
CLD 780	Special Problems In CLD	(1-6)
CLD 790	Research In CLD	(1-6)
AED 671	Youth Organizations In CTE	(3)
AED 779	Seminar In CTE	(3)

Computer Science

College of Engineering

The Department of Computer Science offers programs of study leading to the Master of Science in Computer Science and Doctor of Philosophy degrees. Admission to these programs is highly competitive and based upon academic record, GRE scores, and letters of recommendation. It is strongly suggested that applicants present evidence of mathematical maturity as well as competence in computer science. Full details of the requirements for degree programs are available from the department upon request.

Since very few specific courses are required for the graduate degree programs, all candidates in the M.S. program are expected to demonstrate proficiency in the fundamental areas of computer science by taking four core courses in specific areas.

Both thesis (Plan A) and non-thesis (Plan B) options are available in the program leading to the Master of Science degree. A project is required of non-thesis candidates. No language requirement (other than proficiency in English) is mandated.

The doctoral program in Computer Science is a research degree granted primarily on the demonstration of substantial research achievement. To be admitted to candidacy for this degree, candidates must satisfy the requirements of the Graduate School and pass the qualifying examination. This examination consists of written and oral sections covering breadth in computer science as well as depth in a specific area.

Areas of research actively pursued by faculty and students within the department include: artificial intelligence, numerical methods, computational science, operating systems, distributed computing and networking, theory of computation, data base technology, design and analysis of algorithms, cryptography, graphics and vision, parallel processing, data mining, bioinformatics and software engineering. Courses in these and other areas are available to permit students to complete studies of sufficient breadth and depth prior to engaging in independent research.

Admissions
The admission decision is made by the Higher Degrees Committee based on the overall application file consisting of GRE scores, TOEFL scores (for international students), GPA, grades in CS and Math courses, background in computer science, letters of recommendation, and statement of purpose.

Students admitted to the doctoral program in Computer Science who have been awarded a master's degree in Computer Science from another institution are not eligible to receive a master's degree in Computer Science from the University of Kentucky. Exceptions to this policy must be approved by the Graduate School Dean upon petition by the Director of Graduate Studies.

Graduate Courses

CS 405G	Introduction To Database Systems	(3)
CS 415G	Graph Theory (Same As MA415G)	(3)
CS 416G	Principles Of Operations Research I (Same As MA 416G)	(3)
CS 441G	Compilers For Algorithmic Languages	(3)
CS 450G	Fundamentals Of Programming Languages	(3)
CS 463G	Introduction To Artificial Intelligence	(3)
CS 470G	Introduction To Operating Systems	(3)

CS 471G	Networking And Distributed Operating Systems	(3)
CS 485G	Topics In Computer Science (Subtitle Required)	(2-4)
CS 505	Intermediate Topics In Database Systems	(3)
CS 515	Algorithm Design	(3)
CS 521	Computational Sciences	(3)
CS 522	Matrix Theory And Numerical Linear Algebra I (Same As MA 522)	(3)
CS 535	Intermediate Computer Graphics	(3)
CS 536	Situated Computing	(3)
CS 537	Numerical Analysis (Same As MA/EGR 537)	(3)
CS 541	Compiler Design	(3)
CS 555	Declarative Programming	(3)
CS 570	Modern Operating Systems	(3)
CS 571	Computer Networks	(3)
CS 575	Models Of Computation	(3)
CS 585	Intermediate Topics In Computer Science (Subtitle Required)	(3)
CS 587	Microcomputer Systems Design (Same As EE 587)	(3)
CS 610	Master's Project	(3)
CS 611	Research In Computer Science	(3)
CS 612	Independent Work In Computer Science	(1-3)
CS 616	Software Engineering	(3)
CS 617	Requirements Engineering	(3)
CS 618	Software Design	(3)
CS 619	Software Testing And Quality Evaluation	(3)
CS 621	Parallel And Distributed Computing	(3)
CS 622	Matrix Theory And Numerical Linear Algebra II (Same As MA 622)	(3)
CS 623	Parallel Iterative Computing	(3)
CS 630	Free-Form Solid Modeling	(3)
CS 631	Computer-Aided Geometric Design	(3)
CS 633	3D Computer Animation	(3)
CS 634	Multimedia Systems	(3)
CS 635	Image Processing (Same As EE 635)	(3)
CS 636	Computer Vision	(3)
CS 637	Exploring Virtual Worlds	(3)
CS 642	Discrete Event Systems (Same As EE 642)	(3)
CS 655	Programming Languages	(3)
CS 660	Topics In Artificial Intelligence (Subtitle Required)	(3)
CS 663	Artificial Intelligence	(3)
CS 670	Distributed Operating System Theory	(3)
CS 671	Advanced Computer Networks	(3)
CS 673	Error Correcting Codes	(3)
CS 676	Parallel Algorithms	(3)
CS 677	Computational Geometry	(3)
CS 678	Cryptography	(3)
CS 680	Seminar In Computer Science	(2)
CS 682	Switching Theory	(3)
CS 683	Finite-State Machines	(3)
CS 684	Special Topics In Vision, Graphics And Multimedia (Subtitle Required)	(3)
CS 685	Special Topics In Computer Science (Subtitle Required)	(3)
CS 686	Special Topics In The Theory Of Computation (Subtitle Required)	(3)
CS 687	Special Topics In Systems	(3)

CS 688	Neural Networks (Same As EE 688)	(3)
CS 689	Special Topics In Numerical And Scientific Computation (Subtitle Required)	(3)
CS 690	Operating Systems Theory	(3)
CS 748	Master's Thesis Research	(0)
CS 749	Dissertation Research	(0)
CS 767	Dissertation Residency Credit	(2)
CS 768	Residence Credit For Master's Degree	(1-6)
CS769	Residence Credit For Doctor's Degree	(0-12)

Creative Writing

College of Arts & Sciences

The MFA in Creative Writing is a two-year program with a flexible and interdisciplinary approach, combining a studio/research curriculum. The UK MFA in Creative Writing places equal emphasis on fostering the artistic process of the MFA student, as well as his or her literary study and related creative or scholarly work.

Requirements for the Master of Fine Arts in Creative Writing

1. 24 hours of coursework following a plan drawn up in consultation with the student's advisor. Coursework must include:

- At least 9 hours of graduate writing workshop, ENG 607
- At least 6 hours of courses related to the study of creative writing genres (ex. Craft of Poetry, Craft of Creative Nonfiction, Special Topics in Poetry/Fiction/Nonfiction, courses in Creative Writing Pedagogy, Publishing, etc.)
- At least 6 hours of graduate courses designated as ENG, at the 600 or 700 levels, offered by the English department
- At least 3 hours from a focus area outside the English department

Although a course may be designated as fitting into several categories, a student may apply each course to only one. Neither ENG 609 nor ENG 691 may count toward the 24 hour requirement.

2. Students in the Creative Writing program will give a presentation of a significant portion of their own written work produced while in residence. In this public reading/performance, the student exhibits his or her work before an audience of peers, faculty, and the general public.
3. In the fall of their second year (if not earlier), students will form their thesis committee. The committee consists of their thesis director and two additional faculty members. The committee must be approved by the Director of Graduate Studies. At least two committee members (including the thesis director) must have graduate faculty status, and at least one of the two must be a full member of the graduate faculty. At least two members of the committee should be from the English department. The committee should include at least one English creative writing faculty member and one English literature faculty member. The committee must be in place and approved by the Director of Graduate Studies by the end of the fall semester of the student's second year.
4. During the spring semester of their second year, students will complete a creative thesis, under the direction of a thesis advisor. The thesis will be a substantial body of original writing—over 120 pages of fiction (short stories, novella, or novel) or non-fiction, or a collection of approximately 48 poems, or an equivalent thesis of mixed genre. While the final project usually consists of a book-length manuscript, theses that are not strictly English Department Graduate Student Handbook 2014-2015 10 print-based may also be submitted. The thesis must be approved by the student's thesis committee.
5. MFA candidates who have completed their coursework who are receiving financial support from the University and/or utilizing University resources while working on their theses should enroll in ENG 748. Please contact Catherine Sizemore, Department Manager Associate, to enroll in this residency course.
6. Toward the end of the spring semester of the second year, the student will take a ninetyminute oral examination based on the thesis. The exam may be scheduled once the committee has agreed that the thesis is ready for defense. Students should contact Catherine Sizemore, Department Manager Associate, to schedule their exam. All committee members must be present for the entire examination (in extreme cases, committee members may use conference calls or skype, but must be available and in contact with the student and the rest of the committee during the entirety of the exam).

Important Deadlines and Paperwork for the Final Exam

1. During the spring semester of the second year, students must submit their application for degree through MyUK. The deadline to submit the application for a Spring 2015 degree is February 20th, 2015.
2. Students must submit the Request for Final Exam to the Graduate School (http://www.research.uky.edu/cfdocs/gs/MastersCommittee/Student/Selection_Screen .cfm) at least two weeks prior to their final exam. The last day to submit this form for a Spring 2015 exam is April 9 th, 2015. The final day to sit for a Spring 2015 exam is April 23rd, 2015.
3. After successfully completing the oral examination, students will have 60 days or until the last day of the semester (May 8th, 2015), whichever comes first, to submit their final, accepted document and their ETD Approval Form to the Graduate School. Prior to final submission, students must have their thesis reviewed via UKnowledge for a first format check.

Curriculum & Instruction

College of Education

The Department of Curriculum and Instruction offers a wide range of graduate programs leading to the Master of Arts in Education, Master of Science in Education (Plan A or Plan B available), and Doctor of Education degrees. These programs are designed to prepare specialists for a variety of roles in curriculum and instruction including teaching, supervising, and coordinating subject matter areas at the elementary, middle school, senior high, and community college levels. The doctoral programs prepare leaders for public schools, universities, and other educational agencies. Specialization is available in several graduate areas.

Doctor of Education

In cooperation with the Department of Administration and Supervision, the department offers a program leading to the Doctor of Education (Ed.D.) degree in Instruction and Administration.
Coursework for the Ed.D. in Instruction and Administration, Curriculum and Instruction option, will consist of a minimum of 42 graduate credits beyond the master's degree planned by the major professor and advisory committee based on the student's background, needs and goals. All course work plans will include work in the following:

1. Curriculum and Instruction,
2. Support work in education,
3. Research tool courses (minimum of 9 semester hours required), and
4. Support work outside of education.

Admission Requirements
In addition to the admission requirements set by the Graduate School, departmental requirements include a statement of professional goals, an autobiographical sketch, professional writing samples, and four letters of professional reference. Interviews are frequently requested. All materials may be submitted through The Graduate School's online application process.

Master of Arts in Education (Initial Certification Option - Secondary Education)

This program is designed for students with a completed bachelor's degree in a content field. If it is a University of Kentucky degree, the degree must be in one of the following areas: English, history, mathematics, a science, a social science, or in secondary education. Science and mathematics candidates will also work with faculty in the STEM Education Department. Students having a bachelor's degree listed above from another institution are also eligible. Students not having a degree in one of the above areas may be required to complete additional course work. A departmental requirement is recommendation to a Teacher Education Program. That process involves compliance with admission requirements of the Kentucky Education Professional Standards Board.

Students meet state initial certification requirements while completing degree requirements. Dependent upon the student's background, one may need to complete undergraduate deficiencies to meet degree and certification requirements. Consult the Director of Graduate Studies for specific information regarding degree requirements and the dual application process.

Master of Science in Education (Instructional Systems Design Option)

The Instructional Systems Design area offers a 36-hour program designed for individuals who wish to develop their knowledge and skills in planning and designing instruction. Persons choosing this area are frequently preparing for instructional systems design responsibilities in business and industry, government, education, and various training organizations.

This program does not require or lead to initial teacher certification. However, previously certified teachers can use the program to advance the rank of their teaching certificates. Both a thesis option (Plan A, requiring 30 hours of course work and 6 hours of thesis credit) and a non-thesis option (Plan B, requiring 36 hours of course work) are offered. All students are required to complete an 18-hour common core including nine semester hours in the Department of Curriculum and Instruction. At least 6 hours must be taken outside the College of Education. An additional 12 credit hours of electives are required for the non-thesis option. The thesis option includes 6 credit hours of electives and 6 credit hours of thesis credit. Specific programs are planned with a faculty advisor subject to the approval of the Director of Graduate Studies.

Admission Requirements

For applicants who are not seeking advanced rank teaching certifications, in addition to the admission requirements set by the Graduate School, there is a departmental requirement of three references. For applicants who will pursue advanced teaching certificates, departmental requirements include initial teacher certification and three letters of professional reference. All materials may be submitted through The Graduate School's online application process.

Master of Arts in Education (Literacy)

Candidates for a Master of Arts in Education with Literacy as an area of concentration must meet the specifications for a Master of Arts in Education, Plan B. The curriculum includes a minimum of 33 credit hours according to the following distribution: a) a minimum of 30 credit hours in specified literacy related courses, b) nine credit hours in other professional educational course work, and c) three credit hours in course work either inside or outside the College of Education.

Completion of the Master of Arts in Education with Literacy as an area of concentration will fulfill the academic requirements for certification as a literacy specialist.

Admissions Requirements

In addition to the admission requirements set by the Graduate School, departmental requirements for admission to the Literacy program include initial teacher certification. Applicants without teaching experience or initial teacher certification are considered for this program. However, those without initial teacher certification will not receive a literacy specialist certificate.

Graduate Courses

EDC 501	Teaching Internship	(1-12)
EDC 509	Composition For Teachers (Same As ENG 5090	(3)
EDC 513	Teaching English As A Second Language (Same As ENG/Lin 513)	(3)
EDC 514	Tesl Materials And Methods (Same As ENG/LIN 514)	(3)
EDC 522	Educational Tests And Measurements	(3)
EDC 533	Teaching Adolescent Literacy Across The Disciplines	(3)
EDC 534	Reading And Study Skills In English	(3)
EDC 537	Advanced Applications Of Teaching Writing	(3)
EDC 543	Digital Game Based Learning And Instruction	(3)

EDC 544	Use And Integration Of Instructional Media	(3)
EDC 541:	Reading And Understanding Educational Research	(3)
EDC 547	Technology In Instructional Practice	(3)
EDC 548	Instructional Technology Leadership	(3)
EDC 550	Education In A Culturally Diverse Society	(3)
EDC 554	Culture, Education And Teaching Abroad (Same As EPE 554)	(3)
EDC 565	Modern Educational Problems (General Curriculum)	(3)
EDC 575	Modern Educational Problems (Unclassified)	(3)
EDC 576	Modern Educational Problems (Unclassified)	(3)
EDC 601	Theories, Perspectives, Trends And Issues In Multicultural Education (Same As AAS 601)	(3)
EDC 605	Distance Learning Research And Design	(3)
EDC 607	Instructional Design I	(3)
EDC 608	Instructional Design Ii	(3)
EDC 609	Interactive Multimedia Research And Design	(3)
EDC 610	Discipline And Classroom Management	(3)
EDC 611	Authoring Applications For Technology-Based Instruction	(3)
EDC 612	Instructional Design And Technology Foundations	(3)
EDC 615	Advanced Instructional Applications For The Early Adolescent Learner	(3)
EDC 616	The Middle School	(3)
EDC 618	Advanced Study In The Teaching Of Reading	(3)
EDC 619	Assessment Of Reading Growth And Development	(3)
EDC 620	Design And Implementation Of Reading Instruction	(3)
EDC 621	Language And Literacy Development	(3)
EDC 625	Literacy Leadership P-12	
EDC 626	Current Issues In Literacy Education	
EDC 632	Social Studies Pedagogy In The Secondary School	(3)
EDC 635	English Pedagogy In The Secondary School	(3)
EDC 637	Classroom Management In Secondary Education	(1)
EDC 638	Technology In Secondary Education	(1)
EDC 639	Multiculturalism In Secondary Education	(1)
EDC 641	Research And Theory In Teaching Reading In The Elementary School	(3)
EDC 642	Research And Theory In Literacy Education	(3)
EDC 709	Social Media And Interactive Systems Design	(3)
EDC 710	Advanced Topics In Instructional Design	(3)
EDC 712	The Elementary School	(3)
EDC 714	The Secondary School	(3)
EDC 724	Guiding And Analyzing Effective Teaching	(3)
EDC 726	Curriculum Inquiry Mixed Methods For Research	(3)
EDC 730	Problems Of The School Curriculum (Subtitle Required)	(3)
EDC 731	Social Studies Seminar: History Education	(3)
EDC 732	Curriculum Design For Leading And Learning	(3)
EDC 733	Leadership In Advanced Instructional Practice	(3)
EDC 740	Practicum In Teaching Reading And Related Language Arts	(3)
EDC 746	Subject Area Instruction In The Secondary School	(9)
EDC 748	Master's Thesis Research	(0)
EDC 749	Dissertation Research	(0)
EDC 750	Internship In Instructional Systems Design	(3)
EDC 755	Instructional Systems Design Research Colloquium	(1)
EDC 767	Dissertation Residency Credit	(2)

EDC 768	Residence Credit For The Master's Degree	(1-6)
EDC 769	Residence Credit For The Doctor's Degree	(0-12)
EDC 770	Special Topics In Stem Education (Subtitle Required)	(3)
EDC 777	Seminar In Curriculum And Instruction (Subtitle Required)	(1-3)
EDC 781	Independent Study In Curriculum And Instruction	(1-3)
EDC 791	Research Problems In Curriculum And Instruction	(1-3)
CS 689	Special Topics In Numerical And Scientific Computation (Subtitle Required)	(3)
CS 690	Operating Systems Theory	(3)
CS 748	Master's Thesis Research	(0)
CS 749	Dissertation Research	(0)
CS 767	Dissertation Residency Credit	(2)
CS 768	Residence Credit For Master's Degree	(1-6)
CS769	Residence Credit For Doctor's Degree	(0-12)

Dentistry

College of Dentistry

The goal of the Master of Science degree program is to produce graduates who are clinically adept, well-grounded in research and the biological basis of dentistry and prepared to function at a high level of accomplishment in clinical practice and academic dentistry. The program is interdisciplinary. Faculty members are drawn from the College of Dentistry clinical and graduate faculty, and from departments throughout the University of Kentucky.

Only students of high academic standing will be accepted into this program, which requires didactic, clinical, and research training. All of these elements are integrated throughout the program. All students receive teaching experience in anticipation of full- or part-time academic involvement after graduation.

Admission Requirements
Students pursuing specialty training in Orthodontics, Periodontology, or Orofacial Pain are eligible for the Master of Science (M.S.) degree. Successful completion of the M.S. degree is prerequisite to awarding of a specialty certificate (specialty programs). Applicants to the specialty tracks must have a D.M.D./D.D.S. degree from an accredited United States or Canadian dental school or equivalent. Applicants to the specialty tracks (Periodontology, Orthodontics or Orofacial Pain) must have a D.M.D./D.D.S. degree from an accredited United States or Canadian dental school or equivalent. Admission to the Master of Science Program is based on high academic performance in dental school, professional recommendations and a personal interview.

Applicants must submit official scores to the specific program of interest for one of the following tests: the Graduate Record Exam (GRE), Part I of the National Dental Board, or Part II of the National Dental Board for the Master of Science Programs. Additional exams such as ADAT are now under review and consideration. To determine which of these tests is recommended for your specialty track, please consult the student handbook or web site for that specific program. Applicants who are not native English speakers must score at least 550 (paper,) 213 (computer) or 79 (internet) on the Test of English as a Foreign Language (TOEFL) or 6.5 on the International English Language Testing System (IELTS). To determine which of these tests is recommended for your specialty track, please consult the web site for that specific program.

Degree Requirements
Both Plan A (thesis option) and Plan B (non-thesis option, preferable) are currently available to students enrolled in the Master of Science degree program. Requirements for the Master of Science degree are: 1) satisfactory completion of program requirements; 2) 24 hours graduate credit (Plan A Thesis option) or 30 hours graduate credit (Plan B Non-thesis option), at least 13 hours of which must be from the core curriculum; 3) submission of an acceptable thesis based on an individual research project (Plan A) or completion of a manuscript based on the results from the individual research project for a peer-reviewed journal (Plan B);; and 4) passage of a comprehensive oral examination and thesis defense (Plan A) or passage of a comprehensive oral examination (Plan B). Foreign language credit is not a requirement.

Orthodontics

Core Curriculum

OBI 650	Oral Biology for Postgraduate Students I	(2)
OBI 651	Oral Biology for Postgraduate Students II	(2)
CDS 660	Research Design, Methodology and Dissemination	(2)

CDS 670	Advances in Oral and Maxillofacial Pathology	(1)
CDS 680	Clinical Medicine for Postgraduate Dental Students	(2)
CDS 631	Diagnosis and Management of Temporomandibular Disorders	(1)
	TOTAL	(10)

Additional Courses

CDS 611	Child Growth and Development, Part 1	(2)
OSG 651	Anatomic Relationships in Surgery	(1)
CDS 612	Child Growth and Development, Part II	(2)
ORT 610	Craniofacial Form	(2)
ORT 620	Oral Pharyngeal Function, Part I	(2)
ORT 621	Oral Pharyngeal Function, Part II	(2)
ORT 660	Orthodontic Diagnosis	(2)
ORT 661	Orthodontic Seminar-Clinic	(3)
ORT 662	Orthodontic Technique	(2)
ORT 664	Biomechanics	(2)
ORT 710	Management of Complex Orofacial Deformities	(1)
ORT 770	Orthodontics Seminar	(1)
ORT 790	Research in Orthodontics	(1-5)
PER 776	Periodontics Therapy Seminar	(1)
	TOTAL	(24-29)

ORT 748	Master's Thesis Research	(0)
ORT 768	Residence Credit for Master's Degree	(1-6)

Periodontology

Core Curriculum

OBI 650	Oral Biology for Postgraduate Students I	(2)
OBI 651	Oral Biology for Postgraduate Students II	(2)
OPT 650	Oral Pathology I	(2)
OPT 651	Oral Pathology II	(2)
CDS 660	Research Design, Methodology and Dissemination	(2)
CDS 680	Clinical Medicine for Postgraduate Dental Students	(2)
CDS 631	Diagnosis and Management of Temporomandibular Disorders	(1)
	TOTAL	(13)

Additional Courses

PER 661	Modern Concepts in Periodontics (3 semesters)	(6)
PER 770	Treatment Planning Seminar (3 semesters)	(6)
PER 772	Periodontal Biology and Pathology (3 semesters)	(6)
PER 774	Periodontics Surgical Seminar (3 semesters)	(3)
PER 776	Periodontics Therapy Seminar (3 semesters)	(3)
PER 790	Research in Periodontics	(1-3)
	TOTAL	(25-27)

ORT 748	Master's Thesis Research	(0)
ORT 768	Residence Credit for Master's Degree	(1-6)

Orofacial Pain

Core Curriculum

OBI 650	Oral Biology for Postgraduate Students I	(2)
OBI 651	Oral Biology for Postgraduate Students II	(2)
CDS 660	Research Design, Methodology and Dissemination	(2)
CDS 670	Advances in Oral and Maxillofacial Pathology	(1)
CDS 680	Clinical Medicine for Postgraduate Dental Students	(2)
CDS 631	Diagnosis and Management of Temporomandibular Disorders	(1)
	TOTAL	(10)

Additional Courses

OFP 634	Current Concepts in Temporomandibular Disorders	(3)
OFP 636	Clinical Management of Temporomandibular Disorders	(3)
OFP 700	Orofacial Pain Treatment Planning Seminar	(2)
OFP 734	Current Concepts in Orofacial Pain	(3)
OFP 736	Clinical Management of Orofacial Pain	(3)
OFP 790	Research in Orofacial Pain	(1-6)
	TOTAL	(15-20)

ORT 748	Master's Thesis Research	(0)
ORT 768	Residence Credit for Master's Degree	(1-6)

Pediatric Dentistry

Core Curriculum

OBI 650	Oral Biology for Postgraduate Students I	(2)
OBI 651	Oral Biology for Postgraduate Students II	(2)
CDS 660	Research Design, Methodology and Dissemination	(2)
CDS 670	Advances in Oral and Maxillofacial Pathology	(1)
CDS 680	Clinical Medicine for Postgraduate Dental Students	(2)
CDS 631	Diagnosis and Management of Temporomandibular Disorders	(1)
	TOTAL	(10)

Additional Courses

CDS 611	Growth and Development	(2)
ORT 610	Craniofacial Form	(2)
ORT 660	Orthodontic Diagnosis	(2)
PDO 610	Pediatric Dentistry Seminar I	(2)
PDO 790	Research in Pediatric Dentistry	(1-6)
PDO 620	Pediatric Dentistry Seminar II	(2)
PDO 630	Pediatric Dentistry Seminar III	(2)
ORT 710	Management of Complex Orofacial Deformities	(2)
	TOTAL	(15-17)

ORT 748	Master's Thesis Research	(0)
ORT 768	Residence Credit for Master's Degree	(1-6)

Diplomacy & International Commerce

Patterson School of Diplomacy & International Commerce

The Patterson School of Diplomacy and International Commerce offers a Masters of Arts program designed to prepare students academically, professionally, and personally for careers in international affairs. Formal academic coursework is combined with experiential learning via a rich variety of co–curricular activities. The Patterson School M.A. is excellent preparation for service with government agencies such as the U.S. Departments of State, Treasury, or Commerce, and in the intelligence community, careers in international organizations or non-governmental organizations or in the private sector. The Patterson School faculty is a mix of academics and former foreign-affairs practitioners whom spent decades in government service prior to starting their teaching careers. Students come to the Patterson School with diverse undergraduate degrees but most are well-prepared in political science, economics and foreign languages.

Our flexible program totals 30 credit hours and can be completed in just three semesters. Each student enrolls in core curriculum courses and seminars taught by regular Patterson School faculty in one of four concentrations: diplomacy, development/international organizations, security/intelligence, and international commerce. Beyond this core, students can work with their academic advisors to craft interdisciplinary courses of study tailored to their unique desires that draw widely upon other University of Kentucky graduate departments. Patterson School students have developed individual degree plans that include classes in agricultural economics, anthropology, finance, marketing, management, foreign languages, history, political science, communications, sociology, law, geography, public health, and more. Additionally, students can pursue certificate programs in Global Health or International Education. This flexibility in curriculum is pivotal to the Patterson School concept.

All students begin the program as a group in the fall semester. Even though three semesters are required to complete the required the coursework, some students elect to remain a fourth semester in order to obtain more breadth and/or depth in their desired fields of professional preparation, or additional language training. Entering students are expected to have a strong background in at least one foreign language but many students undertake further language study during the program (although this study does not earn credit for the M.A. degree). Students are strongly encouraged to complete a career-related internship in the United States or abroad, typically during the summer between their second and third semesters.

All students must successfully pass written and oral comprehensive examinations before being awarded their master's degree. These exams require students to draw upon the full measure of academic and professional activities they have experienced in the program, testing their universal foreign affairs knowledge as well as their unique specialized skills. During their last semester, most students join informal study groups to prepare for this critical final step. Each student has only two chances to pass the comprehensive examinations. Students are also required to maintain a 3.0 grade point average to graduate.

Patterson School students are able to take advantage of a variety of joint degree opportunities to combine the study of international affairs with other disciplines, such as law or business. Students must meet the admission requirements of the separate programs independently and commit upfront to pursue both degrees. The Patterson School currently maintains concurrent degree programs in Law, Business, Economics, and Modern Languages. While many Patterson School graduates have later obtained doctoral degrees, this M.A. program is specifically designed to prepare students for non-academic careers in international affairs. Students who contemplate working immediately on a Ph.D. are generally advised to pursue that goal elsewhere.

Financial Assistance
A number of non-service Patterson School fellowships are available from the bequest of James K. Patterson, the first President of the University. Additional merit fellowships are provided to Patterson School students by the Vince Davis Memorial Fund and other sources.

Admission Requirments
Admission to the Patterson School is highly selective. The deadline for applications is February 1st. The online application process begins at the Patterson School website http://www.uky.edu/PattersonSchool/. Each applicant is required to submit GRE scores, college transcripts, a resume, a brief statement explaining his/her interest in the Patterson School program in terms of career goals, and two to four letters of reference. International students are also required to take the Test of English as a Foreign Language or the International English Language Testing System.

Dual Degree Program

J.D./M.A. in Diplomacy
The University of Kentucky Law School joins the Patterson School in offering a dual degree program in law and diplomacy that permits students to acquire both degrees in four years time. Professionals trained in both law and international affairs are well positioned to seek positions in the private, public and non-profit spheres. Interested students must apply separately to each program, noting their desire to pursue the dual degree. For further information, contact the Director of Graduate Studies in the Patterson School of Diplomacy and International Commerce and the College of Law.

M.B.A./M.A. in Diplomacy
The Patterson School of Diplomacy and International Commerce and the College of Business and Economics offer the opportunity to obtain the Master of Business Administration (M.B.A.) and the MA in Diplomacy degrees in a dual degree program that requires less time than would be required to achieve both degrees separately. The dual program of studies is designed to train students for international business careers or careers in government service that emphasize international business relations. Interested students must apply separately to each program, noting their desire to pursue the dual degreent.

M.S. in Economics/M.A. in Diplomacy
The Department of Economics of the Gatton College of Business and Economics combines with the Patterson School of Diplomacy to offer a dual degree program in economics and diplomacy that allows students to obtain both degrees in less time than would be required to achieve both degrees separately. The dual program of studies is designed to train students to become international economic analysts serving in government or international research institutions, or economic specialists headed for government departments (Treasury, State, U.S. Trade Representative) or intergovernmental organizations. Interested students must apply separately to each program, noting their desire to pursue the dual degree.

M.A. in a Modern Language/M.A. in Diplomacy
The Department of Modern and Classical Languages, Literatures, and Cultures in cooperation with the Patterson School of Diplomacy and International Commerce offers a dual degree program that allows students to obtain both degrees in less time than would be required to achieve both degrees separately. Interested students must apply separately to each program, noting their desire to pursue the dual degree.

Graduate Courses

DIP 700	Dynamics Of Diplomacy	(3)
DIP 712	Weak States And International Security	(3)
DIP 715	Democracy And International Affairs	(3)
DIP 716	International Trade Policy And Practice	(3)
DIP 720	Economic Statecraft	(3)
DIP 726	Introduction To Intelligence	(3)
DIP 727	Analytic Techniques In Intelligence	(3)
DIP 730	Cross-Cultural Negotiation	(3)
DIP 734	Africa's Development Challenge	(3)
DIP 735	Energy Security	(3)
DIP 740	Globalization	(3)
DIP 742	National Security Policy	(3)
DIP 750	Defense Statecraft	(3)
DIP 755	Politics And Diplomacy Of The Middle East	(3)
DIP 756	Diplomacy Of Nuclear Weapons	(3)
DIP 777	Research Problems In International Relations	(3)
DIP 795	Special Problems In Diplomacy And International Commerce	(3)
DIP 600-X	Mediation And Conflict Resolution	(3)
DIP 600-X	Russian Foreign And Security Policy	(3)
DIP 600-X	Comparative Foreign Policy	(3)
DIP 600-X	Trade And Development	(3)
DIP 600-X	Sea Power	(3)
DIP 600-X	Air Power	(3)
DIP 600-X	European Security	(3)
DIP 600-X	East Asian Security	(3)
DIP 600-X	International Ethics Practicum	(1)
PS 737	Transnational Organization And Processes	(3)

Interdisciplinary Early Childhood Education

College of Education

Requirements for Program
The Interdisciplinary Early Childhood (IEC) MEd program prepares educators for leadership roles in schools, programs, and systems that serve children, birth through age five, with and without disabilities and their families. Graduates are awarded the MEd degree in Education with a major in Interdisciplinary Early Childhood. In the Interdisciplinary Early Childhood program, students will build upon their skills as active, critical consumers of research and are expected to consume and produce research that will inform their practice. At this advanced level, students are expected to reflect not only on matters within the classroom context, but also on systems such as schools, families, communities, and policy. Through engaging students in a variety of learning experiences, including field-based experiences, professional literature, and conducting research, the M.Ed. program prepares graduates to build upon their leadership skills so they are prepared to actively engage in their chosen professions as agents of research-based change.

The program is guided by the standards of the Division for Early Childhood of the Council for Exceptional Children and the National Association for the Education of Young Children. The program also embeds Kentucky's Standards for Interdisciplinary Early Childhood Education and the Kentucky Early Childhood Core Content within courses and field experiences.

The IEC program admits twice a year: October 15th is the deadline for completed Department application submissions for Spring or Summer admission; March 15th is the deadline for completed Department application submissions for Summer or Fall. After completed applications are received by the deadline, candidates with complete applications are invited for an interview. Upon admission to the program, students are assigned an advisor and a Curriculum Contract is completed.

For application procedures, please go to the Graduate School web site (http://gradschool.uky.edu) and follow the directions for the Apply Yourself application. This electronic application incorporates the program and Graduate School application process.

Continuous Assessment
1. **Assessment at the Point of Entry to the IEC Progra**m. In addition to satisfying the criteria for admission to the University of Kentucky Graduate School, all MEd applicants must complete a departmental application, which includes indicators of written language and professional writing, technology skills, and professional goals, supported by professional letters of recommendation. The program faculty reviews the students' portfolio and interview results to make a determination on entry.
2. **On-going Assessment**. Once students are admitted to the program, they plan with their advisor the remainder of the program. Midpoint review is not necessarily a single point of assessment, and because of the different program options, mid-point evaluations are not restricted to specific timelines or identified courses. All advanced study candidates are evaluated by the conclusion of 15 semester credit hours. Evaluation criteria include the maintenance of at least a 3.0 GPA and the satisfactory performance in coursework and field placements.
3. **Exit Assessment**. MEd students undergo exit review at the conclusion of the final course required on

the program plan for the MEd degree. Because of the distinction between requirements for fulfilling Rank and degree, there may be multiple "exit" reviews for a given student. Thus, students pursuing the Master's may opt to file for Rank change prior to completion of the thesis. In such cases, there will in essence be two "exit" assessments; one for Rank and a subsequent assessment upon thesis completion.

Graduate Courses

Core Graduate Coursework

IEC 620	Assessment in IECE	(3)
IEC 621	Issues in Interdisciplinary Early Childhood Education	(3)
IEC 623	Practicum in IECE	(3)
IEC 710	Advanced Instructional Methods in IECE	(3)
IEC 659	Advanced Child Development	(3)
EDS 768	Residence Credit for Master's Degree	(3)

Research Core
Two courses in a research methodology selected by the student and approved by the thesis advisor; may include courses in a) single subject, b) qualitative, or c) group design.

EDS 601 & EDS 633 (6)
EPE 663 & EPE 763 (6) OR
EDP 557 & EDP 660 (6)

Electives
Students choose 9 hours of approved electives in one of the following areas:

1. Administration & Program Development
2. Curriculum Leadership & Technical Assistance
3. Policy & Advocacy
4. Higher Education & Research

Interdiscplinary Ph.D. in Education Sciences

Program Overview
The Interdisciplinary Ph.D. in Education Sciences (major code: EDSC) program is designed for individuals seeking careers in educational research. Graduates of the program are prepared to meet the growing national need for educators who are well trained in methodological issues in education research. This Ph.D. program prepares individuals who will have careers in research universities, educational research labs and corporations, and research groups within education agencies.

All EDSC students will be encouraged to apply for 20-hour per week research assistantships on grant-supported projects in the College of Education and other units at the University of Kentucky. In addition to coursework, students will be expected to attend local, state, or national professional conferences during the first and second years of their programs. All students will be expected to present their research at professional conferences by their third year in the program. EDSC doctoral students are expected to submit manuscripts to professional journals and accomplish refereed publications during their doctoral study. Presentations and publications may be scholarly works with a single author or groups of co-authors.
Curriculum

EDSC is a rigorous doctoral program that requires year-round, full-time study. Students are encouraged to apply for admission for the Fall semester. Students seeking Spring admission should contact the program

DGS to determine if the strand they are interested in allows for Spring admissions. Students will be required to complete a set of core courses in research methods and education policy; in addition, students will then be able to follow a particular "strand" of courses in an area of specialization. All students will be involved in educational research projects throughout their time in the program.

EDSC doctoral students will be required to designate at the time of application the strand that they would like to complete. These include advanced concentrations in the areas of:

a. Curriculum and instruction
b. Educational leadership
c. Educational policy studies: Educational evaluation and policy
d. Educational policy studies: Philosophical and cultural inquiry
e. Health education
f. Interdisciplinary early childhood education
g. Physical education
h. Rehabilitation counseling
i. Special education
j. STEM education

Additional information about the curriculum, including specific course requirements, may be found in the document: Interdisciplinary Ph.D. in Education Sciences Program Plan and Curriculum Sheet. This document is a tool for current and prospective students and faculty advisors.

Applications
Qualified applicants will have earned baccalaureate and master's degrees from fully accredited institutions. Applicants must meet admission requirements set by the University of Kentucky Graduate School.
Applications to the Interdisciplinary Ph.D. in Education Sciences are made online through the UK Graduate School Apply Yourself application process. Details about the application process can be found at http://gradschool.uky.edu/admissions.

Economics

Gatton College of Business & Economics

Financial Assistance
Any student who is a graduate of a fully accredited institution of higher learning is eligible to apply for admission to the graduate program in economics. The final decision on matters of admission is made by the Graduate Studies Committee of the Department of Economics and is based on the student's academic profile and prospects for successful completion of the curriculum. For more information on the qualifications of our admitted students see http://gatton.uky.edu/programs/phd/phd-economics.

Applications are submitted online through the Graduate School, and must include:
1. A resumé
2. A one-to-two page personal essay about why you want to attend graduate school in economics
3. Two or three confidential letters of recommendation
4. Unofficial copies of your GRE scores, transcript, and TOEFL score (if required).

Along with the other application materials, the information in these items will be considered by the Economics Department in its admission and financial aid decisions.

Master of Science

The M.S. in Economics is designed to introduce students to graduate-level study in economics. The M.S. in Economics provides a strong foundation in microeconomics, macroeconomics, and econometrics, in addition to allowing students to pursue some electives in their fields of interest.

Degree Requirements
The recommended minimum prerequisite undergraduate preparation includes 6 hours of intermediate theory, 6 hours of statistics, and 6 hours of calculus. Requirements for the M.S. in Economics are:
1. A minimum of 30 hours of graduate credit courses.
    a. The student must satisfactorily complete the following courses:
        ECO 590 Introduction to Quantitative Economics
        ECO 601 Advanced Microeconomic Theory
        ECO 602 Macroeconomic Theory
        ECO 603 Research Methods and Procedures
        ECO 703 Introduction to Econometrics I
    b. The student must also satisfactorily complete either:
        ECO 701 Neoclassical Microeconomic Theory or
        ECO 702 Advanced Macroeconomic Theory
    and, one course in an elective area of the Ph.D. program.
    c. Courses taken outside of the Department of Economics must be approved by the Director of Graduate Studies to count toward the 30 hour requirement.
2. Successful completion of a final examination.
3. Minimum average of grade B (a GPA of 3.0) in all courses attempted for graduate credit after being admitted to Graduate School. Students obtaining six quality points below a B average will be dropped by the department.

Doctor of Philosophy

The Ph.D. program is designed to enable the graduate to contribute to economic research and policy-making. The program is aimed at preparing students for careers in academia, government, and the private sector. To attain these objectives, the program is structured to provide the student with the appropriate knowledge, understanding, skills and abilities, including:

1. An understanding of economic theory;
2. Skill in the use of quantitative techniques, specifically mathematics and statistics;
3. An extensive exposure to the research, institutions, and issues in several fields;
4. Experience in the development of research projects throughout their entire program;
5. Research and writing skills that will lead to the publication of original research; and
6. Competence in communicating economic knowledge to broad and diverse audiences.

Degree Requirements

1. 1. Economic Theory. The student must demonstrate competence in economic theory as demonstrated by passing a departmental written examination in economic theory. This examination will be given twice a year, at the beginnings of the spring semester and the eight-week summer session. Students failing the examination will be given a second attempt; those failing on the second attempt will not be allowed to continue in the program. Minimum preparation for the written examination in economic theory can be achieved by taking the following core courses:

   ECO 601 Advanced Microeconomic Theory
   ECO 602 Macroeconomic Theory
   ECO 701 Neoclassical Microeconomic Theory
   ECO 702 Advanced Macroeconomic Theory

2. Statistics/Econometrics. The student must demonstrate competence in the area of statistics and econometrics. This competence may be demonstrated by satisfactory performance in the following courses:

   ECO 603 Research Methods and Procedures
   ECO 703 Introduction to Econometrics I
   ECO 706 Introduction to Econometrics II
   and ECO 707 (Seminar) or ECO 790 (Time Series Analysis)

3. Elective Areas. All Ph.D. students must choose two fields of study approved by the student's Advisory Committee. The two fields may be chosen from the following:

   Environmental/Health Economics
   Industrial Organization
   International Economics
   Labor Economics
   Macroeconomics
   Public Economics

Minimum course preparation for each field shall consist of at least two courses as determined by the student's Advisory Committee. In addition to the two chosen fields, the student is encouraged to take elective courses in other areas of economics, such as econometrics or economic theory, or in other disciplines such as Agricultural Economics, Finance, Marketing, Management, Mathematics, or Public Administration.

4. Supporting Work. At least nine hours of supporting course work must be selected. These courses must be approved by the student's Advisory Committee. This supporting work will allow the student to pursue more intensive study of one or both of the two chosen fields, or to pursue courses in other fields of economics. The supporting work cannot consist of 400 or 500 level courses, ECO 610 or ECO 611, ECO 652, or any of the core courses in economic theory (ECO 601, ECO 602, ECO 701, ECO 702, ECO 704, ECO 705) or econometrics (ECO 603, ECO 703, ECO 706). Supporting work can also be courses from other disciplines including Agricultural Economics, Finance, Mathematics, Statistics, or Public Policy with the approval of the Director of Graduate Studies.

5. Grades. Minimum average of grade B in all courses attempted for graduate credit after being admitted to the Graduate School. Students obtaining six quality points below a B average will automatically be dropped by the department.

6. Qualifying Examinations.

   a. Written Examination: The written examination must be taken in one of the student's two elective fields as part of the requirements for candidacy for the Ph.D. degree. The choice of the field in which the student takes the exam should reflect the intended field in which the student is to write his or her dissertation. This examination is given twice a year, at the beginning of the spring semester and at the beginning of the eight-week summer session. Fields may elect to require a paper in addition to an exam; this will be communicated to the students at the beginning of the academic year. The written examination is prepared and graded by specialists in the respective fields. In the event that the student fails the examination, the student's Advisory Committee determines the conditions which must be met before another examination is given. The minimum time between examinations is four months. Two failures to pass the written examination constitute failure of the qualifying examination.

   b. Oral Examination: After passing the written qualifying examination, the Director of Graduate Studies will, on the advice of the Advisory Committee, schedule through the Graduate School an oral examination which will be administered by the Advisory Committee. The examination will ordinarily consist of the presentation and defense of a dissertation proposal.

7. The Ph.D. Dissertation. The dissertation will be based on original research on a significant topic. The dissertation will be defended in an oral examination

Graduate Courses

Eco 590	Introduction To Quantitative Economics I (Same As Aec 590)	(3)
Eco 601	Advanced Microeconomic Theory	(3)
Eco 602	Macroeconomic Theory	(3)
Eco 603	Research Methods And Procedures In Economics	(3)
Eco 652	Public Policy Economics (Ms Only) (Same As Pa/Ha 652)	(3)
Eco 653	Health Economics (Ms Only) (Same As Pa/Ha 636)	(3)
Eco 654	Benefit-Cost Analysis (Ms Only) (Same As Pa 680)	(3)
Eco 674	Agriculture And Economic Development (Same As Aec 626)	(3)
Eco 700	Teaching Methods In Business (Same As Ba 700)	(1)
Eco 701	Neoclassical Microeconomic Theory	(3)
Eco 702	Advanced Macroeconomic Theory	(3)
Eco 703	Introduction To Econometrics I	(3)
Eco 704	General Equilibrium Analysis And Welfare Economics	(3)
Eco 706	Introduction To Econometrics Ii	(3)
Eco 707	Research Seminar In Economics	(3)
Eco 721	Environmental Economics, Regulation And Policy (Same As Pa 727)	(3)

Eco 731	Labor Economics I	(3)
Eco 732	Labor Economics Ii	(3)
Eco 741	Theory Of The Firm And Market Structure	(3)
Eco 742	Industrial Organization	(3)
Eco 751	Public Economics	(3)
Eco 752	The Economics Of Policy Analysis (Same As Pa 754)	(3)
Eco 761	Macro & Monetary Economics I	(3)
Eco 762	Macro & Monetary Economics Ii	(3)
Eco 767	Dissertation Residency Credit	(2)
Eco 771	International Economics: International Money And Finance	(3)
Eco 772	International Economics: Trade Theory And Policy	(3)
Eco 773	Open Economy Macroeconomics	(3)
Eco 796	Seminar	(1-6)
Eco 797	Research Problems In Economics	(1-9)

Educational Policy Studies & Evaluation

College of Education

The Department of Educational Policy Studies and Evaluation offers programs leading to degrees in the Master of Science (M.S.) in Higher Education, M.S. in Social and Philosophical Studies in Education, M.S. in Research Methods in Education, Doctor of Philosophy (Ph.D.) in Studies in Higher Education, and the Doctor of Education (Ed.D.) in Educational Policy Studies, Measurement, and Evaluation. The department also participates in the College of Education's Interdisciplinary Ph.D. in Education Sciences degree program with the Philosophical and Cultural Inquiry, Educational Evaluation and Policy, and Quantitative and Psychometric Methods strands. Additionally, the department offers graduate certificates in Research Methods in Education and International Education. The department has periodically offered an Ed.D. Cohort program in collaboration with the Kentucky Community and Technical College System.

Admission to Programs
Prospective students of the Department of Educational Policy Studies and Evaluation must complete an application to the UK Graduate School and follow general Graduate School application requirements. All master's and doctoral applicants must submit (a) official transcripts for all previous coursework completed at any institution of higher education, (b) official scores on all three sections of the Graduate Record Examination (GRE), (c) a statement of purpose, and (d) letters of reference. Master's applicants must provide two letters of recommendation, whereas doctoral applicants are required to provide four. Moreover, a writing sample is required of all doctoral applicants.

The deadline for application submission to the fall and summer semesters is January 15. The deadline for application submission to the spring semester is October 1 of the preceding year. The periodic Ed.D. Cohort will have its own separate application deadline. Because the Quantitative and Psychometric Methods strand of the Ph.D. in Education Sciences requires that its students begin in the fall semester, applicants must submit their completed applications by the January 15 deadline. The Philosophical and Cultural Inquiry and Educational Evaluation and Policy strands, as well as the M.S. in Research Methods in Education, operate on rolling admission, though students interested in applying for assistantships and/or scholarships must submit their applications in accordance with the January and October deadlines. Graduate certificates also operate on rolling admission.

It should be noted that international students' deadlines may differ from these listings depending on regulations set by the Graduate School. A list of current application deadlines and requirements can be found here. You may view the current Graduate School admission requirements here.

Admission Requirements
Admission to the department follows the basic application requirements as specified above. Moreover, those seeking admission must comply with the Graduate School regulations. Incoming international students should check the Graduate School's website or contact an admissions officer in the Graduate School for additional requirements.

Master of Science in Higher Education

The Master of Science in Higher Education (HIED) is a degree program with options of focus in Higher Education Policy and Student Services. The program serves those contemplating careers in higher education or already working in a college or university, as well as those interested in pursuing the study of higher education at the doctoral level.

HIED Curriculum
The program requires 31 hours of coursework to be completed. Courses required of all MSHE students include EPE 601: Proseminar (1 credit hour), EPE 612: Introduction to Higher Education, EPE 653: History of Higher Education, and EPE 676: Organization and Administration of Higher Education. The MSHE program plan also requires one research course, 9 credit hours in the Policy or Student Services emphasis, and 9 additional elective credits.

MSHE students who are in their final semester of coursework are required to take a two-part exam. Students learn about the exam during EPE 601: Proseminar and will receive more information about it during the final semester in which they are enrolled.

Master of Science in Social & Philosophical Studies in Education

The Master of Science in Social and Philosophical Studies in Education (SPSE) works well as a foundation for doctoral study. When focused with an approved "topical major," the degree may also serve a variety of career and academic purposes. Students following this degree program may engage in the study of the history, sociology, philosophy, and comparative international analyses of education.

SPSE Curriculum
The program requires 31 hours of coursework to be completed. The only specific course that SPSE students are required to take is EPE 601: Proseminar (1 credit hour), but program students must take a minimum of 12 hours in their core area of study and at least 18 hours in a concentration of their choosing. Typically, students take at least one research course. Each SPSE student's program plan is highly individualized, as it is created according to their interests and with the guidance of their advisor. A student's program of study may vary from this structure if they receive approval from their major advisor.

SPSE students are required to write and be examined on a scholarly paper in order to graduate from the program. During their final semester, SPSE students will consult their major advisor and form a three-person committee before an examination is held.

Master of Science in Research Methods in Education

The Master of Science in Research Methods in Education (RMinE) prepares students for careers in settings such as academic institutions, testing organizations, school districts, and state and federal agencies. It is designed to provide a foundation in basic research methods within a problem-of-practice framework while allowing students a focused area of emphasis on Quantitative Methods, Evaluation, or Research Design. RMinE students have the option to complete the entirety of their coursework online.

RMinE Curriculum
The program requires 37 hours of coursework, all of which is available online. Courses required of all MSHE students include EPE 601: Proseminar (1 credit hour) and 18 credit hours of core coursework. Each student will complete 18 hours in their chosen concentration. Each concentration has 6 hours of required courses and 12 hours of electives. Specific program plan listings can be found online at https://education.uky.edu/epe/rmine/plan-and-courses/. A student's program of study may vary from this structure if they receive approval from their major advisor.

At the end of the program, RMinE students are expected to be able to implement an evaluation, create and test an assessment, or design and conduct an advanced quantitative research study. RMinE students are required to write and be examined on a scholarly paper in order to graduate from the program. During their final semester, they will consult their major advisor and form a three-person committee before an examination is held.

Doctor of Education in Educational Policies, Measurement, & Evaluation

The Ed.D. program in Educational Policy Studies, Measurement, and Evaluation (EPME) provides advanced study for those who seek careers in the administration or evaluation of educational programs in schools, colleges, or other institutional settings. Ed.D. candidates may pursue a variety of research interests including but not limited to institutional research and assessment, educational measurement and evaluation, P-12 educational policy issues, post-secondary education, comparative education, and community/continuing education issues.

The Ed.D. differs from the Ph.D. in SHED in focus and audience. Ed.D. students prepare to address live or emerging issues in education as scholarly practitioners. Ed.D. candidates are expected to have a broad knowledge of research methodologies as applied to specific educational contexts.

Admission to this program is offered regularly on UK's Lexington campus with an individualized, on-campus program of study. In addition, the department periodically offers the EPME with a focus on open-access post-secondary institutions via a statewide Ed.D. Cohort model that may continue as needed.

EPME Curriculum

The EPME requires completion of 43 credit hours of coursework (42 for members of the Ed.D. Cohort) and a two-part qualifying exam to qualify for doctoral candidacy. Before completing 18 credit hours, students constitute a four-person advisory committee in order to create an approved program of study and provide further guidance throughout their doctoral work. To graduate, EPME students must write a dissertation and defend it before their committee as part of their final exam.

In terms of course requirements, EPME students must take 1 hour of EPE 601: Proseminar, a minimum of 15 hours in a core area of concentration, at least 9 hours of research, and complete the rest of their hours in supporting coursework. Students are encouraged to take multiple courses in contextual studies in education and to take supporting coursework both inside and outside the College of Education. A student's program of study may vary from this structure with approval from their program committee. Ed.D. Cohort students' courses may follow a pattern predetermined by their cohort director.

Graduate Certificates

The Department of Educational Policy Studies and Evaluation offers graduate certificates in International Education and Research Methods in Education (RMinE). These certificates are designed to provide students with formal recognition of the mastery of a clearly defined academic topic.

Admission to Certificate Programs

Certificate applicants are required to apply through the Graduate School's ApplyYourself portal. The general requirements for admission to a certificate curriculum are the same as those in effect for post-baccalaureate status. Students who already are or will be enrolled in a degree program, or those who simply apply for post-baccalaureate (non-degree) status with the Graduate School in order to complete the certificate, are eligible to apply for admission. A student should apply and be admitted to the certificate curriculum prior to completion of coursework for the certificate. For current admission requirements, visit the Graduate School's certificate webpage.

Additional requirements for admission to the Graduate Certificate in International Education are to submit letters of support and complete the certificate application form found online. A letter of support can come from a student's graduate advisor (for current graduate students), DGS (for new graduate students), or research supervisor (for post-doctoral students). Individuals who are non-degree-seeking, have already received their doctorate or other terminal degree, and/or who are enrolling at UK only for the certificate must submit two letters of recommendation. The Graduate Certificate in Research Methods in Education also requires its applicants to complete the Graduate Certificate in RMinE course plan found here.

Graduate Certificate in International Education

The Graduate Certificate in International Education prepares graduate students for careers in international education, including but not limited to education abroad, international student services, and placement in other international organizations which support the exchange of students in higher education. Through elective courses appropriate to student interests, students will develop a regional area of cultural expertise and participate in at least one professional vocational experience with an emphasis on developing skills in evaluation/assessment, management, and program development.

The certificate curriculum combines 9 hours of core courses and 6 hours of elective coursework for a required total of 15 credit hours. Although the certificate does not require language coursework as part of the curriculum, participants must establish their language proficiency relative to their professional and regional concentration so that they are prepared to be effective and competitive in the field.

A student must have a minimum GPA of 3.0 in their certificate coursework in order to be awarded the Graduate Certificate in International Education. Award of the certificate requires formal admission to the certificate, as well as the approval of the course of study and certificate completion worksheets.

The Director of the Graduate Certificate in International Education is Dr. Beth Goldstein. She can be contacted at bethg@uky.edu and at (859) 257-2705.

Graduate Certificate in Research Methods in Education

The Graduate Certificate in RMinE provides students with the ability to specialize in education research methods that can be applied to a host of disciplines, including social sciences, physical sciences, K-12 instruction/administration, and business. The certificate combines 12 hours of core courses and 3 hours of elective coursework for a required total of 15 credit hours.

A student must have a minimum GPA of 3.0 in their certificate coursework in order to be awarded the Graduate Certificate in RMinE. Award of the certificate requires formal admission to the certificate, as well as the approval of the course of study and certificate completion worksheets.

The Director of the Graduate Certificate in RMinE is Dr. Kelly Bradley. She can be contacted at kelly.bradley@uky.edu and at (859) 257-4923.

Addtional Information

For further information, contact the Director of Graduate Studies in the Department of Educational Policy Studies and Evaluation. You may also contact the department's administrative assistant in 145 Taylor Education Building at (859) 257-2626.

Graduate Courses

EPE 520	Program Evaluation	(3)
EPE 522	Psychological And Educational Tests And Measurements	(3)
EPE 525	Special Topics Seminar In Educational Policy Studies And Evaluation (Subtitle Required)	(3)
EPE 554	Culture, Education And Teaching Abroad (Same As EDC 554)	(3)
EPE 555	Comparative Education	(3)
EPE 557	Gathering, Analyzing, And Using Educational Data (Same As EDP 557)	(3)
EPE 558	Gathering, Analyzing, And Using Educational Data II (Same As EDP 558)	(3)
EPE 571	Writing Seminar In Educational Research	(3)
EPE 600	Social Foundations Topics For Secondary Education	(1)
EPE 601	Proseminar	(1)

EPE 602	Social Policy Issues And Education	(1-3)
EPE 603	Politics Of Educational Leadership (Same As EDL 704)	(3)
EPE 612	Introduction To Higher Education	(3)
EPE 619	Survey Research Methods In Education (Subtitle Required)	(3)
EPE 620	Topics And Methods Of Evaluation (Same As EDP 620/ANT 620/SOC 622)	(3)
EPE 621	Advanced Topics And Methods Of Evaluation (Same As EDP/ANT 621)	(3)
EPE 622	College And University Faculty	(3)
EPE 628	Ethics And Educational Decision Making	(3)
EPE 632	Student Services	(3)
EPE 640	Philosophy Of Education	(3)
EPE 650	History Of Western Education	(3)
EPE 651	History Of Education In The United States	(3)
EPE 652	History Of Educational Thought	(3)
EPE 653	History Of Higher Education	(3)
EPE 655	Comparative Higher Education	(3)
EPE 660	Research Design And Analysis In Education	(3)
EPE 661	Sociology Of Education (Same As SOC 661)	(3)
EPE 663	Field Studies In Educational Institutions	(3)
EPE 665	Education And Culture	(3)
EPE 667	Education And Gender	(3)
EPE 669	Oral History	(3)
EPE 670	Policy Issues In Higher Education	(3)
EPE 672	College Teaching And Learning	(3)
EPE 674	Theories Of Student Development	(3)
EPE 675	Sociology Of Higher Education	(3)
EPE 676	Organization And Administration Of Higher Education	(3)
EPE 678	Economics Of Higher Education	(3)
EPE 679	Introduction To Measurement Theory And Techniques (Same As EDP 679)	(3)
EPE 680	Politics Of Higher Education	(3)
EPE 681	History Of University Governance And Its Legal Context	(3)
EPE 682	Higher Education And The Law	(3)
EPE 683	Affirmative Action And Federal Regulation Of Higher Ed	(3)
EPE 684	Higher Education And Athletics: A Historical Analysis	(3)
EPE 685	The Research University	(3)
EPE 686	Philanthropy And Higher Education	(3)
EPE 690	The Community College	(3)
EPE 703	Preparing Research Proposals	(3)
EPE 707	Multivariate Analysis In Educational Research (Same As EDP 707)	(3)
EPE 711	Advanced Quantitative Methods (Same As EDP 711)	(3-12)
EPE 712	Advanced Psychometric Methods (Same As EDP 712)	(3)
EPE 763	Advanced Field Studies	(3)
EPE 767	Dissertation Residency Credit	(2)
EPE 773	Seminar In Educational Policy Studies And Evaluation	(1-3)
EPE 778	Seminar In History Of Education In Kentucky	(3)
EPE 785	Independent Studies In Educational Policy Studies And Evaluation	(1-3)
EPE 790	Internship In Educational Policy Studies And Evaluation	(1-6)
EPE 797	Historical Research On Education	(3)
EPE 798	Seminar In Higher Education	(3)

Educational Leadership Studies

College of Education

The Department of Educational Leadership Studies offers programs leading to the Master of Education (M.Ed) degree, the Specialist in Education (Ed.S) degree, and the Doctor of Education (Ed.D) degree in Educational Leadership Studies. These programs are designed to prepare candidates for leadership positions in P-12 schools and other educational agencies or for the professorship in educational administration. The department has participated in a Cooperative Doctoral Program with four regional comprehensive universities and may continue as needed.

Admission to Programs
The Department of Educational Leadership Studies delivers its programs through cohorts that begin in the fall semester. Prospective students must complete two applications—one to the department, one to the UK Graduate School. Instructions and application forms are posted on the department's website. All applicants must submit to the department (a) official transcripts for all previous coursework completed at any institution of higher education and (b) official scores on all three sections of the Graduate Record Examination (GRE). All programs require students to have access to and use information technology. Deadline for application submission to any program is April 1.

Master of Education

The Master of Education (MEd) in Educational Leadership Studies is a degree program with an option for certification as a school principal in Kentucky. The certification program requires 33 hours of coursework and leads to a letter of eligibility for the Instructional Leader, School Principalship, All Grades professional certificate. Students may achieve Rank II (initial master's degree) or Rank I (30 credit hours beyond initial master's degree) designations through this MEd program. Courses in the MEd program may require students to complete field-based assignments in schools or with the support of a practicing administrator.

Admission Requirements
Admission to the M.Ed. program follows the basic requirements of the Department of Educational Leadership Studies and the UK Graduate School as specified above. Those seeking admission to the M.Ed. tied to principal certification must meet the following additional requirements established by the Educational Professional Standards Board:

1. A cumulative 2.75 GPA on a 4.0 scale for all collegiate work;
2. Eligibility for a Kentucky classroom teaching certificate;
3. Successful completion of the Kentucky Teacher Internship Program (KTIP) or two years documented teaching experience outside Kentucky;
4. Successful completion of three years full-time teaching; and
5. Passing score on the national examination required for Kentucky teacher certification.

Program exit requirements for the M.Ed. include:

1. A cumulative 3.0 GPA on a 4.0 scale for coursework completed in the program;
2. Successful completion of the Level I and II portfolio reviews; and
3. Successful defense of the Level II portfolio or other capstone project during a formal oral examination.

Graduates of the M.Ed. program tied to principal certification must meet the following additional requirements before a letter of eligibility can be sent to the Educational Professional Standards Board:

1. Master's degree in education from an accredited institution;

2. Three years full-time teaching experience;
3. Successful completion of all program requirements; and
4. Passing scores on national and state tests as specified by the Kentucky Education Professional Standards Board.

Specialist in Education

The Specialist in Education (Ed.S.) degree in Educational Leadership Studies offers a practice-oriented, academic program intended to serve two interrelated and complementary purposes:

1. To provide professional educators with an opportunity to develop specialized expertise in the area of educational leadership with a focus on school administration and instructional supervision; and
2. To provide those professional educators who desire it, a bridge from their master's-level academic work to doctoral-level study in a specialized area of educational administration and supervision.

Ed.S. Curriculum

The Ed.S. program is divided into two segments. The first consists of 33 credit hours of formal coursework that can be structured to meet the subject-matter requirements for Kentucky certification as a school principal, as an instructional supervisor, or as a district superintendent or to meet the professional development needs of the student. Many courses in the Ed.S. program require candidates to complete field-based assignments in schools, district offices, or other education-oriented settings.

The second segment of the EdS program requires the design, implementation, and submission of a formal written report of a field-based inquiry project. The research component of the Ed.S. program requires candidates to enroll in EDL 785 Independent Work in School Administration for at least 3 credit hours or for a maximum of 6 credit hours. EdS candidates must successfully defend their field-based inquiry project during a formal oral examination.

Admission Requirements

Admission to the EdS program requires a master's degree from an accredited institution of higher education and follows the basic requirements of the Department of Educational Leadership Studies and the UK Graduate School as specified above. Applicants who plan to apply EdS courses toward administrator certification (e.g., school principal, instructional supervisor) must meet all additional requirements imposed by the Kentucky Educational Professional Standards Board. Contact the Director of Graduate Studies in the Department of Education Leadership Studies for information about entry and exit requirements for the specific advanced certification sought.

Doctor of Education

The Department of Educational Leadership Studies offers the Doctor of Education (EdD) with emphasis on preparing scholar-practitioners to assume leadership in diverse educational settings. Each student develops a program of study with three essential elements: (1) the core curriculum; (2) a program major emphasis; and (3) a research sequence. Program content and experiences integrate leadership theory and its application, learning organizations, educational improvement and innovation, educational technology, comparison of educational leadership practiced locally and internationally, economics of education, law and policy, research methods for educational leader, and leadership development of self and others.

EdD Curriculum

The EdD program consists of a minimum of 42 credit hours of graduate-level coursework and a minimum of 4 credit hours (two semesters) of EDL 767 Dissertation Residency Credit as required by the UK Graduate School. Students must remain enrolled in EDL 767 from the semester they sit for their Qualifying Examination through semester they defend their dissertation. Internships for graduate students can be arranged with public school systems and other educational agencies.

A limited number of graduate assistantships are available for EdD students. These involve up to 20 hours per week of service to the department or some other unit of the University, designed in such a way that the work contributes to the educational or leadership development of the student. A modest stipend is paid for this service. The University also provides some financial aid in the form of loans and fellowships.

Admission Requirements

Admission to the EdD program requires a master's degree from an accredited institution of higher education and follows the basic requirements of the Department of Educational Leadership Studies and the UK Graduate School as specified above. Applicants who plan to use courses for administrator certification (e.g., school principal, instructional supervisor, district administrator) as their major program emphasis must meet all additional requirements imposed by the Kentucky Educational Professional Standards Board. Applicants should contact the Director of Graduate Studies in the Department of Education Leadership Studies for information about entry and exit requirements for the specific advanced certification sought.

Graduate Courses

EDL 600	Organization And Administration Of American Education	(3)
EDL 601	Introduction To School Leadership And Administration	(3)
EDL 610	School Leadership Practicum I: Summer	(1)
EDL 611	School Leadership Practicum II	(1)
EDL 612	School Leadership Practicum III	(1)
EDL 625	School Safety And Discipline Leadership	(3)
EDL 627	School Finance And Support Services	(3)
EDL 628	School Law And Ethics	(3)
EDL 629	The Principal	(3)
EDL 631	Leadership For School Program Collaboration	(3)
EDL 632	Administration Of Educational Reform	(3)
EDL 634	Leadership For Human Resources Development In Schools	(3)
EDL 638	The Supervisor	(3)
EDL 639	The School Superintendency	(3)
EDL 642	Microcomputer Applications In Administration	(3)
EDL 646	Leadership For School Community Relations	(3)
EDL 649	School System Administration	(3)
EDL 650	Leadership For School Program Improvement	(3)
EDL 651	Foundations Of Inquiry	(3)
EDL 659	Strategic Management In Education	(3)
EDL 669	Leadership For School Problem-Solving	(3)
EDL 679	School Superintendent Practicum I: Spring	(1)
EDL 680	School Superintendent Practicum Ii: Summer	(1)
EDL 681	School Superintendent Practicum Iii: Fall	(1)
EDL 694	The Administration Of Vocational Education (Same as AED/HEE 694)	(3)
EDL 701	Leadership In Educational Organizations I	(3)
EDL 702	Leadership In Educational Organizations Ii	(3)
EDL 749	Dissertation Research	(0)
EDL 767	Dissertation Residency Credit	(2)
EDL 769	Residence Credit For The Doctor's Degree	(0-12)
EDL 770	Topical Seminar In Educational Leadership	(1-3)
EDL 771	Seminar In Administration	(1-3)
EDL 785	Independent Work In School Administration	(3)
EDL 792	Research In Educational Administration And Supervision	(3)

Educational Policy Studies & Evaluation

College of Education

The Department of Educational Policy Studies and Evaluation offers programs leading to degrees in the Master of Science (M.S.) in Higher Education, M.S. in Social and Philosophical Studies in Education, M.S. in Research Methods in Education, Doctor of Philosophy (Ph.D.) in Studies in Higher Education, and the Doctor of Education (Ed.D.) in Educational Policy Studies, Measurement, and Evaluation. The department also participates in the College of Education's Interdisciplinary Ph.D. in Education Sciences degree program with the Philosophical and Cultural Inquiry, Educational Evaluation and Policy, and Quantitative and Psychometric Methods strands. Additionally, the department offers graduate certificates in Research Methods in Education and International Education. The department has periodically offered an Ed.D. Cohort program in collaboration with the Kentucky Community and Technical College System.

Admission to Programs
Prospective students of the Department of Educational Policy Studies and Evaluation must complete an application to the UK Graduate School and follow general Graduate School application requirements. All master's and doctoral applicants must submit (a) official transcripts for all previous coursework completed at any institution of higher education, (b) official scores on all three sections of the Graduate Record Examination (GRE), (c) a statement of purpose, and (d) letters of reference. Master's applicants must provide two letters of recommendation, whereas doctoral applicants are required to provide four. Moreover, a writing sample is required of all doctoral applicants.

The deadline for application submission to the fall and summer semesters is January 15. The deadline for application submission to the spring semester is October 1 of the preceding year. The periodic Ed.D. Cohort will have its own separate application deadline. Because the Quantitative and Psychometric Methods strand of the Ph.D. in Education Sciences requires that its students begin in the fall semester, applicants must submit their completed applications by the January 15 deadline. The Philosophical and Cultural Inquiry and Educational Evaluation and Policy strands, as well as the M.S. in Research Methods in Education, operate on rolling admission, though students interested in applying for assistantships and/or scholarships must submit their applications in accordance with the January and October deadlines. Graduate certificates also operate on rolling admission.

It should be noted that international students' deadlines may differ from these listings depending on regulations set by the Graduate School. A list of current application deadlines and requirements can be found here. You may view the current Graduate School admission requirements here.

Admission Requirements
Admission to the department follows the basic application requirements as specified above. Moreover, those seeking admission must comply with the Graduate School regulations. Incoming international students should check the Graduate School's website or contact an admissions officer in the Graduate School for additional requirements.

Master of Science in Higher Education

The Master of Science in Higher Education (HIED) is a degree program with options of focus in Higher Education Policy and Student Services. The program serves those contemplating careers in higher education or already working in a college or university, as well as those interested in pursuing the study of higher education at the doctoral level.

HIED Curriculum
The program requires 31 hours of coursework to be completed. Courses required of all MSHE students include EPE 601: Proseminar (1 credit hour), EPE 612: Introduction to Higher Education, EPE 653: History of Higher Education, and EPE 676: Organization and Administration of Higher Education. The MSHE program plan also requires one research course, 9 credit hours in the Policy or Student Services emphasis, and 9 additional elective credits.

MSHE students who are in their final semester of coursework are required to take a two-part exam. Students learn about the exam during EPE 601: Proseminar and will receive more information about it during the final semester in which they are enrolled.

Master of Science in Social & Philosophical Studies in Education

The Master of Science in Social and Philosophical Studies in Education (SPSE) works well as a foundation for doctoral study. When focused with an approved "topical major," the degree may also serve a variety of career and academic purposes. Students following this degree program may engage in the study of the history, sociology, philosophy, and comparative international analyses of education.

SPSE Curriculum
The program requires 31 hours of coursework to be completed. The only specific course that SPSE students are required to take is EPE 601: Proseminar (1 credit hour), but program students must take a minimum of 12 hours in their core area of study and at least 18 hours in a concentration of their choosing. Typically, students take at least one research course. Each SPSE student's program plan is highly individualized, as it is created according to their interests and with the guidance of their advisor. A student's program of study may vary from this structure if they receive approval from their major advisor.

SPSE students are required to write and be examined on a scholarly paper in order to graduate from the program. During their final semester, SPSE students will consult their major advisor and form a three-person committee before an examination is held.

Master of Science in Research Methods in Education

The Master of Science in Research Methods in Education (RMinE) prepares students for careers in settings such as academic institutions, testing organizations, school districts, and state and federal agencies. It is designed to provide a foundation in basic research methods within a problem-of-practice framework while allowing students a focused area of emphasis on Quantitative Methods, Evaluation, or Research Design. RMinE students have the option to complete the entirety of their coursework online.

RMinE Curriculum
The program requires 37 hours of coursework, all of which is available online. Courses required of all MSHE students include EPE 601: Proseminar (1 credit hour) and 18 credit hours of core coursework. Each student will complete 18 hours in their chosen concentration. Each concentration has 6 hours of required courses and 12 hours of electives. Specific program plan listings can be found online at https://education.uky.edu/epe/rmine/plan-and-courses/. A student's program of study may vary from this structure if they receive approval from their major advisor.

At the end of the program, RMinE students are expected to be able to implement an evaluation, create and test an assessment, or design and conduct an advanced quantitative research study. RMinE students are required to write and be examined on a scholarly paper in order to graduate from the program. During their final semester, they will consult their major advisor and form a three-person committee before an examination is held.

Doctor of Education in Educational Policies, Measurement, & Evaluation

The Ed.D. program in Educational Policy Studies, Measurement, and Evaluation (EPME) provides advanced study for those who seek careers in the administration or evaluation of educational programs in schools, colleges, or other institutional settings. Ed.D. candidates may pursue a variety of research interests including but not limited to institutional research and assessment, educational measurement and evaluation, P-12 educational policy issues, post-secondary education, comparative education, and community/continuing education issues.
The Ed.D. differs from the Ph.D. in SHED in focus and audience. Ed.D. students prepare to address live or emerging issues in education as scholarly practitioners. Ed.D. candidates are expected to have a broad knowledge of research methodologies as applied to specific educational contexts.
Admission to this program is offered regularly on UK's Lexington campus with an individualized, on-campus program of study. In addition, the department periodically offers the EPME with a focus on open-access post-secondary institutions via a statewide Ed.D. Cohort model that may continue as needed.

EPME Curriculum
The EPME requires completion of 43 credit hours of coursework (42 for members of the Ed.D. Cohort) and a two-part qualifying exam to qualify for doctoral candidacy. Before completing 18 credit hours, students constitute a four-person advisory committee in order to create an approved program of study and provide further guidance throughout their doctoral work. To graduate, EPME students must write a dissertation and defend it before their committee as part of their final exam.

In terms of course requirements, EPME students must take 1 hour of EPE 601: Proseminar, a minimum of 15 hours in a core area of concentration, at least 9 hours of research, and complete the rest of their hours in supporting coursework. Students are encouraged to take multiple courses in contextual studies in education and to take supporting coursework both inside and outside the College of Education. A student's program of study may vary from this structure with approval from their program committee. Ed.D. Cohort students' courses may follow a pattern predetermined by their cohort director.

Graduate Certificates

The Department of Educational Policy Studies and Evaluation offers graduate certificates in International Education and Research Methods in Education (RMinE). These certificates are designed to provide students with formal recognition of the mastery of a clearly defined academic topic.

Admission to Certificate Programs
Certificate applicants are required to apply through the Graduate School's ApplyYourself portal. The general requirements for admission to a certificate curriculum are the same as those in effect for post-baccalaureate status. Students who already are or will be enrolled in a degree program, or those who simply apply for post-baccalaureate (non-degree) status with the Graduate School in order to complete the certificate, are eligible to apply for admission. A student should apply and be admitted to the certificate curriculum prior to completion of coursework for the certificate. For current admission requirements, visit the Graduate School's certificate webpage.

Additional requirements for admission to the Graduate Certificate in International Education are to submit letters of support and complete the certificate application form found online. A letter of support can come from a student's graduate advisor (for current graduate students), DGS (for new graduate students), or research supervisor (for post-doctoral students). Individuals who are non-degree-seeking, have already received their doctorate or other terminal degree, and/or who are enrolling at UK only for the certificate must submit two letters of recommendation. The Graduate Certificate in Research Methods in Education also requires its applicants to complete the Graduate Certificate in RMinE course plan found here.

Graduate Certificate in International Education

The Graduate Certificate in International Education prepares graduate students for careers in international education, including but not limited to education abroad, international student services, and placement in other international organizations which support the exchange of students in higher education. Through elective courses appropriate to student interests, students will develop a regional area of cultural expertise and participate in at least one professional vocational experience with an emphasis on developing skills in evaluation/assessment, management, and program development.

The certificate curriculum combines 9 hours of core courses and 6 hours of elective coursework for a required total of 15 credit hours. Although the certificate does not require language coursework as part of the curriculum, participants must establish their language proficiency relative to their professional and regional concentration so that they are prepared to be effective and competitive in the field.

A student must have a minimum GPA of 3.0 in their certificate coursework in order to be awarded the Graduate Certificate in International Education. Award of the certificate requires formal admission to the certificate, as well as the approval of the course of study and certificate completion worksheets.

The Director of the Graduate Certificate in International Education is Dr. Beth Goldstein. She can be contacted at bethg@uky.edu and at (859) 257-2705.

Graduate Certificate in Research Methods in Education

The Graduate Certificate in RMinE provides students with the ability to specialize in education research methods that can be applied to a host of disciplines, including social sciences, physical sciences, K-12 instruction/administration, and business. The certificate combines 12 hours of core courses and 3 hours of elective coursework for a required total of 15 credit hours.

A student must have a minimum GPA of 3.0 in their certificate coursework in order to be awarded the Graduate Certificate in RMinE. Award of the certificate requires formal admission to the certificate, as well as the approval of the course of study and certificate completion worksheets.

The Director of the Graduate Certificate in RMinE is Dr. Kelly Bradley. She can be contacted at kelly.bradley@uky.edu and at (859) 257-4923.

Addtional Information

For further information, contact the Director of Graduate Studies in the Department of Educational Policy Studies and Evaluation. You may also contact the department's administrative assistant in 145 Taylor Education Building at (859) 257-2626.

Graduate Courses

EPE 520	Program Evaluation	(3)
EPE 522	Psychological And Educational Tests And Measurements	(3)
EPE 525	Special Topics Seminar In Educational Policy Studies And Evaluation (Subtitle Required)	(3)
EPE 554	Culture, Education And Teaching Abroad (Same As EDC 554)	(3)
EPE 555	Comparative Education	(3)
EPE 557	Gathering, Analyzing, And Using Educational Data (Same As EDP 557)	(3)
EPE 558	Gathering, Analyzing, And Using Educational Data II (Same As EDP 558)	(3)
EPE 571	Writing Seminar In Educational Research	(3)
EPE 600	Social Foundations Topics For Secondary Education	(1)
EPE 601	Proseminar	(1)
EPE 602	Social Policy Issues And Education	(1-3)
EPE 603	Politics Of Educational Leadership (Same As EDL 704)	(3)
EPE 612	Introduction To Higher Education	(3)
EPE 619	Survey Research Methods In Education (Subtitle Required)	(3)
EPE 620	Topics And Methods Of Evaluation (Same As EDP 620/ANT 620/SOC 622)	(3)
EPE 621	Advanced Topics And Methods Of Evaluation (Same As EDP/ANT 621)	(3)
EPE 622	College And University Faculty	(3)
EPE 628	Ethics And Educational Decision Making	(3)
EPE 632	Student Services	(3)
EPE 640	Philosophy Of Education	(3)
EPE 650	History Of Western Education	(3)
EPE 651	History Of Education In The United States	(3)
EPE 652	History Of Educational Thought	(3)
EPE 653	History Of Higher Education	(3)
EPE 655	Comparative Higher Education	(3)
EPE 660	Research Design And Analysis In Education	(3)
EPE 661	Sociology Of Education (Same As SOC 661)	(3)
EPE 663	Field Studies In Educational Institutions	(3)
EPE 665	Education And Culture	(3)
EPE 667	Education And Gender	(3)
EPE 669	Oral History	(3)
EPE 670	Policy Issues In Higher Education	(3)
EPE 672	College Teaching And Learning	(3)
EPE 674	Theories Of Student Development	(3)
EPE 675	Sociology Of Higher Education	(3)
EPE 676	Organization And Administration Of Higher Education	(3)
EPE 678	Economics Of Higher Education	(3)
EPE 679	Introduction To Measurement Theory And Techniques (Same As EDP 679)	(3)
EPE 680	Politics Of Higher Education	(3)
EPE 681	History Of University Governance And Its Legal Context	(3)
EPE 682	Higher Education And The Law	(3)
EPE 683	Affirmative Action And Federal Regulation Of Higher Ed	(3)
EPE 684	Higher Education And Athletics: A Historical Analysis	(3)
EPE 685	The Research University	(3)
EPE 686	Philanthropy And Higher Education	(3)
EPE 690	The Community College	(3)
EPE 703	Preparing Research Proposals	(3)
EPE 707	Multivariate Analysis In Educational Research (Same As EDP 707)	(3)
EPE 711	Advanced Quantitative Methods (Same As EDP 711)	(3-12)
EPE 712	Advanced Psychometric Methods (Same As EDP 712)	(3)
EPE 763	Advanced Field Studies	(3)
EPE 767	Dissertation Residency Credit	(2)
EPE 773	Seminar In Educational Policy Studies And Evaluation	(1-3)
EPE 778	Seminar In History Of Education In Kentucky	(3)
EPE 785	Independent Studies In Educational Policy Studies And Evaluation	(1-3)
EPE 790	Internship In Educational Policy Studies And Evaluation	(1-6)
EPE 797	Historical Research On Education	(3)
EPE 798	Seminar In Higher Education	(3)

Educational, School, & Counseling Psychology

College of Education

The Department of Educational, School, and Counseling Psychology offers programs leading to the following degrees: Master of Science in Education (Plans A and B available), the Specialist in Education (Ed.S.), and the Doctor of Philosophy (Ph.D.). Applications to the Master of Arts in Education and the Doctor of Education (Ed.D.) degrees are no longer accepted. Students must apply for admission to both the Graduate School and to the Department. Doctoral applications must be completed by December 1 for summer/fall admission. All other degree applications have a deadline of January 15.

Within the degree programs offered, three specializations are possible: counseling psychology, educational psychology, and school psychology. Specializations are designed to provide students with both a background in behavioral and humanistic components of human learning and behavior, and the competencies to practice the skills designated for these programs. Admission to candidacy in any of these programs includes not only demonstrated skills in the academic area, but a judgment by the faculty of the program that the candidate demonstrates the personal and social characteristics, as well as the professional commitment and ethical standards requisite, for providing the services and demonstrating the skills associated with the program and the advanced degree.

For further information on specific program guidelines first garner information through the departmental website, http://education.uky.edu/EDP/ , and if clarification is needed, contact the Director of Graduate Studies in the Department of Educational, School, and Counseling Psychology.

Master of Science in Education

The Master of Science in Education degree is offered by the Department for individuals who will not meet state licensure (Licensed Psychological Associate [LPA] or Licensed Professional Counselor [LPC]) requirements in counseling or school psychology immediately upon completion. Individuals who are interested in specializing in educational psychology, human development, measurement, or research in education may obtain this degree. The educational psychology program, planned in consultation with an advisor, is flexible and tailored to individual needs. It consists of 36 hours of course work (including a 3-hour paper) or 30 hours of course work plus a 6-hour thesis. The work completed for this degree with an emphasis in either counseling or school psychology is applicable toward licensure in either counseling or school psychology, respectively, but does not fulfill state certification requirements. In these areas no realistic thesis option is available. The counseling program prerequisites include psychological testing and abnormal psychology.

Admission Requirements

Applicants to the M.S. Ed. Degree program leading to certification in school psychology must possess an undergraduate degree in psychology, education, or a closely allied field (e.g., rehabilitation counseling or pediatric nursing). Applicants to the M.S. Ed. Degree program leading to counseling psychology licensure may apply with any undergraduate degree, but an undergraduate degree in psychology, education, or a closely allied field will facilitate movement through the program. Students are selected for these programs based on their undergraduate grade point average, Graduate Record Examination scores, letters of recommendation, a personal statement describing their selection of a career in school or counseling

psychology, a writing sample, and, in the case of school psychology, a personal interview. These data provide information regarding student diversity, interests, and prior academic accomplishments in relation to program goals. The program faculty uses the Graduate School minimum requirements for undergraduate grade point average for admissions eligibility.

Specialist in Education

The Educational Specialist degree is offered in the areas of educational psychology, counseling psychology, and school psychology. Programs follow the general guidelines of the College of Education as specified earlier (see Advanced Degrees). The program includes the Master of Science in Education degree program plus a full-time one-semester internship and additional course work. This program leads to permission to sit for the State Board of Psychology Certification Examination in Counseling Psychology as a Licensed Psychological Associate (LPA) or the Certification Examination for the Licensed Professional Counselor (LPC). The requirements for the State Board of Education certification in School Psychology include the work for the Master of Science in Education degree plus the additional Educational Specialist degree requirements.

Admission Requirements

Applicants to the Ed. S. degree program leading to certification in school psychology must possess a master's degree in psychology, education or a closely allied field (e.g., rehabilitation counseling or pediatric nursing). Applicants to the Ed. S. degree program leading to licensure in counseling psychology must possess a master's degree in counseling psychology. Students who did not complete the M.S. Ed. programs in school psychology or counseling psychology will likely need to complete additional requirements to replace required course work from the M.S. Ed. programs. Students are selected for the Ed.S. program based on their undergraduate and prior graduate grade point average, Graduate Record Examination scores, letters of recommendation, a personal statement describing their selection of a career in school psychology, a writing sample, and a personal interview. These data provide information regarding student diversity, interests, and prior academic accomplishments in relation to program goals. The program faculty uses the Graduate School minimum requirements for undergraduate and graduate grade point average for admissions eligibility.

Doctor of Philosophy

The Ph.D. program is offered in the specialty areas of counseling psychology, educational psychology, and school psychology under one departmental program. The Doctor of Philosophy programs in Counseling Psychology and in School Psychology are accredited by the American Psychological Association through its Office of Program Consultation and Accreditation (750 First Street, NE, Washington, DC 20002-4242, phone: 202.336.5500). A full-time, supervised one-year internship is required for both areas. Various concentrations are possible within the Ph.D. program. Representative of these are: (a) learning, cognition, and curriculum design; (b) human development and social processes; (c) counseling psychology; (d) measurement, evaluation and research design; and (e) school psychology.

Admissions Requirements

Applicants to the Ph.D. Degree program in school psychology must possess an undergraduate degree in psychology, education or a closely allied field (e.g., rehabilitation counseling or pediatric nursing). Applicants to the Ph.D. Degree program leading to counseling psychology licensure may apply with any undergraduate degree, but an undergraduate degree in psychology, education, or a closely allied field will facilitate movement through the program. Students with prior graduate work at the masters or specialist degree will also be considered for admission to advanced graduate status and, in the case of counseling psychology, are preferred. Students are selected for this program based on their undergraduate and prior graduate grade point average, Graduate Record Examination scores, letters of recommendation, personal statements describing their selection of a career in their chosen areas, writing samples, and personal interviews. These data provide information regarding student diversity, interests, and prior academic accomplishments in relation to program goals. The program faculty uses the Graduate School minimum requirements for undergraduate grade point average for admissions eligibility.

Graduate Courses

EDP 518	Mental Hygiene	(3)
EDP 522	Educational Tests And Measurements	(3)
EDP 548	Educational Psychology	(3)
EDP 557	Educational Statistics	(3)
EDP 570	Introduction To Psychological Services In Schools	(3)
EDP 580	Introduction To Gifted Education	(3)
EDP 600	Life Span Human Development And Behavior	(3)
EDP 603	Human Cognitive Development	(3)
EDP 604	Lifespan Gender Development	(3)
EDP 605	Introduction To Counseling: Techniques I	(3)
EDP 606	Professional Issues In Counseling Psychology	(3)
EDP 610	Theories Of Learning In Education	(3)
EDP 611	Human Cognitive Learning	(3)
EDP 612	Development Of Creativity And Critical Thinking	(3)
EDP 613	Social Psychological Issues In Education	(3)
EDP 614	Motivation And Learning	(3)
EDP 615	Proseminar In History And Systems Of Psychology (Same As PSY 620)	(3)
EDP 616	Multicultural Psychology (Same As AAS 616)	(3)
EDP 620	Topics And Methods Of Evaluation (Same As ANT/EPE 620/SOC 622)	(3)
EDP 621	Advanced Topics And Methods Of Evaluation (Same As ANT/EPE 621)	(3)
EDP 630	Principles Of Psychological Assessment	(3)
EDP 640	Individual Assessment Of Cognitive Functioning	(3)
EDP 642	Individual Assessment Of Personality Functioning	(3)
EDP 649	Group Counseling	(3)
EDP 650	Diagnosis And Psychopathology In Counseling Psychology	(3)
EDP 652	Theories Of Counseling	(3)
EDP 656	Methodology Of Educational Research	(3)
EDP 658	Problems In Educational Psychology	(1-3)
EDP 660	Research Design And Analysis In Education	(3)
EDP 661	Techniques Of Counseling Ii	(3)
EDP 662	Doctoral Pre-Practicum Seminar In Counseling Psychology	(1)
EDP 664	Pre-Masters Practicum In Counseling Psychology	(1-6)
EDP 665	Post-Masters Practicum In Counseling Psychology	(1-6)
EDP 666	Psychology Of Career Counseling	(3)
EDP 669	Diagnostic Classification In School Psychology	(3)
EDP 670	Psychoeducational Strategies Of Intervention	(3)
EDP 671	Seminar In Psychoeducational Consultation In Schools	(3)
EDP 675	Practicum In School Psychology	(1-6)
EDP 676	Practicum In Gifted Education (Same As EDC 676)	(3)
EDP 679	Introduction To Measurement Theory & Techniques	(3)
EDP 680	Parent And Child Counseling	(3)
EDP 683	Topics In Counseling Psychology	(1-3)
EDP 685	Issues And Techniques In The Counseling Of Women	(3)
EDP 686	Theory And Methods In Marriage And Family Therapy	(3)
EDP 701	Cognitive-Behavioral Counseling	(3)

EDP 702	Career Development: Research, Theories And Practices (Same As EDV 702)	(2-3)
EDP 703	Seminar In Clinical Supervision	(1-3)
EDP 707	Multivariate Analysis In Educational Research	(3)
EDP 708	Internship In Educational And Counseling Psychology	(0-9)
EDP 711	Advanced Quantitative Methods	(3)
EDP 748	Master's Thesis Research	(0)
EDP 749	Dissertation Research	(0)
EDP 765	Independent Study In Counseling Psychology	(1-4)
EDP 767	Dissertation Residency Credit	(2)
EDP 768	Residence Credit For The Master's Degree	(1-6)
EDP 776	Seminar In School Psychology (Subtitle Required)	(3)
EDP 777	Seminar In Counseling Psychology	(1-3)
EDP 778	Seminar In Educational Psychology (Subtitle Required)	(3)
EDP 782	Independent Study In Educational Psychology	(1-3)
EPE 767	Dissertation Residency Credit	(3)
EPE 773	Seminar In Educational Policy Studies And Evaluation	(1-3)
EPE 778	Seminar In History Of Education In Kentucky	(3)
EPE 785	Independent Studies In Educational Policy Studies And Evaluation	(1-3)
EPE 790	Internship In Educational Policy Studies And Evaluation	(1-6)
EPE 797	Historical Research On Education	(3)
EPE 798	Seminar In Higher Education	(3)

Education Sciences

College of Education

The Interdisciplinary Ph.D. in Education Sciences (major code: EDSC) program is designed for individuals seeking careers in educational research. Graduates of the program are prepared to meet the growing national need for educators who are well trained in methodological issues in education research. This Ph.D. program prepares individuals who will have careers in research universities, educational research labs and corporations, and research groups within education agencies.

All EDSC students will be encouraged to apply for 20-hour per week research assistantships on grant-supported projects in the College of Education and other units at the University of Kentucky. In addition to coursework, students will be expected to attend local, state, or national professional conferences during the first and second years of their programs. All students will be expected to present their research at professional conferences by their third year in the program. EDSC doctoral students are expected to submit manuscripts to professional journals and accomplish refereed publications during their doctoral study. Presentations and publications may be scholarly works with a single author or groups of co-authors.

Curriculum
EDSC is a rigorous doctoral program that requires year-round, full-time study. Students are encouraged to apply for admission for the Fall semester. Students seeking Spring admission should contact the program DGS to determine if the strand they are interested in allows for Spring admissions. Students will be required to complete a set of core courses in research methods and education policy; in addition, students will then be able to follow a particular "strand" of courses in an area of specialization. All students will be involved in educational research projects throughout their time in the program.

EDSC doctoral students will be required to designate at the time of application the strand that they would like to complete. These include advanced concentrations in the areas of:

- Curriculum and instruction
- Educational leadership
- Educational policy studies: Educational evaluation and policy
- Educational policy studies: Philosophical and cultural inquiry
- Health education
- Interdisciplinary early childhood education
- Physical education
- Rehabilitation counseling
- Special education
- STEM education

Application
Qualified applicants will have earned baccalaureate and master's degrees from fully accredited institutions. Applicants must meet admission requirements set by the University of Kentucky Graduate School. Applications to the Interdisciplinary Ph.D. in Education Sciences are made online through the UK Graduate School Apply Yourself application process.

Electical Engineering

College of Engineering

The Department of Electrical and Computer Engineering offers advanced studies leading to either a Master of Science in Electrical Engineering or a Doctor of Philosophy in Electrical Engineering.

Admission Requirements
A minimum grade point average of 3.0/4.0 on all undergraduate work is required for admission to the graduate program. A minimum GRE general test scores of 301 (combination of Verbal and Quantitative sections) and analytical writing of at least 2.5 for the M.S. degree. The corresponding minimum GRE scores for Ph.D degree are 310 (V+Q) and 3.0 (Writing). Meeting the minimum requirements does not guarantee admission will be granted. Acceptance is based upon a competitive evaluation and on a space-availability basis. An undergraduate degree in electrical engineering is preferred. Those applicants without a B.S.E.E. degree from an ABET accredited EE program should develop competence and demonstrate ability in the fundamentals of electrical engineering. Such students, before being admitted to full graduate standing within the department, must take (or have taken an equivalent of) a set of prescribed electrical engineering remedial courses. A minimum grade of C must be made in these courses.

Degree Requirements
For the M.S.E.E. degree, both the thesis and non-thesis options are available. The thesis option requires 24 hours of acceptable graduate level work plus the satisfying of the usual requirements for the thesis. The non-thesis option, Plan B, requires 30 hours of acceptable graduate work plus an additional three hours of EE 784 (Research Project in Electrical Engineering). All students in their first semester of regular graduate work must select an academic advisor who will assist the student in formulating a graduate plan of study leading to their particular degree. This plan, which must receive the approval of the Director of Graduate Studies, must contain specific courses and a proposed thesis area or specialized project topic.

For the PhD degree, students who only have a B.S. degree must complete 42 hours of course work. Students who have a M.S. degree from an accredited institution must complete 18 hours of course work. Students who have a M.S. degree from a non accredited institution must complete 24 hours of course work.

In order to assure a minimum breadth and level of understanding at the graduate level, all EE graduate students must take three of six specified courses from the major areas of electrical engineering. These courses are: EE 611 Deterministic Systems, EE 621 Electromagnetic Systems, EE 640 Stochastic Systems, EE641 Advanced Power Systems, EE 661 Solid State Electronics, EE 685 Digital Computer Structure. PhD students must also take a course in technical writing such as WRD 204.

The Department of Electrical and Computer Engineering has active research programs in the following areas: power electronics, power systems, electromechanics, computer engineering, control systems, electromagnetics, electro-optics, micro and nano-electronics, signal processing, communication systems, and controls. Departmental laboratories are well-equipped for students' research. In addition, the Power and Energy Institute of Kentucky provides additional research opportunities.

Graduate Courses

EE 402G	Electronic Instrumentation And Measurements (Same As Phy 402G)	(3)
EE 415G	Electromechanics	(3)
EE 416G	Energy Conversion Laboratory	(2)

EE 421G	Signals And Systems I	(3)
EW 422G	Signals And Systems II	(3)
EE 461G	Introduction To Electronics	(3)
EE 462G	Electronic Circuits Laboratory	(2)
EE 468G	Introduction To Engineering Electromagnetics	(4)
EE 511	Introduction To Communication Systems	(3)
EE 512	Digital Communication Systems	(3)
EE 517	Advanced Electromechanics	(3)
EE 518	Electric Drives	(3)
EE 521	Introduction To Wireless Communications	(3)
EE 522	Antenna Design	(3)
EE 523	Microwave Circuit Design	(3)
EE 524	Solid State Physics (Same As PHY 524)	(3)
EE 525	Numerical Methods And Electromagnetics	(3)
EE 527	Electromagnetic Compatibility	(3)
EE 530	Robotics	(3)
EE 531	Alternative And Renewable Energy Systems	(3)
EE 332	Smart Grid-Automation And Control Of Power Systems	(3)
EE 533	Advanced Power System Protection	(3)
EE 536	Power System Fault Analysis And Protection	(3)
EE 537	Electric Power Systems I	(3)
EE 538	Electric Power Systems Ii	(3)
EE 539	Power Distribution Systems	(3)
EE 543	Solar Cell Devices And Systems For Electrical Energy Generation	(3)
EE 560	Semiconductor Device Design	(3)
EE 561	Electric And Magnetic Properties Of Materials (Same As MSE 561)	(3)
EE 562	Analog Electronic Circuits	(3)
EE 564	Digital Electronic Circuits	(3)
EE 567	Introduction To Lasers And Masers (Same As PHY 567)	(3)
EE 569	Electronic Packaging Systems And Manufacturing Processes (Same As MSE 569)	(3)
EE 571	Feedback Control Design	(3)
EE 572	Digital Control Of Dynamic Systems	(3)
EE 576	Cybersecurity	(3)
EE 579	Neural Engineering: Merging Engineering With Neuroscience (Same As BME 579)	(3)
EE 580	Embedded Systems Design	(3)
EE 581	Advanced Logical Design	(3)
EE 582	Hardware Description Languages And Programmable Logic	(3)
EE 584	Introduction To Vlsi Design And Testing	(3)
EE 585	Fault Tolerant Computing	(3)
EE 586	Communication And Switching Networks	(3)
EE 587	Microcomputer Systems Design (Same As CS 587)	(3)
EE 588	Real-Time Digital Systems	(3)
EE 589	Advanced VLSI	(3)
EE 595	Independent Problems	(1-3)
EE 599	Topics In Electrical Engineering (Subtitle Required)	(2-3)
EE 601	Electromagnetic Energy Conversion I	(3)
EE 603	Power Electronics	(3)
EE 604	Switch Mode Converters	(3)

EE 605	Systems For Factory Information And Control (Same As MFS 605)	(3)
EE 606	Seminar And Project In Manufacturing Systems Engineering (Same As MFS/ME 606)	(3)
EE 611	Deterministic Systems	(3)
EE 613	Optimal Control Theory	(3)
EE 614	Adaptive Control	(3)
EE 621	Electromagnetic Fields	(3)
EE 622	Advanced Electrodynamics	(3)
EE 624	Computational Electromagnetics: The Finite-Difference	(3)
EE 625	Advanced Computational Electromagnetics	(3)
EE 630	Digital Signal Processing	(3)
EE 635	Image Processing (Same As CS 635)	(3)
EE 639	Advanced Topics In Signal Processing And Communications	(3)
EE 640	Stochastic Systems	(3)
EE 641	Advanced Power Systems	(3)
EE 642	Discrete Event Systems (Same As CS 642)	(3)
EE 661	Solid-State Electronics	(3)
EE 663	Optoelectronic Devices	(3)
EE 664	Multidisciplinary Sensors Laboratory	(3)
EE 684	Introduction To Computer Aided Design Of Vlsi Circuits	(3)
EE 685	Digital Computer Structure	(3)
EE 686	Advanced Computer Architecture Design	(3)
EE 699	Topics In Electrical Engineering (Subtitle Required)	(3)
EE 748	Master's Thesis Research	(0)
EE 749	Dissertation Research	(0)
EE 767	Dissertation Residency Credit	(2)
EE 768	Residence Credit For The Master's Degree	(1-6)
EE 769	Residence Credit For The Doctor's Degree	(0-12)
EE 780	Advanced Practice In Electrical And Computer Engineering	(1-3)
EE 783	Special Problems In Electrical Engineering	(1-3)
EE 784	Research Project In Electrical Engineering	(3)
EE 790	Research In Electrical Engineering	(1-9)
EGR 537	Numerical Analysis (Same As CS/MA 537)	(3)
EGR 599	Topics In Engineering (Subtitle Required)	(1-3)
EGR 611	Boundary Element Methods In Engineering (Same As ME 611)	(3)
EGR 621	Finite Element Analysis In Engineering	(3)

English

College of Arts & Sciences

The Department of English offers M.A. and Ph.D. programs. For the MA degree, students can choose either the thesis option, Plan A, or non-thesis option, Plan B. MA students can choose from concentrations in Literature and Film (which are only Plan A). Students will select from both British and American literature courses for their M.A. coursework. The final oral exam of Plan B students is based on a reading list. The final exam of Plan A students is a defense of the master's thesis.

For the PhD degree, students will select from a variety of literature courses. The qualifying examinations are comprised of a presentation prepared in response to questions submitted by the student's advisory committee, an oral exam, and a defense of the dissertation prospectus.

Requirements

- Oral examination based on two lists (major and minor) to be taken by the end of the first semester of the third year
- Directed Study with either director or core member during the first semester of the third year
- Dissertation prospectus to be completed during the second semester of the third year
- Dissertation prospectus defended in an oral examination by the end of the second semester of the third year

The Lists:
In consultation with the director and the two core members, the student decides on two areas:

1. Major - which will likely but not necessarily be a historical period (70 texts)
2. Minor - which will be either historical, special topic, or genre (30 texts)

For example, the student might focus on 19th century British literature along with a special topic such as gender studies or affect or postcolonial theory. The two lists will be assembled by the student in consultation with the committee members. While it is expected that most doctoral candidates will be examined in at least one major historical period, in certain circumstances a candidate may, with the approval of the doctoral committee, petition the Graduate Committee to take qualifying exams in a recognizable area other than a historical period.

Qualifying exam/part 1:
A week before the exam, students will be given 2 or 3 questions formulated by their director (in consultation with the core committee) from which students will choose one. They will then prepare a twenty-minute presentation for their exam. While the presentation should not be read, students may use Powerpoint. Students are advised to focus on roughly 6 central texts for the presentation. During the next forty minutes, the committee members discuss the presentation. Students should be prepared to reference in some detail other primary and secondary texts during the question period—roughly 20. Followed by a short break, the second hour turns to the whole list (including major and minor).

Prospectus
This should be from 12 to 15 pages with a (minimum) 3-page bibliography.

Oral exam/part 2:
By the end of the second semester of the third year, the student will be tested in an oral format for 2 hours on the dissertation prospectus.

Committee members divide the responsibilities.
The director oversees at least one of the lists, likely the major but possibly the minor instead, while a core committee member may oversee the other list, depending on area expertise. All three members should agree on the lists.

Admission Requirements
Admission is based on course grades, GRE scores, three letters of recommendation, a brief (1-2 pages) statement of purpose and an analytical writing sample, preferably a critical essay. While each applicant is judged on his or her merits, normal expectations are an undergraduate GPA of 3.0 or above, a graduate GPA of 3.5 or above, and scores of at least 70-80% on two of the three sections of the GRE Aptitude test. (The subject test is not required.) Applicants for the master's program who do not have an undergraduate degree in English should contact the Director of Graduate Studies who along with the Graduate Committee will evaluate their applications on a case by case basis. This is also the case for applicants to the doctoral program who do not have an M.A. in English. The English Department only has fall admissions, and the deadline for applications is January 15th.

All applicants must also fulfill the admission requirements of the Graduate School.
A detailed and current statement of requirements for the M.A. and Ph.D. is available here: https://english.as.uky.edu/english-graduate-program.

Graduate Courses

ENG 480g	Special Studies In Film (Subtitle Required)	(3)
ENG 481g	Studies In British Literature (Subtitle Required)	(3)
ENG 482g	Studies In American Literature (Subtitle Required)	(3)
ENG 483g	Studies In African American Or Diasporic Literature (Subtitle Required)	(3)
ENG 484g	Comparative Studies In Literature (Subtitle Required)	(3)
ENG 485g	Studies In Literature And Gender (Subtitle Required)	(3)
ENG 486g	Studies In Theory (Subtitle Required)	(3)
ENG 487g	Cultural Studies (Subtitle Required)	(3)
ENG 488g	Gender And Sexuality Studies (Subtitle Required)	(3)
ENG 507	Advanced Workshop In Imaginative Writing (Subtitle Required)	(3)
ENG 509	Composition For Teachers (Subtitle Required)	(3)
ENG 512	Modern English Grammar (Same As LIN 512)	(3)
ENG 513	Teaching English As A Second Language (Same As EDC/LIN 513)	(3)
ENG 514	Tesl Materials And Methods (Same As EDC/LIN 514)	(3)
ENG 515	Phonological Analysis (Same As ANT/LIN 515)	(3)
ENG 516	Grammatical Analysis (Same As ANT/LIN 516)	(3)
ENG 519	Introduction To Old English	(3)
ENG 570	Selected Topics For Advanced Studies In Literature (Subtitle Required)	(3)
ENGg 572	Studies In English For Teachers (Subtitle Required)	(3)
ENG 600	Bibliography And Methods Of Research	(3)
ENG 605	Editing	(3)
ENG 607	Graduate Writing Workshop (Subtitle Required)	(3)
ENG 609	Composition For Teachers	(3)
ENG 610	Studies In Rhetoric	(3)
ENG 617	Studies In Linguistics (Subtitle Required)(Same As LIN 617)	(3)
ENG 618	History Of The English Language	(3)
ENG 619	Beowulf	(3)
ENG 620	Studies In Middle English Literature	(3)
ENG 621	Studies In Chaucer	(3)

ENG 622	Studies In Renaissance Literature: 1500-1660	(3)
ENG 625	Studies In Renaissance Drama Exclusive Of Shakespeare	(3)
ENG 626	Studies In Spenser, Shakespeare, Milton	(3)
ENG 630	Studies In English Literature: 1660-1720	(3)
ENG 631	Studies In English Literature: 1720-1780	(3)
ENG 635	Studies In Literature: 1780-1815	(3)
ENG 636	Studies In Literature: 1815-1830	(3)
ENG 638	Studies In English Literature: 1830-1860	(3)
ENG 642	Studies In Modern British Literature	(3)
ENG651	Studies In American Literature Before 1860	(3)
ENG 652	Studies In American Literature: 1860-1900	(3)
ENG 653	Studies In American Literature Since 1900	(3)
ENG 656	Black American Literature (Same As AAS 656)	(3)
ENG 660	Modern Critical Theory	(3)
ENG 681	Studies In Film	(3)
ENG 682	Studies In Fiction	(3)
ENG 690	Studies In Literature And Gender (Subtitle Required)	(3)
ENG 691	Readings In Rhetoric (Subtitle Required)	(1)
ENG 700	Tutorial For Ph.D. Candidates	(3)
ENG 720	Seminar In Medieval Literature	(3)
ENG 722	Seminar In Renaissance Studies (Subtitle Required)	(3)
ENG 730	Seminar In 18th Century Literature	(3)
ENG 735	Seminar In Romantic Literature	(3)
ENG 738	Seminar In Victorian Literature	(3)
ENG 740	Seminar In 20th Century British Literature	(3)
ENG 748	Master's Thesis Research	(0)
ENG 749	Dissertation Research	(0)
ENG 750	Seminar In Colonial Literature	(3)
ENG 751	Seminar In American Literature: 1800-1860	(3)
ENG 752	Seminar In American Literature: 1860-1900	(3)
ENG 753	Seminar In American Literature Since 1900	(3)
ENG 767	Dissertation Residency Credit	(2)
ENG 768	Residence Credit For The Master's Degree	(1-6)
ENG 769	Residence Credit For The Doctor's Degree	(0-12)
ENG 771	Seminar In Special Topics	(3)
ENG 780	Directed Studies	(1-6)
ENG 781	Seminar In Film (Subtitle Required)	(3)

Entomology

College of Agriculture, Food & Environment

The Department of Entomology offers graduate work leading to the Master of Science (Plan A -- Thesis and Plan B -- Non-thesis) and the Doctor of Philosophy degrees. Individual graduate programs are planned by students in consultation with their advisory committee and the Director of Graduate Studies. Entomology, like all agricultural and biological sciences disciplines, continues to evolve and integrate state of the art technology and new research perspectives with insect biology. Although departmental research is unified by a focus on insects and their arthropod relatives, many research groups creatively merge aspects of basic and applied biology. Graduate study and research opportunities are available in a diverse range of areas of entomology, including agricultural and urban entomology, biological control and integrated pest management, medical, veterinary, and public health entomology, pollinator biology and insect-plant relationships, forest entomology, and arachnology. Research covers many major fields of biology including behavior, biochemistry, ecology (including evolutionary, urban, landscape, and general ecology), genetics, neuroscience, molecular biology, physiology, toxicology, and systematics.

Admission Requirements
Minimum admission requirements include an overall undergraduate grade point average of 3.0 and an overall graduate grade point average of 3.25. Applicants whose native language is English must score at least 300 on the combined verbal and quantitative portions of the Graduate Record Examination (GRE) general test. Those whose native language is not English must have a Test of English as a Foreign Language (TOEFL) with a minimum score of 79 on the TOEFL- iBT. A minimum overall band score of 6.5 on the International English Language Testing System (IELTS) may be used in lieu of a TOEFL score. They must also have a score of 150 on the quantitative portion of the GRE. The Program requires three letters of recommendation. Meeting the minimum requirements does not guarantee admission. These minimum requirements may be waived in exceptional cases if sufficient additional evidence is presented regarding the ability of the student to do graduate work. Admission to the Graduate Program in Entomology does not automatically guarantee financial assistance to the student.

Degree Requirements
During their first year of graduate studies, M.S. (Plan A) and Ph.D. students are required to prepare a formal written research proposal encompassing a thorough literature review, clear statement of objectives, and materials and methods of the project. A research proposal seminar will be presented to the Department upon completion of the written research proposal. An exit seminar, usually presented during the last semester of the student's tenure, is required for M.S. (plans A and B) and Ph.D. students. August graduates will present their seminar in the preceding spring. M.S. students using the Plan B option will be required to provide a detailed outline of their practicum to their Advisory Committee. The practicum must be a minimum of 3 credit hours (maximum of 6 credit hours) and may consist of library research, special problems, internships, etc., as agreed upon by the student and major professor, and approved by the Advisory Committee.

All M.S. and Ph.D. students must satisfy the following core course requirements:
1. An undergraduate course in general entomology. Students who have not had such a course before enrolling in the Entomology graduate program must take ENT 300.
2. STA 570 (Basic Statistical Analysis) or equivalent, or a different statistics course approved by the student's advisory committee
3. Each M.S. student must take two semesters of ENT 770, Entomological Seminar, (or approved

equivalent seminars) and Ph.D. candidates must take four semesters of approved seminars.

4. Ph.D. and M.S. candidates using the Plan A option must take a minimum of one course from two of the following core areas. M.S. candidates using the Plan B option must take a minimum of one course from all three core areas.

Core Area 1: Insect Behavior, Ecology, Evolution and Systematics.

ENT 564	Insect Taxonomy
ENT 568	Insect Behavior
ENT 607	Advanced Evolution
ENT 625	Insect-Plant Relationships
ENT 660	Immature Insects
ENT 665	Insect Ecology
ENT 667	Invasive Species Biology

Core Area 2: Insect Molecular Biology, Physiology and Genetics.

ENT 635	Insect Physiology
ENT 636	Insect Molecular Biology

Core Area 3: Pest Management and Applied Ecology.

ENT 530	Integrated Pest Management
ENT 561	Insects Affecting Human and Animal Health
ENT 574	Advanced Applied Entomology
ENT 680	Biological Control

In all cases, an equivalent graduate level course from another institution is acceptable upon approval of the Advisory Committee. Such approval will not decrease the minimum number of credits required, but simply will permit the student to take other courses.

Graduate Courses

ENT 530	Integrated Pest Management	(3)
ENT 561	Insects Affecting Human And Animal Health (Same As BIO 561)	(3)
ENT 564	Insect Taxonomy (Same As BIO 564)	(4)
ENT 568	Insect Behavior (Same As BIO 568)	(3)
ENT 574	Advanced Applied Entomology	(4)
ENT 605	Empirical Methods In Ecology And Evolution (Same As BIO/FOR 605)	(2)
ENT 606	Conceptual Methods In Ecology And Evolution (Same As BIO/FOR 606)	(3)
ENT 607	Advanced Evolution (Same As BIO/FOR607)	(2)
ENT 608	Behavioral Ecology And Life Histories (Same As BIO/FOR 608)	(2)
ENT 609	Population And Community Ecology (Same As BIO/FOR 609)	(2)
ENT 613	Behavioral Ecology And Comparative Neurobiology (Same As BIO/PSY/PGY/ANA 613)	(2)
ENT 614	Techniques In Behavioral Ecology And Comparative Neurobiology (Same As BIO/PSY/PGY/ANA 614)	(2)
ENT 625	Insect-Plant Relationships (Same As BIO 625)	(3)
ENT 635	Insect Physiology (Same As BIO 635)	(4)
ENT 636	Insect Molecular Biology	(4)
ENT 660	Immature Insects	(3)

ENT 665	Insect Ecology (Same As BIO 665)	(3)
ENT 667	Invasive Species Biology (Same As BIO/FOR 667)	(3)
ENT 680	Biological Control	(3)
ENT 684	Phylogenetic Systematics (Same As BIO 684)	(3)
ENT 695	Special Topics In Entomology (Subtitle Required)	(3)
ENT 748	Master's Thesis Research	(0)
ENT 767	Dissertation Residency Credit	(2)
ENT 768	Residence Credit For The Master's Degree	(1-6)
ENT 770	Entomological Seminar	(1)
ENT 780	Special Problems In Entomology And Acarology	(2-3)
ENT 790	Research In Entomology And Acarology	(1-6)

Epidemiology & Biostatistics

College of Public Health

The Ph.D. program in Epidemiology and Biostatistics at the University of Kentucky is intended to prepare professionals for a career in conducting population-based research and clinical trials. This is a unique program which strongly emphasizes the acquisition of applied skills in the complementary fields of epidemiology and biostatistics, as well as the theoretical foundations of these disciplines. Graduates of this program will be prepared to address the practical challenges of conducting population-based and clinical, translational research in the multidisciplinary work environments of academia, government, and industry. The essentially strong cross-training and mentoring nature of the program is intended to develop independent researchers who will be skilled in designing and conducting studies as well as analyzing, and interpreting the results from an increasing variety of designs and databases in the public health and medical research domains.

The target audience for this program will include students with an appropriate prior bachelor's or master's degree (in biostatistics, epidemiology, statistics, health services research, mathematical sciences, or a related field) with prior mathematical training to include two semesters of calculus (univariate, differential and integral) and statistical methods. Practicing health care professionals (MDs, DMDs, PharmDs, etc.) who are interested in pursuing independent, doctoral level, research careers will be targeted for the program. Master's graduates from psychology, computer science, engineering, business, biology, or chemistry may also find this degree program attractive.

Program Overview
Students will complete a minimum of 57 credit hours of study plus dissertation research and the corresponding residency credits. The core curriculum consists of 33 credit hours comprising eleven courses, including nine courses in epidemiology and biostatistics, a 1-credit-hour doctoral seminar, and a three-credit-hour course that will serve as a broad introduction to public health. Students will also complete a minimum of 24 credit hours of electives, including at least three DGS-approved epidemiology courses and two 700 level biostatistics courses. Electives must be approved by the student's dissertation committee and the DGS. If the student does not yet have a dissertation committee at the time approval is sought for an elective, then approval will rest with the DGS, who will serve as the student's academic advisor until such time as the student has a dissertation advisor.

After passing a written comprehensive examination over selected core courses (between the Fall and Spring semesters of the second year for a full-time student), the student will select a dissertation advisor and form a dissertation committee. The dissertation research will be an original scientific project which is integrative in the sense that either advanced biostatistical methods are applied to a population-based epidemiologic study of sufficient size and appropriate design, or original theoretical research is undertaken in biostatistics with applied research problems. Ordinarily a dissertation document will produce at least three manuscripts of publishable quality, as well as an integrative literature review. The scope of the project will demonstrate independence, mastery of research skills, thoughtful reflection of the results, and contribute to new knowledge in the field of investigation. The student must pass both an oral qualifying examination in the early stages of dissertation research and a final oral defense once the dissertation research has been completed.

Admission Requirements
Please follow the instructions at http://gradschool.uky.edu/welcome-university-kentucky.
The Ph.D. program in Epidemiology and Biostatistics has its own earlier deadline of 01 February

preceding the fall semester in which the applicant hopes to begin graduate work. This Ph.D. program does not admit students for the spring or summer semesters. See the handbook (p.6) at http://www.uky.edu/publichealth/sites/www.uky.edu.publichealth/files/Academics/PhD_epi-bio/2017-2018%20PhD%20in%20Epidemiology%20%26%20Biostatistics%20Handbook.pdf for additional application requirements, including the submission of some material through SOPHAS.

Financial aid may be available to qualified applicants. For further information about financial aid, academic policies, courses, and other program requirements, please refer to the handbook.

Graduate Courses

BST 675	Biometrics I	(4)
BST 676	Biometrics II	(4)
BST 701	Bayesian Modeling In Biostatistics	(3)
BST 713	Clinical Trials (Same As STA 653)	(3)
BST 740	Spatial Statistics	(3)
BST 760	Advanced Regression	(3)
BST 761	Time To Event Analysis	(3)
BST 762	Longitudinal Data Analysis (Same As STA 632)	(3)
BST 763	Analysis Of Categorical Data (Same As STA 665)	(3)
BST 764	Applied Statistical Modeling In Medicine And Public Health	(3)
BST 765	Missing Data Methodology In Public Health	(3)
BST 766	Analysis Of Temporal Data In Public Health	(3)
CPH 610	Injury Epidemiology	(3)
CPH 616	Cardiovascular Epidemiology	(3)
CPH 617	Environmental And Occupational Epidemiology	(3)
CPH 631	Design And Analysis Of Health Surveys	(3)
CPH 636	Data Mining In Public Health	(3)
CPH 662	Public Health Response To Terrorism And Disasters	(3)
CPH 701	Current Issues In Public Health	(1)
CPH 711	Chronic Disease Epidemiology	(3)
CPH 712	Advanced Epidemiology	(3)
CPH 718	Special Topics In Epidemiology	(3)
CPH 767	Dissertation Residency Credit	(2)
CPH 786	Doctoral Seminar	(1)
EPI 714	Epidemiologic Study Design	(3)
EPI 715	Research Methods In Epidemiology And Biostatistics	(3)
EPI 716	Infectious Disease Epidemiology	(3)

Family Sciences

College of Agriculture, Food & Environment

The Department of Family Sciences offers M.S. and Ph.D. programs in Family Sciences. For more details and to apply for one of our graduate programs, see www.fam.uky.edu/grad.

Master of Science in Family Sciences

Areas of emphasis within the master's program are: (a) adolescent development, (b) aging, (c) couples and family therapy, (d) family finance and economics, and (e) family processes. The curriculum for each emphasis area except couples and family therapy requires a minimum of 30 credit hours, comprised of 15 credit hours of core courses (FAM 601, FAM 652, FAM 654, FAM 668, and FAM 690), 5 hours of electives, 3 hours of a data analysis or program evaluation course, 1 hour of a professional development seminar, and 6 credit hours for the thesis (Plan A) or scholarly project (Plan B).

The couple and family therapy emphasis area is accredited by the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE) and requires a prescribed curriculum totaling 53 credit hours (2 years, including one summer), comprised of 15 credit hours of core family sciences courses, 18 hours of core couples and family therapy courses, 10 hours of supervised practicum, 3 hours of a data analysis or program evaluation course, 1 hour of a professional development seminar, and 6 credit hours for the thesis (Plan A) or scholarly project (Plan B).

Admission Requirements

Students must have a bachelor's degree prior to admission into the master's program. Admissions are conducted one time each year; the application deadline is January 15 for admission Fall Semester of the same calendar year. Applicants must submit a statement of their academic goals for the M.S. degree and three letters of recommendation. See www.fam.uky.edu/apply/ for details.

Doctor of Philosophy

Areas of emphasis within the doctoral program are: (a) adolescent development, (b) aging, (c) family finance and economics, and (d) family processes. The doctoral program is a research-based curriculum designed particularly for those desiring a research career in family science, including positions at colleges and universities, program evaluation positions in public and private settings focusing on individuals and the family, and administrative positions in public and private human services prevention and intervention settings.

The curriculum is competency based, but minimal coursework requirements prior to the qualifying examination include 2 years of residency and 36 credit hours, comprised of 20 credit hours of foundational courses (if not taken in master's program), 9 hours of research methods and theory, 9 credit hours of statistics, 7 credit hours of professional development, and 15 credit hours in a specialization area.

Admission Requirements

Master's level practitioners, educators, and researchers in the social sciences are best suited for the doctoral program. Previous research experience is desirable, but not required. Although students generally must have a master's degree prior to admission into the doctoral program, particularly outstanding applicants who have earned a bachelor's degree but not a master's degree may be considered for admission into the doctoral program.

Admissions are conducted one time each year; the application deadline is January 15 for admission Fall Semester of the same calendar year. Applicants must submit a statement of clearly developed academic and research goals for the Ph.D. degree and three letters of recommendation. See www.fam.uky.edu/apply/ for details.

For additional information, see fam.uky.edu/grad or contact the Director of Graduate Studies, Department of Family Sciences, 315 Funkhouser, University of Kentucky, Lexington, KY 40506-0054 or 859.257.7750.

Graduate Courses

FAM 502	Families And Children Under Stress	(3)
FAM 553	Parent-Child Relationships Across The Lifecycle	(3)
FAM 554	Working With Parents	(3)
FAM 563	Families, Legislation And Public Policy	(3)
FAM 585	Aging And Environment (Same As GEO 585/GRN 585)	(3)
FAM 601	Family Processes	(3)
FAM 624	Perspectives On Human Sexuality (Same As SW 624)	(3)
FAM 640	Using The Dsm In Mft Assessment	(3)
FAM 652	Readings In Family Theory And Research	(3)
FAM 654	The Lifecourse Perspective On Families	(3)
FAM 658	Adolescent Development	(3)
FAM 660	Aging Issues And Family Relations (Same As GRN 660)	(3)
FAM 661	Health And Financial Issues Of Aging Families	(3)
FAM 668	Allocation Of Family Resources	(3)
FAM 673	Family Life Education	(3)
FAM 685	Professional Issues In Marriage And Family Intervention	(3)
FAM 686	Theory And Methods In Marriage And Family Therapy	(3)
FAM 687	Treatment Modalities In Marriage And Family Therapy	(3)
FAM 690	Research Methods In Family Sciences	(3)
FAM 699	Field Experiences In Family Sciences	(1-3)
FAM 740	Couple And Sex Therapy	(3)
FAM 748	Master's Thesis Research	(0)
FAM 749	Dissertation Research	(0)
FAM 755	Advanced Theory And Dynamics Of Human Development Across The Life Course	(3)
FAM 759	Special Advanced Topics In Family Sciences	(1-3)
FAM 767	Dissertation Residency Credit	(2)
FAM 768	Residence Credit For The Master's Degree	(1-6)
FAM 769	Residence Credit For The Doctor's Degree	(0-12)
FAM 775	Professional Development Seminar	(1-3)
FAM 776	Proseminar In Marriage And Family Therapy (Subtitle Required)	(1-3)
FAM 777	Applied Statistics In Family Science	(3)
FAM 784	Research Practicum In Family Sciences	(3)
FAM 785	Advanced Problems In Family Sciences	(1-3)
FAM 786	Teaching Practicum In Family Sciences	(3)
FAM 787	Supervised Experience In The Practice Of Marriage And Family Therapy	(1-6)
FAM 790	Advanced Research Methods In Family Sciences	(3)

Finance

Gatton College of Business and Economics

The Master of Science in Finance (MSF) degree at the University of Kentucky offers students a program of advanced study in finance. The program supports the goal of preparing students for leading roles in an innovation-driven economy and global society by providing them with the specialized training needed in the finance industry, which is an information- and innovation-intensive industry of global scope. The program also supports the goal of increasing the intellectual, social, and economic capital of Kentucky and the world beyond its borders by growing the financial expertise available in the state. Such expertise is increasingly important at the local, state, national, and international levels as these economies become increasingly integrated. The MSF courses also prepare students to take CFA exams if students choose to do so. Specifically, the program's objectives are to:

- Help students develop communication and technology skills expected in the finance profession;
- Enhance the finance knowledge of students entering the finance profession;
- Enable students to develop both leadership skills and teamwork in researching finance issues;
- Enhance students' creative problem-solving skills and ability to think logically and analytically.

Master of Science

Admission Requirements

The MSF program only has fall admission at the moment. Applicants to the program must have an undergraduate degree from an accredited college or university and complete the Graduate Management Admission Test (GMAT). Applicants will be evaluated for admission based on their undergraduate grade point averages (GPA), their GMAT score, and TOEFL score, if applicable. There are no required course prerequisites.

Minimum admission requirements are as follows:

- Minimum overall GPA of 2.75.
- Minimum GMAT score of 550.
- International students must have a minimum TOEFL IBT score of 79 or IELTS score of 6.5.

Degree Requirements

Students must complete at least thirty semester hours in courses carrying graduate credit. The MSF degree requirements are:

1. The required courses include: FIN 600, FIN 650, ECO 491G, ACC 621, FIN 691-1, FIN 623, FIN 630, FIN 645, FIN 691-2, and FIN 691-3.
2. A minimum average GPA of 3.0 in all courses attempted for graduate credit after being admitted to The Graduate School.

You can learn more about the MSF program here.

Graduate Courses

FIN 600	Corporate Financial Policy	(3)
FIN 650	Investments	(3)
ECO 491G	Applied Econometrics	(3)
ACC 621	Understanding Financial Statements	(3)
FIN 691-1	Investments Practicum I	(3)

FIN 623	International Financial Management	(3)
FIN 630	Financial Modeling and Analysis	(3)
FIN 645	Corporate Investment and Financial Policy	(3)
FIN 691-2	Investments Practicum II	(3)
FIN 691-3	Current Issues in Finance	(3)

Forest & Natural Resource Sciences

College of Agriculture, Food & Environment

Students may elect to pursue the Master of Science in Forest and Natural Resource Sciences degree under Plan A, which requires a minimum of 24 semester hours of graduate course work plus an acceptable thesis, or under a non-thesis option (Plan B), which requires a minimum of 30 semester hours of graduate course work that includes an area of specialization. All Forest and Natural Resource Sciences graduate students take:

- FOR 601 (Research Methods in Forestry, taught every fall semester)
- FOR 602 (Renewable Natural Resources in a Global Perspective, taught in the fall semesters of odd-numbered calendar years)
- FOR 770 three times (Forestry Seminar, at least one section of which is taught each fall and spring semester).

A goal of the Forest and Natural Resource Sciences Graduate Program is to contribute to improved forest health and management through enhanced understanding of relevant ecological and social benefits and constraints. Consequently, a student's degree program may be directed toward any of the disciplinary or interdisciplinary fields in Forest and Natural Resource Sciences, which range from molecular to landscape and societal levels. The Program's current research has particular strengths in southern Appalachian hardwood forest ecology and management, forest hydrology and watershed management, reforestation and mine reclamation, invasive species and forest health, animal ecology and management, and human dimensions including forest policy and economics.

In addition to mentoring Master's students in the Forest and Natural Resource Sciences Graduate Program, faculty members of the Department of Forestry serve as major professors for M.S. and Ph.D. students in other academic programs. Examples of other graduate programs in which Department of Forestry students have enrolled include agricultural economics, animal science, biology, crop science, geography, earth & environmental sciences, plant physiology, and plant & soil science. Details about Ph.D. opportunities available in the Department of Forestry are available by contacting individual faculty members directly (http://forestry.ca.uky.edu/faculty).

Admission Requirements

Applicants for admission to the Master of Science in Forest and Natural Resource Sciences degree program must hold (by the time of enrollment in the program) an awarded four-year baccalaureate degree from an accredited institution of higher learning. Although it is not required that an applicant's undergraduate degree be in forestry or another natural resource field, a student admitted to the program who lacks essential undergraduate courses may be required by an advisory committee to take them. Applicants are expected to have an overall undergraduate grade point average of 3.00 and a minimum combined verbal and quantitative score on the Graduate Record Examination (GRE) of 1000 (if the GRE is taken prior to 1 August 2011). If the revised GRE is taken on or after 1 August 2011, the minimum expected combined score is 297. Applications are submitted online (http://www.gradschool.uky.edu/ProspectiveStudents/Admission.html). Each applicant must identify (in the personal statement) a graduate faculty member who agrees to serve as his/her major advisor and whether or not the applicant wishes to be considered for an assistantship. Applications for fall admission that are complete by February 1 are eligible to be considered for departmentally-funded research and teaching assistantships that normally begin on July 1 of the same calendar year. Research assistantships are sometimes funded by the grants and contracts of individual faculty members; applications for such assistantships may be subject to different deadlines that are established by those faculty members.

More detailed information concerning the Forest and Natural Resource Sciences Graduate Program's admission procedures, assistantships, and degree requirements may be obtained:

- at http://forestry.ca.uky.edu/forestry-graduate-program
- for your specific area(s) of interest from our individual faculty members (http://forestry.ca.uky.edu/faculty)
- by contacting the Director of Graduate Studies at (859) 257-3773

Graduate Courses

FOR 460	Forest Watershed Management	(3)
FOR 510	Herpetology	(4)
FOR 520	Mammals Of The Eastern United States	(4)
FOR 530	Freshwater Ecology	(3)
FOR 540	Urban Ecology	(3)
FOR 550	U.S. Biodiversity Hotspots	(3)
FOR 564	Forest Soils (Same As PLS 564)	(3)
FOR 570	Landscape Ecology For Natural Resources (Same As GEO 570)	(3)
FOR 599	Independent Work In Forestry	(1-3)
FOR 601	Research Methods In Forestry	(3)
FOR 602	Renewable Natural Resources In A Global Perspective	(3)
FOR 606	Conceptual Methods In Ecology And Evolution (Same As ENT/BIO 606)	(3)
FOR 607	Advanced Evolution (Same As ENT/BIO 607)	(2)
FOR 608	Behavioral Ecology And Life Histories (Same As ENT/BIO 608)	(2)
FOR 609	Population And Community Ecology (Same As BIO/ENT 609)	(2)
FOR 612	Forest Ecosystem Dynamics	(3)
FOR 620	Special Topics In Forestry (Subtitle Required)	(1-3)
FOR 622	Physiology Of Plants I (Same As PLS/BIO 622)	(3)
FOR 623	Physiology Of Plants II (Same As PLS/BIO 623)	(3)
FOR 662	Quantitative Methods In Renewable Resource Management (Same As AEC 662)	(3)
FOR 695	Field Research In Forestry	(3)
FOR 748	Master's Thesis Research	(0)
FOR 768	Residence Credit For Master's Degree	(1-6)
FOR 770	Forestry Seminar (Subtitle Required)	(1)
FOR 781	Special Problems In Forestry	(1-3)
FOR 791	Research In Forestry	(1-3)

French and Francophone Studies

College of Arts & Sciences

The Department of Modern and Classical Languages, Literatures and Cultures offers a graduate program leading to the M.A. degree in French according to Plan B (non-thesis) only.

Admission Requirements
Applicants for admission must first be approved by the Graduate School. They are then reviewed by the Director of Graduate Studies in the Department of Modern and Classical Languages, Literatures and Cultures, who consults with the French graduate faculty before returning recommendations to the Graduate School.

An applicant may be provisionally admitted without meeting all of the minimum standards if other factors, including letters of recommendation, the writing sample, and the digital-format recording indicate an ability to perform satisfactorily in graduate-level work. Presentation of a minimum Graduate Record Examination score (GRE) or a minimum Grade Point Average (GPA) does not, however, automatically guarantee admission to the program, as the final decision depends on an evaluation of all materials submitted and the faculty's assessment of the applicant's potential for successful graduate study.

In addition to ensuring that the applicant has met the admission requirements of the Graduate School, the Department carefully evaluates the following materials:

1. Evidence of completion of the equivalent of the University of Kentucky's undergraduate major in French. Applicants who fail to meet this standard may be admitted provisionally to the Master's program, but may be required to take additional undergraduate work in French. Graduate credit will not be awarded for undergraduate courses, but graduate courses taken simultaneously count in the degree program.
2. A minimum 3.25 undergraduate GPA in French on a four-point scale.
3. A statement of purpose in seeking the M.A. in French.
4. A combined score of 1700-1800 or better on the three sections of the GRE. In special cases, a student without the GRE may be accepted provisionally for the first semester, during which the examination must be taken.
5. Three letters of recommendation addressing the applicant's qualifications for graduate work in French.
6. A writing sample in French by the applicant (analytical prose, typically a graded term paper; not a creative work).
7. Non-native speakers of French must submit a digital-format recording (3-4 minutes) of themselves reading a contemporary prose passage in French (a newspaper or magazine article, not a literary work).
8. Non-native speakers of English must submit a digital-format recording of themselves reading a similar passage in English. In addition, they must fulfill the Graduate School's Test of English as a Foreign Language (TOEFL) requirement.
9. Students in post-baccalaureate programs in French or other areas at the University of Kentucky who wish to transfer to the French Master's program will be evaluated also on their post-baccalaureate course work and on recommendations from their instructors, even though admission may be delayed until the end of the semester in which they are enrolled. A maximum of six hours in post- baccalaureate course work may be transferred to the Master's program.

All application materials should be uploaded directly to the UK Graduate School's Apply Yourself program

on the application website (https://app.applyyourself.com/AYApplicantLogin/fl_ApplicantConnectLogin.asp?id=ukgrad).

For admission in the fall semester with a Teaching Assistantship award, all materials should be received by the Department no later than February 1.

Degree Requirements
Students select a program from a variety of courses listed below in French literature, language, culture, and literature and the arts. Students need to take a total of ten 3-credit hour classes to complete the course requirements for the MA degree.The master's examination for each candidate is prepared and evaluated by a committee of three members of the French graduate faculty which will consider the candidate's course program in preparing the examination.

Candidates must also demonstrate a reading knowledge of another foreign language. The M.A. examination is administered in November and April. Applications for the examination should be made to the Director of Graduate Studies no later than four months prior to the date of examination. For further information concerning the M.A. program in French, consult the Director of Graduate Studies.
All courses listed below are offered on a rotating basis and not less frequently than every eighth semester

Graduate Courses

FR 504	Topics In French Literature And Culture (Subtitle Required)	(3)
FR 507	Interpretation And Style	(3)
FR 510	Linguistic Structure Of Modern French	(3)
FR 550	France Today	(3)
FR 553	Teaching Of French	(3)
FR 570	Seminar In French Language Pedagogy	(1)
FR 601	Poetic Vision (Subtitle Required)	(3)
FR 604	The Tragic Mode (Subtitle Required)	(3)
FR 605	Comic Fiction (Subtitle Required)	(3)
FR 606	Literature Of The Middle Ages (Subtitle Required)	(3)
FR 607	Studies In Renaissance Literature (Subtitle Required)	(3)
FR 609	Seventeenth-Century Studies (Subtitle Required)	(3)
FR 612	Structure And Stylistics Of French	(3)
FR 617	Eighteenth-Century Studies (Subtitle Required)	(3)
FR 619	Nineteenth-Century Studies (Subtitle Required)	(3)
FR 621	Twentieth-Century Studies (Subtitle Required)	(3)
FR 630	French Language, Literature And Culture Outside France (Subtitle Required)	(3)
FR 780	Special Studies In French	(3)

Gender & Women's Studies

College of Arts & Sciences

The Department of Gender and Women's Studies offers Ph.D., M.A. and Graduate Certificate degree programs. Students are accepted only into the Ph.D. and Graduate Certificate programs. All degree programs share a core curriculum of courses. Information about the specific requirements for each degree is available on the Department of Gender and Women's Studies website http://gws.as.uky.edu/.

Applicants for the Ph.D. degree program may be accepted from any undergraduate degree field. Applicants will be accepted into the program with or without an M.A. or equivalent advanced degree. For students without an M.A., the degree will be earned as part of their Ph.D. program.

The Ph.D. program includes required coursework and specialized coursework. The purposes of the required coursework are (1) to familiarize students with fundamental concepts, theories and frameworks for scholarly feminist inquiry, and (2) to familiarize students with different approaches to inquiry and research in gender and women's studies.

The Ph.D. program allows students to establish mentoring relationships with the faculty and their advisory committee members. The advisory committee will assist students in designing a specific program of study to prepare the student for their qualifying exams and to write their dissertation within an area of study.

The Graduate Certificate program is a 12 hour curriculum that students take as a complement to a graduate disciplinary degree program or as a stand-alone curriculum. The aim of the Graduate Certificate curriculum is to provide a coherent, graduate-level interdisciplinary grounding in Gender and Women's Studies scholarship and to create an intellectual community among faculty and graduate students who share a scholarly interest in Gender and Women's Studies.

The M.A. program is connected to the Ph.D. program and does not admit students for M.A. study only.

Graduate Courses

GWS 595	Issues In Gender And Women's Studies	(3-12)
GWS 600	Topics In Gender And Women's Studies	(3-12)
GWS 610	Women And Madness	(3)
GWS 630	Research Methods In Gender And Women's Studies	(3)
GWSs 640	Feminist Thought And Action	(3)
GWS 650	Feminist Theory And History	(3)
GWS 690	Graduate Research In Gender And Women's Studies	(3-12)
GWS 700	Topical Seminar In Gender And Women's Studies	(3-12)
GWS 710 L	Latin American And U.S. Latina Women's Lives	(3)

Geography

College of Arts & Sciences

The Department of Geography offers both M.A. and Ph.D. programs. Emphasis is placed on theoretical and conceptual training in the student's chosen field of interest. A variety of philosophical and methodological approaches are encouraged. The primary objective of the graduate program is to prepare students for research-oriented careers in universities, government, and industry. Emphasis in graduate seminars is on developing the background and skills necessary for original contributions to geographic knowledge. The Department is known for high quality research and graduate education in human and physical geography. In accordance with our strategic plan, and funded in part through our RCTF designation, we have also recently focused, on building a research cluster in Earth Surface Systems as well as a program in critical cartography/GIS., Program strengths include close faculty/student interaction, flexibility in designing an appropriate plan of study, and research training in seminar environments. Emphasis at both the M.A. and Ph.D. levels is placed on theoretical and methodological training and is closely integrated with both breadth and depth in substantive literatures. Student research also is empirically rich, with data regularly acquired through off-campus fieldwork. Members of the faculty are committed to assisting students in disseminating their research through publications in professional journals and presentations at conferences, and in obtaining external funding. Graduate students also gain valuable experience as instructors in undergraduate courses. Rounding out graduate students' experiences is their active participation in departmental governance and service on departmental committees.

Faculty and student research in the Department focuses on interrelated thematic clusters. Research seminars are organized around topics relevant to these clusters. The thematic content of seminars varies in accordance with the current interests of graduate students and faculty. The research clusters we presently feature are:

- Cultural and Social Geographies: Interpretation and analysis of cultural landscapes and the built environment; space and representation; the political economy of landscape production; racialized landscapes; historical geographies of settlement; questions of space and power relating to race, class, gender and their intersection; historic preservation; US roadscapes; regional imagery; popular culture; community, identity and belonging; diasporic identities; Islamic/Muslim cultural practices in the Middle East, Europe, and the United States; health care, disease, and society; the geography of aging and the life course; poverty and social policy; human behavior in space and time; spatial structure of social networks.
- Critical Mapping and GIS: Social implications of geospatial technologies; critical GIS/cartography; histories of cartography and GIS; public participation GIS, and community-based GIS; volunteered geographic information and neogeographies; mapping 2.0 and the geoweb; spatialities of user-generated content; geographies of the Internet; digital/spatial humanities. Much research in this area is organized through the New Mappings Collaboratory.
- Development Studies: Policies and practices of development; political economy perspectives on development; anti-development and postcolonial theory; household survival strategies; environmental management and sustainable development.
- Economic Geography: The political economy of urban and regional economic change; globalization, and in particular global finance: information and telecommunications, especially the economic geography of the internet; resource extractive industries; uneven development and spatial inequalities; multinational corporations, foreign direct investment, global production and commodity chains; economic clusters; alternative economies (including Islamic banking); the geography of labor

and employment; labor migration and migrant labor; theorizing the social character of economic phenomena.

- Political Ecology: On the human geography side: critical theories of nature, complexity and resilience; sustainability, the politics of environmental management and conservation policy; mega-engineering projects; environment and resource extraction; human-nonhuman relations; trade, markets, and environment; fair trade networks. Physical geographic approaches address issues related to: human influences on fluvial and soil geomorphic processes, weathering, and biogeographic patterns; bioclimatology and human climate change; urban weather modification; hydrology; earth surface systems modeling; remote sensing and geospatial applications.
- Geomorphology: Fluvial geomorphology, surface hydrology, and river science; soil geomorphology and pedology; rock weathering; cultural geomorphology; fluvial-karst interactions; applied geomorphology; stone conservation and preservation; complexity and nonlinearity in geosciences; coastal geomorphology and ecology (particularly in dunes and salt marshes); spatial variability of soils and landforms; landscape evolution.
- Biogeomorphology: Reciprocal interactions between geomorphological and biological processes; coevolution of ecosystems, soils, and landforms; soils and landforms as extended composite phenotypes and products of ecological engineering; biological weathering; bioturbation; vegetation-landform interactions in salt marshes and coastal dunes; fluvial biogeomorphology; forest biogeomorphology.
- Biogeography and Landscape Ecology: Bioclimatology; ecosystem responses to climate and environmental change; evolutionary theory; landscape phenology; species distribution modeling; ecological engineering and niche construction; quantitative landscape ecology; biophysical remote sensing; disturbance; coastal and forest ecosystems; scale and scaling theory.
- Political Geography: Questions of states, territory, and law; citizenship, faith and belonging; migration and immigration; transnationalism; post-colonial and imperial geographies; Islamist politics; feminist geopolitics; political economy of environmental movements; political economy of globalization discourses and practices; the surveillant state; geographical intelligence; urban governance; the politics of urban and regional development.
- Social Theory: Theories of human spatiality; marxist, neo-marxist, and post-marxist theory; postmodernism and poststructuralism; social ontology; practice theory; continental philosophy, feminist theory; queer theory; identity theory; race theory; geographic thought and society; geography and psychoanalysis; science and technology studies; topology; posthumanism.
- Urban Geography: The local politics of urban development; urban social fragmentation; the politics of sprawl and urban planning; urban property markets; citizenship and public space; urban space and identities relating to 'race', gender, class, and migrants and immigrants; urban historical geography; urban landscapes; racialized landscapes; historical preservation labor migration; informal employment; urban economic development.

Faculty members have regional expertise in South and Southeast Asia, Japan, the Himalayas, Mexico, the Caribbean, Central and Eastern Europe, the Middle East (particularly Turkey), the Central Asian republics, Western Europe, Canada. East Africa (Tanzania), and the U.S. (particularly the Southeast).

In addition, students have access to faculty with expertise in a variety of methodological areas including field methods; qualitative research methodologies (such as interviews; focus groups; critical ethnography; experiential methods; textual and visual methods and deconstruction) quantitative methods (especially multivariate statistics, spatial statistics, and simulation modelling; as well as GIS and remote sensing methods (such as LIDAR, participatory GIS; digital image processing; and crowd-sourced data collection).

Admission Requirements

In addition to the basic graduate school requirements (see the Graduate School for application procedures), the following materials should be sent by e-mail to the Department of Geography (details of

the application procedure can be found on our Departmental website):

- Three letters of reference from persons who can evaluate your potential for success in our graduate program
- Statement of your goals and objectives in which you discuss your areas of scholarly interest, any research directions you may wish to pursue, and how your interests and goals fit with the University of Kentucky's graduate program in Geography (about two pages, double-spaced)
- A curriculum vitae (if available)
- 1 official or unofficial copy of all transcripts from prior universities or other institutions

Once all these materials have arrived in the Department of Geography, the application is reviewed by the faculty members on the Department's Graduate Committee. The committee's evaluation does not place emphasis on any one element of the application rather the combination of elements must convince the Graduate Committee members that the applicant has great potential for success in our program.

The Department welcomes students with undergraduate concentrations in related fields. In some cases students without an academic background in Geography may be required to complete additional course work so as to gain appropriate foundational knowledge.

There is no official deadline for applications. However, applicants are encouraged to submit all application material before January 15th to ensure consideration for admission for the following fall semester. Admission decisions are made on a rolling basis, but decisions about financial aid usually take place in March and April.

Degree Requirements

Applicants for the Ph.D. in geography must conform to the general requirements of the Graduate School as set forth in the first part of this Bulletin. Requirements in the Ph.D. program consist of 1) core courses (GEO 600, 705 or other advanced methods course, 702) in the theory and methodology of geography; 2) seminars, independent study and directed research in one of the research foci noted above or in cognate disciplines; 4) a written and oral qualifying examination in theory, methodology, and the student's selected topical focus; and 5) a dissertation based on original research. A program designed to meet the professional academic goals of each doctoral candidate is outlined in consultation with the Director of Graduate Studies and the candidate's Advisory Committee.

Applicants for the M.A. degree in geography follow a broadly based program which consists of: 1) required courses (GEO 600 and 702); 2) elective courses in geography and cognate disciplines according to the student's academic goals and career objectives; and 3) the completion of a master's thesis (Plan A). The non-thesis Ph.D.-preparatory program (Plan B) consists of: 1) required courses (GEO 600, 700 or other advanced methods course, 702); 2) elective courses in geography and cognate disciplines according to the student's academic goals and career objectives; 3) a written examination; 4) a publication-quality research paper; and 5) an oral examination. The Plan A option requires 24 credit hours, the Plan B, 30 credit hours.

Graduate Courses

GEO 405G	Cartographic Production And Design	(3)
GEO 406G	Field Studies	(1-9)
GEO 409G	Geographic Information Systems And Science: Fundamentals	(3)
GEO 430G	Physical Geography For Teachers	(3)
GEO 442G	Political Geography	(3)
GEO 451G	Fluvial Forms And Processes	(3)
GEO 452G	World Geography For Teachers	(3)
GEO 470G	America's Cultural Geographies	(3)
GEO 475G	Medical Geography	(3)

GEO 485G	Urban Planning And Sustainability	(3)
GEO 490G	American Landscapes	(3)
GEO 491g	Japanese Landscapes	(3)
GEO 505	Practicum In Cartography	(3)
GEO 506	Introduction To Computer Cartography	(3)
GEO 509	Workshop In Geospatial Technologies	(3)
GEO 530	Biogeography And Conservation (Same As Bio 530)	(3)
GEO 542	Political Geography	(3)
GEO 544	Human Population Dynamics	(3)
GEO 545	Transportation Geography	(3)
GEO 546	Tourism And Recreation Geography	(3)
GEO 547	Geography Of Information And Communications	(3)
GEO 551	Japanese Multinational Corporations (Same As Jpn 551)	(3)
GEO 560	Independent Work In Geography	(3)
GEO 565	Topics In Geography	(3)
GEO 570	Landscape Ecology And Natural Resources	(3)
GEO 585	Aging And Environment (Same As Fam 585/Grn 585)	(3)
GEO 600	Introduction To Methods In Geography	(3)
GEO 609	Giscience Fundamentals	(3)
GEO 610	Analytical Methods In Geography	(3)
GEO 619	Remote Senseing Fundamentals	(3)
GEO 655	Special Study Of Systematic Geography	(3)
GEO 700	Advanced Analytical Methods In Geography	(3)
GEO 702	Concepts In Geography	(3)
GEO 705	Advanced Geographic Methods	(3)
GEO 706	Advanced Field Studies	(1-9)
GEO 707	Development Of Geographic Thought	(3)
GEO 708	Geographic Information Systems Research Methodologies	(3)
GEO 711	Cultural Studies And Geography	(3)
GEO 712	Development Studies And Geography	(3)
GEO 713	Economic Geography	(3)
GEO 714	Political Geography	(3)
GEO 715	Geography And Social Theory	(3)
GEO 717	Urban Geography	(3)
GEO 720	Regional Studies	(3)
GEO 721	Topical Seminar In Physical Geography	(3)
GEO 722	Social Geography	(3)
GEO 731	Earth Surface Systems	(3)
GEO 740	Research Internship	(1-6)
GEO 741	Teaching Practicum	(1)
GEO 742	Future Faculty In Geography	(1)
GEO 743	Research Proposals And Grant Writing	(1)
GEO 748	Master's Thesis Research	(0)
GEO 749	Dissertation Research	(0)
GEO 767	Dissertation Residency Credit	(2)
GEO 768	Residence Credit For The Master's Degree	(1-6)
GEO 769	Residence Credit For The Doctor's Degree	(0-12)
GEO 772	Special Research Problems In Geography	(1-6)

Geological Sciences

College of Arts & Sciences

The Department of Earth and Environmental Sciences offers graduate studies leading to the M.S. and Ph.D. degrees in Geology. Students with degrees in geology, any other natural science, or engineering are invited to apply.

Admission to pursue an M.S. or Ph.D. degree requires a bachelor's degree, a minimum grade point average of 2.75, three letters of reference and results from the verbal, quantitative, and analytical Graduate Record Examination (GRE). TOEFL scores are required for international applicants. For more details, please consult Admissions Information and Assistantships and Fellowships.
Research within the Department of Earth and Environmental Sciences is funded by grants and contracts from NSF, DOE, PRF, and other federal, state, and industrial sources. Areas of graduate research are in fields covered by regular and adjunct faculty, including coal geology, hydrogeology, stratigraphy, petrology, geophysics, and tectonics.

Admission Requirements
Admission criteria include GPA, GRE scores, prior course work, letters of reference, previous experience, and match with faculty research interests. This program requires an undergraduate GPA of at least 3.0 on all undergraduate and graduate work. For international applicants, we require that applicants rank in the top 25% of their graduating classes.

GRE must be taken, but there is no minimum score. Applicants who score at least 75th percentile on one category of the GRE and who have (a) an overall undergraduate GPA of 3.30, (b) a GPA of 3.60 for the last 60 credit hours of undergraduate work, or (c) a GPA of 3.80 for a completed master's degree (in each case from a US institution) are eligible for a Pirtle Fellowship, which provides $3,000 in summer salary.
Most applicants have a "standard" geology background, but strong students with backgrounds in the sciences and engineering are also admitted. Spoken English proficiency is important because many of our graduate students are employed as teaching assistants (in particular, as laboratory instructors). For international applicants, the Graduate School requires a minimum score of 550 on the TOEFL (213 on the computerized version; 79 on the internet-based version) or 6.5 on the IELTS. We typically only consider admission to the PhD program after completion of a master's degree either here at UK or at another US or European institution. Students who are deficient in one or more respects may be admitted provi¬sionally or as non-degree students by action of the Graduate Committee. Your chances of admission are better if you've identified faculty members with whom you might work. We recommend you consult our faculty research specialties at https://ees.as.uky.edu/faculty and directly contact faculty in your areas of interest. All application materials should be uploaded directly to the UK Graduate School's Apply Yourself program on the application website (https://app.applyyourself.com/AYApplicantLogin/fl_ApplicantConnectLogin.asp?id=ukgrad).

Degree Requirements
The Doctor of Philosophy in Geological Sciences requires candidates complete at least 42 hours of graduate course work, including that taken for a master's degree (which counts for 18hours). Ph.D. students must take 3 credits of EES 695-001 (Scientific Communication), unless they have already completed these requirements as a student in the M.S. program. The normal full-time load is 3 courses (usually 9-10 credits) each semester, and no more than 12 credits per semester should be taken. Individual Work in Geology (EES782) and Research in Geological Sciences (EES790) will include data collection (field, laboratory, and/

or library) and must not duplicate dissertation research. A research plan must be approved by a faculty member, who will direct the research, as well as the DGS. The faculty member who directed the research will provide a final evaluation of the project. The evaluation will be conveyed to the DGS.

The Master of Science in Geological Sciences (Plan A) requires the completion of graduate course work and a thesis. The student must complete at least 24 credit hours of graduate course work. The normal graduate load is 9-10 credits during each of the first two semesters, and no more than 12 credits is advised. Graduate courses are those in the 500, 600, or 700 series, or in the 400G series if outside the Department of Earth and Environmental Sciences. At least 16 credits must be in EES course work, including 3 credits of Scientific Communication (EES 695-001). At least 12 credits must be in the 600 or 700 series, and at least 9 of the 600- or 700-level credits must be in EES courses. At least 16 hours must be regular (non-research) courses. Full-time students who are enrolled in at least 3 hours but less than 9 hours of coursework, which is typical in the third semester of the M.S. program, should register for EES768 (Residence Credit for the Master's Degree) to reach 9 hours total.

Graduate Courses

EES 530	Low Temperature Geochem
EES 645	Tops In Petrology and Geochemistry
EES 741	Environmental Clay Mineralogy
EES 550	Fundamental Geophysics
EES 560	Geophysical Field Methods
EES 625	Topics in Geophysics
EES 626	Gravity and Magnetic Methods
EES 670	Exploration Seismology
EES 675	Earthquake Seismology
EES 676	Paleoseismology
EES 585	Hydrogeology
EES 610	Topics in Hydrogeology/Surficial Processes
EES 685	Groundwater Modeling
EES 490	Earth Dynamics
EES 620	Tectonics
EES 624	Advanced Structural Geology
EES 652	Tectonics and Stratigraphy
EES 735	Special Topics in Structure and Tectonics
EES 511	Petroleum Geology
EES 555	Stratigraphy
EES 570	Sem In Geological Sci
EES 695	Scientific Communication
EES 748	Master's Thesis Research
EES 749	Dissertation Research
EES 767	Dissertation Residency Credit
EES 768	Res Cr Masters Degree
EES 769	Res Cr For Doctors Deg
EES 782	Individ Work In Geology
EES 790	Research In Geological Science

German

College of Arts & Sciences

The general goal of graduate work in German is to provide students with a critical understanding of German culture, its language and literature and its relationship to western civilization as a whole. Specific courses are designed to acquaint students with the aims and methods of research in the fields of language pedagogy, literary and cultural history, literary theory, and historical linguistics. Students working as teaching assistants under faculty supervision have ample opportunity to develop effective teaching skills in a controlled setting.

The Department of Modern and Classical Languages, Literatures and Cultures offers a graduate program leading to the M.A. (Plan A or B) degree in German. Competence in another foreign language, normally French, in addition to German is required for graduate degrees.

Admission Requirements
Admission requirements include an acceptable undergraduate major in German, a satisfactory score on the Graduate Record Examination (GRE), and three letters of recommendation. Applicants lacking more comprehensive knowledge of German language and literature may be admitted with the understanding that their program must include some advanced undergraduate work in addition to those courses normally required for the M.A.

Individual programs of study are planned with consideration of the student's competencies and interests. The Department endeavors to be flexible and to accommodate career goals in teaching, government service, or research. Areas of specialization of the graduate faculty of the department afford flexible coverage in breadth and depth, with particular strength in early modern studies, the Age of Goethe, Wilhelmine and Weimar culture, contemporary literature and culture, literary theory, intellectual history, gender studies, and foreign language pedagogy. The Department serves as the editorial center for the international journal, Colloquia Germanica. The University Library has substantial holdings in all areas of German language, linguistics and literature and in supporting fields.

Graduate Courses

GER 415G	Major German Authors (Subtitle Required)	(3)
GER 416G	Genres Of German Literature	(3)
GER 420G	Special Studies In German Literary And Cultural History (Subtitle Required)	(3)
GER 507	Advanced German Composition And Conversation	(3)
GER 520	Special Topics Seminar	(3)
GER 532	History Of The German Language	(3)
GER 553	The Teaching Of German	(3)
GER 612	Studies In Literary Theory	(3)
GER 615	Studies In Major Authors	(3)
GER 616	Studies In Genre	(3)
GER 620	Studies In The Middle Ages	(3)
GER 624	Studies In The Early Modern Era	(3)
GER 625	Studies In The 18th Century	(3)
GER 629	Studies In The 19th Century	(3)
GER 630	Studies In The 20th Century	(3)
GER 650	Multidisciplinary German Studies Seminar (Subtitle Required)	(3)
GER 653	Research And Issues In Teaching German	(1)

GER 721	Special Topics In German Literary And Cultural History	(3)
GER 748	Master's Thesis Research	(0)
GER 768	Residence Credit For Master's Degree	(1-6)
GER 769	Residence Credit For Doctor's Degree	(0-12)
GER 781	Independent Studies In German	(1-3)

Gerontology

College of Public Health

The Ph.D. program in Gerontology is an interdisciplinary research-oriented degree specifically focused on developing critically holistic and integrative perspectives of aging and health. The program, based in the Graduate Center for Gerontology and the College of Public Health, is organized in a way that combines topical expertise, methodologies and facilities from more than 20 departments ranging from the biomedical sciences, through the social and behavioral sciences, to the humanities.

Admission Requirements
The Ph.D. Program in Gerontology encourages applications from individuals having expressed interests in advanced theoretical and research-based studies of aging processes or aged individuals and populations. Complete applications that will be considered for admission to the Gerontology Program must include:

- Application Form and fee payment,
- Official transcripts of all colleges and universities attended,
- Official report of the Graduate Record Examination (GRE).
- (International Students) Official TOEFL report
- At least three (3) letters of reference,
- Personal statement of interests, doctoral study plans, and career goals.

Students are encouraged to submit samples of scholarly writing, and are strongly encouraged to visit the program before admission decisions are made. All complete applications will be evaluated not only for evidence of strong academic accomplishment and high professional standards, but for evidence of a strong potential for success in advanced graduate studies and careers in gerontology-related fields.

Degree Requirements
The goal of the Ph.D. program is to provide advanced scholarly development in gerontology. Students will develop critical thinking and methodological skills through the study of topics that concern both the process of aging and the health and well-being of both individuals and populations. In addition, students will develop advanced expertise in related disciplines or areas of specialization. The course of study is flexible, stressing an integrative approach to the selection of course work and research activities. Emphasis is placed on tailoring each student's program to meet the specific needs of the individual's background and career goals. To fulfill these objectives, the program integrates formal course work in gerontology, specialized training in a related domain, opportunities for research, experiential learning modules and a problem focused research seminar. Graduates of the program will be able to conduct aging-related research, teach gerontology at the university level, direct gerontology educational programs, work in the aging services field, and consult with other professionals on various issues pertaining to aging and health.

Approximately 35 faculty from departments throughout the University are involved in the program's instruction and research activities. Departments represented include: Anatomy and Neurobiology, Anthropology, Behavioral Science, Civil Engineering, Communications, Dentistry, Epidemiology, Family Studies, Geography, Health Administration, Internal Medicine and Geriatrics, Management, Neurology, Nursing, Pharmacy, Physiology and Biophysics, Preventive Medicine, Psychology, Rehabilitation Sciences, Social Work, and Sociology. The diversity of the faculty facilitates the comprehensive study of aging and the aged. At the same time it allows for concentration in several areas of particular expertise and program specialization, including: rural aging, long-term care, cognitive and sensory change, public policy, ethical

issues, and the etiology and treatment of Alzheimer's disease, strokes, and other diseases prevalent among the elderly.

The Ph.D. program maintains close linkages with the Sanders-Brown Center on Aging, a Commonwealth Center of Excellence, which offers a broad base of programmatic support for the program as well as serving as the home of the Alzheimer's Disease Research Center and the Stroke Center. Numerous sites for clinical/experiential training are available at various clinics, agencies and organizations, including but not limited to: The Kentucky Division of Aging Services, the University of Kentucky Hospital, Christian Health Center (a University-affiliated nursing home), Best Friends Alzheimer's Day Care Program, University of Kentucky Geriatric Support Services, University of Kentucky Memory Disorders Clinic, University of Kentucky Center for Rural Health, the Center for Creative Living, Cardinal Hill Hospital, St. Claire Medical Center, Northeast Area Health Education Center and the Veterans Affairs Medical Center.
Further information may be obtained by writing to:

John Watkins, Ph.D., Director of Graduate Studies
Graduate Center for Gerontology
401 Multidisciplinary Sciences Building
University of Kentucky
Lexington, KY 40536-0082
http://www.uky.edu/publichealth/departments/gerontology

Ph.D. Requirements

Students are required to complete the core curriculum in gerontology and 12 hours in an area of specialization. Elective courses to be taken will be recommended by each student's Advisory Committee.

Core Requirements

CPH 605 Epidemiology (3 hr)
CPH 663 Issues in Public Health (3hr)
GRN 600 A Study of the Older Person (3 hrs)
GRN 612 Biology of Aging (3 hrs)
GRN 620 Human Aging and Adjustment (3 hrs)
GRN 650 Research Design in Gerontology (4 hrs)
GRN 656 Integrative Studies in Gerontology (3 hrs)

STA 570 (4) or 580 (3) Basic Statistical Analysis / Biostatistics
Elective Methods (6 hrs minimum)
Approved courses in area of specialization (minimum of 12 hrs)

Elective courses should be selected by the student with the guidance of the student's advisor and/or Advisory Committee. No more than 9 hours of independent readings or research may be used to fulfill this requirement.

It is assumed that students entering with M.S. or M.A. degrees will have taken some of the required courses or their equivalent. The student's Advisory Committee, in conjunction with the DGS, will determine the amount of prior course work to be credited toward specific requirements.

Committee Composition Requirements
Doctoral advisory committees conform to Graduate School requirements. Selection of committee members is done by the student with consultation and approval of the student's chair, co-chair (if applicable) and the DGS. Final determinations of whether membership requirements are met are made by the DGS.

Possible elective courses from within or outside the Gerontology Program that may be selected by the student or required by the student's Advisory Committee include but are not limited to those listed below:

Gerontology Electives

GRN 513	Geriatric Pharmacy	(3)
GRN 585	Aging and Environment	(3)
GRN 610	Psychology of Aging	(3)
GRN 612	Biology of Aging	(3)
GRN 615	Seminar in Teaching Medical Science (Medical Science Teaching I)	(2)
GRN 616	Teaching Seminar in Gerontology	(2)
GRN 617	Teaching Practicum in Gerontology	(3)
GRN 618	Epidemiology of Aging	(3)
GRN 643	Biomedical Aspects of Aging	(3)
GRN 644	Demography and Aging	(3)
GRN 651	Qualitative Gerontology	(3)
GRN 652	Quantitative Gerontology	(3)
GRN 653	Laboratory Research in Gerontology	(1)
GRN 660	Aging and Family Values	(3)
GRN 704	Mental Health and Aging	(3)
GRN 705	Cognitive Aging	(3)
GRN 710	Aging of the Nervous System	(3)
GRN 715	Health Policy and Aging	(3)
GRN 720	Gerontology/Geriatric Dentistry	(1)
GRN 731	Elder Mistreatment	(3)
GRN 770	Special Topics in Gerontology	(1-6)
GRN 771	Aging in Rural Environments	(3)
GRN 772	Aging and the Life Course	(3)
GRN 773	Ethics and Aging	(3)
GRN 774	Aging and Public Policy	(3)
GRN 775	Clinical Geriatrics	(3)
GRN 778	Current Topics in Brain Aging	(3)
GRN 780	Applied Gerontology Practicum	(1-3)
GRN 781	Applied Gerontology Practicum II	(1-3)
GRN 782	Women's Health and Aging	(3)
GRN 783	Public Health and Aging	(3)
GRN 785	Independent Research in Gerontology	(1-6)
GRN 786	Independent Readings in Gerontology	(1-6)
GRN 790	Professional Development in Gerontology	(1)

Health Administration

College of Public Health

The Master of Health Administration (MHA) program is offered in the College of Public Health. Its mission is to provide students with critical competencies required to succeed in leadership positions in health systems, hospitals and other complex health-related organizations, and to build a solid foundation for their future career development. The MHA program focuses on preparing students early in their careers for positions that require management and strategic abilities, and places special emphasis on needs and opportunities in healthcare organizations within Kentucky and the region. MHA courses draw on the expertise of faculty from several UK colleges, UK HealthCare, and other healthcare organizations in Kentucky and beyond.

Admission Requirements

- A 3.0 or higher undergraduate grade point average is recommended.
- Official scores on the Graduate Record Examination (GRE) or Graduate Management Admissions Test (GMAT). Verbal and quantitative scores at the 50 percentile or better are recommended.
- Three letters of recommendation (at least one from a faculty member who has taught or supervised the applicant).
- Personal statement
- Official TOEFL scores (international students only).
- Official GRE/ GMAT, TOEFL scores and copies of official transcripts must be submitted by the applicant directly to SOPHAS or HAMPCAS.
- Applicants must also submit a supplemental application to the University of Kentucky's Graduate School; http://gradschool.uky.edu/welcome-university-kentucky
- Applicants are encouraged to apply early for all scholarship/financial aid consideration.
- Application deadline for international students March 15th.
- Application deadline for all other applicants is June 30th.
- Admission is competitive and decisions are made on a rolling basis, so applicants are encouraged to apply early.
- Students are admitted only in the fall semester.

Prerequisites

Students who have not taken courses in financial accounting and microeconomics are required to take ECO 201 and ACC 201 or the equivalent before they begin the economics and accounting courses in the MHA curriculum.

Curriculum

The MHA curriculum consists of 54 semester hours, including an internship and an Integrative Final Exam. Degree requirements include the successful completion of all course work with a 3.0 or better GPA and successful completion of the Integrative Final Exam. For more information about the program, contact:
Office of Admissions and Student Affairs
College of Public Health Building, Suite 120
859.218.2096 or ukcph@uky.edu

Course Requirements

Completion of 54 credit hours of coursework is required.

MHA Curriculum

CPH 600	Health Services and Systems Organization	(3)
CPH 614	Managerial Epidemiology	(3)
CPH 652	Health Finance	(3)
CPH 655	Management Accounting for Healthcare Organizations	(3)
CPH 658	Health Economics	(3)
CPH 663	An Introduction to Public Health Practice and Administration	(3)
CPH 681	Legal Aspects of Healthcare Management	(3)
CPH 682	Quantitative Methods for Healthcare Management	(3)
CPH 683	Healthcare Operations Management	(3)
CPH 684	Human Resources Management in Healthcare	(3)
CPH 687	Organizational Theory and Behavior	(3)
CPH 688	Internship in Health Administration	(1)
CPH 780	Strategic Planning and Marketing in Healthcare	(3)
CPH 781	Healthcare Ethics and Governance	(2)
CPH 782	Information Systems in Healthcare	(3)
CPH 784	Case Studies in Health Administration	(3)
CPH 785	Health Policy	(3)
CPH 787	Independent Study in Health Administration	(1)
	Electives	(5)

MHA/JD Dual Degree

The JD/MHA Dual Degree Program encompasses the Master of Health Administration (MHA) degree from the College of Public Health and the Juris Doctor (JD) degree from the College of Law. Students who are currently enrolled in either the JD or the MHA program can be considered for admission to the JD/MHA dual degree program after the end of the first full-time year. Students can complete the dual program in four years, one year less than completing each program individually. Earning a dual degree will make students highly marketable in the job market. For more information on the MHA/JD dual degree program, contact the MHA Program Director.

MHA/MPH Dual Degree

The MHA/MPH Dual Degree Program combines the Master of Health Administration (MHA) degree and the Master of Public Health (MPH) degree, both housed in the College of Public Health. This dual degree addresses the knowledge gap between delivery of healthcare services and management of the health of a population. Students may complete the degree in two and a half or three years rather than the four years required if the degrees are completed separately. Initial students will be in the MPH concentration in Population Health Policy & Management, which is housed in the same department as the MHA program. For more information on the MHA/MPH Dual Degree Program, contact the MHA Program Director/DGS or the MPH Director of Graduate Studies.

Graduate Courses

CPH 600	Health Services and Systems Organization	(3)
CPH 614	Managerial Epidemiology	(3)
CPH 652	Health Finance	(3)
CPH 655	Management Accounting for Healthcare Organizations	(3)
CPH 658	Health Economics	(3)
CPH 663	An Introduction to Public Health Practice and Administration	(3)
CPH 681	Legal Aspects of Healthcare Management	(3)
CPH 682	Quantitative Methods for Healthcare Management	(3)
CPH 683	Healthcare Operations Management	(3)
CPH 684	Human Resources Management in Healthcare	(3)
CPH 687	Organizational Theory and Behavior	(3)
CPH 688	Internship in Health Administration	(1)
CPH 755	Leading Change with Healthcare Teams	(3)
CPH 780	Strategic Planning and Marketing in Healthcare	(3)
CPH 781	Healthcare Ethics and Governance	(2)
CPH 782	Information Systems in Healthcare	(3)
CPH 784	Case Studies in Health Administration	(3)
CPH 785	Health Policy	(3)
CPH 787	Independent Study in Health Administration	(1)
CPH 788	Special Topics in Health Administration: Health Finance II	(3)

Incoming students are informed of the graduate school/departmental academic policies at the MHA Orientation held before classes begin each fall. The MHA handbook is also on the College of Public Health Website: http://www.uky.edu/publichealth/student-resources/student-handbooks

Hispanic Studies

College of Art & Sciences

Master of Arts

Admission Requirements

We require a B.A. in Hispanic Studies or a related area, demonstrated fluency in Spanish and English, strong letters of reference and a representative research essay from the candidate's prior academic work. Graduate Record Examination scores are required for admission. Foreign students must pass the TOEFL with the minimum required score of 550 on the paper version of the exam, 213 on the computer version, or 79 on the Internet/IBT version. Supervised teaching experience within the department is a requirement for both the M.A. and Doctoral degrees.

Degree Requirements

32 credit hours total. Reading knowledge of one foreign language in addition to Spanish and/or English; successful completion of SPA 553 (Pedagogy and the Teaching of Spanish), SPA 602 (Studies in Spanish Linguistics), SPA 606 (Introduction to Cultural and Literary Theory) and SPA 770 (Introduction to Hispanic Studies). Successful completion of an additional 24 hours of credits of which 6 may be taken at the 500 level (24 credits must be taken at the 600 level or above). The M.A. is granted to a student who has successfully passed a written and oral examination after completing the required coursework. One half of the exam is designed to test the candidate's knowledge of the M.A. Reading List (located at https://hs.as.uky.edu/sites/default/files/MAReadingListFINAL2007.pdf) and the other half is based on the candidate's graduate-level coursework. A student who plans to complete only the M.A. degree (or is not admitted into the Ph.D. program) has four semesters to complete the coursework towards the MA. M.A. exams are given in August and January.

NOTE: Students who are admitted into the Ph.D. program during the fourth semester of coursework are not required to take an M.A. exam after four semesters. The M.A. degree will be conferred to them upon successful completion of the doctoral Qualifying Exam. Students who enter the program with an M.A. from another institution will be evaluated by the Graduate Studies Committee at the beginning of the third semester of coursework. If the committee deems the student's work acceptable, the student may then go on to complete the PhD requirement. If the work is deemed unacceptable, the student will be required to pass the MA exam before proceeding on to the Ph.D.

Doctor of Philosophy

Degree Requirements

54 credit hours (18 courses) of which ten credits are required: successful completion of SPA 553 (Pedagogy and the Teaching of Spanish), SPA 602 (Studies in Spanish Linguistics), SPA 606 (Introduction to Cultural and Literary Theory) and SPA 770 (Introduction to Hispanic Studies). Of the remaining 15 courses, 5 must be in the major field of concentration (with two of these at the 700 level). 4 courses must be in the allied fields, and 2 in a minor field (outside the department). Additionally, the student must demonstrate reading knowledge of one language other than Spanish and English. The successful candidate will defend a dissertation prospectus, successfully complete Parts A and B of the Doctoral Qualifying Exam, and defend a dissertation.

Candidates are expected to devise a program of study and research around the major area of specialization. Two minor areas (in Hispanic literature and culture or Linguistics) and one allied field (related to the dissertation work) must be selected as support divisions for the major area. Minimum graduate credit

expectations are 24 credit hours in the combined Major and Minor areas and 12 credit hours in the Allied Fields; 6 graduate credits in each of the two remaining areas not chosen as Major, Minor, or Allied Fields. Two seminars (one in the major field) are required.

Specialization by area:
1) Medieval Spanish Studies;
2) Renaissance and Early Modern Spanish Studies;
3) Eighteenth and Nineteenth Century Spanish Studies;
4) Twentieth and Twenty-First Century Spanish Studies;
5) Colonial and Nineteenth Century Spanish American Studies;
6) Twentieth and Twenty First Century Spanish American Studies.
7) U.S. Latino Studies

The dissertation focus may combine Hispanic literature and film, Hispanic literature and Fine Arts, Hispanic literature with a second literature, literature and popular culture, or literature and theory. Students are encouraged to explore topics in Transatlantic Studies, and to make use of the programs in Social Theory, Gender and Women's Studies, Latin American Studies, Environmental Studies and Appalachian Studies in considering transdisciplinary possibilities for their doctoral theses.

The Doctoral Qualifying Examination consists of two parts. Part A is a written exam and a two hour oral exam based on the reading list and the prospectus the student has created under the supervision of the dissertation committee. The written exam is structured as follows: a take-home exam in the areas of the dissertation and the extradisciplinary Minor Field, and an additional ten hours to test the student's knowledge in his/her area of general specialization, and the additional three areas (Major and Allied Fields) on which the student has chosen to concentrate. In order to take this exam, the student needs to have submitted a written prospectus and a reading list to the dissertation committee at least two months before scheduling the exam.

Part B of the qualifying examination will take place during the semester following Part A. The student will present either a fully written introduction or a sample dissertation chapter to the dissertation committee. Acceptable Progress towards the Dissertation: The ABD student is required to establish and maintain an acceptable timeline for completing the dissertation. The Department expects that the student complete at least one dissertation chapter per semester until the dissertation is completed. It is hoped that the student will complete the dissertation within two years after the qualifying exams.

Graduate Courses

SPA 438g	Literature Of Social Protest In Spanish America	(3)
SPA 501	Spanish Phonetics, Pronunciation And Phonemics	(3)
SPA 506	Introduction To Comparative Spanish, Portuguese, and Italian Linguistics	(3)
SPA 519	Themes In Medieval And Early Modern Spanish Literature And Culture	(3)
SPA 529	Themes In Modern And Contemporary Spanish Literature, Culture And Film	(3)
SPA 539	Themes In Latin American Literature, Culture And Film	(3)
SPA 553	Teaching Of Spanish	(3)
SPA 600	History Of The Spanish Language	(3)
SPA 601	Studies In Spanish Pedagogy (Subtitle Required)	(1)
SPA 602	Studies In Spanish Linguistics (Subtitle Required)	(3)
SPA 603	Spanish Applied Linguistics	(3)
SPA 604	Sociolinguistics Of The Spanish-Speaking World	(3)
SPA 605	History Of The Spanish Language	(3)
SPA 606	Introduction To Cultural And Literary Theory	(3)

SPA 607	Special Topics In Critical Theory And Cultural Studies (Subtitle Required)	(1)
SPAa 608	Special Topics In Spanish Literature And Culture (Subtitle Required)	(3)
SPA 609	Special Topics In Latin American And U.S. Hispanic Literature And Culture (Subtitle Required)	(3)
SPA 610	Studies In Medieval Spanish Literature (Subtitle Required)	(3)
SPA 620	Studies In Early Modern And Baroque Spanish Literature (Subtitle Required)	(3)
SPA 630	Studies In 18th And 19th Century Spanish Literature (Subtitle Required)	(3)
SPA 640	Studies In 20th And 21 Stcentury Spanish Literature (Subtitle Required)	(3)
SPA 650	Studies In Colonial Latin American Literature (Subtitle Required)	(3)
SPA 653	Studies In Spanish Pedagogy	(3)
SPA 654	Spanish Dialectology	(3)
SPA 655	Comparative-Historical Romance Linguistics	(3)
SPA 660	Studies In 19th Century Latin American Literature (Subtitle Required)	(3)
SPA 680	Studies In 20th Century Latin American Literature 1900.1950's (Subtitle Required)	(3)
SPA 681	Studies In Contemporary Latin American Literature 1960's To Present (Subtitle Required)	(3)
SPA 685	Studies In U.S. Hispanic Literature And Culture (Subtitle Required)	(3)
SPA 690	Studies In Spanish And/Or Latin American Film (Subtitle Required)	(3)
SPA 703	Seminar In Sla Theory In Spanish L2 Learning	(3)
SPA 704	Seminar In Linguistic Analysis Of Spanish Discourse	(3)
SPA 705	Seminar In Historical Language Contact In The Spanish Speaking World	(3)
SPA 706	Advanced Readings In Critical Theory And Cultural Studies (Subtitle Required)	(3)
SPA 708	Critical Perspectives on Spanish Literature And Culture (Subtitle Required)	(3)
SPA 709	Critical Perspectives On Latin American And U.S. Hispanic Literature And Culture (Subtitle Required)	(3)
SPA 710	Seminar In Medieval Spanish Literature And Culture (Subtitle Required)	(3)
SPA720	Seminar In Early Modern And Baroque Spanish Literature And Culture (Subtitle Required)	(3)
SPA 730	Seminar In 18th And 19th Century Spanish Literature And Culture (Subtitle Required)	(3)
SPA 740	Seminar 20-21st Century Spanish Literature And Culture (Subtitle Required)	(3)
SPA 748	Master's Thesis Research	(0)
SPA 749	Dissertation Research	(0)
SPA 750	Seminar In Colonial Latinamerican Literature And Culture (Subtitle Required)	(3)
SPA 760	Seminar In I9th Century Latin American Literature And Culture (Subtitle Required)	(3)
SPA 768	Residence Credit For The Master's Degree	(1-6)
SPA 767	Dissertation Residency Credit	(2)
SPA 769	Residence Credit For The Doctor's Degree	(0-12)
SPA 770	Introduction To Hispanic Studies	(3)
SPA 780	Seminar In 20th Century Latin American Literature And Culture 1900-1950's (Subtitle Required)	(3)
SPA 781	Seminar In Contemporary Latin American Literature And Culture 1960's To Present (Subtitle Required)	(3)
SPA 782	Special Studies In Spanish	(1-3)
SPA 785	Seminar In U.S. Hispanic And/Or Literature And Culture (Subtitle Required)	(3)

Historic Preservation

College of Design

Preservation is a field involved with the interpretation and conservation of historic sites, as well as with their renovation and adaptive use. An interdisciplinary approach to the investigation of buildings and landscapes, which addresses the complexity of material culture, has been adopted by the faculty of this program. The College of Design offers a Master of Historic Preservation degree that provides opportunities for students to explore a variety of interests, including Building Revitalization, Community Engagement, and Rural Preservation. Applications are invited not only from those with degrees in design—architects, interior designers, and landscape architects—but also from those who hold degrees in other disciplines and wish to pursue studies in historic preservation. In addition to the two-year Master's degree, the department also offers a graduate certificate in Historic Preservation, which is comprised of two required courses (HP 601 and HP 602) and two additional courses in an area of focus. Admission to the Graduate School is required to enroll in the certificate program.

Admission Requirements
Requirements for admission to the Master of Historic Preservation program include 1) a baccalaureate degree from an accredited college or university, 2) demonstration of ability in writing, drawing, drafting, and/or photography, 3) three letters of recommendation and a personal essay, 4) the Graduate Record Examination (GRE), 5) an interview with the faculty in the program, if possible, and 6) a B average GPA at the undergraduate level.

Requirements for the two-year degree include the completion of core courses, advanced electives, and a final project —a total of 48 hours of credit. For additional information on admission and requirements, contact the Director, Graduate Program in Historic Preservation, College of Design, University of Kentucky, Lexington, KY 40506-0041.

Graduate Courses

HP 501	Selected Topics In Historic Preservation (Subtitle Required)	(3)
HP 601	Introduction To Historic Preservation	(3)
HP 602	Historic Preservation Law	(3)
HP 609	Revitalization	(3)
HP 610	American Architecture I	(3)
HP 611	American Architecture II	(3)
HP 612	Documentation Of Historic Buildings And Sites	(3)
HP 613	Historical Structural Systems And Building Materials	(3)
HP 614	Buildings And Sites II	(3)
HP 615	American Settlement Patterns	(3)
HP 616	Historic Preservation Design	(3)
HP 617	Historic Preservation Planning	(3)
HP 675	Architectural History For Preservation Practice (For Certificate Students Only)	(3)
HP 676	Field Methods In Heritage Conservation	(3)
HP 699	Summer Internship	(1-6)
HP 718	Adaptive Reuse	(3)
HP 720	Case Studies In Preservation	(3)
HP 721	Interpretation Of Historic Buildings And Sites	(3)
HP 724	Advanced Historical Structural Systems And Building Materials Conservation	(3)

HP 748	Master's Project Res	(0)
HP 750	Architecture Design Studio	(3)
HP 772	Preservation Seminar	(3)
HP 785	Ind Study In Historic Preservation	(3)
HP 798	Research Design	(3)
HP 799	Master's Project	(3,3)

History

College of Arts & Sciences

The Department of History offers both the M. A. and the Ph.D. degrees. A reading knowledge of at least one foreign language is required for both degrees. The M.A. degree may be obtained either by Plan A (thesis) or Plan B (non-thesis). The Ph.D. program is built around graduate readings and research seminars that are designed to prepare students for the qualifying exams and to write the doctoral dissertation. Program requirements vary depending on specific concentrations. More detailed information may be found at: https://history.as.uky.edu/

Admission Procedures & Requirements
Students applying for either the MA or the Ph.D. program should submit evidence of extensive undergraduate preparation in History (preferably an undergraduate major). Applicants who wish to be considered for financial assistance and fellowships should review the department's web-site for specific deadlines and must apply no later than January 1.

For additional requirements and information on application procedures, consult: https://history.as.uky.edu/applying-program.

Graduate Courses

HIS 500	Pre-Classical And Classical Greece	(3)
HIS 501	Fourth Century Greece And The Hellenistic World	(3)
HIS 502	A History Of The Roman Republic	(3)
HIS 503	A History Of The Roman Empire	(3)
HIS 506	History Of Sexuality In The Us	(3)
HIS 509	Roman Law (Same As Cla 509)	(3)
HIS 510	Medieval Law	(3)
HIS 511	Barbarians	(3)
HIS 512	Carolingian Empire	(3)
HIS 513	Medieval Institutions Since The Mid Tenth Century	(3)
HIS 514	Spain: From Reconquest To Empire, 1200-1700	(3)
HIS 519	The Era Of The Renaissance	(3)
HIS 520	The Era Of The Reformation	(3)
HIS 521	Early Modern Social History, 1400-1800	(3)
HIS 522	Europe And The World In The Age Of Revolution, 1760-1815	(3)
HIS 525	Modern Europe: 1890-1939	(3)
HIS 526	Europe Since 1939	(3)
HIS 529	Women In Modern Europe	(3)
HIS 534	Russia In The Nineteenth Century	(3)
HIS 535	Russia In The Twentieth Century	(3)
HIS 536	Intellectual And Cultural History Of Russia To 1800	(3)
HIS 537	Intellectual And Cultural History Of Russia From 1800 To Present	(3)
HIS 540	History Of Modern France To 1815	(3)
HIS 541	History Of Modern France Since 1815	(3)
HIS 542	German History 1789-1918	(3)
HIS 543	German History Since 1918	(3)
HIS 546	The Byzantine Empire	(3)

HIS 549	History Of The Middle East: 1952 To Present	(3)
HIS 552	Tudor-Stuart Britain, 1485-1714	(3)
HIS 553	Eighteenth Century Britain	(3)
HIS 554	British History 1815-1901	(3)
HIS 555	British History Since 1901	(3)
HIS 556	The British Empire, 1322-1879	(3)
HIS 557	The British Empire And Commonwealth, 1880-2000	(3)
HIS 561	Culture, Ideas, And Society In Latin America	(3)
HIS 562	Modern Mexico	(3)
HIS 563	The History Of Women In Latin America	(3)
HIS 564	History Of Brazil	(3)
HIS 574	The Diplomacy And Foreign Policy Of The Us To 1919	(3)
HIS 575	The Diplomacy And Foreign Policy Of The United States Since 1919	(3)
HIS 576	Frontier America, 1400-1869	(3)
HIS 577	Frontier America, 1869-Present	(3)
HIS 578	History Of The Old South	(3)
HIS 579	History Of The New South	(3)
HIS 580	History Of Appalachia	(3)
HIS 584	Health And Disease In The U.S.	(3)
HIS 587	The Civil Rights Movements In The U.S. Since 1930	(3)
HIS 593	East Asian History Since World War Ii	(3)
HIS 595	Studies In History	(3)
HIS 598	China In Revolution, 1895-1976	(3)
HIS 606	HIStorical Criticism	(3)
HIS 611	Readings In Early Christianity	(3)
HIS 612	Readings In Late Antiquity	(3)
HIS 613	Readings In Early Medieval History	(3)
HIS 614	Readings In High And Late Medieval History	(3)
HIS 615	Manuscript Cultures	(3)
HIS 616	Paleography	(3)
HIS 621	Readings In Early Modern Europe, 1450-1648	(3)
HIS 622	Readings In Early Modern Europe, 1648-1815	(3)
HIS 623	Readings In 19th Century European History	(3)
HIS 624	Readings In European History Of The Twentieth Century	(3)
HIS 625	Britain, 1688-1815	(3)
HIS 626	Britain, 1792-1914	(3)
HIS 627	British Empire, 1763-1914	(3)
HIS 628	Colloquium On Modern European History	(3)
HIS 637	Readings In Colonial Latin American History	(3)
HIS 638	Readings In Latin American History	(3)
HIS 640	Readings In American History To 1877	(3)
HIS 641	Readings In American History Since 1877	(3)
HIS 650	Readings In Special Topics In History	(3)
HIS 651	Readings In U.S. Foreign Relations Since 1900	(3)
HIS 653	Readings In U.S. Women's History	(3)
HIS 654	Readings In Modern African-American History	(3)
HIS 655	Readings In Antebellum Southern History	(3)
HIS 656	Readings In New South History	(3)
HIS 657	Race Relations In The United States (Same As AAS 657)	(3)
HIS 695	Independent Work	(1-3)

HIS 700	Special Problems In History	(3)
HIS 701	Research Seminar In American History	(3)
HIS 705	Colloquium In Early Modern Europe, 1450-1648	(3)
HIS 706	Seminar In Medieval History	(3)
HIS 722	Seminar In Modern European History, 1870 To The Present	(3)
HIS 730	Seminar In Modern British History	(3)
HIS 748	Master's Thesis Research	(0)
HIS 750	Introduction To The Historical Profession	(1)
HIS 767	Dissertation Residency Credit	(2)
HIS 768	Residence Credit For The Master's Degree	(1-6)

Information Communication Technology

College of Communication & Information

Master of Science

Our Information Communication Technology program strives to educate students to assume roles where the application of information technology (IT) is concerned with the ultimate goal of connecting people, organizations, and communities to enhance their ability to succeed. This master's program focuses on providing students with the knowledge and skills to assume leadership positions charged with effectively applying, using, and managing technology when solving problems specifically related to information and communication. It provides a human and organizational focus on technology – teaching students how to be effective users of technology. In general, the ICT program focuses on the intersection of technology, the people who use that technology, the policies and regulations governing or affecting use of that technology, and the community or environment in which that technology is used, in order to facilitate communicating information in meaningful ways.

Admission Requirements

Students are admitted for fall and spring semesters. Application deadlines are July 15 for fall admission and November 15 for spring admission. Students pursuing the degree will apply to the Graduate School for admission to the ICT MS degree program. There is no preferred undergraduate degree program. Admission to the ICT MS degree program requires 1) a bachelor's degree from an accredited institution; 2) a grade point average of 3.0 or higher on any prior undergraduate or graduate work, in both cases on a scale with A = 4.0; and 3) Graduate Record Exam scores, verbal: new exam 150 or higher OR old exam 400 or higher, quantitative: new exam 140 or higher OR old exam 450 or higher, and analytical writing 4.0 or higher. For the quantitative and analytical scores, applicants should meet at least one of the minimum scores. Applicants for whom English is not the native language must achieve a TOEFL score of 550 for the paper-based test (213 for computer-based test or 79 for the internet-based test). Students may take 500-level undergraduate courses, with the advice of faculty or staff, to remedy any deficiencies.

Degree Requirements

The ICT master's degree program requires successful completion of 36 hours, including 15 hours of required core classes. With the faculty advisor's prior approval, as many as 6 elective hours may be taken in a cognate area of study. Students pursuing the ICT master's will submit a research proposal in the form of a written paper and visual presentation as their Exit Requirement. Students will identify an ICT-related problem space, research current options, propose a new solution, and provide reasoning and evidence that supports the new solution. The project may be new, or it may be an extension to a project started during a student'sinternship, as long as the student substantially expands what they did during the internship.

Required Core Courses

ICT 600	ICT in Society	(3)
ICT 610	Research Methods	(3)
ICT 650	Introduction to Leadership in Information Professions	(3)
ICT 661	Data Science	(3)
ICT 596	Practicum	(3)

Elective Courses

ICT 550	Security Informatics	(3)
ICT 552	Cybercrime and Digital Law Enforcement	(3)

ICT 610	ICT Research Methods	(3)
ICT 626	Electronic Information Resources in the Health Sciences	(3)
ICT 627	Consumer Health Information Resources	(3)
ICT 630	Information Retrieval	(3)
ICT 638	Advanced Web Design	(3)
ICT 640	Health Information Resource Services	(3)
ICT 650	Introduction to Leadership in Information Professions	(3)
ICT 651	Technology Security	(3)
ICT 658	Knowledge Management	(3)
ICT 668	Information Systems Design	(3)
ICT 695	Independent Study in ICT	(3)
CJT 730	Seminar in Mass Media and Public Policy	(3)
CJT 771	Seminar in Health Communication	(3)
CJT 775	Seminar in Health Communication Campaigns	(3)
LIS 605	Information Policy & Regulation	(3)
LIS 634	Information Architecture	(3)
LIS 629	Introduction to Medical Informatics	(3)

Integrated Plant & Soil Sciences

College of Agriculture, Food & Environment

The interdepartmental graduate program in Integrated Plant and Soil Sciences offers graduate work leading to the Master of Science and Doctor of Philosophy degrees with specialization in Crop Science, Horticultural Science, Forest Science, Plant Biology, and Soil Science. Faculty members belong to the Departments of Forestry, Horticulture, and Plant and Soil Sciences in the College of Agriculture, Food, and Environment.

The IPSS M.S. program replaces the M.S. program in Plant and Soil Sciences. The IPSS PhD program replaces the PhD programs in Crop Science, Plant Physiology, and Soil Science. Students currently matriculating in any of those graduate programs should consult the 2010-2011 version of the Graduate Bulletin for applicable guidelines.

Admission Requirements
All students with strong training in science, including but not limited to baccalaureate degrees in agronomy, biology, chemistry, and horticulture are encouraged to apply. Admission to the IPSS Program is competitive and based on the applicant's undergraduate and graduate records, performance on standardized exams, and letters of recommendation. It is expected that applicants will meet the minimum standards established by the University of Kentucky Graduate School. Applicants will automatically be considered for departmental research assistantshIPS, which are awarded on a competitive basis.

Graduate students in IPSS have flexibility in designing course work to suit individual goals, but are expected to demonstrate competence in basic areas of plant and soil science and excellence in their chosen area of specialization as demonstrated by novel research leading to a published thesis or dissertation. So that all entering Ph.D. students are at an academic level to successfully complete course requirements, the following courses or their equivalent should have been completed prior to admission:

1. Chemistry – a first semester course in organic chemistry (equivalent to CHE 230)
2. Calculus – a first semester course (equivalent to MA 113)
3. Physics – a first semester course (equivalent to PHY 201)

For PhD students with a specialization in Soil Science, the following additional preparation is suggested:

1. Chemistry - Analytical Chemistry (equivalent to CHE 226) and Organic Chemistry (equivalent to CHE 230 or 236)
2. Introductory Soil Science with a lab (equivalent to PLS 366) and at least two additional soils courses
3. Biology, two courses in basic biology (equivalent to BIO 151/152) and two additional courses in crop science, plant biology, or microbiology
4. Statistics, including regression and experiment design (equivalent to STA 570, 671, and 672)

Students are expected to make up deficiencies in these courses within one year of enrollment.

Degree Requirements
For the M.S. degree, 24 hours of course work, which includes IPS 610, IPS 625, PLS 772, at least one graduate level statistics course, and an acceptable thesis. There is a non-thesis option requiring 30 hours of coursework for students who wish to make the M.S. a terminal degree. Work leading to advanced degrees must conform to the general rules and regulations of the Graduate School. Individual programs include a strong course work component and a meaningful research experience.

For the Ph.D. degree, a minimum of 36 credit hours of graduate level work of which 18 hours of course work are in residence at the University of Kentucky and includes IPS 610, IPS 625, PLS 772, at least one graduate level statistics course, and an acceptable dissertation. Additional coursework may be required by the student's dissertation committee.

Details regarding the curriculum, program areas, and areas of specialization, financial aid, faculty research interests, and the application process may be found at: www.ca.uky.edu/pss/academics/IPSs

Graduate Courses

IPS 610	Trans-Disciplinary Communication In IPSS	(1)
IPS 625	Trans-Disciplinary Research In IPSS	(2)
PLS 450G	Biogeochemistry (Same As NRE 450G)	(3)
PLS 455G	Wetland Delineation (Same As NRE 455G)	(3)
PLS 456G	Constructed Wetlands (Same As NRE 456G)	(3)
PLS 468G	Soil Use And Management (Same As NRE 468G)	(3)
PLS 470G	Soil Nutrient Management (Same As NRE 470G)	(3)
PLS 502	Ecology Of Economic Plants	(3)
PLS 510	Forage Management And Utilization	(3)
PLS 514	Grass Taxonomy And Identification	(3)
PLS 515	Turf Management	(3)
PLS 520	Fruit And Vegetable Production	(3)
PLS 525	Nursery And Floriculture Crop Production	(4)
PLS 531	Field Schools In Crop Pest Management	(2)
PLS 566	Soil Microbiology	(3)
PLS 567	Methods In Soil Microbiology	(1)
PLS 573	Soil Morphology And Classification	(3)
PLS 575	Soil Physics	(3)
PLS 576	Laboratory In Soil Physics	(1)
PLS 597	Special Topics In Plant And Soil Sciences (Subtopic Required)	(1-3)
PLS 599	Special Problems In Plant And Soil Sciences (Off Campus Independent Research)	(1-8)
PLS 601	Special Topics In Molecular And Cellular Genetics	(1)
PLS 602	Principles Of Yield Physiology	(3)
PLS 620	Plant Molecular Biology (Same As BIO 620)	(3)
PLS 622	Physiology Of Plants I (Same As BIO/FOR 622)	(3)
PLS 623	Physiology Of Plants II (Same As BIO/FOR 623)	(3)
PLS 650	Soil-Plant Relationships	(3)
PLS 655	Spatial And Temporal Statistics	(3)
PLS 660	Advanced Soil Biology	(2)
PLS 664	Plant Breeding I	(3)
PLS 671	Soil Chemistry	(4)
PLS 676	Quantitative Inheritance In Plant Populations	(3)
PLS 697	Special Topics In Plant And Soil Sciences	(1-3)
PLS 712	Advanced Soil Fertility	(3)
PLS 741	Clay Mineralogy (Same As GLY 741)	(3)
PLS 748	Master's Thesis Research	(0)
PLS 767	Post Qualifying Exam Residency Credit	(2)
PLS 768	Residence Credit For The Master's Degree	(1-6)
PLS 772	Seminar In IPSS	(1)
PLS 799	Non Dissertation Research In Plant And Soil Sciences	(1-4)

Interiors: Planning/Strategy/Design

College of Design

The graduate program in the School of Interiors leads to a post-professional Master of Arts in Interiors: Planning/Strategy/Design. Students undertake a combination of course work, independent study, and research experience to develop a course of study designed to meet each student's career interests. Courses from within and outside the discipline cultivate interdisciplinary design thinking. Using design-related scholarship/research and creative approaches, students engage in an investigative process leading to an area of design specialization.

Each student works with an advising committee in the selection of a written thesis or a design thesis project option and the appropriate courses at the 500, 600, and 700 levels. Applicants that have an undergraduate degree in interior design or a related professional subject matter normally complete the program in two years. Supplementary course work may be required of applicants without professional undergraduate interior design degrees.

Degree Requirements
Students undertake the Master of Arts in Interiors with either a Plan A and Plan B option. The thesis option (Plan A) requires 24 hours of course work, six hours of Master's residence credit, and a written thesis with a research emphasis. Plan B requires completion of 30 credit hours, including six hours of ID 700, in which a student develops a design thesis project that engages in innovative problem-solving focusing on the student's area of specialization. A common core of twelve hours, comprised of ID 650, ID 655, and ID 659, is required of all students. Students complete twelve credits of additional course work in the area of concentration. Students must successfully complete a final examination in the form of a thesis defense, which is required for graduation.

Admission Requirements
Potential graduate students must:

1. Apply and be accepted to the Graduate School.
2. Have been granted a baccalaureate degree by an accredited institution with a minimum 3.0 GPA on a 4.0 scale (2.75-3.0 GPA will be considered in relation to other credentials).
3. Have taken the Graduate Record Examination (GRE). For a non-English speaking student, a TOEFL score of 550 or above is required (or a score of 213 on the computer version of TOEFL).
4. After admittance to the Graduate School, apply and be accepted by the School of Interiors

To be reviewed by the school, apply to the graduate program in the School of Interiors through the portal provided by the Graduate School. As part of your application, students will write a personal statement articulating why they wish to study interiors, including career goal aspirations. Additionally, three letters of recommendation regarding academic ability must be included. Students must submit a portfolio to be reviewed and evaluated by a faculty committee. The portfolio may be submitted digitally.

If you would like further information on the program, contact the Director.

Graduate Courses

ID 559	Special Topic In Interiors (Subtitle Required)	(1-3)
ID 595	Independent Study In Interiors	(1-3)
ID 650	Current Literature And Methodologies	(3)
ID 655	Creative And Theoretical Design	(3)

ID 659	Interiors Graduate Studio	(6)
ID 700	Research Applications In Interiors	(3)
ID 748	Master's Thesis Research	(0)
ID 759	Special Topics In Interiors (Subtitle Required)	(1-3)
ID 768	Residence Credit For The Master's Degree	(1-6)
ID 772	Current Issues In Design	(1-3)
ID 785	Independent Study In Interiors	(1-3)

Kinesiology & Health Promotion

College of Education

The Department of Kinesiology and Health Promotion offers graduate work leading to the Master of Science, Doctor of Education, and Doctor of Philosophy degrees. The Master of Science degree offers concentrations in biomechanics, exercise physiology, health promotion, physical education and sport leadership. The Ed.D. degree has concentrations in health promotion and in physical education. The Ph.D. degree in Exercise Science offers specializations in biomechanics or exercise physiology. The department also offers a Ph.D. in Interdisciplinary Sciences for both Physical Education and Health Education.

Master of Science

The master's program is designed to provide a high-quality graduate program for students who desire advanced study to enhance their professional knowledge and skills as well as for students who complete the master's degree as an intermediate step toward doctoral work. The objective of the program is to prepare the student to:

- effectively locate, analyze, and use significant elements of the professional literature and research materials,
- permit an in-depth study of a specialized content area within the field, and
- acquire a knowledge of sound research procedures.

The course work and program experiences are designed to enable graduate students in the Department of Kinesiology and Health Promotion to demonstrate:

1. Educational, professional and technological standards.
2. Literacy skills for life-long professional learning
3. Current, factual, and functional content knowledge.
4. Functional skills and dispositions of professionals.
5. Skills for research and reflection for learning and leading.
6. Skills to plan, implement, and evaluate basic and applied research.
7. Skills to analyze and interpret research data.
8. Skills to design, implement and evaluate programs.

The program needed to accomplish these outcomes involves a combination of departmental course offerings, supporting electives, and a required core of statistics and research methods. Inasmuch as the fields of health promotion and kinesiology draw their principles from a variety of disciplines, it is appropriate that certain electives be chosen from the supportive areas of the biological and physical sciences and the behavioral and social sciences. Master's candidates with the approval of the department may select either a thesis (Plan A) or a non-thesis option (Plan B).

Admission Requirements

Applicants must meet the requirements set forth in the first part of this Bulletin. Students are expected to have satisfactorily completed the Graduate Record Examination (GRE). In addition, applicants are expected to have a minimum of 21 undergraduate hours in their respective fields. Specific prerequisites for graduate study at the master's level are determined by a committee of the departmental graduate faculty based upon area of emphasis.

Degree Requirements

Regardless of whether the student concentrates in the kinesiology or health promotion areas, all candidates are required to complete one of the following:

Plan A (Thesis Option)

EDP/EPE 557	Gathering, Analyzing and Using Educational Data	(3)
or		
STA 570	Basic Statistical Analysis	(4)
KHP 644	Research Techniques Applied to Kinesiology and Health Promotion	(3)
Supporting Electives		(6)
KHP	Area of Concentration	(12)
KHP 768	Residence Credit for the Master's Degree	(6)
TOTAL		(30+)

Plan B (Non-Thesis Option)

EDP/EPE 557	Gathering, Analyzing and Using Educational Data	(3)
or		
STA 570	Basic Statistical Analysis	(4)
KHP 644	Research Techniques Applied to Kinesiology and Health Promotion	(3)
Supporting Electives		(6)
KHP	Area of Concentration	(18)
TOTAL		(30+)

Doctor of Philosophy

The Ph.D. program offers areas of concentration in Biomechanics or Exercise Physiology. The goal of the program is to provide education to qualified students so that they will have a broad understanding of exercise science, as well as an in-depth knowledge of one specific area or discipline. Graduates of this program will be able to conduct exercise science research, teach at the university level, direct discipline specific educational programs, and collaborate with other professionals on various issues related to exercise science.

The Exercise Science Core includes 18+ hours and provides the student with a broad understanding of the various disciplines involved in this field. Each student is also required to take a minimum of 7 hours in research/statistic course work and demonstrate proficiency in computer programming. Beyond this minimum, an advisor and committee in consultation with each student set the structure and content of the doctoral program. The number of formal courses within each area of specialization may vary. It is expected that the depth of knowledge in each area of study comes from independent study and research experiences, in addition to the dissertation, which are all under the direction of the faculty. Each student will demonstrate their depth of knowledge by their qualifying exams. Typically, it will take from 3-5 years for the student to complete the degree requirements including the dissertation.

Core Courses (Required 18+ credits)

KHP 615	Biomechanics of Fundamental Movements	(3)
KHP 620	Advanced Exercise Physiology	(3)
KHP 640	Laboratory Methods in Exercise Science	(3)
KHP 695/782	Independent Research	(3)
GS 650	Preparing Future Faculty	(2)
KHP 785	Seminar in Exercise Science (1 credit/semester for 4 semesters)	(4)

Doctor of Education

The Ed.D. program in Kinesiology and Health Promotion provides advanced study for those who seek careers in educational, industrial or other appropriate settings. Admission to the program requires a master's degree and satisfactory completion of the Graduate Record Examination. Course work is planned by members of the student's advisory committee based on their assessment of the student's background and professional goals. All programs include course work within and outside the department. Additional information about the Ed.D. can be obtained from the Director of Graduate Studies.

Graduate Courses

KHP 420G	Physiology Of Exercise	(3)
KHP 509	Workshop In Health And Safety	(1-3)
KHP 547	Psychology Of Sport And Physical Activity	(3)
KHP 550	Principles Of Resistance Training	(3)
KHP 573	Management Of Sport	(3)
KHP 577	Practicum In Kinesiology And Health Promotion	(3-6)
KHP 579	Adapted Physical Education	(3)
KHP 585	Foundations Of Sport Management	(3)
KHP 590	Advanced Health Concepts	(3)
KHP 600	Exercise Stress Testing And Prescription	(3)
KHP 601	Teacher Effectiveness And Leadership In Kinesiology And Health Promotion	(3)
KHP 602	Promoting Physical Activity For Youth	(3)
KHP 609	Seminar In Health And Safety Education	(3)
KHP 616	Sports Biomechanics	(3)
KHP 615	Biomechanics Of Fundamental Movements	(3)
KHP 617	Gait Analysis	(3)
KHP 620	Advanced Exercise Physiology	(3)
KHP 640	Lab Methods In Exercise Science	(3)
KHP 644	Research Techniques Applied To Kinesiology And Health Promotion	(3)
KHP 673	Health Promotion And Behavior Change	(3)
KHP 674	Foundations Of Health Promotion	(3)
KHP 676	Current Issues And Problems In Sport Management	(3)
KHP 677	Planning Health Promotion Programs	(3)
KHP 680	Sport Marketing	(3)
KHP 681	Financial Aspects Of Sport	(3)
KHP 682	Contemporary Sport Leaders	(3)
KHP 685	Supervision Of Sport And Fitness Personnel	(3)
KHP 686	Sport Manager's Laboratory	(3)
KHP 687	Practicum In Sport Management	(3-9)
KHP 695	Independent Study In Kinesiology And Health Promotion	(1-3)
KHP 715	Three-Dimensional Biomechanical Analysis Of Human Movement	(3)
KHP 720	Sports Medicine	(3)
KHP 748	Master's Thesis Research	(0)
KHP 767	Dissertation Residency Credit	(2)
KHP 768	Residence Credit For The Master's Degree	(1-6)
KHP 781	Proseminar In Khp (Subtitle Required)	(1-3)
KHP 782	Independent Research In Khp	(3)
KHP 785	Graduate Seminar In Exercise Science	(0-1)

Library Sciences

College of Communication & Information

The School of Library and Information Science offers the Master of Science in Library Science (MSLS). This degree can be completed entirely online with no required travel to Lexington, Kentucky.

Admission Requirements
Students are admitted for fall, summer, and spring semesters. Students pursuing the degree will apply to the Graduate School for admission to the Library Science MS degree program. There is no preferred undergraduate degree program. Admission to the Library Science MS degree program requires 1) a bachelor's degree from an accredited institution; 2) a grade point average of 3.0 or higher on any prior undergraduate or graduate work, in both cases on a scale with A = 4.0; and 3) Graduate Record Exam scores, verbal: new exam 150 or higher OR old exam 400 or higher, quantitative: new exam 140 or higher OR old exam 450 or higher, and analytical writing 4.0 or higher. For the quantitative and analytical scores, applicants should meet at least one of the minimum scores. Applicants for whom English is not the native language must achieve a TOEFL score of 550 for the paper-based test (213 for computer-based test or 79 for the internet-based test). Students who are admitted will be expected to complete online Microsoft Office trainings, available through the University at no charge, for Word, Access, Excel, and PowerPoint by the end of their second semester. These trainings serve a leveling function and help to ensure that students entering the graduate program possess baseline skills with general office productivity applications.

Degree Requirements
To successfully complete the MSLS degree, a student must successfully complete 36 hours of course work and a program portfolio. The 36 hours (12 courses) are made up of 12 hours of required courses, 6 hours of technology electives, 6 hours of foundational courses and 12 hours of student selected electives.

Required Courses (all 4 courses required)

LIS 600	Information in Society	(3)
LIS 601	Information Searching	(3)
LIS 602	Knowledge Organization	(3)
LIS 603	Management in Information Organizations	(3)

Foundational Courses (select 2)

LIS 621	Introduction to Information Services	(3)
LIS 630	Information Retrieval	(3)
LIS 672	Practicum	(3)

Technology Electives (select 2)

LIS 636	Foundations of Information Technology	(3)
LIS 637	Information Technology	(3)
LIS 638	Internet Technologies And Information Services	(3)
LIS 668	Information Systems Design	(3)

*Student can select an alternative technology elective if it is first approved by the adviser.

With the faculty advisor's prior approval, as many as 6 elective hours may be taken in a cognate area of study. Transfer credit is limited to 9 credit hours and includes any of the School's courses taken while in post-baccalaureate status.

Degree requirements allow a student considerable freedom to design her/his program to suit individual needs and interests. The curriculum is sufficiently varied to permit opportunities to build both breadth and depth into the course of study. The student is assisted by a faculty advisor who provides guidance and counsel. Ultimately, however, it is the student's responsibility to see that all School and Graduate School requirements are met prior to taking submitting the program portfolio.

A grade point average of 3.00 (B) must be maintained. Failure to do so results in academic probation, and will result in dismissal, if, in the prescribed time, the grade point average is not raised to 3.00 or higher. A student who earns a third C (or lower) grade is dismissed from the program, even though the student may have earned the required minimum 3.00 grade point average.

Graduate Courses

LIS 600	Information in Society	(3)
LIS 601	Information Searching	(3)
LIS 602	Knowledge Organization	(3)
LIS 603	Management in Information Organizations	(3)
LIS 604	Library and Book History	(3)
LIS 605	Information Policy and Technology Regulation	(3)
LIS 608	Methods of Research in Library and Information Science	(3)
LIS 609	Current Problems in Library and Information Science	(3)
LIS 610	Library Materials and Literature for Children	(3)
LIS 611	Critical Analysis of Children's Literature	(3)
LIS 613	Information Resources and Services for Children	(3)
LIS 614	Library Materials and Literature for Young Adults	(3)
LIS 621	Introduction to Information Services	(3)
LIS 627	Consumer Health Information Resources	(3)
LIS 629	Introduction to Medical Informatics	(3)
LIS 630	Information Retrieval	(3)
LIS 634	Information Architecture	(3)
LIS 636	Foundations of Information Technology	(3)
LIS 637	Information Technology	(3)
LIS 638	Internet Technologies and Information Services	(3)
LIS 639	Introduction to Medical Informatics	(3)
LIS 640	Health Information Resource Services	(3)
LIS 641	Law Librarianship	(3)
LIS 642	Oral History	(3)
LIS 643	Archives and Manuscripts Management	(3)
LIS 644	Administration of School Library Media Centers	(3)
LIS 645	Public Libraries	(3)
LIS 646	Academic Libraries	(3)
LIS 647	Current Trends in School Media Centers	(3)
LIS 648	Technology in the School Media Center	(3)
LIS 650	Technical Processing Systems	(3)
LIS 653	Preservation Management	(3)
LIS 655	Organization of Knowledge I	(3)
LIS 656	Organization of Knowledge II	(3)
LIS 658	Knowledge Management	(3)
LIS 659	Collection Development	(3)
LIS 661	Introduction to Data Science	(3)
LIS 665	Introduction to Digital Libraries	(3)

LIS 668	Information Systems Design	(3)
LIS 672	Practicum	(3)
LIS 676	School Media Practicum	(1-12)
LIS 690	Special Topics in Library and Information Science	(3)
LIS 695	Independent Study in Library and Information Science	(3)
LIS 748	Master's Thesis Research	(0)
LIS 768	Residence Credit for the Master's Degree	(1-6)
PLS 768	Residence Credit For The Master's Degree	(1-6)
PLS 772	Seminar In IPSS	(1)
PLS 799	Non Dissertation Research In Plant And Soil Sciences	(1-4)

Linguistic Theory & Typology

College of Arts & Sciences

The MA in Linguistic Theory & Typology (MALTT) offers training by a world class faculty in theoretical frameworks for approaching descriptive, historical, and sociolinguistic data with a special focus on how grammatical features are distributed across the world's languages. Emphasis is given to language modeling and analysis through computational and quantitative methods. In addition to providing invaluable intellectual preparation for doctoral studies in linguistics, the MALTT program prepares students for careers in high-tech industries, text-based consultancies in law and medicine, and jobs in government agencies.

Admission Requirements
We welcome students with a BA/BS major or minor in Linguistics. Students with degrees in cognate disciplines are also welcome to apply but will have to take an introductory course in linguistics prior to enrollment. We run such a course as a summer online course. Minimum GPA is 3.3. Funded positions are available (TA, RA) on a competitive basis.

Degree Requirements
Students take 30 hours of LIN course work and complete a thesis. The course work must include at least 15 hours taken at the 600 or 700 level. Mandatory courses are LIN 601 Research Methods and LIN 701 Research Seminar in Linguistic Theory & Typology. All students must take a syntax course (LIN 512, 622, or 712) and a phonology course (LIN 515, 615, or 715). Students must also take a course in either morphology (LIN 505, 605, 705) or a course in phonetics (LIN 500, 600, or 700). The thesis component consists of a written research project and oral examination. The thesis must be approved by a committee of three faculty.

Graduate Courses

LIN 500	Phonetics	(3)
LIN 505	Linguistic Morphology	(3)
LIN 506	Sociolinguistics	(3)
LIN 507	Linguistic Anthropology	(3)
LIN 508	Discourse Analysis	(3)
LIN 509	Formal Semantics	(3)
LIN 510	Corpus Linguistics	(3)
LIN 511	Computational Linguistics	(3)
LIN 512	Analysis Of English Syntax	(3)
LIN 515	Phonological Analysis	(3)
LIN 516	Grammatical Typology	(3)
LIN 517	Special Topics In Linguistics (Subtitle Required)	(3)
LIN 519	Historical Linguistics	(3)
LIN 520	Sanskrit I	(3)
LIN 521	Sanskrit Ii	(3)
LIN 527	Language Investigations (Subtitle Required)	(3)
LIN 529	Language Contact	(3)
LIN 530	Pragmatics	(3)
LIN 540	Laboratory In Linguistics	(1)
LIN 550	Linguistic Field Methods	(3)

LIN 600	Advanced Phonetics	(3)
LIN 601	Research Methods In Linguistics	(3)
LIN 605	Advanced Morphology	(3)
LIN 606	Advanced Sociolinguistics	(3)
LIN 609	Advanced Semantics	(3)
LIN 610	Advanced Computational/Corpus Linguistics	(3)
LIN 611	Quantitative Methods In Linguistics	(3)
LIN 615	Advanced Phonology	(3)
LIN 617	Advanced Topics In Linguistics (Subtitle Required)	(3)
LIN 619	Historical Sociolinguistics	(3)
LIN 622	Advanced Syntax	(3)
LIN 629	Advanced Historical Linguistics	(3)
LIN 640	Advanced Laboratory In Linguistics	(1)
LIN 695	Directed Studies In Linguistics	(1-3)
LIN 701	Research Seminar In Linguistic Theory & Typology*	(3)
LIN 748	Masters Thesis Research	(0)

Manufacturing Systems Engineering

College of Engineering

The Department of Mechanical Engineering at the University of Kentucky provides an intellectually challenging environment in which to pursue advanced studies and engage in research. In addition to programs of study leading to M.S. and Ph.D. Degrees in Mechanical Engineering, the Mechanical Engineering Department also offers a master's degree program in Manufacturing Systems Engineering. Students in this program are able to earn their degree entirely online or by taking a combination of courses offered online and in the face-to-face mode.
Graduate degree programs in the field of manufacturing systems engineering are important for enhancing manufacturing productivity and quality in the U.S. The Master of Science in Manufacturing Systems Engineering is designed to equip the student for opportunities in modern manufacturing processes and systems. Some of the possible areas of concentration for research and study are: Manufacturing Processes and Equipment, Design for Manufacturing, Plastic and Polymer Processing, Electronics Design and Manufacturing, Computer-aided Design and Manufacturing, Manufacturing Systems Planning and Control, Automated Assembly, and Lean Manufacturing.

The UK Center for Manufacturing, a part of the College of Engineering, conducts graduate-level academic research of the highest quality and transmits that knowledge to industry and government. Housing a 68,000-square-foot building, completed in the fall of 1989, the Center contains: R & D laboratories and offices including machining research lab, metrology lab, rapid prototyping lab, electronics assembly lab, welding lab, automation equipment lab, CAD/CAM/CAE lab, instructional TV classrooms, and TV satellite uplink and downlink equipment.

Admission Requirements
Applicants normally have a bachelor's degree in engineering from an ABET accredited institution (or equivalent). For students with an undergraduate degree other than engineering, completion of a set of identified courses (or their equivalent) in an Engineering discipline will be required prior to admission to the program with full graduate standing. If a student does not meet these criteria, an evaluation of the student's overall education and experience may allow admission, subject to evaluation by the Director of Graduate Studies. GRE scores are NOT required for admission to the Manufacturing Systems Engineering MS program. However, applicants must note that, GRE scores must be submitted if they are interested in being considered for any graduate fellowships. .

Curriculum & Degree Requirements
The Plan A provides for study and research leading to the degree of Master of Science in Manufacturing Systems Engineering. The thesis plan requires twenty-four credit hours of course work and a thesis. All students will be required to complete four specified core courses [MFS 606, MFS 605, MFS 505, MFS 613 (MFS 611, if enrolled prior to Spring 2016)]. The electives for each student will be developed in conjunction with an advisor to insure that the program provides breadth and depth of content for the student, and meets his or her specific needs and interests. Appropriate electives are drawn from areas of Engineering, Computer Science, Business and Economics, or Mathematics. Two electives are designated as Manufacturing Specialization electives.

The Plan B (non-thesis option) is reserved for students who have significant engineering research or development experience in a manufacturing environment, for which completion of a thesis would be less beneficial than the additional course work involved in Plan B. The Plan B requires thirty (30) credit hours of course work and the satisfactory completion of a final examination. All students will be required to

complete four specified core courses [MFS 606, MFS 605, MFS 505, MFS 613 (MFS 611, if enrolled prior to Spring 2016)], as well as MFS 784 Research Project in Manufacturing Systems Engineering, nine credit hours of Manufacturing Specialization electives, and nine credit hours of other appropriate electives. Approval of the student's advisor and of the Director of Graduate Studies is necessary for a student to pursue Plan B.

Graduate Courses

MFS 501	Mechanical Design with Finite Element Methods	(3)
MFS 503	Lean Manufacturing Principles & Practices	(3)
MFS 505	Modeling Manufacturing Processes and Machines	(3)
MFS 507	Design for Manufacturing	(3)
MFS 509/609	Lean Leadership	(3)
MFS 512	Manufacturing Systems	(3)
MFS 513	Mechanical Vibrations	(3)
MFS 515	Rotordynamics of Turbomachinery	(3)
MFS 525	Organizational Learning for Lean Manufacturing	(3)
MFS 526	Lean Operations Management	(3)
MFS 541	Occupational Biomechanics	(3)
MFS 554	Chemical and Physical Processing of Polymer Systems	(3)
MFS 556	Introduction to Composite Materials	(3)
MFS 563	Simulation of Industrial Production Systems	(3)
MFS 599	Concepts, Assessment Tools and Methods in Sustainable Power and Energy	(3)
MFS 605	Modeling, Simulation and Control for Manufacturing	(3)
MFS 606	Global Issues in Manufacturing	(3)
MFS 607	Analysis of Metal Cutting Processes	(3)
MFS 608	Nontraditional Manufacturing Processes	(3)
MFS 612	Design of Lean Manufacturing Systems	(3)
MFS 613	Sustainability, Ethics, and Leadership in Manufacturing Organizations	(3)
MFS 780	Independent Study	(3)

Materials Science & Engineering

College of Engineering

The Department of Chemical and Materials Engineering offers programs leading to the M.S. and Ph.D. degrees in Materials Science and Engineering, with research specialization in the following areas:

- Ceramics
- Electronic Materials
- Metals and Alloys
- Micro-Materials
- Nanomaterials
- Polymers and Composites
- Surfaces and Interfaces
- Thin Films

Admission Requirements
Admission to the M.S. and Ph.D. degree programs is on a competitive basis, and financial assistance is available through teaching and research assistantships, as well as a limited number of fellowships. Applicants should have a minimum grade point average of 3.0/4.0 on all undergraduate work. Persons with backgrounds in any physical science or engineering discipline are encouraged to apply, as each applicant's qualifications are reviewed individually. Minimum requirements for admission include a bachelor's degree and four semesters of university-level calculus, calculus-based physics, and chemistry. Please note that meeting the minimum requirements does not guarantee admission, as acceptance is on a competitive and space-available basis.

Master of Science

The master's degree is offered under Plan A (thesis option) and Plan B (non-thesis option). Candidates for the degree under Plan A must complete 24 credit hours of course work and submit and defend a thesis that demonstrates research ability. The required course work includes the materials science core (MSE 632, 635, 650, 781) as well as appropriate electives selected in consultation with the Director of Graduate Studies. In certain exceptional cases (as determined by the faculty), a non-thesis M.S. may be undertaken (Plan B). The non-thesis option requires 30 hours of course work that includes the materials science core, and is only available to those students with prior research or industrial experience. For both Plan A and Plan B, at least half of all graduate course work must be at the 600 level or above.

Doctor of Philosophy

The Ph.D. program offers broad training in materials science and engineering while providing options to suit the student's particular interests and designated area of specialization. The student must conduct original and significant research and must submit and defend a dissertation based on that research. Doctoral students complete the materials science core, and work with their doctoral advisory committee to develop a program of elective courses designed to address deficiencies and to enhance the specialization area of interest. In addition, students must demonstrate proficiency in a minor area selected from the fields of mathematics, physical sciences, or engineering.

In order to advance to candidacy, doctoral students must pass an oral qualifying examination that tests the candidate's knowledge in three fundamental areas of Materials Science and Engineering: Structure of Materials, Mechanical Behavior of Materials, and Thermodynamics of Materials. There is no language requirement for the M.S. or Ph.D. degrees in Materials Science and Engineering.

Graduate Courses

MSE 401G	Metal And Alloys	(3)
MSE 402G	Electronic Materials And Processing	(3)
MSE 403G	Ceramic Engineering	(3)
MSE 404G	Polymeric Materials (Same As Cme 404G)	(3)
MSE 506	Mechanics Of Composite Materials (Same As Me 506)	(3)
MSE 531	Powder Metallurgy	(3)
MSE 535	Mechanical Properties Of Materials	(3)
MSE 538	Metals Processing	(3)
MSE 542	Extractive Metallurgy	(4)
MSE 554	Chemical And Physical Processing Of Polymer Systems (Same As CME/ME/MFS 554)	(3)
MSE 556	Introduction To Composite Materials (Same As CME/ME 556)	(3)
MSE 561	Electric And Magnetic Properties Of Materials (Same As EE 561)	(3)
MSE 569	Electronic Packaging Systems And Manufacturing Processes (Same As EE 569)	(3)
MSE 585	Materials Characterization Techniques	(3)
MSE 599	Topics In Materials Science And Engineering	(1-4)
MSE 607	Analysis Of Metal Cutting Processes (Same As Me/MFS 607)	(3)
MSE 620	Computational Materials Science Engineering	(3)
MSE 622	Physics Of Polymers (Same As CME 622)	(3)
MSE 632	Advanced Materials Science	(3)
MSE 635	Advanced Mechanical Metallurgy	(3)
MSE 636	Dislocation Theory	(3)
MSE 650	Advanced Materials Thermodynamics	(3)
MSE 661	Advanced Physical Metallurgy I	(3)
MSE 662	Advanced Physical Metallurgy Ii	(3)
MSE 663	Optoelectronic Devices	(3)
MSE 699	Advanced Topics In Materials Science And Engineering	(3)
MSE 748	Master's Thesis Research	(0)
MSE 749	Dissertation Research	(0)
MSE 767	Dissertation Residency Credit	(2)
MSE 768	Residence Credit For Master's Degree	(1-6)
MSE 769	Residence Credit For Doctor's Degree	(0-12)
MSE 771	Seminar	(0)
MSE 781	Special Problems, Literature And Laboratory	(1-3)
MSE 782	Special Problems, Literature And Laboratory	(3)
MSE 790	Research In Materials Science	(3-9)

Mathematics

College of Arts & Sciences

The Department of Mathematics grants the M.A., M.S., and Ph.D. degrees. There are no specific course prerequisites for admission; however, two semesters of advanced calculus, and at least one semester each of algebra and topology are suggested. Both the M.A. and M.S. degrees are 30-credit-hour programs, offered under either Plan A or Plan B.

The Master of Arts degree, featuring a core program that emphasizes mathematical structures, is designed for prospective community college teachers and for students contemplating studies at the Ph.D. level. The Master of Science degree, through an emphasis on the applications of mathematics and the acquisition of computational skills, focuses on careers in business, industry, and government.

The doctorate is a research degree granted on the basis of broad mathematical knowledge and exhibited creative ability. Course work leading to the doctorate is available in the areas of algebra, analysis applied mathematics, discrete mathematics, numerical analysis, partial differential equations, and topology. Each student must pass three comprehensive examinations in one of the six areas of algebra, analysis, discrete mathematics, numerical analysis, partial differential equations, and topology.

Admission Requirements
The graduate programs in mathematics do not have formal admission requirements other than those of the Graduate School. Admission, however, is competitive. The admissions committee reviews transcripts, letters of recommendation, the candidate's personal statement, and GRE scores seeking evidence of mastery in proof-based mathematics (such as analysis, topology, and modern algebra), the ability to craft mathematical proofs, and general mathematical maturity.

Degree Requirements
In order to be admitted to candidacy for the Ph.D. degree, a student must complete studies in a minor field (either inside or outside the department) and successfully complete three comprehensive examinations as described above. Subsequent work becomes highly specialized through seminars, independent study, and finally, work on a dissertation is an original contribution to the candidate's major field. The faculty has research expertise in algebraic topology, coding theory, ring theory, algebraic geometry, number theory, complex variables, rational approximation, operator theory, partial differential equations, mathematical physics, continuum mechanics, numerical analysis, algebraic combinatorics, and optimization.

The ability to communicate mathematics is an increasingly important professional qualification. The department requires all students to complete a teaching or research assignment during each semester of their enrollment in a graduate mathematics program. Students will be assigned to teach courses at the early undergraduate level. With the approval of the Director of Graduate Studies, a student may substitute an equivalent research effort for the teaching activity.

Graduate Courses

MA 415G	Graph Theory (Same As CS 415G)	(3)
MA 416G	Principles Of Operations Research I (Same As CS 416G)	(3)
MA 417G	Principles Of Operations Research II (Same As STA 417G)	(3)
MA 432G	Methods Of Applied Mathematics I	(3)
MA 433G	Introduction To Complex Variables	(3)
MA 471G	Advanced Calculus I	(3)

MA 472G	Advanced Calculus II	(3)
MA 481G	Differential Equations	(3)
MA 483G	Introduction To Partial Differential Equations	(3)
MA 485G	Fourier Series And Boundary Value Problems (Same As ME 585)	(3)
MA 501	Seminar In Selected Topics	(3)
MA 502	Seminar In Selected Topics	(3)
MA 503	Combinatorics	(3)
MA 506	Methods Of Theoretical Physics I (Same As PHY 506)	(3)
MA 507	Methods Of Theoretical Physics II (Same As PHY 507)	(3)
MA 515	Mathematical Programming And Extensions (Same As STA 515)	(3)
MA 522	Matrix Theory And Numerical Linear Algebra I (Same As CS 522)	(3)
MA 527	Applied Mathematics In The Natural Sciences I (Same As ME 527)	(3)
MA 532	Ordinary Differential Equations	(3)
MA 533	Partial Differential Equations	(3)
MA 537	Numerical Analysis (Same As CS/EGR 537)	(3)
MA 551	Topology I	(3)
MA 561	Modern Algebra I	(3)
MA 565	Linear Algebra	(3)
MA 570	Multivariate Calculus	(3)
MA 575	Principles Of Analysis	(3)
MA 611	Independent Work In Mathematics	(3-9)
MA 613	Problems Seminar In Operations Research (Same As EE/STA 619)	(3)
MA 614	Ennumerative Combinatorics	(3)
MA 616	Numerical Techniques For Nonlinear Optimization	(3)
MA 617	Markovian Decision Problems	(3)
MA 618	Combinatorics And Networks	(3)
MA 622	Matrix Theory And Numerical Linear Algebra II (Same As CS 622)	(3)
MA 625	Numerical Methods For Differential Equations	(3)
MA 628	Applied Mathematics In The Natural Sciences II	(3)
MA 630	Mathematical Foundations Of Stochastic Processes And Control Theory I	(3)
MA 633	Theory Of Partial Differential Equations	(3)
MA 641	Differential Geometry	(3)
MA 642	Differential Geometry	(3)
MA 651	Topology IS	(3)
MA 654	Algebraic Topology I	(3)
MA 655	Algebraic Topology II	(3)
MA 661	Modern Algebra II	(3)
MA 667	Group Theory	(3)
MA 671	Functions Of A Complex Variable I	(3)
MA 672	Functions Of A Complex Variable II	(3)
MA 676	Analysis I	(3)
MA 677	Analysis II	(3)
MA 681	Functional Analysis I	(3)
MA 682	Functional Analysis II	(3)
MA 714	Topics In Discrete Mathematics (Subtitle Required)	(3)
MA 715	Selected Topics In Optimization	(3)
MA 721	Selected Topics In Numerical Analysis	(3)
MA 732	Selected Topics In Differential And Integral Equations	(3)
MA 748	Master's Thesis Research	(0)
MA 749	Dissertation Research	(0)

MA 751	Selected Topics In Topology	(3)
MA 752	Selected Topics In Topology	(3)
MA 761	Homological Algebra	(3)
MA 764	Selected Topics In Algebra	(3)
MA 765	Selected Topics In Algebra	(3)
MA 768	Residence Credit For Master's Degree	(1-6)
MA 767	Dissertation Residency Credit	(2)
MA 769	Residence Credit For Doctor's Degree	(0-12)
MA 772	Selected Topics In The Theory Of Complex Variables	(3)
MA 773	Selected Topics In Analysis	(3)
MA 777	Mathematical Seminar	(3)
MA 778	Mathematical Seminar	(3)

Mechanical Engineering

College of Engineering

The Department of Mechanical Engineering at the University of Kentucky provides an intellectually challenging environment in which to pursue advanced studies and engage in research. The department offers programs of study leading to M.S. and Ph.D. Degrees in Mechanical Engineering. Financial assistance is available to qualified applicants in the form of graduate teaching assistantships, research assistantships and fellowships. Stipends vary depending on the student's program level and type of support.

Graduate students work closely with faculty, often recognized as renowned authorities in their discipline, in conducting research at the forefront of science and technology. Such graduate studies may be focused in any of the following areas:

- Manufacturing: analytical and numerical modeling, optimization of machining processes and systems, lean, sustainable, precision manufacturing, and robotics and machine vision.
- Mechanics: dynamic analysis of solids, contact mechanics, system identification of structures, thermal stress and boundary element methods.
- Systems and Design: application of nontraditional materials, finite element methods, vibration and noise prediction, rotating machinery dynamics, engineered surfaces, magnetic bearing technology, control of systems, micro-scale design and fabrication, MEMS, biologically-inspired design, and boundary element methods in acoustics.
- Thermal-Fluid Sciences: experimental and computational combustion and fire research, computational and experimental fluid dynamics, turbulence research and nonlinear dynamical systems, convection, phase change and radiation heat transfer, nano-technology, optics, and painting technology.

Admission Requirements
Applicants seeking admission to a graduate program in the Department of Mechanical Engineering (ME) as regular students must have been awarded a baccalaureate degree. Admission to the ME graduate programs normally requires a bachelor's degree in engineering (not necessarily in mechanical engineering), a minimum grade point average (GPA) of 3.0/4.0 or 70% on all graduate and undergraduate works, and Graduate Record Examination (GRE) scores of at least 1200 for the combined Quantitative and Verbal sections and 3.5 for the Analytical section. An undergraduate degree in mathematics, chemistry or physics combined with a strong interest in engineering topics may be suitable preparation when certain required undergraduate courses are taken. Exceptions to these requirements may be made if other persuasive evidence indicating the student's potential of success is available.

In addition, all international students (except those with a degree from a U.S. institution) must have a minimum score of 550 (paper) / 213 (computer) / 80 (Internet) on the Test of English as a Foreign Language (TOEFL).

The Master of Science Degree (M.S.)

There are two options, A and B, for fulfilling the requirements for the M.S. degree. Students are admitted into Option A by default. Transfers between options must be approved by the DGS.

Option A (Thesis Plan)
A minimum of 24 semester hours of course work and a research thesis are required. The thesis must be actively supervised by a full or associate member of the Graduate Faculty. In no case will independent work, taken as ME 699, ME 780-783 or ME 790, be counted as part of the 24 hours of coursework when

the course material is related to the student's thesis. No more than two special courses such as ME 599, ME 699, ME 780-783 or ME 790 or independent courses/projects may be counted towards fulfilling requirements for the Master's degree. At least half of all graduate course work must be at the 600 level or above.

Instructors of independent course projects must provide the DGS with a course syllabus in order to obtain approval for use of the course toward satisfaction of M.S. requirements.

Option B (Non-Thesis Plan)
A minimum of 30 semester hours of coursework is required for this program. This option is only allowed on a case-by-case basis with approval of the DGS, and is intended primarily for students with significant industrial experience and a desire to complete degree requirements on a part-time basis. At least half of all graduate course work must be at the 600 level or above. A final oral examination administered by the student's committee must be passed to complete degree requirements.

Doctor of Philosophy

The Ph.D. degree is a research degree granted on the basis of broad knowledge of mechanical engineering and specialized study in a specific area of interest. The student must conduct original and significant research and must submit and defend a dissertation based on that research. To obtain a Ph.D. degree from the Department of Mechanical Engineering, a student must Earn 36 graduate credit-hours taken at the University of Kentucky while in graduate standing after receiving a bachelor's degree. Residency and research courses may not be used to satisfy this requirement. Students who have a M.S. degree from an accredited institution must complete 18 hours of course work. In order to advance to candidacy, doctoral students must pass a qualifying examination consisting of both written and oral components. The written component tests the candidate's knowledge in three fundamental areas of Mechanical Engineering. The oral component consists of a presentation and defense of the student's proposed dissertation research; a prospectus prepared by the student must be submitted to the doctoral advisory committee prior to the examination.

For a more detailed description of these requirements, contact the Director of Graduate Studies.

Graduate Courses

ME 501	Mechanical Design With Finite Element Methods	(3)
ME 503	Lean Manufacturing Principles And Practices (Same As MFS 503)	(3)
ME 505	Modeling Of Manufacturing Processes And Machines (Same As MFS 505)	(3)
ME 506	Mechanics Of Composite Materials (Same As MSE 506)	(3)
ME 507	Design For Manufacturing (Same As MFS 507)	(3)
ME 510	Vibro-Acoustic Design In Mechanical Systems	(3)
ME 512	Manufacturing Systems (Same As MFS 512)	(3)
ME 513	Mechanical Vibrations	(3)
ME 527	Applied Mathematics In The Natural Sciences I (Same As MA 527)	(3)
ME 530	Gas Dynamics	(3)
ME 531	Fluid Dynamics I	(3)
ME 532	Advanced Strength Of Materials	(3)
ME 548	Aerodynamics Of Turbomachinery	(3)
ME 549	Power Generation	(3)
ME 554	Chemical And Physical Processing Of Polymer Systems	(3)
ME 556	Introduction To Composite Materials (Same As MSE 556)	(4)
ME 560	Engineering Optics	(3)
ME 563	Basic Combustion Phenomena	(3)

ME 565	Scale Modeling In Engineering	(3)
ME 580	Heating, Ventilation And Air Conditioning	(3)
ME 585	Fourier Series And Boundary Problems	(3)
ME 599	Topics In Mechanical Engineering (Subtitle Required)	(3)
ME 601	Advanced Cae Applications	(3)
ME 602	Dynamics Of Distributed Mechanical Systems	(3)
ME 603	Mechanics Of Plastic Solids I	(3)
ME 604	Dynamics Of Rotating Machinery	(3)
ME 606	Seminar And Project In Manufacturing Systems Engineering (Same As EE/MFS 606)	(3)
ME 607	Analysis Of Metal Cutting Processes (Same As MFS/MSE 607)	(3)
ME 610	Engineering Acoustics	(3)
ME 611	Boundary Element Methods In Engineering (Same As EGR 611)	(3)
ME 613	Nonlinear Oscillations	(3)
ME 620	Advanced Engineering Thermodynamics I	(3)
ME 626	Advanced Heat Convection	(3)
ME 627	Radiation Heat Transfer	(3)
ME 628	Boiling And Condensation	(3)
ME 631	Fluid Dynamics II	(3)
ME 634	Turbulent Flows	(3)
ME 640	Advanced Analysis And Simulation Of Dynamic Systems	(3)
ME 641	Foundations Of Solid Mechanics	(3)
ME 644	Advanced Dynamics I	(3)
ME 645	Advanced Control System Analysis	(3)
ME 647	System Optimization I (Same As AEN 647)	(3)
ME 651	Mechanics Of Elastic Solids I	(3)
ME 690	Advanced Algorithms For Computational Fluid Dynamics	(4)
ME 691	CFD I - Incompressible Flows	(3)
ME 692	CFD II - Incompressible Flows	(3)
ME 699	Topics In Mechanical Engineering (Subtitle Required)	(3)
ME 748	Master's Thesis Research	(0)
ME 767	Dissertation Residency Credit	(2)
ME 780	Special Problems In Mechanical Engineering	(3)
ME 790	Research In Mechanical Engineering	(1-9)
MFS 608	Nontraditional Manufacturing Processes	(3)
MFS 612	Design of Lean Manufacturing Systems	(3)
MFS 613	Sustainability, Ethics, and Leadership in Manufacturing Organizations	(3)
MFS 780	Independent Study	(3)

Medical Sciences

College of Medicine

Admission Requirements
The Master's of Science in Medical Sciences (MSMS) is a broad interdisciplinary degree program housed in the College of Medicine. Participating Departments and Centers include Behavioral Sciences; Pharmacology and Nutritional Sciences; Toxicology and Cancer Biology; Microbiology, Immunology and Molecular Genetics; Molecular and Cellular Biochemistry; Neuroscience; and Physiology. The MSMS may be used as a stand-alone degree by students seeking career enhancement in fields such as basic biomedical research, the pharmaceutical industry, or the health science professions; by students seeking academic credentials in the biomedical sciences prior to applying for medical school or other health related professional degree programs; or by students seeking to enhance their knowledge base prior to choosing a career direction.

The MSMS degree may also provide supplemental or joint training for practitioners in the health professions (e.g., physicians, dentists, pharmacists), or students in professional health science programs based on individual career goals and research training needs. Finally, the MSMS program provides students with the opportunity to opt out of a Ph.D. program and receive a master's degree.

Admission to the graduate program is competitive and is based upon academic background, professional recommendations, performance on either the Graduate Record Examination (GRE), Medical College Admission Test (MCAT), or Dental Admission Test (DAT), and experience. Students should have completed an undergraduate degree in chemistry, biology, biochemistry, engineering, mathematics, neurosciences, physics, pharmacy or psychology. Although there are no formal course requirements, it is recommended that students have completed undergraduate courses in organic chemistry, calculus, physics, biochemistry (optional but likely helpful) and the biological sciences.

Degree Requirements
The Medical Sciences program encompasses the disciplines of behavioral science; nutritional sciences; toxicology; microbiology, immunology and molecular genetics; molecular and biomedical pharmacology; nolecular and cellular biochemistry; neuroscience and physiology. The student, in cooperation with the major professor/thesis advisor and the student's Advisory Committee, will determine the elective course work in the area of specialization and in related basic sciences.

Each student will take the required eight (8) hour core curriculum hours and will choose from the list of recommended courses and departmental course work to develop a disciplinary specialization. The degree requirements will vary with the thesis (Plan A) and the non-thesis (Plan B) option selected by the student. The thesis option requires a minimum of 30 hours (6 of which are research), and half of the 30 hours must be at the 600+ level, as well as an approved thesis based on the student's research. The non-thesis option requires a minimum of 30 graduate credit hours, half of which must be at the 600+ level.

Financial support is not provided for students in the M.S. in Medical Sciences program. Inquiries regarding the program should be directed to the Director of Graduate Studies, M.S. in Medical Sciences Program (Dr. Joe Springer at jspring@uky.edu) or Bridget Szczapinski at bridget.szczapinski@uky.edu.

Core Curriculum

The plan of study for the MSMS program consists of an eight (8) credit hour curriculum and a

recommended course of study based on career tracks. The eight credit hour core curriculum consists of the following courses:

IBS 602	Molecular Biology and Genetics	(3)
IBS 606	Physiological Communications	(3)
TOX 600	Ethics in Scientific Research	(1)
MI 772	Seminar in Microbiology	(1)

Recommended Courses (representative list)

ANA 417G	Functional Human Neuroanatomy
ANA 611	Regional Human Anatomy
ANA/PGY 605	Neurobiology of CNS Injury and Repair
BCH 401G	Fundamentals of Biochemistry
BCH 419G	Molecular Basis of Human Disease
BSC 731	Methods and Technologies in Clinical and Translational Science
IBS 601/BCH 607	Biomolecules and Metabolism
IBS 603	Cell Biology and Signaling
MI 494G	Immunobiology
MI 598	Clinical Microbiology
MI 685	Immunology, Infection, and Inflammation
NS 601/2/3	Integrated Nutritional Sciences I/II/III
NS 605	Wellness and Sports Nutrition
PGY 412G	Principles of Human Physiology
PHA 621	Principles of Drug Action
PHA 622	Molecular Drug Targets and Therapeutics
TOX 663	Drug Metabolism and Disposition
TOX 680	Molecular Mechanisms in Toxicology

Coursework: The minimum requirements are as follows:

1. Plan A: Twenty-four hours of graduate level courses (50% must be at 600+ level; 2/3 in organized courses). Research required for the master's thesis cannot be included in the required 24 credit hours of course work.
2. Plan B: Thirty hours of graduate courses (50% must be 600+ level; 2/3 in organized courses).
3. Eight hours of core curriculum (see above).
4. The Advisor will work with the student to identify the remainder of hours in the area of the student's specialization.

Microbiology

College of Medicine

The Ph.D. program in Microbiology is designed to prepare candidates for research careers in academics, industry, and government laboratories, as well as teaching careers at major universities and colleges. The program has at its heart a close student-mentor relationship that allows for the maximum flexibility in the development of independent and creative scientists and teachers.

Admission Requirements
Admission to the graduate program is competitive and is based upon academic background, professional recommendations, performance on either the Graduate Record Examination (GRE), experience, and when possible, personal interviews. Students should have completed an undergraduate degree in chemistry, biology, biochemistry, engineering, mathematics, neurosciences, physics, pharmacy or psychology. It is recommended that students have completed undergraduate courses in organic chemistry, physical chemistry, calculus, physics, and the biological sciences.

Students will have the opportunity to join faculty research programs across a spectrum of topics including: pathogenic microbiology, virology, cancer cell and molecular biology and cellular and molecular immunology. Specific research areas include microbial physiology, microbial pathogenesis, cellular and molecular immununology, mucosal immunology, host immune responses to infection, tumor immunology, lymphocyte differentiation, membrane biology, molecular virology, molecular genetics and gene regulation. Students will utilize the techniques of molecular biology, genetic engineering, genomics, proteomics, array technology, transgenic technology, hybridoma technology and fluorescence-activated cell sorting. The program of study is tailored to the individual background and career goals of the student and stresses an interdepartmental approach both in the selection of courses and in the pursuit of research. The most important aspect of the doctoral program is an independent research thesis under the direction of the student's mentor. Students have the opportunity to participate in graduate seminars, journal clubs, research seminars; to interact with visiting scholars; and to present the results of their research at national and international meetings. Financial aid is available for qualified students.

All students pursuing degrees in the biomedical sciences at the University of Kentucky, College of Medicine are admitted through the Integrated Biomedical Sciences (IBS) Curriculum. This first-year core curriculum provides broad-based exposure to biochemistry, cell biology, molecular biology, genetics, cell signaling and integrated physiology, as well as flexibility in selecting a research emphasis among 125 faculty in the Biomedical Sciences. Students select their doctoral degree program at the completion of the first year core curriculum from among the departments of Anatomy and Neurobiology; Microbiology, Immunology and Molecular Genetics; Molecular and Biomedical Pharmacology; Molecular and Cellular Biochemistry; Physiology, Toxicology, and the Nutritional Sciences. Inquiries regarding admission should be directed to the Director, Integrated Biomedical Sciences Curriculum, University of Kentucky College of Medicine, Lexington, KY 40536-0298. Information regarding the IBS program and admission forms are available on their web site: http://www.mc.uky.edu/ibs/. Information regarding the Microbiology program may be obtained from the Director of Graduate Studies, Department of Microbiology, Immunology and Molecular Genetics, University of Kentucky College of Medicine, Lexington, KY 40536-0298, (800.462.5257) or the Microbiology, Immunology and Molecular Genetics web site: http://www.mc.uky.edu/microbiology/.

Graduate Courses

MI 494G	Immunobiology (Same as BIO 494G)	(3)
MI 601	Special Topics in Molecular and Cellular Genetics (Same as BIO/BCH/PLS/PPA 601)	(1)
MI 604	Experimental Genetics (Same as IBS 605)	(2)
MI 615	Molecular Biology (Same as BIO/BCH 615)	(3)
MI 616	Biology and Therapy of Cancer (Same as MED 616)	(3)
MI 685	Advanced Immunobiology (Same as BIO 685)	(3)
MI 707	Contemporary Topics in Immunology (Same as BIO 707)	(2)
MI 710	Special Topics in Microbiology	(2-3)
MI 710-002	Microbial Pathogenesis	(2-3)
MI 720	Microbial Structure and Function (Same as BIO/OBI 720)	(4)
MI 748	Master's Thesis Research	(0)
MI 749	Dissertation Research (Same as MB 749)	(0)
MI 767	Dissertation Residency Credit	(2)
MI 768	Residence Credit for Master's Degree (Same as MB 768)	(1-6)
MI 769	Residence Credit for the Doctor's Degree (Same as MB 769)	(0-12)
MI 772	Seminar in Microbiology (Same as BIO 772)	(0-1)
MI 798	Research in Microbiology	(1-9)

Mining Engineering

College of Engineering

The programs leading to the degrees of Master of Science in Mining Engineering, Master of Mining Engineering (* suspension pending) and Doctor of Philosophy are offered through the Department of Mining Engineering. The objectives of these programs are to provide an advanced level of applied science for use in the mining industry and to offer specified topics for research specialization.

The Master of Science in Mining Engineering is a research-oriented degree appropriate for a career in problem solving, research, or technology development.

For the Master of Science in Mining Engineering, 24 credit hours of course work plus an acceptable thesis (Plan A) or 30 credits of course work and a report on one or more research topics (Plan B) are required to fulfill program requirements. Plan B Master of Science degrees will be reserved normally for students who have already demonstrated their ability to conduct and report on independent research.

The Doctor of Philosophy is the terminal degree in the subject and is normally required for a career in teaching and research.

Admission Requirements
Enrollment in the Master of Science degree program is open to qualified applicants with an undergraduate degree in mining engineering or other engineering and science fields. A minimum cumulative grade point average of 2.8/4.0 from an accredited undergraduate program is required. Persons with undergraduate degrees in fields other than mining engineering are required to satisfy deficiencies in undergraduate mining engineering courses.

Applicants for admission must have a combined score on the verbal and quantitative portions of the Graduate Record Examination (GRE) in excess of 300. Scores on the analytical portion are also considered. Foreign applicants whose native language is other than English must take the Test of English as a Foreign Language (TOEFL) and achieve a score of at least 80 (internet based test) or 230 (computer based test) or (550 paper based test) is required before they can be admitted. Alternatively candidates should take the International English Language Testing System (IELTS) test and achieve a score of at least 6.5.

In addition to satisfying general Graduate School and College of Engineering admissions requirements, applicants for admission to the Master of Science and Ph.D. degree programs in Mining Engineering must have been awarded the Bachelor of Science degree prior to admission to the graduate degree status. Normally, it is expected that applicants will have graduated from an engineering program accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET). For applicants from non-U.S. universities, from related but non-engineering disciplines, and from institutions that do not have accredited engineering programs, an assessment will be made of the comparability of educational background to that prescribed and appropriate remedial course work established as a provision for admission.

The Ph.D. degree has no formal course requirements. Students need to complete a minimum of 36 credits of graduate level courses while preparing for the written and oral qualifying examinations. Students who hold a Master of Science degree are typically given credit for up to 18 credit hours of the 36 hour requirement.

Current research areas include the following: rock mechanics and ground control, operations research, mine ventilation, underground construction, surface mining and reclamation, explosive and blasting, mine environmental engineering, mine power systems, mineral and coal processing, extractive metallurgy, data management and mineral economics. In addition to the graduate courses in mining engineering, graduate courses in civil engineering and other disciplines may be used to satisfy degree requirements providing they are appropriate to the student's program of study.

Additional information about the graduate program in mining engineering can be obtained by writing the Director of Graduate Studies, Department of Mining Engineering.

Graduate Courses

MNG 511	Mine Power System Design	(3)
MNG 531	Advanced Blast Design And Technology	(3)
MNG 535	Environmental Control System Design And Reclamation (Same As BAE 535)	(3)
MNG 541	Computer Design Of Mine Ventilation Systems	(3)
MNG 551	Rock Mechanics	(4)
MNG 552	Ground Control Software And Analysis	(3)
MNG 561	Mine Construction Engineering I (Same As MFS 563)	(3)
MNG 575	Coal Preparation Design	(3)
MNG 580	Mineral Processing Plant Design	(3)
MNG 591	Mine Design Project I	(1)
MNG 592	Mine Design Project II	(3)
MNG 599	Topic In Mining Engineering (Subtitle Required)	(2-3)
MNG 611	Mine Power System Protection	(3)
MNG 621	Instrumentation For Blasting And Blast Mitigation	(3)
MNG 641	Advanced Mine Ventilation	(3)
MNG 690	Advanced Mineral Beneficiation Engineering	(3)
MNG 691	Simulation Of Mineral Processing Circuits	(3)
MNG 699	Topics In Mining Engineering (Subtitle Required)	(3)
MNG 748	Master's Thesis Research	(0)
MNG 767	Dissertation Residency Credit	(2)
MNG 768	Residence Credit For The Master's Degree	(1-6)
MNG 771	Seminar In Mining Engineering	(1)
MNG 780	Special Problems In Mining Engineering	(1-6)
MNG 790	Special Research Problems In Mining Engineering	(1-9)

Molecular & Cellular Biochemistry

College of Medicine

Graduate study in biochemistry is designed to prepare candidates for research careers in academics, industry, and government laboratories. Admission to the graduate program is competitive and is based upon academic background, professional recommendations, performance on the Graduate Record Examination (GRE), experience and, when possible, personal interviews. Students should have completed an undergraduate degree in chemistry, biology, biochemistry, engineering, mathematics, physics, or pharmacy. It is recommended that students have completed undergraduate courses in organic chemistry, physical chemistry, calculus, physics and biological sciences.

Students will have the opportunity to join faculty research programs studying a spectrum of topics including: signal transduction, protein structure and function, transcriptional regulation, the cytoskeleton, secretion and vesicular fusion, disease mechanisms (atherosclerosis, cancer, infectious disease, diabetes, Alzheimer's), drug design, computational biology, development, nucleic acid dynamics, and membrane biogenesis & function. The program of study stresses an interdepartmental approach both in the selection of courses and in the pursuit of research. Students are expected to participate in graduate seminars, journal clubs, and research seminars; to interact with visiting scholars; and to present the results of their research at local and national meetings. Financial aid is available to all students in the program.

Admission Requirements
Admission to the Ph.D. program in Molecular and Cellular Biochemistry is through the Integrated Biomedical Sciences (IBS) Curriculum.

Inquiries regarding admission should be directed to the Director of Graduate Studies, Department of Biochemistry, University of Kentucky College of Medicine. Information regarding the Ph.D. program in Biochemistry may also be obtained at http://biochemistry.med.uky.edu/.

Graduate Courses

BCH 401G	Fundamentals of Biochemistry	(3)
BCH 501	General Biochemistry	(3)
BCH 502	General Biochemistry	(3)
BCH 601	Special Topics in Molecular and Cellular Genetics (Same as BIO/MI/PLS/PPA 601)	(1)
BCH 604	Structural Biology	(3)
BCH 605	Principles of Neurobiology (Same as NEU/PGY/ANA/PHA 605)	(4)
BCH 607	Biomolecules and Metabolism (Same as IBS 601)	(3)
BCH 608	Biomolecules and Molecular Biology (Same as IBS 602)	(3)
BCH 609	Plant Biochemistry (Same as PPA/PLS 609)	(3)
BCH 610	Biochemistry of Lipids and Membranes	(3)
BCH 611	Biochemistry and Cell Biology of Nucleic Adics	(3)
BCH 612	Structure and Function of Proteins and Enzymes	(3)
BCH 615	Molecular Biology (Same as BIO/MI 615)	(3)
BCH 618	Seminar in Biochemistry	(1)
BCH 619	Seminar in Biochemistry	(1)
BCH 640	Research in Biochemistry	(1-9)
BCH 749	Dissertation Research	(0)
BCH 767	Dissertation Residency Credit	(2)

BCH 769	Residence Credit for Doctor's Degree	(0-12)
BCH 779	Membrane Sciences Colloquium (Same as CHE/CME/PHR/PHA 779)	(1)
BCH 780	Topics in Biochemistry	(1-3)

Molecular & Biochemical Pharmacology

College of Medicine

Graduate study in Pharmacology is designed to prepare candidates for research careers in academics, industry or government laboratories and agencies. The Ph.D. program in Pharmacology trains students in the fundamental principles of basic molecular and biochemical science, while also providing training in the principles of drug-receptor interactions, of experimental therapeutics and of drug discovery. Modern pharmacology also emphasizes new directions in gene therapy and pharmacogenetics. Students learn the conceptual and technical basis of research while performing mentored and, subsequently, independent research projects in laboratories equipped with state of the art technology and instrumentation.

Students will have the opportunity to join nationally recognized faculty research programs in investigating topics such as: Cardiovascular Disease and Obesity; Molecular Biology of Carcinogenesis and Metastasis; and Neurobiology of Aging and Neurodegenerative Disease, with emphases on memory, hormones, stress, and Type II Diabetes.

Admission Requirements
Admission to the graduate program is competitive and is based upon academic background, professional recommendations, performance on the Graduate Record Examination (GRE), experience, and when possible, personal interviews. It is recommended that students have completed undergraduate courses in organic chemistry, calculus, physics, and biological sciences. The program of study is tailored to the individual background and career goals of the student and can often include interdepartmental study and research. Students are expected to participate in journal clubs and research seminars; to interact with visiting scholars; and to present the results of their research at local and national meetings. Financial aid is available for qualified students.

Admission to the Ph.D. program in Pharmacology is through the Integrated Biomedical Sciences (IBS) program. Information about the admissions process is available at http://www.mc.uky.edu/ibs .For information about the Ph.D. program in Pharmacology, please contact the Director of Graduate Studies, Department of Molecular and Biomedical Pharmacology, University of Kentucky College of Medicine, Lexington, KY 40536-0298. Information may also be obtained from www.mc.uky.edu/pharmacology/.

Graduate Courses

PHA 422g	Pharmacology Of Treating Human Disease	(3)
PHA 522	Systems Pharmacology	(3)
PHA 605	Principles Of Neurobiology (Same As NEU/PGY/BCH/ANA 605)	(4)
PHA 606	Mechanisms Of Neurologic Disease (Same As ANA/NEU 606)	(4)
PHA 612	Quantitative Pharmacodynamics: Pharmacokinetics (Same As PHR 612)	(3)
PHA 616	Biology And Therapy Of Cancer (Same As MI/MED616)	(3)
PHA 617	Physiological Genomics (Same As PGY 617)	(2)
PHA 621	Advanced Pharmacodynamics	(3)
PHA 622	Molecular Drug Targets & Therapeutics	(1-4)
	Cardiovascular Pharmacology (Sect 001)	
	Neuropharmacology (Sect 002)	
	Chemotherapeutic Agents (Sect 003)	
	Autocoids, Endocrine Pharmacology, And Toxicology (Sect 004)	
PHA 630	Special Topics In Pharmacology	(1-3)
PHA 634	Advanced Cardiovascular Pharmacology	(2)

PHA 649	Advanced Molecular Pharmacology (Same As PHA/TOX 649)	(2)
PHA 658	Advanced Neuropharmacology	(2)
PHA 670	Chemical Carcinogenesis (Same As TOX 670)	(3)
PHA 710	Aging Of The Nervous System (Same As GRN/PGY/ANA 710)	(3)
PHA 748	Master's Thesis Research	(0)
PHA 749	Dissertation Research	(0)
PHA 750	Research In Pharmacology	(1-5)
PHA 767	Dissertation Residency Credit	(2)
PHA 768	Residence Credit For Master's Degree	(1-6)
PHA 769	Residence Credit For Doctor's Degree	(0-12)
PHA 770	Seminar In Pharmacology	(1)
PHA 779	Membrane Sciences Colloquium (Same As CHE/CME/PHR/BCH 779)	(1)

Music

College of Fine Arts

The School of Music offers the Master of Arts (M.A.) with specialty areas or emphases in musicology or theory; Master of Music (M.M.) with specialty areas in performance (including choral or instrumental conducting), composition, sacred music, music therapy, or music education; Doctor of Musical Arts (D.M.A.) with specialty areas in performance (including choral or instrumental conducting), or composition; and the Doctor of Philosophy (Ph.D.) with specialty areas in musicology, music education or theory. The applicant for the master's degree is expected to have earned an appropriate undergraduate degree, and the applicant for the doctoral degree is expected to have earned an appropriate master's degree or equivalent.

Graduate work is also provided for persons seeking Rank I and Rank II state certification in music education. Requirements for Rank II coincide with those for the M.M. in Music Education; requirements for Rank I may be completed by a planned and approved 30 semester hour program in addition to Rank II requirements or 60 semester hours of planned and approved graduate credit, including the master's degree. The URL for the School of Music Home Page is http://finearts.uky.edu/music.

Entrance Requirements
Applicants must meet the entrance requirements of The Graduate School as well as those of the School of Music. Applicants to all graduate programs in music are required to take entrance exams in the areas of music theory (aural and written) and music history and literature. (Note: Music therapy students will take a discipline-specific music theory and music history exam, due to the specific requirements designated by music therapy professional/accrediting bodies.) Applicants to programs in music education, music therapy, and voice, as well as doctoral study in musicology, are also required to take an additional exam in the proposed area. Those seeking a degree in performance must audition as well. Applicants can send a video/DVD of a recent concert for preliminary audition. Live auditions should be scheduled by contacting the faculty member in charge of the student's performing area, or filling out an audition request form on the School of Music web page. The purpose of these exams and the audition is to discern the applicant's readiness to pursue graduate work in music. Students who have graduated from or are currently enrolled as undergraduate students at the University of Kentucky are not exempt from these entrance requirements. Applicants must demonstrate a minimum level of skills and knowledge on the entrance exams in order to be accepted into the program. For students who are accepted, the exams indicate whether they need review classes in specific areas before entering into graduate-level course work, but a willingness to take review classes is not a substitute for satisfactory performance on the exams. All applicants should take the exams seriously and attempt to do their best work. Admission of students who need review classes will be admitted conditionally until these requirements have been completed, which should be before the student has completed 12 graduate credit hours, or registration for additional classes may be blocked. Entrance examinations are usually scheduled on 4 dates per year at the School of Music: in November, in January/February, in February/March, and in June. The applicant should notify the Music Graduate Office of his/her intention to take the entrance exams and confirm the date at least four weeks prior to the exam. There is no charge to take the exams on the scheduled dates. Students who cannot arrange to take the exams on one of these dates may hire a private proctor to give them the exams at a mutually convenient time.

Note: Persons not applying for financial assistance may choose any of the above dates. Persons who meet the GPA and GRE score requirements for Non-Service Fellowships and wish to be considered for these awards must take the examinations (and the audition if applicable) no later than the first Saturday in

February. Those applying for teaching assistantships may choose to take the examinations in November or February for application for the subsequent fall semester. Those wishing to begin studies during a summer session must take the examinations no later than the first Saturday of March. Applicants should first complete the online application at the Graduate School homepage, then complete the online application at the School of Music website, prior to doing the audition and entrance exams.

General Requirements for Master's Degree
Foreign Language Requirement: The Master of Arts degree requires a reading knowledge of one foreign language, preferably French or German. Voice Performance majors in the Masters of Music are expected to have taken at least one year each of undergraduate level German, French, and Italian (or the equivalent by petition to the Director of Graduate Studies in the School of Music) as a prerequisite for degree study. If deficient, a student must enroll in language courses each semester of study until the deficiency is removed. Language classes must be passed with a letter grade of B or above.

Thesis Requirement: The Master of Arts degree requires a thesis (Plan A: see general requirements). For the Master of Music degree in Performance, a public recital acceptable to the faculty is required in lieu of a thesis. For the Master of Music degree in Composition, a composition of major proportions, acceptable to the composition-theory faculty and publicly performed, must be submitted in lieu of a written thesis. For the Master of Music in Music Education, students may choose the thesis option (Plan A), or the non- thesis option which requires taking six hours of additional course work instead (Plan B).

A final comprehensive examination is required for each program. At least fifty percent of all course credits must be at the 600 level or above.

Master of Arts

Prerequisites: A suitable background in music literature and music theory, and a reading knowledge of one foreign language, normally French or German.

Master of Arts (Musicology Emphasis)

Music History and Literature	(9-12)
Theory (including a minimum of one course from MUS 670, 671, 672, or 676)	(6-9)
Research Methods (MUS 618)	(3)
Directed Electives	(0-6)
Thesis	(6)
Total	(30)

Master of Arts (Theory Emphasis)

Theory (including a minimum of one course from MUS 670, 671, 672, or 676)	(9-12)
Music History and Literature	(6-9)
Research Methods (MUS 618)	(3)
Directed Electives	(0-6)
Thesis	(6)
Total	(30)

Master of Music (Composition)
Prerequisites: Submission of three original compositions.

Advanced Composition (MUS 673)	(4)
Orchestration (MUS 570 and 571)	(4)
Music History and Literature	(6)
Theory (including a minimum of one course from: MUS 670, 671, 672, or 676)	(9)
Directed Electives	(1)

Thesis Composition	(6)
Total	(30)

The thesis composition must be publicly performed. The student is responsible for the preparation of legible score and parts.

Master of Music (Performance)
Prerequisites: Acceptance by the appropriate faculty of applied music.

Music Performance (including recital)	(9)
Music History and Literature	(6)
Theory (including a minimum of one course from MUS 670, 671, 672, or 676)	(6)
Directed Electives	(9)
Recital	(0)
Total	(30)

A minimum of three full semesters, excluding summer sessions, is necessary for an M.M. in Performance.

This MM degree program is offered in the following specialty areas: piano, piano with emphasis in instrumental or vocal accompanying (see below), voice (see below), organ, violin, viola, cello, bass, guitar, flute, oboe, clarinet, saxophone, bassoon, trumpet, horn, trombone, euphonium, tuba, percussion and conducting (choral or instrumental). Wind, string, percussion, and conducting majors must participate in at least one University-sponsored performing organization for two semesters.

Master of Music (Piano Performance: Instrumental Accompanying)

Piano Performance (MUP 601, including recital)	(9)
Music History and Literature (at 600 level, including MUS 624)	(9)
Theory (including a minimum of one course from MUS 670, 671, 672, or 676)	(6)
Advanced Chamber Ensemble (MUC 570)	(4)
Electives (MUP 503 or MUP 520 recommended)	(2)
Total	(30)

MASTER OF MUSIC (Piano Performance: Vocal Accompanying)

Piano Performance (MUP 601, including recital)	(9)
Music History and Literature (at 600 level, including MUS 520)	(9)
Theory (including a minimum of one course from MUS 670, 671, 672, or 676)	(6)
Vocal Coaching for Singers (MUP 530 and MUP 630)	(4)
Electives (MUP 503 or MUP 520 recommended)	(2)
Total	(30)

MASTER OF MUSIC (Voice Performance)

Voice Performance (including recital)	(9)
Music History and Literature (must include MUS 623 or 627)	(6)
Theory (including a minimum of one course from MUS 670, 671, 672, or 676)	(6)
Physiology and Functioning of the Singing Voice (MUS 665)	(3)
Materials, Techniques, and Literature of Voice Teaching (MUS 667)	(3)
Advanced Vocal Repertory (MUS 620)	(3)
Total	(30)

A minimum of three full semesters, excluding summer sessions, is necessary for an M.M. in Performance.

Master of Music (Sacred Music)

UK Requirements:	(27)

MUS 660 Choral Methods	(3)
Music History and Literature	(3)
Music Theory (including a minimum of one course from MUS 670, 671, 672, or 676)	(3)
Ensemble	(2)
Music Education (Choose from MUS 560, MUS 561, MUS 650 or other graduate music education course in consultation with advisor)	(3)
Internship	(3)
Specialized area of study	(10)
Course work at an accredited seminary or other institution specializing in religious studies (Choose from topics such as Music in Worship, Designing Worship, Congregation, Worship and Spirituality, Worship and Music in the Liturgical Year, or other courses. Credits must be completed with a grade "B" or above and must be transferred to UK officially prior to graduation)	(6-9)
Total	(33)

Specialized areas of study:

VOICE or KEYBOARD (organ or piano)	
MUP 558 Choral Conducting	(4)
Music Performance (Voice or Keyboard)	(6 +*)
CHORAL CONDUCTING	
MUP 558 & 658 Choral Conducting	(8)
Keyboard, MUP 501 or 503	(2)

+ An audition in the performing area (voice, organ, or piano) is required.
* A 15-minute jury before either the voice faculty (for vocal emphasis) or the keyboard faculty (for piano or organ emphasis) is required at the end of the applied study.

Master of Music (Music Education - Plan A)

Core Requirements:	(12)
MUS 600 Research I	(3)
MUS 601 Foundations of Music Education	(3)
Music History and Literature	(3)
Music Theory (including MUS 578,MUS 670, MUS 671, or MUS 672)	(3)
Thesis	(6)
Music Education Electives	(6)
The student can select any Music Education courses 500 level or above.	
Music Electives The student can select any Music course 500 level or above in Performance, Music History, Music Theory, or Composition.	(6)
Total	(30)

Students planning to earn a doctorate in Music Education should elect Plan A.
(Students planning to obtain a Rank II certification should contact the Chair of Music Teacher Education Program (TEP) to get informed about the latest Rank II requirements.)

Master of Music (Music Education - Plan B)

Core Requirements:	(12)
MUS 600 Research I	(3)
MUS 601 Foundations of Music Education	(3)
Music History and Literature	(3)
Music Theory (including MUS 578, 670, 671, 672, or 676)	(3)
Specialized Area of Study	(12)

(The student will select 12 hours from the five areas described below, Instrumental Teaching, Choral Teaching, General Music, Orff Methods, and Choral or Instrumental Conducting. The student and advisor will determine the general area of emphasis and plan a set of courses which best fulfills the student's needs

Music or Education Electives (The student can select any music or education courses 500 level or above.)	(6)
Total	(30)

(Students planning to obtain a Rank II certification should contact the Chair of Music Teacher Education Program (TEP) to get informed about the latest Rank II requirements.)

Specialized areas of study for Plan B
INSTRUMENTAL TEACHING EMPHASIS - Band or Orchestra (Student and Advisor choose twelve hours from courses below which would best fulfill the student's needs.)

MUP Applied Performance (maximum of 4 hours)	(1-4)
MUP Secondary Applied	(1-2)
MUS 680 Band History and Literature	(3)
MUS 622 Symphonic Literature	(3)
MUS 660 Adv. Methods: Elementary General Music	(3)
MUP 558 Conducting or MUP 658 Conducting	(1-4)
MUS 684 Advanced String Methods and Materials	(3)
MUS 570 Orchestration	(2)
MUS 706 Music Learning and Behavior	(3)

CHORAL TEACHING EMPHASIS (Student and Advisor choose twelve hours from courses below which would best fulfill the student's needs.)

MUP Applied Performance (Maximum of 4 hours)	(1-4)
MUS 660 Adv. Methods: Elementary General Music	(3)
MUS 650 Music Education Workshop	(1-3)
MUS 660 Adv. Methods: Choral Techniques	(3)
MUP 558 Conducting or MUP 658 Conducting	(1-4)
MUS 706 Music Learning and Behavior	(3)

GENERAL MUSIC TEACHING EMPHASIS - Elementary Music, Jr. High, Middle School General Music (Student and Advisor choose twelve hours from courses below which would best fulfill the student's needs.)

MUP Applied Performance (maximum of 4 hours)	(1-4)
MUS 660 Adv. Methods: Elementary General Music	(3)
MUS 560 Orff Schulwerk Workshop	(1-3)
MUS 561 Orff Schulwerk Certification	(2-6)
MUS 650 Music Education Workshop	(1-3)
MUS 766 Seminar in Music Education	(3)
MUS 664 Music and Special Learners	(3)
MUS 706 Music Learning and Behavior	(3)

General Music Teaching Emphasis – Orff Schulwerk Concentration
This program follows all current requirements leading to the Master of Music Degree specializing in General Music with an Orff Schulwerk emphasis. Students must complete at least nine hours of coursework including MUS 560 Orff Schulwerk and MUS 561 Orff Schulwerk Certification Levels One and Two within the 12-hour general music specialization. These courses are normally offered only in the summer as part

of the Orff Teacher Training Courses. Students desiring to write a master's thesis may do so by choosing a topic related to Orff Schulwerk for the thesis and completing six hours of Orff Schulwerk and achieving Level Two Orff Certification.

This MM degree with Concentration in Orff Schulwerk is part of the Academic Common Market program recognized in the state of West Virginia. Residents of West Virginia can pay Kentucky in-state tuition by submitting an application to their State Academic Common Market Coordinator for approval.

Conducting Emphasis - Instrumental or Choral (Student and advisor choose twelve hours from courses below which would best fulfill the student's needs).

MUP Applied Performance (maximum of 4 hours)	(1-4)
MUP Secondary Applied Performance	(1-2)
MUS 680 Band History and Literature	(3)
MUS 622 Symphonic Literature	(3)
MUS 681 Advanced Rehearsal Techniques - Band	(3)
MUP 558 Conducting or MUP 658 Conducting (4 hours required)	(1-4)
MUS 660 Adv. Methods: Choral Techniques	(3)
MUS 570 Orchestration or MUS 571 Orchestration	(2)
MUS 684 Adv. String Methods & Materials	(3)
MUS 706 Music Learning and Behavior	(3)

Master of Music (Music Therapy)
Equivalency Requirements: Combined equivalency/master's students must have met all AMTA Professional Competencies before finalizing the Master of Music in Music Therapy degree. The number of credits required to complete the equivalency option will vary based on previous courses taken.

All students (both traditional and combined equivalency/master's degree students) must complete the following coursework to finalize the master's degree. Please note: any graduate coursework taken to remediate professional competencies will not count toward the master's degree.

MUS 600 Research I	(3)
MUS 648 Thesis	(6)
MUS 633 Graduate Clinical Placement	(1)
Music Therapy (The student will select 11 hours from the following courses:	
MUS 630; MUS 631; MUS 632; MUS 664; MUS 706; MUS 730; MUS 770)	(11)
Electives	(9)
(The student will select 9 hours of electives based on consultation with his or her Academic advisor.)	
Total	(30)

Doctor of Musical Arts

The Doctor of Musical Arts program offers opportunity for fullest development as a performer, composer, or teacher of music performance or composition. Technical excellence is a prerequisite for admission into the program; doctoral study emphasizes work in adjunct areas of music, related fields, and research as they enhance and support the major area.
Language requirement differs among performance areas. If required and if deficient, a student must enroll in language courses each semester of study until the deficiency is removed. Language classes must be passed with a grade of B or higher.

Recital requirement differs among performance areas. At least three weeks prior to each recital, the student must do a pre-recital hearing for three members of the applied faculty who must sign and submit a Pre-Recital Hearing Form to be placed in the student's file. The program content of the recitals will be

established in cooperation with the student's Advisory Committee. Immediately after each successful recital, a Recital Approval form must be signed by three members of the Advisory Committee and placed in the student's file. The student should complete at least one recital prior to taking the Qualifying Exam.

If the Major Professor of a student in a performance program is an Associate Member of the Graduate Faculty, he/she can serve as co-chair and another member of the Advisory Committee, who is a Full Member of the Graduate Faculty, shall serve as chair. If the major professor of a student in a performance program is not a member of the Graduate Faculty, a Full Member of the Graduate Faculty shall serve as chair and major academic professor; the performance teacher shall serve as an additional, non-voting member of the committee.

DMA students are required to pass a Qualifying Exam (QE) upon completion of all coursework. Part I of the QE (History and Theory, 3 hours each) will be given as a common exam early every semester. Students should pass Part I prior to taking Part II of the QE which is the Specialty Area portion (six hours) of the QE. Part III of the QE is the oral exam (2 hours maximum) and should be taken last, after completing Parts I and II successfully.

Requirements for doctoral projects differ among the performance areas. The Project for the D.M.A. specializing in Composition will consist of two parts. Part 1 is a large-scale original composition. The candidate is responsible for arranging a public performance of the work. Part 2 is an in-depth analysis and discussion of the composition. The composition and in-depth written analysis and discussion are to be approved by the Advisory Committee in the same manner as a Ph.D. dissertation. For specific requirements in each performance area, please consult the Graduate Music Handbook posted at http://finearts.uky.edu/sites/default/files/Uploads/Documents/GRADUATE%20HANDBOOK.pdf.

Doctor of Musical Arts
The minimum course requirements for all DMA students beyond the master's degree are as follows:

MUS 618 Research Methods*	(3)
Music History and Literature#	(9)
Advanced Music Theory**	(6)
Performance Major	(12)
Minor (optional)***	(9)
Total	(30-39)

#Must include two regular courses offered by the Division of Musicology (one 700-level course recommended) and those required by the specific performance major area. One course may be from the Division of Musicology, Theory, Music Education, or Performance.

Doctor of Musical Arts (Voice Performance)

Research Methods (MUS 618)*	(3)
Music History and Literature (must include MUS 623 or 627*)	(6)
Advanced Music Theory**	(6)
Voice Performance	(12)
Performance Related Study (must include MUS 665*, 667*, and 620*)	(6-15)
Directed Research in Vocal Literature (MUS 780)	(6)
Minor (Optional)***	(9)
Total	(33-51)

Doctor of Musical Arts (Choral Conducting)

Research Methods (MUS 618)*	(3)

Music History and Literature (must include MUS 625)	(9)
Advanced Music Theory**	(6)
Advanced Choral Methods (MUS 660)	(3)
Performance Major****	(12)
Minor (Optional)***	(9)
Total	(33-42

Doctoral of Musical Arts (Instrumental Conducting)

Research Methods (MUS 618)*	(3)
Music History and Literature (must include MUS 622 or MUS 680)	(9)
Advanced Music Theory**	(6)
Advanced Rehearsal Techniques (MUS 681)	(3)
Performance Major (6 hours of MUP 658 and 6 hours of MUP 758)	(12)
Minor (Optional)***	
Total	(33-42

*If not completed at the master's level.
**MUS 578 cannot be used to fulfill this requirement.
***The minor may be taken within or outside the School of Music, and is subject to the approval of the Advisory Committee and the chairman of the department concerned.
****Must include a minimum of 4 credits of MUP 758

Doctor of Philosophy

The School of Music offers courses and research opportunities leading to the Ph.D. Applicants must meet the entrance requirements of The Graduate School as well as those of the School of Music. Applicants must submit a master's thesis or a research paper of sufficient scope and quality to demonstrate competence in research and clarity of expression. The basic core requirements beyond the master's degree are as follows:

Research Methods: MUS 618 (if not taken at the master's level)	(3)
Music History and Literature beyond the master's	(9)
Advanced Music Theory beyond the master's*	(6)
Three seminars (minimum) beyond the master's	
Total	(27)

(24 hours if competency in Research Methods is accepted by the Musicology faculty.)
*MUS 578 cannot be used to fulfill this requirement.

There is no specific requirement in a minor area, but such work may be required by a student's Advisory Committee if it is essential to the major research or field of concentration.

Satisfaction of language requirements will conform to The Graduate School policy; however, specific languages required will vary with individual options. The foreign language requirement(s), if applicable, must be met by the end of the first full year of study in the Ph.D. program. The student's Advisory Committee must be formed and appointed by the Dean of the Graduate School prior to advance registration for the student's third semester. The dissertation topic and prospectus must be approved by the Advisory Committee; the dissertation itself must be the result of original research which adds to or modifies what has previously been known on the subject. Qualifying examinations should be taken no later than one semester after the completion of course work. A student is admitted to candidacy for the Ph.D. degree only after meeting the language requirement(s) and passing the qualifying examinations.

The Ph.D. in music may be pursued in one of three areas: music education, music theory, or musicology. The program outline for each area beyond the core requirements is given below; the student's Advisory Committee advises on and plans the actual program of study.

Music Education
Music in Higher Education (MUS 762)
Psychology of Music (MUS 770)
At least one graduate level course in statistics
Knowledge of acoustics (PHY 140 or equivalent); Knowledge of specialized research in music education (MUS 600 or equivalent). These requirements must be met by the end of the first year of doctoral study.
A foreign language is not required but student must show competency in computer use and statistical understanding for research purposes.
Additional courses in music education or adjunct subjects as recommended by the Advisory Committee.

Music Theory
Pedagogy of Theory (MUS 674)
Advanced Analytical Techniques (MUS 676)
History of Music Theory (MUS 678)
Additional courses in music theory or adjunct subjects as recommended by the Advisory Committee
A reading knowledge of French, German, or a language appropriate to the research interest

Musicology
Medieval and Renaissance Notation (MUS 700)
Proseminar in Musicological Methods (MUS 703)
Additional courses in musicology or adjunct subjects as recommended by the Advisory Committee
A reading knowledge of at least two foreign languages, normally German and either French or Italian

Comnined M.A./Ph.D. Program in Musicology & Ethnomusicology
The First Two Years
The first two years of study provide training in the practice and methodology of musicology and ethnomusicology. A minimum of 30 hours of graduate credit is required during the first two years of graduate study.

Second-Year Review; Examinations and Research Paper
During the second year of graduate study the student will be expected to:

- Take an examination designed to test the student's knowledge of European and American music and of music theory. This will include a four-hour written examination in general music history, and a four-hour written examination in music theory.
- Write a paper on a topic of the student's choice, and with approval of the student's advisor. This third-term paper should explain and review a selected topic in musicology or ethnomusicology, survey and evaluate the available literature on the topic, and identify lines of inquiry which remain to be pursued. The recommended length for this paper is 25-30 pages of prose, in addition to the bibliography, with appendices and musical examples as needed. Three copies of the paper are to be submitted to the Division of Musicology, which may require revisions before final acceptance.

The departmental evaluation of all students in the second year is based on course work completed to date, the paper, the results of the preliminary exam, and the student's prospects for continued success in the field. The department's judgment is a collective one. If the evaluation is favorable, the student may continue in the Ph.D. program. A student who fails the common exams may receive a terminal M.A.

through the following steps: a) completing 36 hours of course work, b) submitting an acceptable 2nd-year paper, in lieu of thesis, and c) establishing a Masters' committee and passing an oral exam.

A student who successfully completes the 2nd-year review, which includes the common exams and the 2nd-year paper, but fails the special area Qualifying Examination, is eligible to receive a terminal M.A. without further academic work, as long as performance on the oral portion of the qualifying exam is considered to have been satisfactory as an M.A. final examination. The advisor and two other members of the doctoral committee will be named as the M.A. committee to complete the necessary paperwork."

"A student who passes the qualifying exams but does not successfully complete the dissertation and/or defense will be eligible to receive the M.A. without further work of any kind, except for applying for the degree. The advisor and two other members of the doctoral committee will be named as the M.A. committee to complete the necessary paperwork, certifying the 2nd-year paper in lieu of the thesis and the doctoral qualifying examination in lieu of the M.A. final exam.

Students entering the program with M.A. degrees in Musicology from the University of Kentucky or other institutions may make a written petition to the departmental faculty to participate in the Second-Year Review during their first year of residency. Note: In order for the petition to be considered, the student must have been admitted without the requirement of any remedial work, and must have taken an appropriate research method class as part of the master's program.

The Third Year
During the third year of study, the student will take additional courses in musicology, ethnomusicology, theory, and any appropriate cognate areas within or outside the music program; a limited number of these courses may be independent study in the area of specialization.

The student will take the qualifying examinations, which will consist of a special field examination in musicology or ethnomusicology, the general sense and limits of which have been discussed in advance with the prospective dissertation advisor and the student's advisory committee. If necessary, the committee may also retest areas in which the second-year exams demonstrated deficiencies.

The Dissertation
As soon as possible after the successful completion of Qualifying Examinations, the student should submit a dissertation proposal to his/her Advisory Committee. The student will defend this proposal at a meeting of the committee, and is expected to submit any required revisions within two months.
The dissertation itself will meet all the requirements of the University of Kentucky Graduate School, and will be defended following the usual Final Examination procedures.

Course Requirements

MUS 618 - Research Methods	(3)
MUS 703 - Proseminar in Musicological Methods	(3)
MUS 700 - Medieval and Renaissance Notation	(3)
MUS 702 - Seminar in Musicology (variable topics)	(12-18)
MUS 710 - Introduction to Ethnomusicology	(3)
MUS 711 - Seminar in Ethnomusicology (variable topics)	(3-6)
Advanced Music Theory (not including MUS 578)	(9)
Directed electives (including independent study)	(9-18)
Total	54

Note: Students entering the program with a Master's degree, whose petition to enter in the second year has been approved, will be required to take 36 hours, with specific courses to be determined by the Advisory Committee based on the evaluation of coursework taken in the previous degree.

Foreign Language
All students in the combined M.A./Ph.D. program must demonstrate reading knowledge of two foreign languages. One of these is usually French or German, but they may also be other languages appropriate to the students' research interests. The Graduate School offers reading knowledge courses in French, German, and Spanish.

Advising
Students in the M.A./Ph.D. program will work initially with an individual advisor, and then with an Advisory Committee. For further details on the program see the program webpage: http://finearts.uky.edu/music/musicology .

Graduate Certificate in Music Theory Pedagogy
The School of Music offers course work leading to the Certificate in Music Theory Pedagogy. The Certificate requires a total of 15 hours consisting of the following courses:

MUS 674	Theory Pedagogy	(3)
MUS 675	Internship	(3)
MUS 676	Advanced Analytic Techniques	(3)
and two elective theory courses selected from the following:		
MUS 572	Counterpoint	(3)
MUS 573	Counterpoint	(3)
MUS 670	Analytical Techniques for Tonal Music	(3)
MUS 671	Introduction to Schenkerian Analysis	(3)
MUS 672	Analytical Techniques for Music Since 1900	(3)
MUS 676:	Analytical Techniques for Atonal Music	(3)
MUS 677	Contemporary Music Idioms	(3)
MUS 678	History of Theory	(3)
MUS 772	Seminar in Theory	(3)
MUS 799	Independent Work in Music Theory	(1-3)

The Certificate will be awarded upon completion of the requirements. Students working on the Certificate are expected to earn a grade of B or higher in each certificate requirement.

Graduate Certificate in Orff Schulwerk
The School of Music offers course work leading to the Certificate in Orff Schulwerk. The Certificate requires a total of 12 hours consisting of the following courses:

MUS 561	Orff Schulwerk Certification I	(2-4)
MUS 561	Orff Schulwerk Certification II	(2-4)
MUS 561	Orff Schulwerk Certification III	(2-4)
OR		
MUS 560	Orff Schulwerk	(1-3)
MUS 666	Independent Project	(1-3)

The content for MUS 666 and MUS 560 must be pre-approved by the UK Director of Orff Schulwerk. The Certificate will be awarded upon completion of the requirements. Students working on the Certificate are expected to earn a grade of B or higher in each certificate requirement.

Graduate Certificate in Vocal Pedagogy
The School of Music offers course work leading to the Certificate in Vocal Pedagogy. The Certificate requires a total of 15 hours consisting of the following courses:

MUP 502/602	Voice	(3)
MUS 665	Physiology & Functioning of the Singing Voice	(3)
MUS 667	Materials, Techniques & Literature of Voice Teaching	(3)
MUS 668/695	Internship in Vocal Pedagogy	(2)
CSD 670	Voice Disorders	(3)
CSD 789	Independent Study in Communication Disorders	(1)

Optional and recommended for students interested in doing scientific research:

MUS 600	Research I	(3)

The content for Internship and Independent Study must be pre-approved by the course instructor and the Director of the Vocal Pedagogy. The Certificate will be awarded upon completion of the requirements. Students working on the Certificate are expected to earn a grade of B or higher in each certificate requirement.

Dismissal Policy
After admission into a music graduate program, a student will be dismissed for any one of the following conditions:

- Review courses not completed (with passing grade at B or higher) by the end of first year of study
- Two "C's" or lower in grade report for courses in the degree program
- Failure to pass full faculty-jury twice

Music Courses
All music performance courses (MUP) may be repeated for credit as needed. Music ensemble courses (MUC) may be repeated indefinitely.

All music performance courses carry from one to four credits, though three credits is the norm for performance majors, during the fall and spring semesters. (Applied music offerings during the summer are limited. Two credits is the maximum allowed, and one credit is the norm.)

Graduate Courses

MUC570	Advanced Chamber Music Ensemble	(1)
MUC 596	Opera Workshop	(1-3)
MUC 675	Jazz Ensemble	(1)
MUC 689	Wind Ensemble	(1)
MUC 691	Orchestra	(1)
MUC 692	University Choristers	(1)
MUP 501	Piano	(1-4)
MUP 502	Voice	(1-4)
MUP 503	Organ	(1-4)
MUP 504	Violin	(1-4)
MUP 505	Viola	(1-4)
MUP 506	Cello	(1-4)
MUP 507	String Bass	(1-4)
MUP 508	Flute	(1-4)
MUP 509	Oboe	(1-4)
MUP 510	Clarinet	(1-4)
MUP 511	Bassoon	(1-4)
MUP 512	Trumpet	(1-4)
MUP 513	French Horn	(1-4)
MUP 514	Trombone	(1-4)
MUP 515	Euphonium	(1-4)
MUP 516	Tuba	(1-4)
MUP 517	Saxophone	(1-4)
MUP 518	Percussion	(1-4)
MUP 520	Harpsichord	(1-4)
MUP 521	English Horn	(1-4)
MUP 523	Classical Guitar	(1-4)
MUP 530	Vocal Coaching For Singers	(1-3)
MUP 558	Conducting	(1-4)
MUP 601	Piano	(1-4)
MUP 602	Voice	(1-4)
MUP 603	Organ	(1-4)
MUP 604	Violin	(1-4)
MUP 605	Viola	(1-4)
MUP 606	Cello	(1-4)
MUP 607	String Bass	(1-4)
MUP 608	Flute	(1-4)
MUP 609	Oboe	(1-4)
MUP 610	Clarinet	(1-4)
MUP 611	Bassoon	(1-4)
MUP 612	Trumpet	(1-4)
MUP 613	French Horn	(1-4)
MUP 614	Trombone	(1-4)
MUP 615	Euphonium	(1-4)
MUP 616	Tuba	(1-4)
MUP 617	Saxophone	(1-4)
MUP 618	Percussion	(1-4)
MUP 620	Harpsichord	(1-4)
MUP 623	Classical Guitar	(1-4)
MUP 630	Vocal Coaching For Singers	(1-3)
MUP 658	Conducting	(1-4)
MUP 701	Piano	(1-4)
MUP 702	Voice	(1-4)
MUP 703	Organ	(1-4)
MUP 704	Violin	(1-4)
MUP 705	Viola	(1-4)
MUP 706	Cello	(1-4)
MUP 708	Flute	(1-4)
MUP 709	Oboe	(1-4)
MUP 710	Clarinet	(1-4)
MUP 711	Bassoon	(1-4)
MUP 712	Trumpet	(1-4)
MUP 713	French Horn	(1-4)

MUP 714	Trombone	(1-4)
MUP 716	Tuba	(1-4)
MUP 717	Saxophone	(1-4)
MUP 718	Percussion	(1-4)
MUP 730	Vocal Coaching For Singers	(1-3)
MUP 758	Conducting	(1-4)
MUS 400G	Music History Review	(3)
MUS470G	Review Of Harmony	(1)
MUS471G	Review Of Aural Skills	(1)
MUS 500	Music Of The Middle Ages	(3)
MUS501	Music Of The Renaissance	(3)
MUS 502	Music Of The Baroque Era	(3)
MUS 503	Music Of The Classic Period	(3)
MUS 504	Music Of The Nineteenth Century	(3)
MUS 505	Music Of The Twentieth Century	(3)
MUS 506	History Of American Music	(3)
MUS 520	Vocal Solo Literature	(3)
MUS 521	Organ Literature	(3)
MUS 522	Piano Literature To 1830	(3)
MUS 523	Piano Literature Since 1830	(3)
MUS 540	Applications Of Music Technology	(3)
MUS550	Topics In Music Education (Subtitle Required)	(1-3)
MUS 560	Orff Schulwerk	(1-3)
MUS561	Orff Certification: Level I, II, Or III	(2)
MUS 566	Piano Pedagogy	(3)
MUS 570	Orchestration	(2)
MUS 571	Orchestration	(2)
MUS 572	Counterpoint	(3)
MUS573	Counterpoint	(3)
MUS 574	Composition	(2)
MUS 575	Composition	(2)
MUS 578	Analysis And Style Survey	(3)
MUS 600	Research I	(3)
MUS 601	Foundations In Music Education	(3)
MUS 618	Research Methods	(3)
MUS 620	Advanced Vocal Repertory (Subtitle Required)	(3)
MUS 622	Symphonic Literature	(3)
MUS 623	Opera Literature I	(3)
MUS 624	Chamber Music Literature	(3)
MUS 625	Choral Literature	(3)
MUS 627	Opera Literature Ii	(3)
MUS 650	Music Education Workshop	(1-4)
MUS 660	Advanced Music Education Methods And Materials (Subtitle Required)	(3)
MUS 664	Music And Special Learners	(3)
MUS 665	Physiology And Functioning Of The Singing Voice	(3)
MUS 666	Advanced Orff Schulwerk	(1-3)
MUS 667	Materials, Techniques And Literature Of Voice Teaching	(3)
MUS 670	Analytical Techniques For Tonal Music	(3)
MUS 671	Introduction To Schenkerian Analysis	(3)
MUS 672	Analytical Techniques For Music Since 1900	(3)

MUS 674	Pedagogy Of Theory	(3)
MUS 675	Internship In Theory Pedagogy	(1)
MUS 676:	Analytical Techniques For Atonal Music	(3)
MUS 677	Contemporary Music Idioms	(3)
MUS 678	History Of Theory	(3)
MUS 680	Band History And Literature	(3)
MUS 684	Advanced String Methods And Materials	(3)
MUS 690	Topics In Musicology (Subtitle Required)	(3)
MUS 694	Internship In Sacred Music	(1)
MUS 695	Independent Work In Music	(1-3)
MUS 700	Medieval And Renaissance Notation	(3)
MUS 702	Seminar In Musicology	(3)
MUS 703	Proseminar In Musicological Methods	(3)
MUS 704	Music Technologies	(3)
MUS 705	Research II	(3)
MUS 706	Music Learning And Behavior	(3)
MUS 707	Tests And Measurements In Music	(3)
MUS 719	Independent Work In Musicology	(1-3)
MUS 748	Master’s Thesis Research	(0)
MUS 749	Dissertation Research	(0)
MUS 750	Independent Work In Music Education	(1-3)
MUS 762	Music In Higher Education	(3)
MUS 766	Seminar In Music Education	(3)
MUS 767	Dissertation Residency Credit	(2)
MUS 768	Residence Credit For The Master’s Degree	(1-6)
MUS 769	Residence Credit For Doctor’s Degree	(1-12)
MUS 770	Psychology Of Music	(3)
MUS 772	Seminar In Theory	(3)
MUS 780	Directed Research In Vocal Literature	(1-3)
MUS 799	Independent Work In Music Theory	(1-3)

Neuroscience

College of Medicine

The Department of Neuroscience offers a graduate program leading to the Doctor of Philosophy degree in Anatomy and Neurobiology. Graduate study in anatomy and neurobiology is designed to prepare candidates for research careers in academics, industry, and government laboratories. Admission to the graduate program is competitive and is based upon academic background, professional recommendations, performance on the Graduate Record Examination (GRE), experience, and when possible, personal interviews. Students should have completed an undergraduate degree in biology, biochemistry, chemistry, engineering, mathematics, neurosciences, physics, pharmacy or psychology. Some students who have already completed an M.D. or D.M.D. degree may be interested in obtaining specific training in anatomy and neurobiology in order to complete their professional education. For traditional students with only an undergraduate degree, undergraduate courses in organic chemistry, physical chemistry, calculus, physics, and the biological sciences are highly recommended.

Students will have the opportunity to join faculty research programs across a spectrum of topics including: cellular and molecular neurobiology, neurodegenerative diseases and aging, brain and spinal cord injury, neuroendocrinology, and behavioral, cognitive and integrated neuroscience. The program of study is tailored to the individual background and career goals of the student and stresses an interdepartmental approach both in the selection of courses and in the pursuit of research. Students are expected to participate in graduate seminars, journal clubs, research seminars; to interact with visiting scholars; and to present the results of their research at local and national meetings. Teaching opportunities leading to a graduate certificate in Anatomical Sciences Instruction are also available. Financial aid is available to students accepted into the program.

Admission Requirements
Admission to the Ph.D. program in Neuroscience is through the Integrated Biomedical Sciences (IBS) Curriculum. Inquiries regarding admission should be directed to the Director, Integrated Biomedical Sciences Curriculum, University of Kentucky College of Medicine at http://www.mc.uky.edu/ibs/. For information about the Ph.D. program in Anatomy and Neurobiology, contact the Director of Graduate Studies, Department of Neuroscience. Information may also be obtained from the department website.

Graduate Courses

ANA 503	Independent Work In Anatomy	(3)
ANA 511	Introduction To Human Anatomy	(5)
ANA 512	Microscopy And Ultrastructure	(4)
ANA 516	Selected Topics In Advanced Neuroscience	(3)
ANA 530	Combined Histology And Special Oral Microanatomy	(5)
ANA 534	Dental Gross Anatomy And Embryology	(5)
ANA 538	Dental Neuroanatomy	(2)
ANA 600	Seminar In Anatomy	(1)
ANA 605	Neurobiology Of Cns Injury And Repair (Same As PGY 605)	(3)
ANA 609	Educational Strategies In The Anatomical Sciences	(3)
ANA 611	Regional Human Anatomy	(5)
ANA 612	Biology Of Aging (Same As BIO/GRN/PGY 612)	(3)

ANA 625	Introduction To Functional MRI	(1)
ANA 629	Techniques Of Anatomical Research	(2)
ANA 631	Advanced Human Anatomy	(3-5)
ANA 636	Advanced Neuroscience	(3-5)
ANA 638	Developmental Neurobiology (Same As BIO/PGY/PSY 638)	(3)
ANA 660	Biology Of Reproduction (Same As ASC 660 And PGY 660)	(3)
ANA 662	Ultrastructural Anatomy	(2-5)
ANA 710	Aging Of The Nervous System (Same As GRN/PGY/PHA 710)	(3)
ANA 748	Master's Thesis Research	(0)
ANA 749	Dissertation Research	(0)
ANA 767	Dissertation Residency Credit	(2)
ANA 768	Residence Credit For The Master's Degree	(1-6)
ANA 769	Residence Credit For The Doctor's Degree	(0-12)
ANA 780	Special Topics In Neurobiology	(1-3)
ANA 790	Research In Anatomy	(1-12)

Nursing

College of Nursing

The College of Nursing offers graduate programs leading to the research doctorate, the Doctor of Philosophy in Nursing, and a professional degree program leading to the clinical doctorate, the Doctor of Nursing Practice. The College of Nursing is not admitting new students to the Master of Science in Nursing degree program.

Doctor of Philosophy

The College of Nursing offers graduate programs leading to the research doctorate, the Doctor of Philosophy in Nursing, and a professional degree program leading to the clinical doctorate, the Doctor of Nursing Practice. The College of Nursing is not admitting new students to the Master of Science in Nursing degree program.

Doctor of Nursing Practice

The College of Nursing offers a post-Baccalaureate of Science in Nursing (B.S.N.) entry option to the Doctorate of Nursing Practice (DNP) program to prepare nurse practitioners, clinical nurse specialists, public health nurses and nurse managers. This professional, clinical doctoral program builds on the B.S.N. degree and the practice experience of a Registered Nurse (R.N.). A post MSN entry option is also available. Information about the DNP program, admission requirements and sample curriculum plans may be found on the College of Nursing Web page, http://www.uky.edu/nursing/.

Admission Requirements

Applicants to the PhD program must meet the minimum requirements of the Graduate School, as well as the following requirements of the nursing program. An applicant for the BSN entry option must possess a bachelor's degree in nursing from a nationally accredited school; a cumulative undergraduate grade point average of 3.3 or higher, on a 4.0 scale; a Kentucky Registered Nurse license; GRE general test scores are optional but highly recommended; GRE scores are used for competitive funding opportunities, particularly those from the Graduate School; three references; personal interview(s); a goal statement, an example of scholarly written work, and description of clinical experience. An applicant for the MS/MSN entry option must have a master's degree in nursing (MS/MSN) from a nationally accredited school and a 3.3 or higher grade point average on a 4.0 scale for all master's level work. Satisfactory scores on the GRE general test are optional, but highly recommended; GRE scores are used for competitive funding opportunities, particularly those from the Graduate School. Personal interviews, a goal statement, a writing sample, and three references are required. Applicants for the DNP entry option must have a DNP degree from a nationally accredited program, and a cumulative GPA of 3.3 or higher on graduate coursework. Applicants must provide a goal statement, a writing sample, participate in interviews, and provide three references. Final admission recommendations are made on a competitive basis.

The Doctor of Philosophy degree in nursing requires a minimum of 45 credit hours of course work beyond the master's degree, participation in at least one research project prior to qualifying examinations, plus a minimum of two semesters of residence credit for dissertation research. Written and oral examinations are required to qualify as a degree candidate. There is a final examination for defense of the dissertation research.

Graduate Courses

Nur 620	Problems In Clinical Nursing	(2-6)
Nur 767	Dissertation Residency Credit	(2)
Nur 769	Residence Credit For The Doctor's Degree	(0-12)
Nur 770	Philosophical Foundations Of Nursing Practice	(3)
Nur 771	Research Experience	(1)
Nur 776	Special Topics Seminar (Subtitle Required)	(2-4)
Nur 778	Proseminar In Contemporary Health And Nursing Policy Issues	(3)
Nur 779	Doctoral Seminar	(1-3)
Nur 781	Independent Study In Nursing	(1-3)
Nur 790	Knowledge Development In Nursing	(3)
Nur 791	Qualitative Methods In Nursing Research	(3)
Nur 792	Quantitative Methods In Nursing Research	(3)
Nur 793	Measurement Of Nursing Phenomena	(4)
Nur 794	Analysis, Interpretation, And Presentation Of Quantitative Data	(3)

Nutritional Sciences

College of Medicine

The impact of nutrition on health and disease has produced major clinical and public policy challenges that are shaping research and career opportunities for highly trained nutritional scientists in academia, industry and government. Disease prevention efforts, increased health consciousness and an aging population are further fueling the demand for nutritional scientists. The interdisciplinary Division of Nutritional Sciences enables students in its Ph.D. and Master's of Science programs to explore the interrelationship between environmental factors and nutrients and their effect on biochemistry, physiology and disease development. More than 50 faculty members provide teaching and individualized research guidance across over 20 departments and divisions in the University's Colleges of Medicine, Health Sciences and Agriculture, as well as the Colleges of Pharmacy, Nursing, and Education.

One of the Center's primary areas of research and training targets nutrition and chronic diseases, with a focus on obesity and associated disorders of cardiovascular disease, diabetes and cancer. Other specialty areas include nutrition and oxidative stress, nutrition and aging, clinical nutrition, animal nutrition and food science.

Further information may be obtained by writing to the Director of Graduate Studies, Division of Nutritional Sciences, 521 CTW Building, 900 South Limestone, University of Kentucky, Lexington, KY 40536-0200.

Applicants for the Ph.D. and Master's of Science programs must meet admissions requirements for the both the University of Kentucky Graduate School and for the Division of Nutritional Sciences.

Master of Science

Admission Requirements

1. A baccalaureate degree from a fully accredited institution of higher learning.
2. A minimum undergraduate grade point average of 2.9 on undergraduate coursework and a 3.0 on all graduate work.
3. An average Graduate Record Examination (GRE) score on the verbal, quantitative and analytical sections greater than the 30th percentile.
4. For international applicants, a minimum score of 550 on the paper-based Test of English as a Foreign Language (TOEFL), which has a maximum score of 667; score of 213 on the computer-based TOEFL (maximum 300), or 79 on the internet-based TOEFL. The minimum International English Language Testing Service (IELTS) score is a 6.5. All applicants must demonstrate proficiency in verbal and written English.
5. Admission for the M.S. in Nutritional Sciences with Clinical Nutrition Emphasis is limited to those with a B.S. in Dietetics, having an RD, or being RD eligible.
6. Course Prerequisites: you would need to have taken an undergraduate physiology course (PGY 206 at UK) and it is highly recommended that you have taken 1 year of general chemistry (CHE 105 and 107 at UK) and 1 semester of organic chemistry (CHE 236 at UK). Biochemistry is also a prerequisite course but it can be taken your first semester for graduate credit (BCH 401G). It has prerequisites of CHE 107 and CHE 236.

Admissions Process

All those interested in graduate study at the University of Kentucky Graduate School must apply online

via Hobson's ApplyYourself Application Network. There is a $65 application fee for domestic applicants and a $75 application fee for international applicants. Please note that the application cannot be submitted without paying this fee.

The following information must be submitted online to the Graduate School via ApplyYourself:

1. Transcripts from all higher education institutions attended. The Graduate School requires an overall grade point average of 2.9 on all undergraduate work, and a 3.00 on all graduate work
2. GRE scores are required for admission. GRE scores should be sent directly from Educational Testing Service (ETS); the Institutional Code for the GRE for the UK Graduate School is R1837.
3. TOEFL or IELTS scores are required for all applicants whose native language is not English. TOEFL scores should be sent directly from Educational Testing Service (ETS); the Institutional Code for the TOEFL for the UK Graduate School is R1837. IELTS scores should be sent directly from the International English Language Testing Service, specifying the University of Kentucky Graduate School, Lexington KY as the recipient institution.
4. Curriculum vitae.
5. A brief essay, no longer than two single-spaced pages, describing long-term career goals and how the M.S. Program in Nutritional Sciences would advance these goals.
6. Three letters of recommendation.
7. Research Assistantship Application Form (optional): http://pharmns.med.uky.edu/pharmns-research-assistant-application-form.

Research Assistantships
Applicants who have been accepted into the M.S. program and can also apply for a Research Assistantship with individual faculty. Interested applicants should submit a completed Research Assistantship Application Form with their application materials to the Center's Director of Graduate Studies by the application deadline listed below.

Degree Requirements
Prerequisites-200 level or equivalent physiology course. Recommended a 400 level biochemistry course

Core Courses	Total credits required for degree (30)	
NS/CNU 601	Integrated Nutritional Sciences Part I	3 credits
NS/ASC/CNU 602	Integrated Nutritional Sciences Part II	3 credits
NS/CNU/FCS 603	Integrated Nutritional Sciences Part III	2 credits
NS/CNU/NFS704	Current Topics	1 credit
STA 570	Basic Statistical Analysis	4 credits OR
IBS 611	Practical Statistics	1 credit
NS 771	Seminar in Nutritional Sciences	0-1** credits
NS/CNU/NFS 782	Special Problems	1-6* credits
NS/CNU 609	Ethics	1 credits

Core Credits = 15 *Plan B Only **Plan A Only

Courses for Emphasis in Clinical Nutrition Prerequisite- B.S. in Dietetics and/or meeting ADA Dietetics requirements for internship

CNU 501	Nutraceuticals and Functional Foods	2 credits OR
CNU 502	Obesity: Cell to Community	2 credits
NS/CNU 702	Clinical Nutrition Problem Based Case Studies	1-3 credits
CNU 611	Advanced Medical Nutrition Therapy	2 credits
CNU 612	Examination Skills for the Clinical Nutritionist	2 credits

Emphasis Credits = 8-10 Electives to equal a minimum of 30 credit hours

Courses for Emphasis in Wellness and Sports Nutrition

NS/CNU 605	Wellness and Sports Nutrition	3 credits
KHP 600	Exercise Stress Testing and Prescription	3 credits
KHP 620	Advanced Exercise Physiology	3 credits
CNU 501	Nutraceuticals and Functional Foods	2 credits

Emphasis credits = 14 Electives to equal a minimum of 30 credit hours

Courses for Emphasis in Community Nutrition

CPH 605	Epidemiology	3 credits
DHN 603	Advanced Community Program Development	3 credits
DHN 607	Food Related Behaviors	3 credits

Emphasis credits= 15 Electives to equal a minimum of 30 credit hours

Courses for Emphasis in Molecular and Biochemical Nutrition

BCH 607 (IBS 601)	Biomolecules & Metabolism	3 credits
BCH 608	Biomolecules and Molecular Biology	3 credits OR
IBS 602	Molecular Biology & Genetics	3 credits
NS/CNU 606	Molecular Biology Applications in Nutrition	2 credits

Emphasis Credits= 8 Electives to equal a minimum of 30 credit hours

Approved Electives
The student must successfully complete a minimum of 6 credit hours in electives. Elective courses are recommended by the DGS and/or the Advisor.

Suggested elective courses include:

IBS 604	Cell Signaling	3 credits
IBS 605	Experimental Genetics	2 credits
IBS 607	Seminar in Integrated Biomedical Sciences	0 credit
IBS 609	Research in Integrated Biomedical Sciences	1 credit
NS/CNU 606	Molecular Biology Applications in Nutrition	2 credits
CNU 501	Nutraceuticals and Functional Foods	2 credits
CNU 502	Obesity: Cell to Community	2 credits
CNU 611	Advanced Medical Nutrition Therapy	2 credits
CNU 612	Examination Skills for the Clinical Nutritionist	2 credits
CNU/NS 604	Lipid Metabolism	3 credits
CNU/NS 605	Wellness and Sports Nutrition	3 credits
CNU/NS 702	Problem-Based Case Studies	1-5 credits
ASC 681	Energy Metabolism	3 credits
ASC 683	Protein metabolism	3 credits
ASC 689	Physiology of Nutrient Digestion/Absorption	3 credits
ASC 684	Advanced Ruminent Nutrition	3 credits
ASC 686	Advanced Non-ruminant Nutrition	3 credits
FSC 638	Food Proteins	3 credits
FSC 640	Food Lipids	3 credits
FSC 434G	Food Chemistry	4 credits

BCH 610	Biochemistry of Lipids and Membranes	3 credits
BCH/BIO/MI 615	Molecular Biology	3 credits
CPH 605/PM 620	Epidemiology	3 credits
CPH 645	Food Systems, Malnutrition and Public Health	3 credits
EDP 661	Counseling Techniques II	3 credits
GS 610	College Teaching	3 credits
KHP 420G	Physiology of Exercise	3 credits
KHP 621	Advanced Exercise Physiology	3 credits
KHP 621	Exercise and Coronary Heart Disease	3 credits
KHP 720	Sport Medicine	3 credits
KHP 781	Theory and Methodology of Body Composition	3 credits
MI 685	Advanced Immunology	3 credits
MI 710	Molecular Cell Biology	3 credits
PGY 604	Advanced Cardiovascular Physiology	3 credits
PGY 607	Hormonal Control Mechanisms	3 credits
BCH 609	Plant Biochemistry	3 credits

Doctor of Philosophy

Admission Requirements

There are two ways to be admitted into the PhD program:

- Direct Admission http://pharmns.med.uky.edu/pharmns-phd-application or
- IBS Program http://www.mc.uky.edu/ibs/default.asp

Direct Admission Requirements for the Ph.D. Program

Applicants must meet the following requirements for admission to the University of Kentucky Graduate School and the Graduate Center for Nutritional Sciences:

1. A baccalaureate degree from a fully accredited institution of higher learning.
2. An M.S. degree with a Grade Point Average (GPA) of 3.2 or above on a 4.0 scale, or a B.S. degree with a GPA of 3.0 or above on a 4.0 scale.
3. An average Graduate Record Examination (GRE) score on the verbal, quantitative and analytical sections that is greater than the 50th percentile.
4. For international applicants, a minimum score of 550 out 667 maximum possible is required on the paper-based Test of English as a Foreign Language (TOEFL), a minimum 213 score on the computer-based TOEFL (maximum 300), or 79 on the internet-based TOEFL. The minimum International English Language Testing Service (IELTS) score is 6.5. All applicants must demonstrate proficiency in verbal and written English.
5. Course Prerequisites: an undergraduate physiology course (PGY 206 at UK), 1 year of general chemistry (CHE 105 and 107 at UK), and 1 semester of organic chemistry (CHE 236 at UK).

Application Process

All those interested in graduate study at the University of Kentucky Graduate School must apply online via Hobson's ApplyYourself Application Network. There is a $65 application fee for domestic applicants and a $75 application fee for international applicants. Please note that the application cannot be submitted without paying this fee.

The following information must be submitted online to the Graduate School via ApplyYourself:

1. Transcripts from all higher education institutions attended. The Graduate School requires an average of 2.9 on all undergraduate work, and a 3.00 on all graduate work. Please note: the Graduate Center for Nutritional Sciences requirements are higher. GRE scores are required for admission. GRE scores should be sent directly from Educational Testing Service (ETS); the Institutional Code for the GRE for the UK Graduate School is R1837.
2. TOEFL or IELTS scores are required for all applications whose native language is not English. TOEFL scores should be sent directly from ETS; the Institutional Code for the TOEFL for the UK Graduate School is R1837. IELTS scores should be sent directly from the IELTS, specifying the University of Kentucky Graduate School, Lexington, KY as the recipient institution.
3. Curriculum vitae
4. A brief essay, no longer than two single-spaced pages, describing long-term career goals and how the Ph.D. Program in Nutritional Sciences would advance these goals.
5. Three letters of recommendation
6. Completed Research Assistant Application Form (http://pharmns.med.uky.edu/pharmns-research-assistant-application-form).

Research Assistantships and Laboratory Rotations

Ph.D. applicants are required to apply for a Research Assistantship, which represents an integral part of the Ph.D. program. Applicants accepted into the Ph.D. program also may apply to participate in a Laboratory Rotation Program. This program enables students to work four to nine months in as many as three laboratories before selecting an advisor.

Degree Requirements

Doctoral Degree Requirements

Students are required to complete the core curriculum. Elective courses to be taken will be recommended by the advisory committee.

Academic Course Prerequisites to Program:

Biology (2 semesters)
General Chemistry (2 semesters)
Organic Chemistry (1 semester)
Undergraduate Biochemistry and Physiology

Some courses are cross-listed with other units and departments, but for clarity only the "NS" prefixes are listed below.

Core Curriculum

NS 601	Integrated Nutritional Sciences I	3 credits
NS 602	Integrated Nutritional Sciences II	3 credits
NS 603	Integrated Nutritional Sciences III	2 credits
NS 704	Current Topics in Nutrition	1 credit
NS 771	Graduate Seminar in Nutritional Sciences	1 credit**
NS 609	Ethics in Clinical Research	1 credit OR
TOX 600	Ethics in Scientific Research	1 credits
STA 570	Basic Statistical Analysis	4 credits OR
IBS 611	Practical Statistics	1 credit
IBS 601	Biomolecules & Metabolism	3 credits OR
IBS 602	Molecular Biology & Genetics	3 credits
IBS 603	Cell Biology	3 credits
IBS 606	Integrated Medical Sciences	3 credits OR
PGY 502	Principles of Systems, Cellular and Molecular Physiology OR	5 credits
PGY 412G	Principles of Human Physiology	4 credits
Electives	Electives	7-12 credits
Total		36 credits

**All Ph.D. students must register for 0 credit (except for the one semester registered for 1 credit) and attend all GCNS seminars during their residency at the University of Kentucky. Minimum of 1 credit is required before qualifying examination. In addition, all GCNS doctoral candidates will present a seminar once/year post-qualifying exam.

Electives The student must successfully complete a minimum of 7 credit hours in electives. Elective courses are recommended by the Advisor and approved by the Advisory Committee.

Suggested courses are listed below:

IBS 607	Seminar in Integrated Biomedical Sciences	0 credit
IBS 608	Special Topics in Integrated Biomedical Sci.	2 credits
IBS 609	Research in Integrated Biomedical Sciences	1 credit
IBS 610	Critical Readings/Small Groups	2 credits
NS/CNU 606	Molecular Biology Applications in Nutrition	2 credits
NS 790	Research in Nutritional Sciences (before qualifying exam)	1-6 credits
CNU 501	Nutraceuticals and Functional Foods	2 credits
CNU 502	Obesity: Cell to Community	2 credits
CNU 611	Advanced Medical Nutrition Therapy	2 credits
CNU 612	Examination Skills for the Clinical Nutritionist	2 credits
CNU/NS 604	Lipid Metabolism	3 credits
CNU/NS 605	Wellness and Sports Nutrition	3 credits
CNU/NS 702	Problem-Based Case Studies	1-5 credits
ASC 681	Energy Metabolism	3 credits
ASC 683	Protein metabolism	3 credits
ASC 689	Physiology of Nutrient Digestion/Absorption	3 credits
ASC 684	Advanced Ruminant Nutrition	3 credits
ASC 686	Advanced Non-ruminant Nutrition	3 credits
FSC 638	Food Proteins	3 credits
FSC 640	Food Lipids	3 credits
FSC 434G	Food Chemistry	4 credits
BCH 610	Biochemistry of Lipids and Membranes	3 credits
BCH/BIO/MI 615	Molecular Biology	3 credits
CPH 605/PM 620	Epidemiology	3 credits
CPH 645	Food Systems, Malnutrition and Public Health	3 credits
EDP 605	Counseling Techniques	3 credits
GS 610	College Teaching	3 credits
KHP 420G	Physiology of Exercise	3 credits
KHP 620	Advanced Exercise Physiology	3 credits
KHP 621	Exercise and Coronary Heart Disease	3 credits
KHP 720	Sport Medicine	3 credits
KHP 781	Theory and Methodology of Body Composition	3 credits
MI 685	Advanced Immunology	3 credits
MI 710	Molecular Cell Biology	3 credits
PGY 604	Advanced Cardiovascular Physiology	3 credits
PGY 607	Hormonal Control Mechanisms	3 credits
BCH 609	Plant Biochemistry	3 credits

Residency Requirement

NS	767	Residency Credit in Nutritional Sciences (post-qualifying exam)	2 hr/semester

Graduate Courses

NS 601	Integrated Nutritional Sciences I (Same As CNU 601)	(3)
NS 602	Integrated Nutritional Sciences II (Same As ASC 602)	(3)
NS 603	Integrated Nutritional Sciences III (Same As CNU 603)	(2)
NS 604	Lipid Metabolism (Same As CNU 604)	(3)
NS 605	Wellness And Sports Nutrition (Same As PT/CNU 605)	(3)
NS 606	Molecular Biology Applications In Nutrition (Same As CNU 606)	(2)
NS 607	Food Related Behaviors (Same As NFS/ANT/BSC 607)	(3)
NS 609	Ethics In Clinical Sciences Research (Same As CNU 609)	(1)
NS 620	Nutrition And Aging (Same As NFS 620)	(2)
NS 630	Advanced Community Nutrition (Same As NFS 630)	(3)
NS 640	Human Nutrition: Assessment (Same As NFS 640)	(3)
NS 680	Laboratory Methods In Nutritional Sciences (Same As ASC 680)	(4)
NS 701	Nutrition And Chronic Diseases (Same As CNU 701)	(4)
NS 702	Clinical/Wellness Problem-Based Case Studies	(1-3)
NS 704	Current Topics In Nutritional Sciences (Same As CNU/NFS 704)	(1)
NS 748	Master's Thesis Research (Same As NFS 748)	(0)
NS 749	Dissertation Research	(0)
NS 767	Dissertation Residency Credit	(2)
NS 768	Residence Credit For The Masters Degree (Same As NFS 768)	(1-6)
NS 769	Residence Credit For The Doctor's Degree	(0-12)
NS 771	Graduate Seminar In Nutritional Sciences	(0-1)
NS 782	Special Problems (Same As CNU/NFS 782)	(1-6)
NS 790	Research In Nutritional Sciences (Same As CNU/NFS 790)	(0-6)
CNU 601	Integrated Nutritional Sciences I (Same As NS 601)	(3)
CNU 603	Integrated Nutritional Sciences III (Same As NS 603)	(2)
CNU 604	Lipid Metabolism (Same As NS 604)	(3)
CNU 605	Wellness And Sports Nutrition (Same As NS/PT 605)	(3)
CNU 606	Molecular Biology Applications In Nutrition (Same As NS 606)	(2)
CNU 608	Nutritional Immunology (Same As NS 608)	(3)
CNU 609	Ethics In Clinical Sciences Research (Same As NS 609)	(1)
CNU 611	Advanced Medical Nutrition Therapy	(2)
CNU 612	Examination Skills For The Clinical Nutritionist	(2)
CNU 701	Nutrition And Chronic Diseases (Same As NS 701)	(4)
CNU 702	Clinical/Wellness Problem-Based Case Studies	(1-3)
CNU 704	Current Topics In Nutritional Sciences (Same As NFS/NS 704)	(1)
CNU 782	Special Problems (Same As NFS/NS 782)	(1-6)
CNU 790	Research In Nutritional Sciences (Same As NFS/NS 790)	(0-6)

Nutrition & Food Systems

College of Agriculture, Food & Environment

Graduate education leading to a MS in Nutrition and Food Systems and replacing the MS in Hospitality and Dietetics Administration. The 17 hour graduate-level core emphasizes contemporary nutrition topics, such as research methods and health behavior theories, community programming and intervention development, food systems, chronic disease diagnosis and process related to lifestyle behaviors, statistics, and a nutrition and food systems seminar. The Master of Science program prepares students for careers in community, education, government, industry, non-profit, health care or private practice settings. A student may choose the Plan A - Thesis or Plan B - Project.

Plan A - Thesis requires the 17-hour core, 7 hours of electives to explore areas of personal interest, 6additional hours of research credit and a written thesis and oral defense.
Plan B - Project requires the 17-hour core, 13 hours of electives, 6additional hours of special problems, 6 additional hours of research credit and a project presentation and exam.

Core Courses

DHN 600	Research Methodology in Nutrition and Food Systems	(3)
DHN 603	Advanced Community Program Development	(3)
DHN 605	Food Systems and Society	(3)
DHN 608	Chronic Disease Management and Process	(3)
DHN 774	Seminar in Nutrition and Food Systems	(3)
STA 671	Regression and Correlation	(2)

A 500-level statistics course is a pre-requisite to the graduate program and may be taken during the existing graduate program.

Elective Courses

DHN 607	Food Related Behaviors	(3)
DHN 784	Special Problems in Financial Management	(3)
DHN 690	Advanced Work in Dietetics	(3)
DHN 620	Nutrition and Aging	(3)
DHN 630	Advanced Community Nutrition	(3)
DHN 640	Human Nutrition: Assessment	(3)
DHN 690	Advanced Work in Dietetics	(3)

Currently, students may choose electives outside the department with the permission from the instructor.

Pharmaceutical Sciences

College of Pharmacy

The Graduate Program in Pharmaceutical Sciences is a multidisciplinary program designed to prepare motivated individuals for academic, industrial, or government careers in pharmaceutical and biomedical research. It is a graduate training program that encompasses research in areas of pharmaceutical sciences that range from identifying fundamental mechanisms of human disease, to the design, development and formulation of new medicines, to understanding the impact of drug policies on health care systems. Within this broad scientific framework, students develop individually tailored programs of study to meet their particular research interests and career objectives.

Intense, laboratory-based and data and analysis driven research, using state-of-the-art techniques and instruments, forms the basis of a student's PhD dissertation or Master's thesis. Each student develops the skills and judgment to make a unique, scholarly contribution to our understanding of drugs and how these compounds impact human health and disease. These breakthroughs are published in top pharmaceutical journals and presented at national and international meetings. Students receive the training that will enable them to become independent scientists who can conduct front-line research in pharmaceutical sciences in industrial, academic or governmental settings.

The overall goal of the graduate program is to provide the graduate student with a comprehensive, structured, yet flexible educational experience comprised of both coursework and independent, highly creative, research. This goal is supported by additional components, such as research rotations for first-year students and a program-wide seminar series. The intent is to provide both depth and breadth of expertise in the Pharmaceutical Sciences along with developing the creative and critical approach to research that characterizes a PhD-level or Master's level scientist.

All students in the program will carry out hypothesis-driven laboratory investigations as the basis of a written dissertation or thesis for PharmD/MS students. The quality of the dissertation will be judged by the student's advisory committee, in accord with the requirements and regulations set forth by the Graduate School. It is expected that the dissertation or thesis work will be recognized as high quality by also being published in national and international scientific journals and presented in forums at national and international scientific meetings.

Admission Requirements
Admission to the graduate program is competitive and is based upon academic background, professional recommendations, performance on the Graduate Record Examination (GRE), experience and interviews. Students should have completed an undergraduate degree in biology, biochemistry, biomedical engineering, chemical engineering, chemistry, neurosciences, or pharmacy with a mastery of mathematics through calculus.

Training Options

Doctoral degrees in Pharmaceutical Sciences at the College of Pharmacy are obtained through one of five Tracks. The Traditional Pharmaceutical Science Tracks provide training that is based on advanced coursework in contemporary basic pharmaceutical sciences plus independent laboratory or computational research under the direction of a faculty mentor. In the Traditional Pharmaceutical Science Tracks the many research opportunities available are organized into three broad disciplinary areas: Medicinal, Bioorganic and Computational Chemistry, Pharmaceutical Chemistry and Engineering, and Pharmacology

and Experimental Therapeutics. The Clinical and Experimental Therapeutics Track requires a prior degree in an area of professional health care, and focuses on training in translational research at the interface between basic and clinical studies. The Pharmaceutical Outcomes and Policy Track trains scientists to conduct research on the safe, efficient, and effective use of pharmaceuticals to improve the health of individuals and populations.

Traditional Pharmaceutical Science Tracks
The goal of the Pharmaceutical Science Tracks is to develop scientists who possess a blend of contemporary basic science skills and an understanding of their role in the development of new drugs. Training begins with advanced coursework that is tailored to give each student a solid foundation across the breadth of pharmaceutical sciences, yet is individualized based on the student's academic background, and the research project that will be the basis for their dissertation. The many research opportunities available are organized into three broad disciplinary areas, built around the three Divisions within the Department of Pharmaceutical Sciences—the Medicinal, Bioorganic, & Computational Chemistry Division, The Pharmaceutical Chemistry and Engineering Division, and the Pharmacology & Experimental Therapeutics Division.

Medicinal, Bioorganic and Computational Chemistry Track
The Division of Medicinal, Bioorganic and Computational Chemistry is focused on small molecules as well as new protein and nucleic acid based therapies, and natural product drug discovery platforms and seeks to expand is expertise with interests in synthetic/biosynthetic approaches for drug discovery, development of novel computational tools for drug design, and evolution of biologics for specific therapies or drug delivery.

Pharmaceutical Chemistry and Engineering Track
The Division of Pharmaceutical Chemistry and Engineering focuses on drug formulation, development and delivery. Areas of emphasis include the application of physical, physical organic, and analytical chemistry to solve pharmaceutical problems; the design, development, and optimization of dosage forms for small and large molecules; and fundamental research into materials science and nanotechnology to advance drug delivery systems design. Collaborations with faculty in the UK College of Engineering provide additional opportunities for a combined pharmaceutical and engineering research program. In addition, faculty participate in preclinical and/or clinical projects through collaborative relationships within the College of Pharmacy and with investigators across the UK Medical Center Complex.

Pharmacology and Experimental Therapeutics Track
The Division of Pharmacology and Experimental Therapeutics draws upon campus-wide strengths in neurobiology, cardiovascular disease, oncology and infectious diseases. Strong collaborations exist with the Sanders-Brown Center on Aging, addiction/abuse consortia, and the Markey Cancer Center, which recently received NCI Cancer Center designation. Division faculty are skilled in pharmacokinetic and pharmacodynamics, systems biology, neurochemistry and neurophysiology. Translational research programs bridging preclinical and/or clinical projects through collaborative relationships within the College of Pharmacy and with investigators across the UK Medical Center Complex also exist.

Clinical and Experimental Therapeutics Track (CET)
The completion of a Pharm.D., D.D.S., D.V.M. or other professional health degree is required for admission into this training Track. The focus of the CET Track is translational research, and involves training in how to conduct studies that occur at the interface of basic and clinical research. Since all students admitted to the program will already have a clinical/health profession degree, the emphasis of the program will be training in the basic sciences. This breadth and balance of skills will improve the graduate's ability to successfully compete for extramural funding and job opportunities. There are required clinical components to assure competency in the foundations, principle and processes of clinical research.

The keystone of the training is the conduct of an integrated, combined laboratory-based and clinical dissertation.

Pharmaceutical Outcomes and Policy Track (POP)
The goal of the Pharmaceutical Outcomes and Policy Track is to train scientists to conduct research on the safe, efficient, and effective use of pharmaceuticals to improve the health of individuals and populations. The emphasis of the program will be on building a core set of analytical skills and tools to evaluate the impact of clinical interventions and clinical outcomes. Students complete core classes in five areas: pharmacoepidemiology, pharmacoeconomics, statistics, biomedical informatics, and pharmaceutical policy. This breadth and balance of skills will improve the graduate's ability to successfully compete for extramural funding and contribute to the scholarly literature on pharmaceutical outcomes. Most students within the Pharmaceutical Outcomes & Policy Track have a prior professional health related degree (Pharm.D., B.S. Pharm.) Exceptional students without a pharmacy related degree may be admitted with the consent of the admissions committee. Students without appropriate prerequisite training may be required to complete additional course work.

Doctoral Program Core Coursework
Each Track has a distinct set of courses. These courses may be offered in the Graduate Program of Pharmaceutical Sciences, or available outside of the Program. The mentor and the Dissertation Ad-visory Committee are empowered to select those courses that fit best into the educational and ca-reer goals of the student and the scientific goals of the dissertation. The Track Coordinator (for first-year students) or mentor and the Dissertation Advisory Committee are empowered to petition the DGS, in writing, to waive courses of the Graduate Program Core if the student has demon-strated sufficient academic mastery of material in courses taken in other programs. The DGS will monitor the coursework of students and keep the Advisory Committee members apprised as to the student's grades and completion of courses. Coursework and grades are reviewed by the Advisory committee at each yearly meeting.

The student's Dissertation Advisory Committee is responsible for coursework recommendations that are in addition to the common coursework of the program and courses recommended by the Track faculty. Full descriptions of available graduate courses are described in the Bulletin of the University of Kentucky Graduate School (http://www.uky.edu/Registrar/Bulletin.htm).

Medicinal, Bioorganic, and Computational Chemistry Track
Core Courses
Students should complete these courses over 4-6 semesters

IBS/CHE 601/550	Biomolecules and Metabolism or Biological Chemistry I	(3)
IBS/CHE 602/552	Molecular Biology and Genetics Biological Chemistry II	(3)
PHS 760 00x	Introduction to Pharmaceutical Sciences	(1)
PHS 760 00x	Drug Discovery, Development, Commercialization, Outcomes	(3)
PHS 711	Fundamentals of Bioethics	(2)
PHS 778	Seminar (attendance required each semester until defense; officially register only until passing the qualifying exam)	(1)

Additional courses to be taken by an individual student depend on:
1. The lab and dissertation project the student selects
2. The academic preparation of the student (areas that need strengthening)

Elective courses

PHS 510	Modern Methods in Pharmaceutical Analysis	(5)
PHS 662	Bioorganic Mechanisms	(3)

PHS 660	Biosynthesis of Natural Products	(3)
BCH 401G	Fundamentals of Biochemistry	(3)
CHE 440G	Introductory Physical Chemistry	(4)
CHE 538	Principals of Physical Chemistry	(3)
IBS 606	Physiological Communication	(3)
MA 213	Calculus III	(4)
PGY 502	Principles of Systems, Cellular and Molecular Physiology	(5)
STA 570	Basic Statistical Analysis4	(4)

Pharmaceutical Chemistry and Engineering Track

Core Courses

Students should complete these courses over 4-6 semesters

CHE 548	Principles of Physical Chemistry II	(3)
PHS 612	Quantitative PD/PK (Modules I and II listed under PHS 760)	(2)
PHS 630	Pharmaceutical Rate Process	(3)
PHS 631	Equilibrium Phenomena in Pharmaceutical Systems	(3)
PHS 760	Drug Discovery, Development, Commercialization and Outcomes	(3)
PHS 711	Fundamentals of Bioethics	(2)
PHS 778	Seminar (attendance required each semester until defense; officially register only until passing the qualifying exam)	(1)

Additional courses to be taken by an individual student depend on:

1. The lab and dissertation project the student selects
2. The academic preparation of the student (areas that need strengthening)

Highly Recommended Courses

Students must select 5 courses from this list

CHE 538	Principles of Organic Chemistry	(3)
CME 505	Analysis of Chemical Engineering Problems	(3)
CME 630	Transport I	(3)
IBS 601	Biomolecules and Metabolism (or CHE 550)	(3)
PGY 206 or 502	Elementary Physiology (no graduate credit) or Principles of Systems, Cellular and Molecular Physiology	(3-5)
PHS 76x	Drug Delivery Systems	(3)
PHS 76x	Solid State Stability and Formulation	(3)
PHS 76x	Techniques in Pharmaceutical Analysis	(3)

Elective Courses

These courses may require additional prerequisites

CHE 532	Spectroscopic Identification of Organic Molecules	(2)
CHE/IBS 552/602	Biological Chemistry II or Molecular Biology and Genetics	(3)
CHE/ABT 553/495	Chemistry and Molecular Biotechnology or Experimental Methods in Biotechnology	(3-4)
MED 616	Biology and Therapy of Cancer	(3)
STA 673	Distribution-Free Statistical Inference and Analysis of Categorical Data	(2)
STA 677	Applied Multivariate Methods	(3)
STA 679	Design and Analysis of Experiments II	(3)

Pharmacology and Experimental Therapeutics

Core Courses

Students should complete these courses over 4-6 semesters

IBS/CHE 601/550	Biomolecules and Metabolism or Biological Chemistry I	(3)
IBS/CHE 602/603/552	Molecular Biology and Genetics/Cell Biology and Cell Signaling/ Biological Chemistry II	(3)
STA/IBS 570/580/611	Basic Statistical Analysis	(4)
	Biostatics	(3)
	Practical Statistics	(1-4)
PHS 760 00x	Introduction to Pharmaceutical Sciences	(1)
PHS 760 00x	Drug Discovery, Development, Commercialization, Out-comes	(3)
PHS 711	Fundamentals of Bioethics	(2)
PHS 778	Seminar (attendance required each semester until de-fense; officially register only until passing the qualifying exam)	(1)

Clinical and Experimental Therapeutics

Core Courses

Students should complete these courses over 4-6 semesters

IBS 601	Biomolecules and Metabolism	(3)
IBS 602	Molecular Biology and Genetics	(3)
PHS 612	Quantitative Pharmacodynamics: Pharmacokinetics	(3)
PHS 711	Fundamentals of Bioethics	(2)
PHS 750	Journal Club (choice of journal club topic)	(1)
PHS 760 00x	Introduction to Pharmaceutical Sciences	(1)
PHS 760 00x	Drug Discovery, Development, Commercialization, Out-comes	(3)
PHS 760 00x	CET track lab rotations	Varies
PHS 778	Seminar (attendance required each semester until de-fense; officially register only until passing the qualifying exam)	(1)
PPS 764	Drug Development Regulation & Clinical Research	(3)

All students must become IRB and HIPPA certified

Strongly Recommended Courses

STA 671	Statistics: Regression and Correlation	(2)
STA 672	Statistics: Design and Analysis of Experiments	(2)

Possible Electives

PHS 760 00x	Techniques in Pharmaceutical Analysis	(3)
BIO 520	Bioinformatics	(3)
BIO 615	Molecular Biology	(3)
IBS 603	Cell Biology and Signaling	(3)
PGY 502	Principles of Systems, Cellular and Molecular Physiology	(5)
PGY 617	Physiological Genomics	(2)
PHA 621	Principles of Drug Action	(3)

Pharmaceutical Outcomes and Policy

The Doctor of Philosophy track focusing on Pharmaceutical Outcomes & Policy requires a minimum of 50 credit hours: including a 29 credit hour core curriculum, 12 hours in a specialization area de-signed by the Advisory Committee, and 9 hours of dissertation work. Students without appropriate pre-requisite training may be required to complete additional course work. Generally, students without a Master level degree will

be required to complete appropriate level courses designed to meet pre-requisite requirements to begin doctoral coursework. The student Advisory Committee may also require additional coursework to satisfy appropriate depth and breadth of training.

PPS 700	Introduction to Pharmaceutical Outcomes and Policy	(3)
PPS 701	Pharmacoepidemiology	(3)
PPS 704	Pharmacy Informatics	(3)
PPS 706	Intermediate Pharmacoeconomics and Decision Analysis	(3)
PPS 710	Techniques in Secondary Data Research	(3)
PPS 750	Pharmaceutical Outcomes and Policy Journal Club (attendance is required each semester until defense)	(1)
PPS 760	Special Topics in Pharmacy Practice & Science: Behavioral Economics in Pharmaceutical Outcomes & Policy (will be created as new course PPS 703)	(3)
PPS 778	Seminars in Pharmacy Practice & Science (attendance is required each semester until defense)	(1)
PHS 760	Topics in Pharmaceutical Sciences: Introduction to Pharmaceutical Sciences	(1)
PHS 760	Topics in Pharmaceutical Sciences: Drug Discovery, Development & Translation	(3)
PHS 711	Fundamentals of Bioethics	(2)
ECO 603*	Research Methods and Procedures in Economics OR (Alt. Statistics)	(3)
ECO 703*	Introduction to Econometrics I OR (Alt. Statistics)	(3)

All students must complete IRB and HIPAA training
* Prerequisites are required, including 6 hours of statistics or biostatistics, and introductory epide-miology and health economics.

In addition to the core courses, the student's Advisory Committee may recommend additional elec-tive courses. A student's completion of these course requirements must be assured by the stu-dent's Mentor(s), Advisory Committee and PPS Track Coordinator. In addition, some students may need to complete prerequisite courses before beginning core class course work. Note at least 75% of the courses must be 600 level or higher and prerequisites for core courses cannot count as specialty electives.

Partial List of Elective Courses
These courses may require additional prerequisites.

PPS 605	Pharmacoeconomics and Decision Analysis	(2)
PPS 620	Substance Use Disorders: Health Implication, Policies, & Prevention Strategies	(3)
PPS 702	Pharmaceutical Health Policy	(2-3)
PPS 764	Drug Development Regulation and Clinical Research	(3)
BMI 633	Introduction to Bioinformatics	(3)
BMI 730	Principles of Clinical Informatics	(3)
BMI 732	Biomedical Ontologies and Semantic Web Techniques	(3)
BMI 734	Introduction to Biomedical Image Analysis	(3)
BMI 738	Big Data for Healthcare	(3)
BST 682	Generalized Linear Models	(3)
BST 761	Time to Event Analysis	(3)
BST 762	Longitudinal Data Analysis	(3)
CPH 664	Design and Analysis of Clinical Trials	(3)
CPH 711	Chronic Disease Epidemiology	(3)
CPH 712	Advanced Epidemiology	(3)

CS 405G	Introduction to Database Systems	(3)
CS 460G	Machine Learning	(3)
CS 515	Algorithm Design	(3)
ECO 751	Public Economics	(3)
PA 751	Public Policy Formulation & Implementation	(3)
PA 752	The Economics of Policy Analysis	(3)
PPA 784	Next Generation Sequencing and Bioinformatics	
STA 671	Regression and Correlation	(2)
STA 672	Design and Analysis of Experiments	(2)
STA 673	Distribution-Free Statistical Inference and Analysis of Categorical Data	(2)
STA 677	Applied Multivariate Methods	(3)

Philosophy

College of Arts & Sciences

Admission Requirements
It is expected that candidates admitted to the graduate program in philosophy will: (1) provide proof of completion of a B.A., B.S., or M.A.; (2) have given evidence of superior skills on the GRE; (3) have achieved an overall grade-point average of at least 3.2 (4.0 scale) in all undergraduate course work; and (4) have achieved an overall grade-point average of at least 3.5 in all graduate course work.

Degree Requirements
The Department of Philosophy offers programs of study leading to the Doctor of Philosophy and the Master of Arts degrees. Ordinarily, applicants for graduate study in philosophy at the University of Kentucky will enter the Ph.D. program. The purpose of the Ph.D. program is to develop the student's ability to do serious, advanced research in philosophy. The program is designed to accommodate the needs of individual students at an advanced level to pursue a traditional degree in philosophy, engage in interdisciplinary research to prepare for professions outside of philosophy itself, or prepare for the profession of teaching philosophy. The Ph.D. program requires the completion of 66 hours of course work, or 36 hours of course work beyond course work done for an M.A. in philosophy at the University of Kentucky or elsewhere. Normally, 18 of the 36 required post-M.A. hours will be taken for writing the dissertation, leaving 18 of the required hours for non-dissertation course work. Students will need to demonstrate reading competence in at least one foreign language, as well as competence in logic. They will also complete a three course requirement in 20th century philosophy. In their first year in the program, all students will complete two proseminars, one in metaphysics and epistemology and one in value theory. A Qualifying Examination in each student's area of specialization precedes the writing of the dissertation. Students entering the Ph.D. program without an M.A. in philosophy from the University of Kentucky are expected to complete their degree work within five years. Every effort will be made to see that all students entering the Ph.D. program without an M.A. in philosophy from the University of Kentucky are offered five years of financial support (teaching assistantships and/or fellowships), with ongoing funding for those years contingent on the availability of funds and the student's continuing satisfactory progress through the program. Ph.D. students who have completed all requirements for the M.A. in philosophy at the University of Kentucky will be eligible to receive the M.A. in philosophy *en passant*.

Graduate Courses

PHI 500	Topics In Philosophy (Subtitle Required)	(3)
PHI 503	Topics In Ancient Philosophy	(3)
PHI 504	Islamic And Jewish Philosophy And The Classical Tradition	(3)
PHI 506	Topics In Medieval Philosophy	(3)
PHI 509	Topics In The History Of Modern Philosophy	(3)
PHI 513	Nineteenth Century Philosophy	(3)
PHI 514	American Philosophy	(3)
PHI 515	Contemporary Philosophy: The Analytic Turn	(3)
PHI 516	Contemporary Philosophy: Phenomenological Directions	(3)
PHI 517	Existentialism	(3)
PHI 519	Critical Social Thought	(3)
PHI 520	Symbolic Logic II	(3)
PHI 530	Ethical Theory	(3)
PHI 531	Advanced Topics In Ethics (Subtitle Required)	(3)

PHI 535	Social And Political Philosophy	(3)
PHI 537	Philosophy Of Law (Same As Law 837)	(3)
PHI 540	Feminist Philosophy	(3)
PHI 545	Philosophy Of Religion	(3)
PHI 550	Philosophical Problems In Knowledge And Reality	(3)
PHI 560	Philosophy Of Scientific Method	(3)
PHI 561	Philosophical Problems In The Natural Sciences (Subtitle Required)	(3)
PHI 562	Philosophical Problems In The Social And Behavioral Sciences	(3)
PHI 565	Philosophy Of Language	(3)
PHI 575	Philosophy Of Mind	(3)
PHI 592	Aesthetics (Same As A-H 592)	(3)
PHI 630	Seminar In Value Theory	(3)
PHI 650	Seminar In Metaphysics And Epistemology (Subtitle Required)	(3)
PHI 680	Special Topics In Philosophy	(3)
PHI 700	Seminar In Ancient Philosophy	(3)
PHI 705	Seminar In Medieval Philosophy	(3)
PHI 710	Seminar In Modern Philosophy	(3)
PHI 715	Seminar In Recent Philosophy	(3)
PHI 740	Proseminar In Teaching Methods	(1)
PHI 749	Dissertation Research	(0)
PHI 755	Tutorial In Interdisciplinary Issues	(1-6)
PHI 767	Dissertation Residency Credit	(2)
PHI 768	Residence Credit For The Master's Degree	(1-6)
PHI 769	Residence Credit For Doctor's Degree	(0-12)
PHI 790	Research In Philosophy	(3)

Physician Assistant Studies

College of Health Sciences

The University of Kentucky, Division of Physician Assistant Studies (PAS) offers a Plan B, non-thesis, physician assistant master's degree program that is accredited by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA). The Master of Science in Physician Assistant Studies (M.S.P.A.S.) program is designed for students who wish to become PAs and hold a baccalaureate or will have earned a baccalaureate degree by the time they enter the program. The M.S.P.A.S. program is offered at two distinct locations in either Lexington or Morehead, KY.

The mission of the UK M.S.P.A.S. program is to improve the health and well-being of the people in the Commonwealth of Kentucky. Accordingly, we seek applicants who have a strong interest in practicing medicine in Kentucky, especially its most underserved areas. We employ a holistic approach to choose those students who will best fulfill our mission. Graduates of the program are eligible to take the Physician Assistant National Certifying Examination. After successful completion of the NCCPA Exam, graduates are eligible for state certification/licensure to practice as certified physician assistants.

Admission Requirements
Admission to the M.S.P.A.S. program occurs annually, with a new class beginning each January. Qualified applicants for the Lexington or Morehead campuses must simultaneously apply to the Centralized Application Service for Physician Assistants (CASPA) and the UK Graduate School. Students must satisfy admissions requirements for both the Graduate School and the Physician Assistant Studies Program.

Bachelor's Degree
Completion of a bachelor's degree from a regionally accredited college or university is required. The UKPAS program does not require a specific degree and the program does not favor one degree over another. All applicants must meet the minimum academic standards for the Graduate School. The Bachelor's Degree must be completed prior to entry into the program. In addition, applicants may have only two outstanding prerequisite requirements at the time of application submission. The program only allows up to one retake per prerequisite course. Applicants must complete all prerequisite courses by the time of scheduled interviews.

*Prerequisite Courses**
A "C" grade or better must be earned in the following prerequisite courses:

General Chemistry 1 with laboratory	1 semester
General Chemistry 2 with laboratory	1 semester
Organic Chemistry with laboratory	1 semester
Psychology	1 semester
Developmental Psychology	1 semester
Microbiology with laboratory	1 semester
General Biology with laboratory	1 semester
Human Physiology	1 semester
Human Anatomy	1 semester
Sociology or Anthropology	1 semester
Medical Terminology	1 semester
Statistics	1 semester

*For more detailed information on prerequisites and course equivalencies, please visit the program website. http://www.mc.uky.edu/PA/admissions.html

Graduate Record Exam (GRE)
All GRE scores must come from exams taken within the last 5 years. A minimum score is not set by the program or UK's Graduate School. The UKPAS Program accepts ONLY the GRE for our program. We do not accept any substitutes (e.g. the MCAT).

TOEFL Requirements (if applicable)
International applicants or domestic students who attended a high school in which English was not the primary language are required to submit TOEFL iBT scores in addition to the GRE. A minimum combined TOEFL iBT socre of 120 is required with a minimum score of 26 in each category: Reading, Listening, Speaking, & Writing.

Patient Care Experience
The UKPAS Program requires patient contact, however a minimum amount of hours is not set. Contact hours may be completed utilizing the following (but not limited to) medical disciplines: CNA, EMT, CMA, Medical Tech., Professional Hospice Volunteer, etc. Medical Scribe is not considered a hands-on clinical patient care experience.

Shadowing
A minimum 50 hours of shadowing a clinical Physician Assistant is required. The UKPAS program prefers applicants shadow PAs in a variety of medical specialities as well as a foundation in a Primary Care/Family Medicine setting.

Letters of Recommendation
Three (3) letters of recommendation are required from people acquainted with the applicant for at least one year and familiar with his/her professional goals. They must be submitted with the CASPA application packet. Letters should come from the following sources:

- Letter 1 - PA or Physician
- Letter 2 - Academic Professor or Advisor
- Letter 3 - Medical (i.e. PA, Physician, supervisor) or Academic

Admissions Essay
The admission essay must be of graduate quality and reflect the applicant's commitment to the mission of the UKPAS Program as well as their interest in being a PA. It should contain approximately 625 words.

Basic Life Support Certification
Applicants must be certified in Basic Life Support for Health Providers through the American Heart Association. Red Cross certifications will not be accepted. The BLS card is expected to be presented at the time of interview.

Technical Standards, Background Checks & Drug Screening
All students matriculating into the UKPA Program are required to meet certain technical standards of the program and College of Health Sciences. Additionally, applicants must pass a background check and drug screen.

Due to the competitive nature and large number of students applying to the program, not all applicants who meet minimum requirements will be invited for an interview.

THE DEADLINE FOR APPLICATIONS--JULY 15 of the application year.

For more information and dates of General Information Sessions please visit our website at www.mc.uky.edu/pa/. If you have questions after visiting our website and attending an information session you may contact:

Julia Berry, Student Affairs Officer
Office of Admissions and Student Affairs College of Health Sciences
900 S. Limestone, Room 205 Charles T. Wethington Building Lexington, KY 40356-0200
859.257.5001
julia.berry@uky.edu

M.S.P.A.S. Program Curriculum Requirements
All students enrolled in the program will take the following courses

Spring

ANA 611	Human Gross Anatomy	(5)
PAS 651	Introduction to PA Profession	(2)
HSM 601	Overview of the Health Care Delivery System	(3)
PGY 412G	Human Physiology	(4)

4-Week Intersession

PAS 610	Research Methods and Epidemiology	(3)

8-Week Intersession

PAS 678	Seminar in PA Studies I	(2)
PAS 653	Introduction to Human Disease	(3)

Fall

PAS 654	Clinical Lecture Series	(4)
PAS 672	Pharmacology I	(3)
PAS 657	Clinical Laboratory Procedures	(3)
PAS 850	Clinical Methods	(3)
PAS 645	Master's Project I	(1)

Spring

PAS 658	Clinical Lecture Series II	(4)
PAS 673	Pharmacology II	(3)
PAS 655	Psychosocial Factors in Primary Care	(3)
PAS 656	Patient Evaluation and Management	(4)
PAS 646	Master's Project II	(2)

4-Week Intersession

PAS 640	Survey of Geriatric Medicine	(3)
CNU 503	Applied Nutrition	(1)

8-Week Intersession, Begin Clinical Year Program Clerkship Requirements
All students will complete the following clerkship requirements:

PAS 660	Family Medicine Clerkship	(6)
PAS 661	Pediatrics Clerkship	(6)
PAS 662	Obstetrics and Gynecology Clerkship	(3)

PAS 663	Surgery Clerkship	(6)
PAS 664	Geriatrics Clerkship	(3)
PAS 665	Elective Clerkship	(3)
PAS 665	Selective Clerkship	(3)
PAS 669	Internal Medicine Clerkship	(6)
PAS 670	Emergency Medicine Clerkship	(3)
PAS 671	Psychiatry Clerkship	(3)
PAS 680	Seminar in PA Studies II	(2)

Please note that any course offered in the PA program curriculum must be taken while in the program. The program does not offer advanced placement. No courses will be allowed to transfer into the program (PGY 412G, HSM 601, etc.)

After completing the course work and clerkship requirements with a minimum 3.0 GPA, students who receive passing scores on written and practical final examination will be awarded a Master of Science in Physician Assistant Studies (M.S.P.A.S.) degree. Graduates of the program are eligible to take the Physician Assistant National Certifying Examination. After successful completion of the exam, they are also eligible for state certification/licensure to practice as certified physician assistants.

M.S.P.A.S. for Graduates of Programs in Physician Assistant Studies
PAs applying to the M.S.P.A.S. program and who already hold a baccalaureate degree in Physician Assistant Studies from an accredited Physician Assistant program, must have maintained a 3.0 GPA in their prior PA program coursework and achieved a combined score of 900 on the verbal and quantitative portions of the GRE taken within the last five years of the application to the program. To satisfy the M.S.P.A.S. curriculum, these students are required to complete a 24 credit hour core of M.S.P.A.S. courses and a minimum of 9 credit hours in an academic concentration of their choosing for a total of 33 credit hours.

M.S.P.A.S. Program Core Courses

STA 570	Basic Statistical Analysis	(4)
PAS 610	Research Methods and Epidemiology	(3)
HSM 601	Overview of the Health Care Delivery System	(3)
PAS 673	Pharmacology II	(3)
PAS 640	Survey of Geriatric Medicine	(3)
PAS 680	Seminar in PA Studies II	(2)
PAS 646	Master's Project II	(2-6)
PAS 690	Physician Assistant Clerkship	(3-6)

A minimum of nine credit hours of elective courses will be completed with a concentration in gerontology, health care administration, or clinical nutrition.

Elective Courses in Areas of Concentration

Gerontology Concentration

GRN 643	Biomedical Aspects of Aging	(3)
BIO/GRN 612	Biology of Aging	(3)
BSC 770	Psychosocial Issues of Aging and Health	(3)
BSC 772	Women, Health and Aging	(3)
NUR 510	Older Women and Their Health	(3)
BSC 779	Behavioral Factors in Death and Dying	(3)
HSM 510	Organization of Long Term Care Sector	(3)
NFS 680	Nutrition and Aging	(3)

GRN 513	Geriatric Pharmacy	(3)

For more information contact the M.S.P.A.S. Program: www.mc.uky.edu/pa/

Graduate Courses

PAS 610	Research Methods and Epidemiology	(3)
PAS 640	Survey of Geriatric Medicine	(3)
PAS 645	Master's Project I	(1)
PAS 646	Master's Project II	(2-6)
PAS 654	Clinical Lecture Series	(4)
PAS 655	Psychosocial Factors in Primary Care	(3)
PAS 658	Clinical Lecture Series II	(4)
PAS 660	Family Medicine Clerkship	(6)
PAS 661	Pediatrics Clerkship	(6)
PAS 663	Surgery Clerkship	(6)
PAS 669	Internal Medicine Clerkship	(6)
PAS 672	Pharmacology I	(3)
PAS 673	Pharmacology II	(3)
PAS 680	Seminar in PA Studies II	(2)
PAS 690	Physician Assistant Clerkship	(3-6)

Physics

College of Arts & Sciences

The Department of Physics and Astronomy offers courses and research opportunities leading to the M.S. and Ph.D. degrees in the areas of astronomy and astrophysics, atomic and molecular physics, low and intermediate energy nuclear physics, condensed matter physics, and particle physics. More detailed descriptions of each of these options is available at https://pa.as.uky.edu/pa-faculty-research. Opportunities exist for experimental, theoretical, and computational, and observational research. Excellent laboratory facilities and library materials are available. Major facilities located within the Department are the six-million volt Van de Graaff accelerator and the Center for Advanced Materials. Computational resources include the Lipscomb HPC cluster and access to XSEDE, NERSC, TACC, JLab and BNL. The Department is active in research at many national laboratories, including Jefferson Lab (Virginia), Oak Ridge National Lab (Tennessee), Los Alamos National Lab (New Mexico), Argonne National Lab. (Illinois), Brookhaven National Lab (New York), Triangle Universities Nuclear Lab (North Carolina), National High Magnetic Field Facility (Florida), and Lawrence Berkeley Lab (California) as well as international laboratories including Paul Scherrer Institute (Switzerland), TRIUMF (Vancouver), and MAX-lab (Sweden). In astronomy our students conduct research at facilities including the National Radio Astronomy Observatory (West Virginia), Arecibo Observatory (Puerto Rico), Kitt Peak National Observatory (Arizona), McDonald Observatory (Texas), and the Hubble Space Telescope, and participate in collaborations including Sloan Digital Sky Survey-IV (SDSS-IV) and the Large Synoptic Survey Telescope (LSST). Such activities expose our graduate students to state-of-the-art instrumentation and world-class researchers.

Admission Requirements
In addition to the admissions requirements of the Graduate School, the Department of Physics & Astronomy requires graduate applicants to have a sound foundation in undergraduate physics. This foundation will normally include advanced courses in classical mechanics, electromagnetism and quantum mechanics. Applicants are encouraged to take the GRE physics subject exam. Applicants wishing to apply for financial aid in the form of a teaching assistantship, research assistantship or fellowship must supply letters of recommendation from three individuals familiar with their academic capabilities. Such applicants must also submit a written statement of their interests and background in physics.

Admissions requirements are the same for the M.S. and the Ph.D. programs except that applicants for the Ph.D. must possess an interest in carrying out original research at the advanced level.

Degree Requirements
The M.S. program can include an emphasis on basic or applied physics or physics education, and students are encouraged to take courses in related programs that satisfy the appropriate academic objectives. Before taking the M.S. oral exam, the M.S. student must have completed (with a B average) 16 (plan A with a thesis) or 20 (plan B without a thesis) credit hours in approved graduate courses.

The Ph.D. degree is a research degree granted on the basis of broad knowledge of physics and in-depth research in a specific area leading to a dissertation (and generally publications in appropriate refereed journals). Students may perform this research at the University of Kentucky or appropriate collaborating institutions. Before taking the Ph.D. qualifying exam, the student must pass the Physics GRE at the 50th percentile or higher and satisfactorily pass core courses in graduate classical mechanics, electromagnetism, quantum mechanics, and statistical mechanics, as well as electives in topical areas of modern physics.

Graduate Courses

PHY 401G	Special Topics In Physics And Astronomy For Elementary, Middle And High School Teachers	(1-4)
PHY 402G	Electronic Instrumentation And Measurements (Same As EE 402G)	(3)
PHY 404G	Mechanics	(3)
PHY 416G	Electricity And Magnetism	(3)
PHY 417G	Electricity And Magnetism	(3)
PHY 472G	Interaction Of Radiation With Matter (Same As RM 472G)	(3)
PHY 504	Advanced Mechanics	(3)
PHY 506	Methods Of Theoretical Physics I (Same As MA 506)	(3)
PHY 507	Methods Of Theoretical Physics II (Same As MA 507)	(3)
PHY 520	Introduction To Quantum Mechanics I	(3)
PHY 521	Introduction To Quantum Mechanics II	(3)
PHY 522	Thermodynamics And Statistical Physics	(3)
PHY 524	Solid State Physics (Same As EE 524)	(3)
PHY 525	Condensed Matter Physics	(3)
PHY 535	Experimental Physics: Advanced Physics Laboratory	(2)
PHY 545	Radiation Hazards And Protection (Same As RM/RAS 545)	(3)
PHY 546	General Medical Radiological Physics (Same As Rm/RAS 546)	(3)
PHY 554	Fundamentals Of Atomic Physics	(3)
PHY 555	Fundamental Nuclear Physics	(3)
PHY 556	Fundamental Particle Physics	(3)
PHY 567	Introduction To Lasers And Masers (Same As EE 567)	(3)
PHY 570	Seminar On Teaching Physics	(1)
PHY 571	Seminar On Teaching Physics Laboratories	(1)
PHY 591	Astrophysics I - Stars (Same As AST 591)	(3)
PHY 592	Astrophysics II– Galaxies And Interstellar Material (Same As AST 592)	(3)
PHY 600	Selected Topics In Advanced Physics	(2-3)
PHY 605	Gravity	(3)
PHY 611	Electromagnetic Theory I	(3)
PHY 613	Electromagnetic Theory II	(3)
PHY 614	Quantum Mechanics I	(3)
PHY 615	Quantum Mechanics II	(3)
PHY 616	Quantum Field Theory I	(3)
PHY 624	Condensed Matter Theory	(3)
PHY 630	Topics In Nuclear And Intermediate Energy Physics (Subtitle Required)	(3)
PHY 632	Statistical Mechanics	(3)
PHY 639	Physical Processes In Astrophysics (Same As AST 639)	(3)
PHY 716	Quantum Field Theory II	(3)
PHY 748	Master's Thesis Research	(0)
PHY 749	Dissertation Research	(0)
PHY 767	Dissertation Residency Credit	(2)
PHY 768	Residence Credit For The Master's Degree	(1-6)
PHY 769	Residence Credit For The Doctor's Degree	(0-12)
PHY 770	Colloquium	(1)
PHY 781	Independent Work In Physics	(1-9)
PHY 790	Research In Physics	(3)
PHY 791	Research In Physics	(5)
AST 591	Astrophysics I – Stars (Same As PHY 591)	(3)
AST 592	Astrophysics Ii - The Galaxy (Same As PHY 592)	(3)
AST 639	Physical Processes In Astrophysics (Same As PHY 639)	(3)

Physiology

College of Medicine

Graduate study in physiology is designed to prepare candidates for careers as independent scientists in academics, industry, and government positions. Admission to the graduate program is competitive and is based upon academic background, professional recommendations, performance on the Graduate Record Examination (GRE), experience, and when possible, personal interviews. Applicants should complete an undergraduate degree in biological sciences, chemical sciences, physical sciences, mathematics, psychology, or engineering. It is recommended that applicants complete courses in organic chemistry, physical chemistry, calculus, physics, and the biological sciences, as well as have some research experience.

Students will have the opportunity to join faculty research programs across a spectrum of topics such as neural, endocrine, cardiovascular, renal, respiratory, sensory, and muscle physiology. Research activities employ systems, cellular, and molecular approaches. The program of study is tailored to the individual background and career goals of the student and stresses an interdepartmental approach both in the selection of courses and in the pursuit of research. Students are expected to participate in graduate seminars, journal clubs, research seminars; to interact with visiting scholars; and to present the results of their research at local and national meetings. Teaching opportunities leading to a graduate certificate in teaching is also available. Financial aid is available to the students accepted to the program.

Admission Requirements
Admission to the Ph.D. program in Physiology is through the Integrated Biomedical Sciences (IBS) Curriculum. Inquiries regarding admission should be directed to Director, Integrated Biomedical Sciences Curriculum, University of Kentucky, College of Medicine http://graduate.med.uky.edu/integrated-biomedical-sciences . For information about the Ph.D. program in Physiology, please contact the Director of Graduate Studies, Department of Physiology. Information may also be obtained from the department Web site: http://physiology.med.uky.edu/.

Graduate Courses

PGY 412g	Principles Of Human Physiology Lectures	(4)
PGY 502	Principles Of Systems, Cellular And Molecular Physiology (Same As BIO 502)	(5)
PGY 504	Independent Work In Physiology	(2-4)
PGY 535	Comparative Neurobiology And Behavior (Same As BIO 535)	(3)
PGY 560	Pathophysiology: Integrative Study In Physiology And Medicine	(1)
PGY 601	Mammalian Endocrinology (Same As ASC 601)	(3)
PGY 602	Readings In Systems, Cellular And Molecular Physiology	(3)
PGY 604	Advanced Cardiovascular Physiology	(3)
PGY 606	Advanced Neurophysiology	(3)
PGY 608	Advanced Renal Physiology	(3)
PGY 609	Advanced Respiratory Physiology	(3)
PGY 612	Biology Of Aging (Same As BIO/ANA/GRN 612)	(3)
PGY 615	Seminar In Teaching Medical Science (Med Science Teaching I) (Same As GRN 615)	(2)
PGY 616	Practicum In Teaching Medical Science (Med Science Teaching II)	(2)
PGY 617	Physiological Genomics	(2)
PGY 618	Molecular Neurobiology (Same As MI/ANA/BIO 618)	(4)
PGY 627	Proseminar In Physiological Psychology (Same As PSY 627)	(3)
PGY 630	Advanced Topics In Physiology	(1-3)

PGY 625	Muscle Forum	(1)
PGY 638	Developmental Neurobiology (Same As BIO/ANA/PSY 638)	(3)
PGY 650	Animal Physiology Laboratory (Same As BIO 650)	(2)
PGY 660	Biology Of Reproduction (Same As ASC /ANA 660)	(3)
PGY 710	Aging Of The Nervous System (Same As PHA/GRN/ANA 710)	(3)
PGY 749	Dissertation Research	(0)
PGY 766	Topical Seminar Behavioral Neuroscience (Same As PSY 766)	(3)
PGY 767	Disertation Residency Credit	(2)
PGY 768	Residence Credit For The Master's Degree	(1-6)
PGY 769	Residence Credit For The Doctor's Degree	(0-12)
PGY 774	Graduate Seminar In Physiology	(1)
PGY 791	Research In Physiology	(1-15)

Plant Pathology

College of Agriculture, Food & Environment

The department offers work leading to the M.S. and Ph.D. degrees. For the Ph.D. degree, individual programs of study must conform to the requirements established by the Graduate School; a minor is not required.

Admission Requirements
The Graduate School's requirements for admission are likewise the minimum requirements for acceptance into the M.S. and Ph.D. programs of the Department of Plant Pathology. However, additional materials are required for application to the Plant Pathology graduate programs. Each applicant must arrange for three letters of recommendation to be sent, and must also provide a curriculum vitae and a written statement identifying the applicant's reasons for desiring to undertake studies in this department, to the Plant Pathology DGS. These materials, and those submitted to the Graduate School, are considered on a case-by-case basis by the department's Academic Program Committee, which then makes a recommendation on admission. Admission to a graduate program in Plant Pathology does not guarantee financial assistance to the student. Applicants who are admitted will also be informed of any financial offer in a contract that they must sign in order to be admitted to the Graduate School.

Required Courses for both MS and Ph.D.:

PPA 400G	(3) (if not taken previously)
PPA 500	(3)
PPA 600	(2)
PPA 640	(3)
PPA 641	(1)
PPA 770	(1)

At least two from the following list:

PPA 650	(3)
PPA 670	(1)
PPA 671	(2)
PPA 673	(1)
PPA 620	(3)
PPA 630	(1)
PPA 631	(1)

Graduate Courses

PPA 400g	Principles Of Plant Pathology	(3)
PPA 500	Physiology Of Plant Health And Disease	(3)
PPA 600	Critical Methods In Plant-Microbe Interactions	(2)
PPA 601	Special Topics In Molecular And Cellular Genetics (Same As PLS/BIO/BCH/MI 601)	(1)
PPA 609	Plant Biochemistry (Same As BCH/PLS 609)	(3)
PPA 620	Fungicides, Advanced Concepts	(3)
PPA 630	Introduction To Genetically Engineered Crops, Risks And Benefits I	(1)

PPA 631	Introduction To Genetically Engineered Crops, Risks And Benefits II	(1)
PPA 640	Identification Of Plant Diseases (Same As PLS 640)	(3)
PPA 641	Plant Disease, Population Biology, And Biotechnology	(1)
PPA 650	Fungal Biology	(3)
PPA 670	Plant Bacteriology	(1)
PPA 671	Advanced Plant Virology	(2)
PPA 673	Advanced Plant Disease Resistance	(1)
PPA 700	Plant Pathology Laboratory Visits	(1-3)
PPA 748	Master's Thesis Research	(0)
PPA 767	Dissertation Residency Credit	(2)
PPA 768	Residence Credit For The Master's Degree	(1-6)
PPA 770	Plant Pathology Seminar	(1)
PPA 784	Special Problems In Plant Pathology	(1-3)
PPA 794	Research In Plant Pathology	(1-9)
PPA 799	Teaching In Plant Pathology	(1-2)

Political Science

College of Arts & Sciences

Admission Requirements
Candidates for admission to the graduate program in political science must apply using the Graduate College online application system, which is available at https://app.applyyourself.com/AYApplicantLogin/fl_ApplicantConnectLogin.asp?id=ukgrad. Required information includes (1) a copy of transcripts and GRE scores; (2) a one- to three-page Statement of Purpose explaining why the student wishes to pursue a Ph.D. degree; (3) three letters of recommendation from persons familiar with the applicant's academic performance; (4) a sample of writing on a topic relevant to political science; (5) a resume or curriculum vitae, and (6) TOEFL scores if the applicant's first language is not English. Applications will only be considered for the fall semester.

Applicants will be evaluated on the basis of the Department's judgment of the likelihood of their success in the program as compared with other applicants and considering the limited number of applicants accepted to the program. In evaluating candidates, the Department will consider the totality of their records, including grades, test scores, letters of recommendation, writing samples, and other relevant information. The department usually only accepts applicants to the PhD. program. Students who do not have political science undergraduate majors are welcome in this program.

Degree Requirements
The Political Science Department offers both the M.A. and Ph.D. degrees. The M.A. degree may be earned under either of two plans: Plan A requires at least 24 hours of course work and a thesis; Plan B requires at least 30 hours of course work and examination in three fields of political science, or in two fields of political science and one outside field. Under either plan, the student must take at least two-thirds of the required semester hours in political science, and at least half of the political science work must be in courses open only to graduate students. A candidate for the Plan B master's degree must pass a foreign language requirement or an analytical skills requirement.

The Ph.D. program is divided into a general phase and a specialized phase. Entering students spend their first year in the general phase, which includes proseminars in methodology and in at least four major fields of political science. Students who have previously taken graduate work may be exempt from some of these proseminars. At the end of the first year of graduate work, the student is evaluated by a departmental committee which determines whether the general phase has been satisfactorily completed.

During the specialized phase of the graduate program, the student's work is based on a program of study prepared with their Advisory Committee. The student takes advanced work in at least two substantive fields in political science. The student completes qualifying exams prior to defending the prospectus for the dissertation. The qualifying examination in political science consists of a written and oral examination in each of the two substantive fields specified in the student's program. The examination is given by the Field or Advisory Committee. The student then writes a dissertation and defends it in a final oral examination.

Candidates for the Ph.D. in political science must demonstrate proficiency in a research skill. The required research skill will consist of additional quantitative skills or proficiency in a foreign language that is directly pertinent to the student's research interests.
Additional details about requirements may be secured from the Department of Political Science.

Graduate Courses

PS 411G	Comparative Government-Parlimentary Democracies I	(3)
PS 415G	Comparative Judicial Politics	(3)
PS 417G	Survey Of Sub-Saharan Politics (Same As AAS 417G)	(3)
PS 419G	The Governments And Politics Of Eastern Asia	(3)
PS 420G	Governments And Politics Of South Asia	(3)
PS 428G	Latin American Government And Politics	(3)
PS 429G	Government And Politics In Russia And The Post-Soviet States	(3)
PS 430G	The Conduct Of American Foreign Relations	(3)
PS 431G	National Security Policy	(3)
PS 433G	Politics Of International Economic Relations	(3)
PS 436G	International Organization	(3)
PS 437G	Dynamics Of International Law	(3)
PS 439G	Contemporary International Problems	(3)
PS 441G	Early Political Theory	(3)
PS 442G	Modern Political Theory	(3)
PS 456G	Appalachian Politics	(3)
PS 461G	Civil Liberties	(3)
PS 463G	Judicial Politics	(3)
PS 465G	Constitutional Law	(3)
PS 470G	American Political Parties	(3)
PS 472G	Political Campaigns And Elections	(3)
PS 473G	Public Opinion	(3)
PS 474G	Political Psychology	(3)
PS 475G	Politics And The Mass Media	(3)
PS 476G	Legislative Process	(3)
PS 480G	Government And The Economy	(3)
PS 489G	The Analysis Of Public Policy	(3)
PS 538	Conflict And Cooperation In Latin American Relations	(3)
PS 545	American Political Thought	(3)
PS 557	Kentucky Government And Politics	(3)
PS 566	Constitutional Interpretation	(3)
PS 584	The American Presidency	(3)
PS 620	Comparative Politics: Theory And Method	(3)
PS 671	Strategies Of Inquiry In Political Science	(3)
PS 672	Introduction To Techniques Of Political Research	(3)
PS 674	Proseminar In Theories Of International Politics	(3)
PS 680	Proseminar In Political Institutions And Process	(3)
PS 681	American Political Behavior	(3)
PS 684	Proseminar In Policy Studies	(3)
PS 685	Proseminar In Public Administration And Policy	(3)
PS 690	Proseminar In Contemporary Political Theory	(3)
PS 711	Topical Seminar In Political Science (Subtitle Required)	(3)
PS 731	International Security/Conflict Analysis	(3)
PS 732	Comparative Foreign Policy (Subtitle Required)	(3)
PS 733	International Political Economy	(3)
PS 734	Great Books Of World Politics	(3)
PS 735	Democracy And International Affairs	(3)
PS 737	Transnational Organizations And Processes	(3)
PS 748	Master's Thesis Research	(0)
PS 749	Dissertation Research	(0)
PS 750	Political Parties And Elections In America	(3)
PS 756	Regional Politics (Subtitle Required)	(3)
PS 759	Comparative Political Behavior	(3)
PS 760	Seminar In Judicial Politics	(3)
PS 767	Dissertation Residency Credit	(2)
PS 768	Residence Credit For The Master's Degree	(1-6)
PS 769	Residence Credit For The Doctor's Degree	(0-12)
PS 772	Advanced Problems In Research Methods	(3)
PS 775	Seminar In Public Policy	(3)
PS 780	Legislative Behavior	(3)
PS 795	Special Problems In Political Science	(1-3)
PS 796	Directed Research In Political Science	(1-3)

Psychology

College of Arts & Sciences

The department offers the Ph.D. degree in psychology in two programs: clinical psychology and experimental psychology, the latter subdivided into cognitive studies/developmental studies, behavioral neuroscience/psychopharmacology, and social psychology. The major goal of the doctoral programs in psychology is to prepare the student for a career in research in both academic and non-academic settings and in teaching.

The area of specialization in clinical psychology provides academic courses, practica, and internships which permit students to combine their teaching and research activities with a clinical career in the mental health field. Special areas of expertise among clinical faculty include psychological assessment, child clinical psychology, health psychology, neuropsychology, personality, psychopathology and diagnosis, psychotherapy, research methodologies, and substance abuse. Clinical training is facilitated by early placement of students at a variety of sites including medical centers, a federal corrections facility, community mental health centers, state and private psychiatric hospitals, and the department's own psychological clinic. The clinical program is fully accredited by the American Psychological Association.

The concentration in behavioral neuroscience and psychopharmacology is designed to train students broadly, through integrated course work and individualized training, in the general theoretical principles and technical approaches used to investigate the biological and behavioral mechanisms of alcohol and drug abuse. Psychopharmacological approaches to understanding basic principles of learning are also emphasized. Numerous collaborative efforts exist between faculty including those in other departments and these are strongly encouraged. Students receive a concentrated laboratory experience ranging from cell culture models, animal models (birds, mice or rats) or human subjects.

The cognitive studies area provides integrated course work and individualized training designed to prepare students for a career in research and teaching. Emphasis is placed on theoretical analysis and empirical studies involving adult cognition, cognitive development, animal cognition and the application of cognitive theories to everyday cognition. Scholarship in basic theory is the primary focus of training, but students interested in applying their training to nonacademic settings (e.g., business, law) may do so.

The developmental studies area focuses on typical and atypical development in human infancy and childhood, and the major aim of graduate training is to develop strong theoretical and methodological foundations in these fields. The primary emphasis is on research, while students are also encouraged to develop expertise in teaching. Training is tailored to individual students' needs. The developmental area is associated with the Children at Risk research cluster, which involves faculty and students from many programs across campus and provides opportunities for multi-disciplinary research and training.

The area in social psychology is designed to provide intensive experience in research with members of the social psychology faculty, with the aim of developing in the student a strong theoretical and research competence with complex social phenomena. Traditions of both experimental laboratory research and naturalistic study are utilized; emphases include theoretical and applied significance of research. Each student's course of study is individually designed to fit that student's particular needs and interests. Research experience in related behavioral sciences (for example, communication, marketing, behavioral sciences) is encouraged. During the first year of the doctoral program, students in all areas gain experience in the major content areas of psychology and in psychological statistics. Thereafter, the student and the

advisor construct a program of study consistent with the academic interests and professional goals of the student. M.A. and M.S. degrees are awarded under Plan A only, as one component of doctoral training.

Admission Requirements

The minimum departmental standards for admission to graduate work in psychology include an undergraduate overall average of B or better, a satisfactory score on the verbal and quantitative portions of the Graduate Record Examination (GRE) and three letters of recommendation. All admissions are on a competitive basis. For additional information concerning the program in psychology and such matters as financial support, contact the Director of Graduate Studies, Department of Psychology or see https://psychology.as.uky.edu/.

Graduate Courses

PSY 500	History And Systems Of Psychology	(3)
PSY 533	Abnormal Psychology	(3)
PSY 534	Child Psychopathology	(3)
PSY 535	Psychological Testing	(3)
PSY 552	Animal Behavior	(4)
PSY 558	Biology Of Motivation	(3)
PSY 561	Advanced Topics In Foundations Of Clinical Psychology (Subtitle Required)	(3)
PSY 562	Advanced Topics In Cognitive Psychology (Subtitle Required)	(3)
PSY 563	Advanced Topics In Developmental Psychology (Subtitle Required)	(3)
PSY 564	Advanced Topics In Learning (Subtitle Required)	(3)
PSY 565	Advanced Topics In Neuroscience (Subtitle Required)	(3)
PSY 566	Advanced Topics In Social Psychology (Subtitle Required)	(3)
PY 603	Psychopathology	(3)
PY 610	Psychometrics	(3)
PSY 611	Psychological Research	(3)
PSY 613	Behavioral Ecology And Comparative Neurobiology (Same As BIO/ENT/PGY/ANA 613)	(2)
PSY 614	Techniques In Behavioral Ecology And Comparative Neurobiology (Same As BIO/PGY/ENT/ANA 614)	(2)
PSY 616	Research Design In Clinical Psychology	(3)
PSY 620	Proseminar In History And Systems Of Psychology (Same As EDP 615)	(3)
PSY 621	Proseminar In Learning	(3)
PSY 622	Proseminar In Personality	(3)
PSY 623	Proseminar In Sensation And Perception	(3)
PSY 624	Proseminar In Social Psychology	(3)
PSY 625	Proseminar In Developmental Psychology	(3)
PSY 626	Survey Of Health Psychology (Same As BSC 626)	(3)
PSY 627	Proseminar In Physiological Psychology (Same As PGY 627)	(3)
PSY 628	Proseminar In Cognitive Processes	(3)
PSY 629	Introduction To Clinical Psychology	(2)
PSY 630	Clinical Methodology I	(2)
PSY 631	Practicum In Clinical Methodology I	(2)
PSY 632	Clinical Methodology Ii	(2)
PSY 633	Practicum In Clinical Methodology Ii	(2)
PSY 636	Systems Of Psychotherapy	(3)
PSY 637	Practicum In Psychological Assessment And Intervention	(1-3)
PSY 638	Developmental Neurobiology (Same As BIO/ANA/PGY 638)	(3)
PSY 708	Internship In Clinical Psychology	(0)
PSY 710	Topical Seminar In Clinical Psychology	(3)
PSY 748	Master's Thesis Research	(0)
PSY 749	Dissertation Research	(0)
PSY 766	Topical Seminar In Behavioral Neuroscience (Same As PGY 766)	(3)
PSY 767	Dissertation Residency Credit	(2)
PSY 768	Residence Credit For The Master's Degree	(1-6)
PSY 769	Residence Credit For The Doctor's Degree	(0-12)
PSY 772	Topical Seminar In Learning	(3)
PSY 776	Seminar In Dependency Behavior (Same As BSC/SOC/ANT 776)	(3)
PSY 778	Topical Seminar In Developmental Psychology	(3)
PSY 779	Topical Seminar In Social Psychology (Same As SOC 779)	(3)
PSY 780	Problems In Psychology	(1-3)
PSY 781	Research Participation	(1)
PSY 790	Research In Psychology	(1-12)

Public Finance Management

Martin School of Public Policy & Administration

The Master of Public Financial Management (MPFM) program offers a professional degree that prepares students for careers as professionals in public and non-profit sectors. The program is offered 100% online and is designed for students with interests in public financial management, public sector accounting and auditing and other unique aspects of public finance. Students enter the program with diverse academic backgrounds and career goals. Applicants are strongly encouraged to have had either an undergraduate course or work experience in accounting prior to admission.

Full details about the program are available at http://martin.uky.edu/

Admission Requirements
The University of Kentucky uses the Hobson's ApplyYourself system. All documents must be submitted online: http://gradschool.uky.edu/welcome-university-kentucky. Be prepared to download:

1. A one to three page personal statement explaining why you wish to pursue an MPFM degree.
2. A resume or CV
3. An official transcript from each post-secondary institution that you have attended.
4. As an online program, admission includes IN-STATE tuition independent of your state of residency.
5. Other administrative fees as applicable.

You will enter your GRE or GMAT scores in the Graduate School application but will also need to submit official scores from ETS. International students will also need English Language test scores.

Deadlines for the program are the same as the Graduate School admission deadlines. The final selection of students for admission will be subject to the discretion of the admissions committee of the program. Competitive admission is based on a consideration of the documents listed above.

Degree requirements
Courses are offered in 8-week and 4-week (summer session only) blocks. Students enroll in one course at time and may complete the 36-credit program in two years. The following section outlines the courses included in the MPFM. Note that the first 4 courses listed comprise of a Graduate Certificate Program that may be taken independently of the full MPFM. The GRE/GMAT is not required for the Graduate Certificate Program.

All students must take the 3-hour capstone class and successfully complete and defend a capstone project developed in that class. The purpose of the course and the project is to integrate the learning experience of the MPP program and apply knowledge and skills acquired in the program to a policy issue. The presentation of the Capstone project serves as the final Masters exam.

Graduate Courses

PA 631	Public Financial Management: Budgeting/Debt Management	(3)
PA 632	Investments/Cash Management	(3)
PA 625	Governmental Accounting and Financial Condition Analysis	(3)
PA 627	Governmental Auditing	(3)
PA 626	Applications in Governmental Accounting and Audit	(3)
PA 683	Tax Policy	(3)

PA 633	Municipal Securities	(3)
PA 694	Public Pensions and Insurance	(3)
PA 695	Data and Revenue Forecasting in the Public Sector	(3)
PA 696	Legal Issues in Public Financial Management	(3)
PA 697	Special Topics in Public Financial Management	(3)
PA 681	Capstone	(3)

Public Health

College of Public Health

A defining characteristic of the area of public health is its focus on population groups rather than individuals. Public health professionals are concerned with the health of communities, relying heavily on collaboration with local, state, and national entities to improve the health status of their targeted populations. With the current interest in health care reform, bioterrorism and preparedness, concerns over managed care, and other factors impacting the nation's health care system, the need for highly trained public health professionals is increasing. The College of Public Health offers the Master of Public Health degree. The M.P.H. is an applied professional/graduate degree designed for highly motivated students who have either a previously earned professional degree or a baccalaureate degree and substantial interest in public health. Unique sequencing of courses, community-based program activities, and field/laboratory research provide students with multiple opportunities to define their course of study in the five areas of concentration, Biostatistics, Epidemiology, Environmental/Occupational Health, Health Behavior, or Health Management and Policy. The M.P.H. degree is designed to prepare graduates for entry and advancement in public health careers in public, non-profit and proprietary health care organizations.

Professionals with the M.P.H. hold important roles in a variety of public and private settings, e.g., local, state, and national health departments, health care facilities, military service, social service agencies, private industry, universities, and community-centered health education facilities. In these positions, they can be involved directly with the development, implementation and assessment of efforts to improve the health of the public and prevention of disease. The curriculum is designed to provide skills and knowledge upon which to build or enhance a career in public health. Unique sequencing of courses, community-based program activities, and field/laboratory research provide students with multiple opportunities to define their public health specialty and provide a broad overview of the disciplines of public health.

The Master of Public Health degree requires a minimum of 42 credit hours of study for completion. All students must complete a minimum of 18 semester hours of required core course work and at least 18 hours of specialty work in one of the five areas of concentration. In addition, a three credit-hour field practicum course (CPH 609), and a three credit-hour final integrative Capstone Project (CPH 608) are required. The dual M.D./M.P.H. and PharmD/M.P.H. degrees are currently available.

Admission Requirements
Admission into the M.P.H. program is competitive, and consideration is given to academic background, a history of service, interest in the field, a personal statement, career plans, and letters of recommendation. Applicants must also have achieved an acceptable score on the Graduate Record Examination (GRE) or the Graduate Management Admission test (GMAT).

Applicants must complete a UK Graduate School Application and make a separate application through the Schools of Public Health Application Service (SOPHAS.org), the centralized application process for accredited schools/colleges of public health. Applications will not be reviewed until the SOPHAS application is completed. For additional information concerning the University of Kentucky, College of Public Health and its degrees, call (859) 218-2096, send e-mail to ukcph@uky.edu, or go to http://www.uky.edu/publichealth/.

Graduate Courses

BST 693	Statistical Practice In Public Health	(3)
BST 761	Time To Event Analysis	(3)
BST 762	Longitudinal Data Analysis	(3)
CPH 535	Databases And Sas Programming	(3)
CPH 551	Comparative Health Systems	(3)
CPH 580	Biostatistics I	(3)
CPH 600	Health Services And Systems Organization	(3)
CPH 601	Occupational And Environmental Health	(3)
CPH 602	Overview Of The Health Care Delivery System	(3)
CPH 604	Foundations Of Health Behavior	(3)
CPH 605	Epidemiology	(3)
CPH 608	Capstone Projcet	(3)
CPH 609	Public Health Practicum	(3)
CPH 610	Injury Epidemiology & Control	(3)
CPH 611	Advanced Epidemiology	(3)
CPH 612	Infectious/Emerging Disease Epidemiology	(3)
CPH 613	Molecular Epidemiology, Cancer Prevention And Control	(3)
CPH 614	Managerial Epidemiology	(3)
CPH 615	Cancer Epidemiology	(3)
CPH 616	Cardiovascular Disease Epidemiology	(3)
CPH 617	Environmental And Occupational Epidemiology	(3)
CPH 618	Epidemiology Of Aging	(3)
CPH 620	Occupational & Environmental Health Ii	(3)
CPH 621	Workplace Ventilation	(3)
CPH 622	Toxic Agents And Their Implications In Public Health	(3)
CPH 630	Biostatistics Ii	(3)
CPH 631	Design & Analysis Of Health Surveys	(3)
CPH 632	Mixed Models In Public Health	(3)
CPH 636	Data Mining In Public Health	(3)
CPH 640	Women's Health	(3)
CPH 641	Public Health And Anthropology	(3)
CPH 643	Measuring Health Behavior: Individuals And Communities	(3)
CPH 644	Rural Health Disparities	(3)
CPH 645	Cph 645-001 Food Systems, Malnutrition And Public Health	(3)
CPH 646	Spec Tops In Behavioral Health	(3)
CPH 647	Research Methods For Public Health	(3)
CPH 648	Eliminating Racial And Ethnic Disparities	(3)
CPH 649	Independent Studies In Health Behavior	(1-3)
CPH 650	Management Of Public Health Organizations	(3)
CPH 652	Health Finance	(3)
CPH 653	Public Health Law And Policy	(3)
CPH 655	Management Accounting For Health Care Organizations	(3)
CPHh 660	Geographic Information Systems In Public Health	(3)
CPH 662	Public Health Response To Terrorism, Disasters	(3)
CPH 663	Introduction To Public Health Practice And Administration	(3)
CPH 664	Design & Analysis Of Clinical Trials	(3)
CPH 665	Ethical Issues In Clinical Research	(3)
CPH 666	Practicum In Clinical Research I	(3)
CPH 667	Practicum In Clinical Research Ii	(3)
CPH 668	Practicum In Clinical Research Iii	(3)
CPH 695	Public Health Practice Through Service Learning	(3)
CPH 698	Occupational Safety & Health Field Surveys	(3)
CPH 709	Global Health Practicum	(3)
CPH 711	Chronic Disease Epidemiology	(3)
CPH 712	Advanced Epidemiology	(3)
CPH 713	Pharmacoepidemiology	(3)
CPH 716	Proseminar Occupational Health And Safety	(3)
CPH 718	Special Topics In Epidemiology	(1-3)
CPH 719	Independent Studies In Epidemiology	(1-3)
CPH 728	Health Of Agricultural Populations	(3)
CPH 729	Independent Studies In Occupational/Environmental Health	(1-3)
CPH 738	Special Topics In Biostatistics	(1-3)
CPH 739	Independent Studies In Biostatistics	(1-3)
CPH 740	Maternal And Child Health	(3)
CPH 746	Research Methods And Program Evaluation For Health Behavior	(3)
CPH 751	Global Public Health	(3)
CPH 758	Special Topics In Health Services Management	(1-3)
CPH 759	Independent Studies In Health Services Management	(1-3)
CPH 763	Ethics For Public Health	(3)
CPH 768	Research Credit Master Degree	(1-3)
CPH 778	Spec Tops In Public Health	(1-3)
CPH 779	Independent Studies In Public Health	(1-3)
CPH 790	Water Sanitation And Health	(3)

Public Policy & Administration

Martin School of Public Policy & Administration

The Martin School of Public Policy and Administration, a research, academic and service unit of the Graduate School, offers the Ph.D. in Public Policy and Administration, the Master in Public Administration (MPA), the Master in Public Policy (MPP) degrees and the online Master of Public Financial Management. The Ph.D. in Public Policy and Administration is designed to prepare students for positions with academic institutions or policy think tanks. The MPA is a 40-credit hour program designed for those seeking careers in the public, non-profit, and private sectors. The MPP is a 37-hour program designed to prepare individuals for careers as professional policy analysts in government and non-profit organizations. The MPFM is a 36 credit-hour degree preparing students to work in the finance departments of government and nonprofit organizations. The interdisciplinary members of the faculty have primary or joint appointments in the Martin School and in one of the academic departments of the College of Business and Economics, the College of Arts and Sciences, the College of Pharmacy, the College of Education, or the College of Agriculture, Food and environment.

Doctor of Philosophy

The curriculum of the Ph.D. program provides knowledge of the principles of organizational behavior, an understanding of the public policy process and policy issues, and an ability to analyze policy and administrative problems through research and analytical methods.

Admission Requirements

The University of Kentucky uses the Hobson's ApplyYourself system. All documents must be submitted on-line: http://gradschool.uky.edu/welcome-university-kentucky. Be prepared to upload:

1. A one to three page statement explaining why you wish to pursue a Ph.D. degree.
2. A resume or CV
3. An official or unofficial transcript from each post-secondary institution that you have attended.
4. The e-mail addresses of at least three individuals who have agreed to write a recommendation letter on your behalf. Ideally, at least two letters are from academic references.
5. A writing sample, while optional, is encouraged.
6. You will enter your GRE or GMAT scores in the Graduate School application but will also need to submit official scores from ETS.

Entering students are expected to have at least a 3.0 grade point average in undergraduate work (on a 4.0 scale), and a 3.5 in all graduate level work. The Martin School does not have "cut-off" scores when it comes to the GRE (or other accepted admissions exam) and considers all aspects of students' records, including evidence of improving performance during students' academic careers. The final selection of students for admission will be subject to the discretion of the director of Graduate Studies based on the advice of the admissions committee of the Ph.D. program. Competitive admission is based on a consideration of the documents listed above.

Pre-Requisites and Exemptions; Many incoming students will hold a master's degree in public administration or public policy. Other students with master's degrees in such areas as political science, economics, agricultural economics or business administration will be evaluated with respect to their background in public administration. All students are expected to have taken four University of Kentucky courses: PA 652 (Public Policy Economics), PA 631 (Public Financial Management), PA 642

(Public Organizational Theory and Behavior), and PA 651 (The Policy Process), or their equivalents from a NASPAA accredited program or their equivalents. Students who have not fulfilled these class requirements will do so before taking the relevant Ph.D. core classes. All students are also expected to have a strong background in research methodology and will need to take calculus before beginning the Ph.D. classes.

Degree Requirements
Students are required to take 42 hours of graduate course work beyond the master's degree or its equivalent. The program of study includes 15 credit hours of core courses, 15 credit hours in the area of concentration, 3 credit hours of theory related to and supporting the student's area of concentration, and 9 credit hours of research methodology courses. In addition to course work, students complete two examinations and a dissertation. The dissertation involves research on a public management or public policy issue.

Core Courses
PA 731 Fiscal and Budgetary Policy (3)
PA 742 Theory of Public Organizations (3)
PA 750 Introduction to Economics of Public Policy (3)
PA 751 Public Policy Formulation (3)
PA 752 The Economics of Policy Analysis (3)

Financial Aid
Financial Support is available to qualified students through fellowships, assistantships and research grants. All students will be considered for aid. No separate form is required. Applications received by February 1st have the maximum chance of receiving support.

Master of Public Administration

The MPA program offers a professional degree that prepares students for careers of leadership in public service as analysts and managers in the public, not-for-profit, and private sectors. Students enter the program with diverse academic backgrounds.

Admission Requirements
The University of Kentucky uses the Hobson's ApplyYourself system. All documents must be submitted on-line: http://gradschool.uky.edu/welcome-university-kentucky. Be prepared to download:
1. A one to three page statement explaining why you wish to pursue an MPA degree.
2. A resume or CV
3. An official or unofficial transcript from each post-secondary institution that you have attended.
4. The e-mail addresses of at least three individuals who have agreed to write a recommendation letter on your behalf. Ideally, at least two letters are from academic references.
5. GRE or GMAT scores. They can be unofficial for admission purposes, but official scores must be submitted upon enrollment. International students will also need English Language test scores.

Questions may be addressed to:
The Martin School of Public Policy and Administration
Student Affairs Office
martinschool@uky.edu
859-257-5594

Deadlines for the program are the same as the Graduate School admission deadlines. Applications completed by February 1st will have priority for financial aid. Generally, courses are offered in the late

afternoon and evening to accommodate working students. The Martin School MPA program is accredited by the National Association of Schools of Public Administration (NASPAA).

Two dual degree programs are offered: a dual JD/MPA program and a dual Pharm.D./MPA degree. For more information about those programs, see Graduate Admission.

Degree Requirements
Completion of a minimum of 37 semester hours of graduate work is required:
1. An Administrative Core of 25 semester hours covering the areas of public policy formulation and analysis, public policy economics, organization and management, budgeting, finance, and analytical methods.
   PA 602 Strategic Planning in the Public and Nonprofit Sectors (3)
   PA 621 Quantitative Methods of Research (3)
   PA 622 Public Program Evaluation (3)
   PA 623 Decision Analysis (3)
   PA 631 Public Financial Management (3)
   PA 632 Public Funds Management (3)
   PA 642 Public Organization Theory and Behavior (3)
   PA 651 The Policy Process
   PA 652 Public Policy Economics (3)
   PA 691 Ethics in Public Administration (1)

2. An area of concentration of 6 semester hours in a stated area of specialization (public financial management, policy analysis, local economic development; non-profit management, environmental management, education policy, health policy, gerontology, international public policy, or transportation systems management) or in an individually designed concentration.
3. Capstone Course and Capstone Project PA 681 Capstone in Public Administration (3). All students must take the 3-hour capstone class and successfully complete and defend a capstone project developed in that class. The purpose of the course and the project is to integrate the learning experience of the MPA program and apply knowledge and skills acquired in the program to a policy issue or management problem. Oral presentation of the project before a faculty committee serves as the final masters' exam
4. Internship: PA 711 Internship in Public Administration (3). An administrative internship at an appropriate agency for 400 hours. Students with a significant professional experience may substitute an independent study policy paper or an additional graduate course.

Master of Public Policy

The MPP program offers a professional degree that prepares students for careers as professional policy analysts in government and non-profit organizations. Students enter the program with diverse academic backgrounds, but should have taken statistics, calculus, and intermediate microeconomics.

Admission Requirements
The University of Kentucky uses the Hobson's ApplyYourself system. All documents must be submitted on-line: http://gradschool.uky.edu/welcome-university-kentucky. Be prepared to download:
1. A one to three page statement explaining why you wish to pursue an MPP degree.
2. A resume or CV
3. An official or unofficial transcript from each post-secondary institution that you have attended.
4. The e-mail addresses of at least three individuals who have agreed to write a recommendation letter on your behalf. Ideally, at least two letters are from academic references.
5. GRE or GMAT scores. They can be unofficial for admission purposes, but official scores must be submitted upon enrollment. International students will also need English Language test scores.

Deadlines for the program are the same as the Graduate School admission deadlines. Applications completed by February 1st will have priority for financial aid. The final selection of students for admission will be subject to the discretion of the admissions committee of the MPP program. Competitive admission is based on a consideration of the documents listed above.

Course Requirements

1. Administrative Core of 3 semester hours covering the areas of statistics, public policy formulation and analysis, public policy economics, organization and management, budgeting, finance, and analytical methods:

    PA 622 Public Program Evaluation (3)
    PA 624 Government Information Systems (3)
    PA 631 Public Financial Management (3)
    PA 642 Public Organization, Theory and Behavior (3)
    PA 651 The Policy Process (3)
    PA 652 Public Policy Economics (3)
    PA 690 Public Policy Analysis Overview (3)
    PA 692 Econometrics (3)
    PA 795 Mathematics for Policy Analysis (1)

2. Area of Specialization (6 Semester Hours). 6 semester hours in a functional area such as Health, Transportation, Education, Environmental Financial, Social Welfare, International Policy or another approved area.
3. Capstone Course and Capstone Project (3 Semester Hours). All students must take the 3-hour capstone class and successfully complete and defend a capstone project developed in that class. The purpose of the course and the project is to integrate the learning experience of the MPP program and apply knowledge and skills acquired in the program to a policy issue. The presentation of the Capstone project serves as the final Masters exam.
4. Internship: PA 711 Internship in Public Administration (3). An administrative internship at an appropriate agency for 400 hours. Students with significant professional experience may substitute an independent study policy paper or an additional graduate course.

Graduate Courses

PA 602	Strategic Planning And Organizational Change In The Public And Nonprofit Sectors	(3)
PA 621	Quantitative Methods Of Research	(3)
PA 622	Public Program Evaluation	(3)
PA 623	Decision Analysis And Decision Support Systems	(3)
PA 624	Government Information Systems	(2)
PA 628	Human Resources Management In Healthcare	(3)
PA 631	Public Financial Management	(3)
PA 632	Public Funds Management	(3)
PA 633	Municipal Securities	(3)
PA 636	Health Economics	(3)
PA 637	Health Finance	(3)
PA 642	Public Organization Theory And Behavior	(3)
PA 651	The Policy Process	(3)
PA 652	Public Policy Economics	(3)
PA 653	Local Economic Development	(3)
PA 660	Public Policy Of The Nonprofit Sector	(3)
PA 661	Financial Management Of Nonprofit Organization	(3)
PA 662	Non-Profit Management.	(3)
PA 665	Public Policy And Political Economy In An International Context	(3)
PA 667	Policymaking In An International Context: Political And Organizational Dimensions	(3)
PA 671	Overview Of U.S. Healthcare	(3)
PA 673	Health Policy	(3)
PA 680	Benefit-Cost Analysis	(3)
PA 681	Capstone In Public Administration	(3)
PA 683	Tax Policy	(3)
PA 690	Public Policy Analysis Overview	(3)
PA 691	Ethics And Public Policy	(1)
PA 692	Econometrics For Policy Analysts	(3)
PA 711	Internship In Public Administration	(3)
PA 722	Policy And Program Evaluation	(3)
PA 727	Environmental Economics, Regulation And Policy	(3)
PA 731	Fiscal And Budgetary Policy	(3)
PA 742	Theory Of Public Organizations	(3)
PA 750	Introduction To Economics For Public Policy	(3)
PA 751	Public Policy Formulation And Implementation	(3)
PA 752	The Economics Of Policy Analysis	(3)
PA 754	Advanced Topics In Public Finance	(3)
PA 767	Dissertation Residency Credit	(2)
PA 775	Special Topics In Health Administration	(1-3)
PA 785	Independent Study In Health Administration	(1-3)
PA 795	Special Topics In Public Administration	(1-3)
PA 796	Independent Study In Public Administration	(1-3)
CPH 759	Independent Studies In Health Services Management	(1-3)
CPH 763	Ethics For Public Health	(3)
CPH 768	Research Credit Master Degree	(1-3)
CPH 778	Spec Tops In Public Health	(1-3)
CPH 779	Independent Studies In Public Health	(1-3)
CPH 790	Water Sanitation And Health	(3)

Radiation Science

College of Medicine

The Radiation Sciences division in the Department of Radiation Medicine offers a Plan B, non-thesis, Master of Science in Radiological Medical Physics degree and a Graduate Certificate in General Radiological Medical Physics. This program is one of a small number of academic medical physics offerings in North America accredited by CAMPEP, the Commission on Accreditation of Medical Physics Educational Programs. Our program offers a small class size (typically eight students per year) and emphasis on clinical training. With the clinical practicum, we offer a unique experience in clinical training with concentration in Radiation Therapy Physics. For more information, please visit https://radiationmedicine.med.uky.edu/radiation-sciences-graduate-program.

Master of Science

Admission Requirements

In addition to the general requirements of the Graduate School, the Radiological Medical Physics Program requires the following for MS candidates. At a minimum, candidates must show the equivalence of a minor in physics (as defined by CAMPEP). To meet this requirement, candidates must have completed the following: 1) Calculus through Ordinary Differential Equations; 2) The Calculus-based introductory General Physics sequence with labs (2 semesters); and 3) Three upper division Physics electives (junior level or above). Courses in Human Anatomy, Human Physiology, Computer Science, and Scientific Statistics are preferred but, if missing, may be incorporated into the graduate program at the discretion of the Director of Graduate Studies.

Application Information

Application to the Radiation Sciences program is online through the Graduate School using the link https://app.applyyourself.com/AYApplicantLogin/fl_ApplicantConnectLogin.asp?id=ukgrad. The applicant will be required to submit GRE General Test scores, transcripts for all undergraduate work, a personal statement, and contact information for three persons willing to provide letters of recommendation. Only self-reported, unofficial General GRE scores and transcripts are required at the time of application. Official versions must be submitted upon entry into the program. A CV may be included but is not required. A personal interview, typically on-campus, is required. However, on-line interviews may be allowed in cases of severe travel restrictions. Fluent spoken English skills are required and are assessed during the interview.

Admission to the program occurs once annually with new classes beginning in the Fall semester. The deadline for applications is April 30th, however, offers for admission are usually made early in the preceding spring semester with completion of the class roster by April 1st. There are a limited number accepted into our program (typically 8), therefore it is recommended that applications be completed by January 31st to assure full consideration. Applications received after the class roster is filled will not be reviewed.

Degree Requirements

The Master of Science in Radiological Medical Physics is interdisciplinary. Plan B (non-thesis) guidelines are utilized for the graduate work, incorporating specific courses in several departments. There is no language requirement. A coursework outline is given as follows.

Required Program Coursework

PHY/RM 472G	Interactions of Radiation with Matter	(3)
RAS/RM/PHY 545	Radiation Hazards and Protection	(3)
RAS/RM/PHY 546	General Medical Radiological Physics	(3)
RAS/RM 601	Advanced Radiation Dosimetry	(2)
RAS/RM 647	Physics of Diagnostic Imaging I	(3)
RAS/RM 648	Physics of Diagnostic Imaging II	(3)
RAS/RM 649	Physics of Radiation Therapy	(3)
RAS 651	Advanced Laboratory in Diagnostic Imaging Physics	(2)
RAS/RM 695	Research in the Health-Related Radiation Sciences	(2)
RAS 710	Radiation Science Seminar	(1)
RM/BIO 740	Mammalian Radiation Biology	(2)
Elective(s)		(3)
	TOTAL CREDIT HOURS	30

Available Electives (Partial Listing)

RM 660	Graduate Practicum in Radiation Medicine	(1-6)
RAS/RM 650	Brachytherapy Physics	(2)
RM 842	Radiation Oncology	(1)
RM 848	Practicum in Brachytherapy Physics	(1-3)
RM 849	Practicum in External Beam Therapy Physics	(1-6)
EE 630	Digital Signal Processing	(3)
EE 635	Image Processing	(3)

Graduate Courses

RAS 472g	Interactions Of Radiation With Matter (Same As RM/PHY 472G)	(3)
RAS 545	Radiation Hazards And Protection (Same As RM/PHY 545)	(3)
RAS 546	General Medical Radiological Physics (Same As RM/PHY 546)	(3)
RAS 601	Advanced Radiation Dosimetry (Same As RM 601)	(2)
RAS 647	Physics Of Diagnostic Imaging I (Same As RM 647)	(3)
RAS 648	Physics Of Diagnostic Imaging II (Same As RM 648)	(3)
RAS 649	Physics Of Radiation Therapy (Same As RM 649)	(3)
RAS 650	Brachytherapy Physics (Same As RM 650)	(3)
RAS 651	Advanced Laboratory In Diagnostic Imaging Physics	(1-3)
RAS 695	Research In Health-Related Radiation Sciences (Same As RM 695)	(1-4)
RAS 710	Radiation Science Seminar	(1)
RM 660	Graduate Practicum In Radiation Medicine	(1-6)
RM 740	Mammalian Radiation Biology (Same As BIO 740)	(2)
EE 630	Digital Signal Processing	(3)
EE 635	Image Processing	(3)

Rehabilitation Counseling

College of Education

The Graduate Program in Rehabilitation Counseling in the Department of Early Childhood, Special Education, and Rehabilitation Counseling offers both a Master's and doctoral degree in Rehabilitation Counseling. For application procedures, please go to the Graduate School web site (http://gradschool.uky.edu) and follow the directions for the Apply Yourself application. This electronic application incorporates the program and Graduate School application process.

Master of Science

The master's curriculum, in accordance with the guidelines of accreditation and certification organizations in Rehabilitation Counseling, provides for flexible programming in response to individual student needs and interests. The program is fully accredited by the Council on Rehabilitation Education (CORE) and fulfills national certification requirements in Rehabilitation Counseling. Program graduates are eligible to sit for the Rehabilitation Counseling Certification (CRCC) Examination, state licensure as a Professional Counselor (LPC), and other national and state certifications.

The program trains students to understand the physical, psychological, social, cultural, global, and economic factors affecting persons with disabilities, and to provide counseling for people with disabilities in a wide variety of professional settings. Rehabilitation Counseling is among the fastest growing professions. Rehabilitation Counselors are professional counselors who provide and coordinate services to persons with emotional, physical, neurological, learning, and developmental disabilities that may interfere with productive functioning, quality of life, and independent living. The counselor must demonstrate competencies in ethics, in establishing and conducting counseling relationships, assessment procedures, vocational placement, program planning and coordination; have an awareness of professional and community resources that can be utilized in the rehabilitation process; have knowledge of persons from culturally diverse backgrounds, and understand how rehabilitation engineering and technology can be utilized to help clients achieve their goals.

The Master's program is offered on campus and via on line web based instruction for employed rehabilitation professionals. These two programs are equivalent with regard to content and student learning outcomes and can be completed in the same timeframe. Please contact the Program Coordinator regarding eligibility requirements for the on line program.
Emphasis is placed on social justice, severe disability and its consequences, independent living, job development and placement, human growth and development, the provision of services in rural communities, technology, business and industry, and consumer issues and rights. Graduates of the program are employed in a wide range of public and private Rehabilitation Counseling, health, educational, mental health, and human service settings. Students interested in obtaining a terminal degree in Rehabilitation Counseling following the completion of their master's degree are encouraged to apply to the doctoral program, described below.

Students who express an interest in employment in public rehabilitation are eligible for a federal personnel preparation scholarship, when available. This scholarship pays tuition and provides a monthly stipend. Scholarship recipients are required to become employed in a public rehabilitation agency or a program, which procures services from a public rehabilitation agency. The program also has a scholarship program to train students for practice in rural rehabilitation environments.
In addition, an Endorsement Curriculum and University Scholars Program in conjunction with Kentucky

State University facilitate the enrollment of persons from culturally diverse backgrounds. An 18-hour certificate program for employed rehabilitation professionals desiring the Certified Rehabilitation Counseling designation has recently been approved. Please contact the Program Coordinator for more information about this new certificate and eligibility requirement.

Admission Requirements
The Rehabilitation Counseling master's program has the following admission requirements. Students are required to have a minimum undergraduate grade point average of 2.75, submit three letters of reference, complete a statement of professional goals and objectives, complete a program application, and participate in an interview with faculty. Under certain circumstances, the program may petition the Graduate School to request a waiver of the undergraduate grade point average.

The program faculty considers all of this information in making admissions decisions. Students are admitted from a wide range of backgrounds and academic disciplines. Students are admitted for the fall, spring, or summer semesters. Admission requirements are the same for the campus and on line programs except that we do not admit online distance learning students in the summer semester but do admit campus students in the summer.

Program Requirements
Course and fieldwork total a minimum of 48 credit hours if the student has a bachelor's degree in Rehabilitation Counseling or related course work. The typical program for other students is 57 hours, up to a maximum of 60 hours. At least 75% of the credit hours must be taken at the University of Kentucky. Campus courses are offered in the late afternoon and early evening to accommodate full- and part-time students. Students who attend the program on a full-time basis can complete the program in 16 months. The program is also offered for practicing rehabilitation counselors on a web-based distance education basis.

Admission to Field Work
Admission to field work will be considered after the student has completed two semesters (full-time) of graduate study or when the student has completed 20 hours of graduate study. The decision to advance to fieldwork includes successful completion of the admission to fieldwork examination, demonstrated skill in academic areas, and a judgment by the faculty that the student possesses the professional, ethical, personal, and social characteristics necessary for providing professional Rehabilitation Counseling services. In addition, the student must have no "I" (incomplete) or S grades. Any E grades must also be cleared with a regular letter grade prior to beginning fieldwork. Students must also be in good academic standing in order to begin fieldwork.

Field Work
The first fieldwork component is a three-credit practicum, which consists of 200 clock hours of supervised experience in Rehabilitation Counseling or rehabilitation-related setting, a weekly seminar, and individual supervision. The practicum is generally taken during the eight-week summer session. However, this course is offered every semester to accommodate part-time students. A student must successfully pass the fieldwork examination prior to enrolling in the practicum.

In accordance with national accreditation and certification requirements, students then complete 600 clock hours of supervised internship in a rehabilitation or rehabilitation-related setting. Every intern student also participates in a weekly seminar and individual supervision. Internship is three credits per 200 clock hours, and may be taken in the summer, fall, or spring semesters following practicum. The internship is taken in one semester; or, due to extenuating circumstances, it may be divided into two semesters. It is recommended, however, that the internship be completed in one semester.

Students who are federal Rehabilitation Services Administration Scholars must do their fieldwork in a public rehabilitation agency and must obtain employment in a public rehabilitation program or an agency or program that provides services to the state federal program.

Students must successfully complete their internship, and demonstrate competence in working with individuals with disabilities in the context of a professional Rehabilitation Counseling relationship in order to graduate. A final written examination is given at the completion of all course work. Graduation is contingent upon the successful completion of this examination. Students also have the option of using the Certified Rehabilitation Counselor examination as their final program exam.

Program of Studies and Sequence of Courses: Master's Program*

Fall Semester (First Year)
RC 515 Medical & Psychosocial Aspects I (3)
RC 520 Principles of Rehabilitation (3)
RC 525 Human Growth, Disability, & Development Across the Lifespan (3)
RC 530 Cultural Diversity in Rehabilitation (3)
RC 650 Rehabilitation Counseling Theories and Techniques I (3)

Spring Semester (First Year)
RC 516 Medical & Psychosocial Aspects II (3)
RC 610 Case Management in Rehabilitation (3)
RC 620 Vocational Evaluation and Work Adjustment (3)
RC 660 Rehabilitation Counseling Theories and Techniques II (3)
RC 750 Rehabilitation Counseling Research and Program Evaluation (3)

Intersession (First Year)
RC 558 Special Topics: (Mental Health/Psychopharmacology, Ethics) (1)
RC 640 Rehabilitation in Business and Industry (3)
RC 680 Mental Health Diagnosis and Treatment Planning (3)

Summer Session (First Year)
RC 560 Supported Employment/Independent Living/Transition (3)
RC 630 Placement Services and Techniques (3)
RC 710 Practicum in Rehabilitation** (3)

Fall Semester (Second Year)
RC 540 Rehabilitation in Alcoholism and Drug Dependency (3-elective)
RC 670 Group and Family Rehabilitation Counseling (3)
RC 730 Internship in Rehabilitation** (9)

Other Rehabilitation Counseling Courses
RC 517 Assistive Technology in Special Education and Rehabilitation Counseling (3)
RC 558 Mental Health Diagnosis (3)
RC 782 Directed Independent Study (1-3)
RC 711: Doctoral Seminar in Rehabilitation Counseling (3)
RC 740: Doctoral Seminar: Administration, Supervision & Program Evaluation in Rehabilitation Counseling (3)
RC 760: Contemporary Practices in Rehabilitation Counseling (3)
RC 735: Methods for Teaching and Conducting Research in Rehabilitation Counseling (3)

*A separate rotating sequence of courses is offered for students enrolled in the program through Distance Learning.

**RC 710 and 730 (Practicum and Internship) are offered every semester for part-time students.

Doctoral Rehabilitation Counseling Education, Research, and Policy Program

The Rehabilitation Counseling Doctoral Program offers a Departmental Ph.D. degree with a formal option in Rehabilitation Counseling Education, Research, and Policy. The doctoral program is campus-based (not offered on-line). We have carefully designed our doctoral curriculum to meet the needs of students who are preparing for careers in rehabilitation counselor education, research, and administration. Our students complete advanced doctoral seminars in rehabilitation counseling research, psychosocial aspects of chronic illnesses and disability, rehabilitation counseling theory, professional rehabilitation counseling issues, and rehabilitation administration and policy. In these courses, students explore a wide range of psychosocial, societal, and international perspectives on disability and rehabilitation counseling. In addition to the rehabilitation counseling professional seminars, doctoral students complete coursework in the following areas:

1. A Graduate Core (23 hours), including coursework in college and university teaching, grant writing, clinical practicum experiences and practicum experiences in university teaching, and dissertation residency;
2. A Rehabilitation Counseling area of emphasis core (15 hours) (rehabilitation counseling professional seminars, described above);
3. A thematic support area from outside the area of emphasis (15 hours), including interdisciplinary coursework consisting of courses from outside the Department, such as: Psychology, Rehabilitation Sciences, Educational and Counseling Psychology, Social Work, Sociology, Communication Disorders, or other areas, designed to develop the student's expertise in a focused area of rehabilitation counseling research, and typically this core directly relates to the student's dissertation topic;
4. A research block (21 hours), including course work in statistical methods, quantitative research methods, qualitative research methods, and mixed method approaches, and research internships.

Each student's program of studies is planned and supervised by an Advisory Committee consisting of 4 individuals, including the student's major professor and two other members from the Department. The remaining member represents the student's outside support area.
Upon completion of the prescribed coursework, students are examined to evaluate their preparedness to be advanced to candidacy for the Doctor of Philosophy degree. The basis of this evaluation is completion of a qualifying examination administered by the student's Advisory Committee.

Admissions Requirements
a) Applicants are required to have an undergraduate GPA of at least 2.75; (b) a Master's degree in Rehabilitation Counseling or a closely-related field with a GPA of at least 3.5. (Note: Students who are entering with a non-Rehabilitation Counseling Master's degree program may be required to take leveling, or foundational courses as described below.); (c) submission of Graduate Record Examination (GRE) scores (mandatory for all doctoral applicants); (d) minimum of one year (at least two preferred) of post-Master's experience in rehabilitation counseling or a related field (program will alternatively consider extensive prior related experience and exceptional academic performance on an individual basis); (e) at least three (3) positive recommendations attesting to the candidate's professional disposition and fitness for the profession, self-awareness and emotional stability, oral and written communication skills, cultural sensitivity and awareness, and potential for scholarship, professional leadership, and advocacy; (f) written statement of the applicant's objectives for completing a doctoral program; and (g) a sample of the applicant's academic and/or professional writing. Final admissions decisions are the purview of the Department's faculty.

Note: For students applying to the Ph.D. Formal Option with a Master's or graduate degree that is not from a CORE- or CACREP-accredited rehabilitation counseling program, foundational rehabilitation counseling content and core counseling content courses may be required prior to, or concurrent with enrollment. Decisions about the need for foundational coursework are the purview of the Program faculty and will be made on an individual basis, based on review of the applicant's previous graduate coursework, review of applicant's transcripts and course descriptions; previous graduate coursework may in some cases be substituted.
Foundational Coursework includes the following: (a) Foundations or Principles of Rehabilitation Counseling or Counseling, (b) Social and Cultural Diversity, (c) Human Growth and Development, (d) Career Theory and Development, (e) Individual and Group Counseling Theories and Models, (f) Assessment and Testing, (g) Research and Program Evaluation, (h) Psychosocial and Medical Aspects of Disability.

A typical course sequence is as follows:
Graduate Core (minimum 23 credits)
1. Coursework from Professional Seminars in Advanced Rehabilitation Counseling may include:
   RC 740 Administration, Supervision, & Program Evaluation in Rehabilitation Counseling
   RC 735 Advanced Methods for Teaching and Conducting Research in Rehabilitation Counseling
   RC 711: Advanced Seminar in Rehabilitation Counseling
   RC 760: Contemporary Practices in Rehabilitation Counseling
   RC 715: Advanced Seminar in Psychosocial Aspects of Chronic Illness and Disability
   RC 770: Advanced Seminar in Rehabilitation Counseling Theory, Practice, and Education
2. EDS 701 / RC 701 / IEC 701: Seminar for EDSRC Leadership Personnel (1 credit each, 4 semesters) (4)
3. EDS 712 / RC 712 / IEC 712: Seminar in EDSRC Professional Services (3)
4. EDS 720 / RC 720 / IEC 720: Seminar in EDSRC Personnel Preparation (3)
5. EDS 721 / RC 721 / IEC 721: Practicum in Personnel Preparation (3-9)
6. EDS 767 / RC 767 / IEC 767: Dissertation Residency Credit (≥4). EDS 767 is taken for a minimum of two credits per semester for two semesters (excluding summer terms) after successful completion of the qualifying examination.
7. RC 710 Clinical Practicum in Rehabilitation Mental Health Counseling (Doctoral Section).

Rehabilitation Counseling Area of Emphasis (15 credits)
Thematic Support Area (15 credits)
Research Tools (21 credits)

Required Practicum Experiences
Clinical practicum experiences are required of all doctoral students. As with the didactic portion of the curriculum, practica experiences are planned according to the individual backgrounds and needs of each student. Students are required to complete a 200-hour clinical practicum (40% of which must be direct client contact hours).

Required Internship Experience
In the course of their program plan, students will complete 600-clock hours of supervised internship, addressing three of the five following areas: Counseling, Supervision, Teaching, Research and Scholarship, Leadership and Advocacy. The internships are designed to ensure doctoral-level experience in counselor education areas including: campus and distance-based teaching, supervision, and clinical counseling. The nature and focus of the internship will be determined in consultation with each student individually.

Professional Involvement
We encourage and support student's professional development, with an emphasis on participation in the rehabilitation counseling profession at the national level through research, publication, and participation in national conferences and leadership opportunities in our national and regional rehabilitation counseling professional associations. We provide support to our students through research grants and teaching assistantships, and a number of funding opportunities that are available to our doctoral students through our graduate school.

Graduate Courses

RC 515	Medical And Psychosocial Aspects Of Disabilities I (Same As SW 515)	(3)
RC 516	Medical And Psychosocial Aspects Of Disabilities II (Same As SW 516)	(3)
RC 520	Principles Of Rehabilitation Counseling	(3)
RC 530	Cultural Diversity In Rehabilitation Counseling	(2)
RC 540	Chemical Dependency In Rehabilitation Counseling	(3)
RC 546	Transdisciplinary Services For Students With Multiple Disabilities (Same As EDS 546)	(3)
RC 547	Collaboration And Inclusion In School And Community Settings (Same As EDS 547)	(3)
RC 558	Special Topics In Rehabilitation (Same As EDS 558)	(1-3)
RC 570	Crisis, Disaster & Trauma Response For Persons With Disability	(3)
RC 610	Case Management In Rehabilitation Counseling	(3)
RC 613	Legal And Parental Issues In School Administration	(3)
RC 620	Vocational Evaluation And Work Adjustment For The Severely Disabled	(3)
RC 630	Placement Services And Techniques In Rehabilitation Counseling	(3)
RC 640	Rehabilitation In Business And Industry	(3)
RC 650	Rehabilitation Counseling Theory And Practice I	(3)
RC 660	Rehabilitation Counseling Theory And Practice II	(3)
RC 670	Group And Family Rehabilitation Counseling	(3)
RC 680	Mental Health Diagnosis And Treatment Planning	(3)
RC 701	Seminar For Edsrc Leadership Personnel	(1)
RC 710	Clinical Practicum In Rehabilitation Mental Health Counseling	(3)
RC 711	Seminar In Advanced Rehabilitation Counseling	(3)
RC 712	Seminar In Edsrc Professional Services	(3)
RC 715	Advanced Seminar In Psychosocial Aspects Of Chronic Illness And Disability	(1-3)
RC 720	Seminar In Edsrc Personnel Preparation	(3)
RC 721	Practicum In Edsrc Personnel Preparation	(3)
RC 730	Internship In Rehabilitation Counseling	(3-9)
RC 735	Advanced Methods For Teaching And Conducting Research In Rehabilitation Counseling: From Theory To Practice	(3)
RC 740	Administration, Supervision And Program Evaluation In Rehabilitation Counseling	(3)
RC 750	Rehabilitation Research	(3)
RC 760	Contemporary Issues In Rehabilitation	(3)
RC 770	Advanced Seminar In Rehabilitation Theory, Practice And Education	(3)
RC 782	Directed Independent Study	(3)
RC 789	Independent Study In Early Childhood/Special Education/Rehabilitation Counseling Research	(3-6)

Rehabilitation Sciences

College of Health Sciences

The Divisions of Athletic Training, Communication Sciences and Disorders, and Physical Therapy at UK, in cooperation with Occupational Therapy program at Eastern Kentucky University, and Communication Sciences and Disorders programs at Murray State University and Western Kentucky University, offer a Doctor of Philosophy Degree in Rehabilitation Sciences. This program has a unique interdisciplinary, inter-institutional emphasis for rehabilitation professionals in the disciplines of athletic training, communication disorders, occupational therapy, and physical therapy.

The focus of the program is to prepare academic leaders in Rehabilitation Sciences through interdisciplinary academic, clinical, and research experiences. The program prepares scholars and scientists in rehabilitation science to teach at the university level, direct discipline specific educational programs, work in rehabilitation services field and collaborate with other professionals on issues related to rehabilitation and health.

Admission Requirements
Individuals applying for admission must be eligible for state licensure or national certification in Athletic Training, Communication Disorders, Occupational Therapy, or Physical Therapy. They must also have a professional or post-professional master's degree and submit GRE scores, transcripts from all universities attended, a comprehensive resume, and three letters of recommendation.Those with basic science graduate degrees and interests are also welcomed to apply and will be considered equally for admission. International students must submit an official TOEFL score. Program application materials can be obtained from www.mc.uky.edu/rehabsciences. An interview is strongly encouraged and may be scheduled after your application has been reviewed by RHB faculty.

Areas of Specialization
Students in the Program have the unique opportunity to study with professionals from all four disciplines and take courses from faculty from all four institutions. Distance technologies are used to deliver some portions of the program, thus making it more widely accessible.

Physical therapists, occupational therapists, speech-language pathologists and audiologists, and athletic trainers who have a master's degree and are eligible for certification or licensure in one of the disciplines may apply for admission to the program. Students can choose from several areas of concentration to focus their research interests. Individuals not eligible for licensure will be considered on an exceptional basis.

Degree Requirements
Each candidate for the Ph.D. must pass a written and oral Qualifying Examination, submit and defend a dissertation based on original and significant research and satisfy the Graduate School requirements. The courses expected of all students in the doctoral degree curriculum include the following:

Core Courses
RHB 701 Rehabilitation Theories and Application through the Life Span (3)
RHB 712 Critical Appraisal of Research in Rehabilitation Sciences (3)
RHB 720 Research in Rehabilitation Sciences (3)
RHB 770 Professional Seminar in Rehabilitation Sciences (6)

Research Methodologies
(minimum 6-9 Credits) Examples below:

STA 671 Regression and Correlation (2)
STA 672 Design and Analysis of Experiments (2)
CPH630 Biostatistics II(3)
CPH 664Design and Analysis of Clinical Trials(3)
EDS 633Single Subject Research Design(3)

Professional Discipline Specific Coursework**(min of 12 credits)
RHB 787 Teaching Apprenticeship in Rehabilitation Sciences (2) (minimum)

Research Apprenticeship
At least two research apprenticeships are required for students (6-9c redits) - individually designed based on student's past research experience.

RHB 789 Research Apprenticeship In Rehabilitation Sciences (1-4)
RHB 767 Residence Credit for the Doctoral Degree (4)
(2 Credits per semester for a maximum of 5 years)

For Additional Information, contact:
Esther Dupont-Versteegden, Ph.D.
eedupo2@uky.edu
Rehabilitation Sciences Doctoral Program
859.218.0592

Occupational Therapy courses are available through our partnership with the Department of Occupational Therapy at Eastern Kentucky University.

Retailing & Tourism Management

College of Agriculture, Food & Environment

The graduate program in the Department of Retailing and Tourism Management is philosophically committed to the well-being of individuals in their immediate environment. The program is designed to meet individual student interests and career objectives.

The graduate program leads to a Master of Science Retailing and Tourism Management with a formal option in HMT (Hospitality Management & Tourism) or MAT (Merchandising, Apparel and Textiles). The program is individualized to meet each student's career interests using a combination of course work, independent study, and research experience. Coursework in RTM is selected to either the HMT (Hospitality Management & Tourism) or MAT (Merchandising, Apparel and Textiles) focus.

Hospitality And Tourism Management Formal Option And Merchandising, Apparel And Textiles Formal Option

Thesis Option (Plan A)
The Thesis Option (Plan A) requires a thesis to be developed under the direction of a full or associate member of the RTM Graduate Faculty. A minimum of 30 semester hours, including thesis hours, must be completed to satisfy requirements for the Thesis Option (Plan A). Instructions for the preparation of thesis and dissertations are available at http://www.research.uky.edu/gs/thesdissprep.html.

If a student selects the Thesis Option (Plan A), they must complete 6 credit hours of RTM 768. In doing so, the first 3 hours of this requirement should result in the completion of Chapters 1, 2, & 3 of their thesis and will result in an official Proposal Meeting of their committee and the approval of their topic.

The primary objective of a thesis research component is to expand the existing knowledge base. Each student completing the Thesis Option (Plan A) must present a thesis which represents the culmination of a major research project. The thesis must be a well-reasoned, original contribution to knowledge in the field of study and should provide evidence of high scholarly achievement. The major professor is the primary source of guidance in the planning and preparation of the thesis. However, other members of the Research Committee may be involved in the process as well. The following guidelines apply:

- Thesis proposal must be submitted to student's Research Committee for approval and will include Chapters 1, 2, & 3 of thesis.
- Thesis proposal must be reviewed and approved by student's Research Committee before student can begin work on thesis research and/or collect data for their thesis work.
- The official Thesis Proposal Approval Sheet must be filed with the DGS before student can proceed with the completion of their thesis.
- Student must obtain IRB approval before any thesis research data may be collected.
- Final thesis draft must be submitted at least 7 days in advance of the Final Exam.
- All members of the Thesis Research Committee must read the thesis prior to signing the Approval Form.

RTM Required Core (Thesis Option)

RTM/HES	600 Research Methods in RTM	(3)
RTM 650	Survey of Current Theories & Literature	(3)
STA 570	Basic Statistical Analysis	(4)

RTM 772	Seminar in RTM	(3)
RTM 768	Residence Credit for Master's Degree	(3)
RTM 768	Residence Credit for Master's Degree	(3)

Non-Thesis Option (Plan B)
A minimum of 30 semester hours, must be completed to satisfy requirements for the Non-Thesis Option (Plan B). The Non-Thesis Option (Plan B) requires six or more graduate credit hours of either RTM 690 Industry Experience in RTM or RTM 790 Research Problems to be submitted in lieu of a thesis under the direction of a Non-thesis Research or Industry Internship Committee.

When selecting to complete RTM 790, students are choosing to complete a non-thesis creative project. In a non-thesis creative project, the focus is on the application of new or existing knowledge to an identified problem. Non-Thesis Options require the completion of 6 hours (RTM 790) of research problems. The non-thesis creative project culminates in a product. The product produced must demonstrate the application of knowledge in an original manner. The process used to produce the product must be documented in written form and illustrate how the product is an application of knowledge in the field.

A Non-Thesis Option (Plan B) student may also opt to complete RTM 690 Industry Experience in RTM. This will involve the completion of an industry internship approved by the DGS and the student's Research Committee. This experience must be within the student's field of study and must include 400 work hours. The following guidelines apply to the non-thesis or internship process:

- Non-Thesis or Internship proposal must be submitted to the Non-Thesis or Internship Committee for approval and will include a written description of either the proposed research project or the proposed industry internship experience.
- Non-Thesis or Internship proposal must be reviewed and approved by Non-Thesis or Internship Committee before student can begin work on their Non-Thesis project or Internship experience.
- The official Non-Thesis or Internship Proposal Approval Sheet must be filed with the DGS before student can proceed with the completion of their Non-Thesis or Internship experience.
- Final Non-Thesis or Internship requirements must be submitted at least 7 days in advance of the Final Exam.
- All members of the Non-Thesis or Internship committee must read the submitted requirements prior to signing the Approval Form. A minimum of 30 total semester hours must be completed to satisfy requirements for the Nonthesis Option. See the Non-Thesis Proposal Approval Sheet.

RTM Required Core (Non-Thesis Option)

RTM/HES 600	Research Methods in RTM	(3)
RTM 650	Survey of Current Theories & Literature	(3)
STA 570	Basic Statistical Analysis	(4)
RTM 772	Seminar in RTM	(3)
RTM 690 Or MAT 790	Industry Experience in RTM	(6)
RTM 690 Or MAT 790	Research Problems in MAT	(6)

Support Selections
Both HMT and MAT students must complete 12 hours of support selection approved by their coursework committee. Students may make selections based on whether they have chosen the HMT formal option or the MAT formal option. All Support Selections must be approved by the student's coursework committee.

RTM Support Selections (Thesis and Non-Thesis Options)

For HMT students, they may complete 12 hours of any HMT course at the 500, 600, or 700 level, or they may complete other committee approved courses at the 500, 600, or 700 level at the University of Kentucky. For MAT students, they may complete 12 hours of any MAT course at the 500, 600, or 700 level, or they may complete other committee approved courses at the 500, 600, or 700 level at the University of Kentucky.

Social & Philosophical Studies

College of Education

This master's degree works well as a foundation for doctoral study. When focused with an approved "topical major," the degree may also serve a variety of career and academic purposes. Students following this degree program engage in the study of the history, sociology, philosophy, and comparative international analyses of education. Education, in this case, is broadly defined to include all aspects of formal and informal learning in and out of educational institutions. Minimum required credit hours (31).

Graduate Courses

EPE 600	Social Foundations Topics For Secondary Education
EPE 601	Proseminar
EPE 602	Social Policy Issues And Education
EPE 603	Politics Of Educational Leadership
EPE 612	Introduction To Higher Education
EPE 619	Survey Research Methods In Education - Subtitle Required
EPE 620	Topics And Methods Of Evaluation
EPE 621	Advanced Topics And Methods Of Evaluation
EPE 622	College And University Faculty
EPE 628	Ethics And Educational Decision Making
EPE 632	Student Services
EPE 640	Philosophy Of Education
EPE 651	History Of Education In The United States
EPE 652	History Of Educational Thought
EPE 653	History Of Higher Education
EPE 655	Comparative Higher Education
EPE 660	Research Design And Analysis In Education
EPE 661	Sociology Of Education
EPE 663	Field Studies In Educational Institutions
EPE 665	Education And Culture
EPE 667	Education And Gender
EPE 669	Oral History
EPE 670	Policy Issues In Higher Education
EPE 672	College Teaching And Learning
EPE 674	Theories Of Student Development
EPE 675	Sociology Of Higher Education
EPE 676	Organization And Administration Of Higher Education
EPE 678	Economics Of Higher Education
EPE 679	Multiple Measures In Education And Evaluation
EPE 680	Politics Of Higher Education
EPE 681	History Of The University: Governance And Its Legal Context
EPE 682	Higher Education And The Law
EPE 683	Affirmative Action And Federal Regulation Of Higher Education
EPE 684	Higher Education And Athletics: A Historical Analysis
EPE 685	The Research University
EPE 686	Philanthropy And Higher Education
EPE 690	The Community College

EPE 703	Preparing Research Proposals
EPE 707	Multivariate Analysis In Educational Research
EPE 711	Advanced Quantitative Methods
EPE 748	Master's Thesis Research
EPE 749	Dissertation Research
EPE 763	Advanced Field Studies
EPE 767	Dissertation Residency Credit
EPE 768	Residence Credit For The Master's Degree
EPE 769	Residence Credit For The Doctor's Degree
EPE 773	Seminar In Educational Policy Studies And Evaluation
EPE 778	Seminar In History Of Education In Kentucky
EPE 785	Independent Studies In Educational Policy Studies And Evaluation
EPE 790	Internship In Educational Policy Studies And Evaluation
EPE 797	Historical Research On Education (Dl Format)
EPE 798	Seminar In Higher Education

Social Work

College of Social Work

The College of Social Work offers a graduate curriculum of full-time and part-time study, leading to the Master of Social Work degree. This program is accredited by the Council on Social Work Education. The MSW degree is designed to prepare students for advanced practice in the field of social work.

Master of Social Work

Application Requirements
Students must meet the general requirements of the Graduate School, as listed elsewhere in this Bulletin, as well as other specific requirements of the College of Social Work for the Master of Social Work degree as indicated below.

1. Applicants who do not qualify for advanced standing must earn 60 hours of credit with a grade-point average of 3.0 or above and no more than one course grade below a "B". Fifty-four of these credits must be in the required social work courses either for the Community and Social Development or Clinical Social Work concentrations and students complete six hours of electives. Minimum academic requirements for admission to the 60-hour program are: baccalaureate degree from an accredited institution of higher learning with a grade point average of 3.0 and a grade point average of 3.0 on all graduate work attempted. Applicants with less than a 3.0 UGPA will be placed in a "Waiting List" pool where the minimum GPA requirement for admission is the Graduate School's 2.75 GPA. Only a limited number of applicants will be admitted from this pool. These students must submit a "Petition for Exceptional Consideration". It is recommended that they take the Graduate Record Exam (GRE) as well. All applicants must complete the College's application form and the Graduate School's application form, submit transcripts from all colleges or universities attended, three letters of recommendation, resume, as well as autobiographical and values statements.
2. Advanced standing of 21 credit hours may be granted in the Master of Social Work program to graduates of social work programs accredited by the Council on Social Work Education who earned:
   a) an overall 3.0 GPA, and
   b) a 3.5 GPA in their social work major.
   Additionally, some work experience is preferred.

Degree Requirements
All MSW students must complete the final comprehensive examination. This examination covers the foundation and concentration areas of the student's educational program to determine the breadth and depth of knowledge acquired for professional practice.

Doctor of Philosophy

The College offers a program leading to a Ph.D. degree through the Joint UK-U of L Ph.D. in Social Work Program which draws upon the academic resources of the University of Kentucky and the University of Louisville. Faculty members from both schools participate on students' dissertation committees.

The program consists of a minimum of 44 credits of post-master's course work plus 4 hours of dissertation research. Students are required to complete a core curriculum of 26 hours and to pass the Preliminary Exam. Students work on an individualized plan of study of 15 credit hours that includes scholarly study of an area of social work practice or research (9 credit hours) and pertinent research and teaching practica

(6 credit hours). These courses assist the student in developing a dissertation research area. Students are also required to complete a course on teaching (3 credit hours). After meeting these requirements, students take the Qualifying Examination which consists of a defense of the dissertation proposal. After successfully passing the Qualifying Exam, 4 hours of dissertation research and a dissertation must be completed.

The major aim of the program is to produce scholars with skills to expand the base of tested knowledge that can guide the profession of social work in addressing major social problems as well as to meet the challenges facing the doctoral level researcher and educator. The program emphasizes theory development and research.

Core Curriculum (29 credit hours)

Theory Development in the Social Work Profession	(3)
Advanced Analysis of Social Welfare Problems	(3)
Human Behavior & Change Theories	(3)
Ethics, Social Work & Society	(3)
Social Work Research I	(3)
Social Work Research II	(3)
Statistics (e.g., STA 570)	(3-4)
Statistics for Social Work II	(3)
Professional Seminar I	(1)
Professional Seminar II	(1)
Teaching in Social Work	(3)

Preliminary Examination
Individualized Plan of Study (15 credit hours)

Course work in an area of scholarly study	(9)
Research/Teaching Practica (3 hrs. must be in research)	(6)

Qualifying Exam
Dissertation Research (4)

Admission Requirements

Applicants must have career objectives consistent with the social work profession and demonstrate strong potential to complete a vigorous academic program as evidenced in the following:

- a master's degree in social work from a program accredited by or judged to be equivalent by CSWE (applicants with other master's degrees can also be considered);
- at least two years' post-master's full-time, paid experience in social work preferred;
- an undergraduate grade point average (GPA) of 3.0 on a 4.0 scale and a graduate GPA of 3.5;
- official transcripts from each college/university attended;
- Graduate Record Examination (GRE) test scores of 1,000 when verbal and quantitative sections are summed;
- three letters of reference (two academic and one from employer)
- a writing sample or publication
- an autobiography that describes career and research interests and the rationale for pursuing a doctoral degree.

Graduate Courses

SW 505	Child Welfare Services	(2-3)
SW 511	Genocide: Intervention With Survivors And Global Prevention	(3)
SW 512	Social Work In The Criminal Justice System	(3)
SW 514	Alcoholism And Problem Drinking	(2-3)
SW 515	Medical And Psychosocial Aspects Of Disabilities I (same as RC 515)	(3)
SW 516	Medical And Psychosocial Aspects Of Disabilities II (same as RC 516)	(3)
SW 523	Social Perspectives On Racism And Ethnic Prejudices In America	(2-3)
SW 571	Social Work And The Law	(3)
SW 580	Topical Seminar In Social Work	(2-4)
SW 600	Theory-Informed Practice With Individuals	(3)
SW 601	Theory -Informed Practice With Families	(3)
SW 602	Theory-Informed Practice With Groups	(3)
SW 603	Social Work Practice With Children And Youth	(2)
SW 606	Seminar In Criminal Justice Processes	(2)
SW 612	Seminar On Social Work Practice With Women	(2-3)
SW 613	Urban Ecology And Aging	(2-3)
SW 616	Social Work Practice In School Settings	(2-3)
SW 617	Family Violence: Social Work Interventions	(2-3)
SW 618	Social Work Practice With Gay And Lesbian People	(2-3)
SW 624	Perspectives On Human Sexuality (same as FAM 624)	(3)
SW 626	Forensic Mental Health: Evaulation And Treatment	(2-3)
SW 627	Collaborative Practice: Substance Abuse, Mental Health And Social Services	(2-3)
SW 630	Introduction To Social Welfare Policy	(3)
SW 635	Introduction To Professional Ethics	(2)
SW 640	Foundation Practicum	(3)
SW 643	Biomedical Aspects Of Aging (same as GRN 643)	(3)
SW 650	Research Methods In Social Work	(3)
SW 680	Special Problems In Social Work Practice	(2-6)
SW 701	Asset-Based Community Development And Assessment	(2-3)
SW 702	Substance Misuse, Violence And Risk Management	(3)
SW 704	Child Assessment And Treatment	(3)
SW 718	Clincial Decison-Making	(3)
SW 720	Social Work Perspectives On Human And Cultural Diveristy	(2)
SW 721	Poverty And Inequality	(3)
SW 722	Psychopathology For Social Work Practice	(3)
SW 724	Assessment And Treatment Planning	(3)
SW 726	Psychopathology II	(3)
SW 728	Comparative Treatment Modalities	(3)
SW 730	Evidence-Based Practices	(3)
SW 731	Advanced Social Welfare Policy And Analysis	(3)
SW 733	Community-Informed Organzational Interventions	(3)
SW 734	Integrative Seminar For Cliniclal Social Work	(3)
SW 735	Integrative Seminar For Communityand Social Development	(3)
SW 737	Non-Profit Management In Human Services	(3)
SW 740	Clinical Social Work Practicum I	(3)
SW 741	Community And Social Development Practicum I	(3)
SW 742	Clinical Social Work Practicum II	(3)
SW 743	Community And Social Development Practicum II	(3)
SW 749	Dissertation Research	(0)

SW 750	Clinical Social Work Advanced Research	(3)
SW 751	Community And Social Development Advanced Research	(3)
SW 767	Dissertation Residency Credit	(2)
SW 769	Residence Credit For The Doctor's Degree	(0-12)
SW 770	Doctoral Research I	(3)
SW 771	Doctoral Research II	(3)
SW 773	Doctoral Statistics II	(3)
SW 780	Independent Work	(1-6)
SW 781	Theory Development In The Social Work Profession	(3)
SW 782	Advanced Analysis Of Social Problems, Policy And Practice	(3)
SW 783	Human Behavior And Change Theories In Social Work Practice	(3)
SW 784	Ethics, Social Work And Society	(3)
SW 785	Proseminar In Social Work Research	(1)
SW 786	Doctoral Research Practicum	(3-6)
SW 787	Doctoral Teaching Practicum	(3-6)
SW 788	Research In Social Work Seminar	(3)
SW 790	Seminar In Teaching And Learning	(3)
SW 795	Advanced Doctoral Seminar In Social Work (Subtitle Required)	(3)

Sociology

College of Arts & Sciences

The Sociology graduate program offers graduate work leading to the Master of Arts and Doctor of Philosophy. Both Plan A and Plan B are offered for the Master's degrees. Graduate students pursuing the Ph.D. degree choose two areas of specialization, one of which must be within the discipline of sociology. The other specialization may be within sociology or a related substantive area. Current areas of faculty expertise include Criminology & Deviance; Global Work & Politics; Rural, Community & Environmental Sociology; Health & Medical Sociology; and Social Inequalities. In addition to the two specialization areas, doctoral students must demonstrate competence in theory and methods on the comprehensive assessment examination prior to taking the qualifying examination on their specialization areas.

To aid in financing graduate education, a number of assistantships are available to qualified students. Outstanding students may compete for fellowships.

Sociologists at the University of Kentucky in the Departments of Sociology, Community and Leadership Development (in the College of Agriculture, Food, & Environment), and Behavioral Science (in the College of Medicine) carry on a substantial variety of research projects, consultative activities, extension education programs, and community services. Specialized experience and training are available to graduate students in rural sociology at the Agricultural Experiment Station and opportunities for applied sociology experience are available in the Cooperative Extension Service.

Assistantships and traineeships in health-related areas are available to graduate students in Behavioral Science in the College of Medicine.

Opportunities for multidisciplinary work exist in conjunction with centers and programs at the University of Kentucky including African American and Africana Studies, Appalachian Center and Appalachian Studies, the Center for Research on Violence Against Women, Sanders-Brown Center on Aging, Prevention Research Center, Center on Drug and Alcohol Abuse, Center for Poverty Research, the Quantitative Initiative for Policy and Social Research, Committee on Social Theory, International Studies, and Gender and Women's Studies. Assistantships and traineeships are also available to qualified sociology graduate students through these centers and programs.

Admission Requirements
The percentile rankings of the three components of the Graduate Record Examination (GRE) must average (mean) at least 50 percent. The following additional materials are required to apply for admission to the graduate program in Sociology, and should be sent directly to the Graduate School's ApplyYourself site. Any inquiry on the program requirements and the admission process should be directed to: Director of Graduate Studies, Department of Sociology, 1515 Patterson Office Tower, University of Kentucky, Lexington, KY 40506-0027:

- A statement of goals and reasons for pursuing an advanced degree in sociology. It is helpful if applicants also address the field(s) of interest within sociology they may wish to pursue in their graduate studies.
- A sample of writing, preferably in the form of a term paper, an extensive essay, or a draft of a senior thesis. If the applicant has completed a master's degree, she or he may submit one or two chapters from the master's thesis. Please do not submit a copy of the entire master's thesis.
- Three letters of recommendation.
- Application form for fellowships and assistantships, if the applicant wishes to be considered for a

teaching assistantship, research assistantship, traineeship, or fellowship. This application form is available at: https://soc.as.uky.edu/sites/default/files/application.pdf.

Graduate Courses

SOC 517	Rural Sociology	(3)
SOC 534	The Southern Appalachians: A Sociological Interpretation (Same as ANT 534)	(3)
SOC 535	Studies In Social Inequalities (Subtitle Required)	(3)
SOC 539	Advanced Topiocs In Crime, Law And Deviance (Subtitle Required)	(3)
SOC 541	Advanced Topics In Work, Organization And Economy (Subtitle Required)	(3)
SOC 543	Advanced Topics In Political Sociology (Subtitle Required)	(3)
SOC 550	Advanced Topics In Sociology (Subtitle Required)	(3)
SOC 565	Independent Work	(1-3)
SOC 603	Seminar In Teaching Sociology	(3)
SOC 610	Proseminar In Complex Organization	(3)
SOC 622	Topics And Methods Of Evaluation (Same as ANT/EPE/EDP 620)	(3)
SOC 630	Proseminar In Deviant Behavior	(3)
SOC 635	Seminar In Social Inequalities	(3)
SOC 636	Stratification And Mobility	(3)
SOC 637	Sociocultural Dimensions Of Economic Development (Same as ANT 637)	(3)
SOC 641	Gender Issues In Development (Same as ANT 641)	(3)
SOC 642	The Sociology Of Work, Occupations And Labor Markets	(3)
SOC 645	Topics In Political Sociology	(3)
SOC 646	Social Movements And Social Change	(3)
SOC 650	Concepts And Theories In Sociology	(3)
SOC 651	Classical Sociological Theory	(3)
SOC 653	Family Theory (Same as FAM 653)	(3)
SOC 661	Sociology Of Education (Same As EPE 661)	(3)
SOC 665	Program Development And Evaluation (Same as CLD 665)	(3)
SOC 675	Community Development And Leadership Communications (Same as CLD 675)	(3)
SOC 680	Social Investigation	(4)
SOC 681	Quantitatively Analysis I (Same as PS 572)	(3)
SOC 682	Special Topics In Advanced Sociological Methods	(1-3)
SOC 685	Community Development Theory And Practice (Same as CLD 685)	(3)
SOC 730	Special Topics In Deviant Behavior	(1-3)
SOC 735	Topical Seminar In Social Inequalities	(3)
SOC 737	Culture, Environment And Development (Same as ANT 736)	(3)
SOC 748	Master's Thesis Research	(0)
SOC 749	Dissertation Research	(0)
SOC 751	Contemporary Sociological Theory	(3)
SOC 766	Concepts In Medical Sociology (Same as BSC 766)	(3)
SOC 767	Dissertation Residency Credit	(2)
SOC 768	Residence Credit For The Master's Degree	(1-6)
SOC 769	Residence Credit For The Doctor's Degree	(0-12)
SOC 772	Topical Seminar In Sociology	(3)
SOC 773	Topical Seminar	(3)
SOC 776	Seminar In Dependency Behavior (Same as BSC/ANT/PSY 776)	(3)
SOC 777	Seminar In Mental Illness Concepts, Research And Policy (Same as BSC 777)	(3)
SOC 779	Topical Seminar In Social Psychology (Same as PSY 779)	(3)
SOC 780	Special Problems In Sociology	(1-6)
SOC 781	Quantitative Data Analysis II	(3)
SOC 785	Comparative Health Care Systems (Same as BSC 785)	(3)
SOC 790	Research In Rural Sociology	(1-3)
SOC 792	Research In Sociology	(1-6)
SOC 797	Community Development Practicum	(1-9)

Special Education

College of Education

Students may enroll for either degree and/or certification graduate programs in the Department of Early Childhood, Special Education, and Rehabilitation Counseling. Information about programs in Rehabilitation Counseling and Early Childhood Special Education can be found elsewhere in this document under those headings. Students seeking initial or additional certification at the graduate level in Moderate/Severe Disabilities are eligible for a Temporary Provisional Teacher Certification through the alternate certificate program. Certification in Learning and Behavior Disorders at the graduate level is also available to those who already hold a teaching certificate in another area.

An advanced program of study (i.e., not initial certification programs) leading to the Special Education Teacher Leader master's degree for a Rank II are available with tracks of focus in the following areas:

1. Learning and Behavior Disorders
2. Moderate/Severe Disabilities
3. Assistive Technology

The degree programs that are offered lead to the Master of Science in Special Education, Specialist in Education, and Doctor of Philosophy degrees. Within the framework of College and University requirements, all advanced graduate degree programs are individually planned. This flexibility makes it possible to structure an appropriate program for each student, based upon previous background and career aspirations. Following are brief descriptions of the various graduate degree programs.

Minimum hours for the Master of Science in Education Degree are distributed as follows:

Department of Special Education and Support Areas in the College	(30)
TOTAL	(30)

It should be noted that these are minimum requirements. Program deficiencies may result in programs of study that exceed the minimum. Program faculty or the Director of Graduate Studies should be contacted to obtain the specific number of courses required for each program of study.
At least half of the required semester hours must be earned in courses at the 600-700 level (excluding practica, independent study, and thesis hours). All students also are required to take the following courses: Applied Behavioral Analysis, Behavioral Consultation in the Schools, Methods for Teaching Students with Disabilities, Single Subject Research Design, an advanced curriculum course, Leadership in Special Education, 9 hours in their respective program areas, and 2 – 5 hours in designated leadership coursework. In addition, a thesis is required of all Master of Science in Education students in the Department of Special Education.

Students entering without a teaching certificate and who plan to receive an M.S. degree and teach in a Special Education certificate area must meet certificate program deficiencies, including certification requirements, as outlined by their advisor, in addition to completing the degree requirements listed above. Depending on their program of studies, students may obtain Rank II or Rank I certification concurrently with their master's degrees.

General requirements for the Specialist in Education (Ed.S.) degree have been described in a previous

section of this Bulletin. Ed.S. programs are individually planned for in-depth study in an area of special education and require a research project and written product for completion.

The Doctor of Philosophy (Ph.D.) program is designed to prepare leadership personnel for the field of special education. Primary emphasis is placed upon training persons for positions in higher education personnel preparation, technology applications in special education programs, distance education, and research in special education. Within the context of personnel preparation in special education, various program areas of emphasis can be planned.

Admission Requirements
Department standards for admission to graduate work in special education are similar to those of the Graduate School. However, there are some additional requirements. All potential graduate students within the department must complete an application to the Graduate School and the program. This combined application can be found on the Graduate School website and is an electronic application called Apply Yourself.

This application requires each student to submit (a) transcripts from each previously attended institution of higher education to the department, (b) letters of recommendation, (c) the Graduate Record Examination, and (d) an outline of professional goals and objectives. In addition to the above, students applying for admission to the department's doctoral program must (a) submit a sample of professional writing, (b) submit an autobiographical statement, and (c) interview with the departmental faculty.

These interviews generally occur on campus but can be arranged through phone or electronic means if necessary. It should be noted that applicants who are pursuing a degree with a teaching certificate must be admitted to the College of Education's Teacher Education Program. Requirements for admission to this program vary by discipline. Potential students should contact the department's Director of Graduate Studies for additional information.

Financial assistance maybe available, on a competitive basis, to graduate students in special education. Students may apply for graduate assistantships at all levels of graduate study. Scholarships and assistantships are awarded from funds that may be granted to the Department by the Office of Special Education and Rehabilitation Services, U.S. Department of Education as well as other funding sources.

Graduate Courses

EDS 513	Legal Issues In Special Education	(3)
EDS 514	Instructional Technology In Special Education	(3)
EDS 516	Principles Of Behavior Management And Instruction	(3)
EDS 517	Assistive Technology In Special Education	(3)
EDS 522	Children And Families	(3)
EDS 528	Educational Assessment For Students With Mild Disabilities	(3)
EDS 529	Educational Programming For Students With Mild Disabilities	(3)
EDS 530	Moderate And Severe Disabilities	(3)
EDS 546	Transdisciplinary Services For Students With Multiple Disabilities	(3)
EDS 547	Collaboration And Inclusion In School And Community Settings	(3)
EDS 548	Curriculum Design For Students With Moderate And Severe Disabilities	(3)
EDS 549	Methods For Students With Moderate And Severe Disabilities	(4)
EDS 550	Student Teaching: Moderate And Severe Disabilities	(6-12)
EDS 558	Issues In Special Education (Same As RC 558)	(1-9)
EDS 570	Emotional And Behavioral Disabilities	(3)
EDS 589	Field Experiences: Mild Disabilities	(3)

EDS 600	Survey Of Special Education	(3)
EDS 601	Applied Behavioral Analysis	(3)
EDS 602	Administration And Programs In Special Education	(3)
EDS 603	Behavioral Consultation In The Schools	(3)
EDS 610	Advanced Educational Assessment For Students With Mild Disabilities	(3)
EDS 611	Advanced Educational Programming For Students With Learning Disabilities	(3)
EDS 612	Advanced Practicum: Special Education	(1-6)
EDS 613	Legal And Parental Issues In School Administration	(3)
EDS 630	Methods For Teaching Students With Disabilities	(3)
EDS 631	Programming For Students With Moderate And Severe Disabilities	(3)
EDS 632	Advanced Practicum: Moderate And Severe Disabilities	(1-12)
EDS 633	Single Subject Research Design	(3)
EDS 634	Leadership In Special Education	(3)
EDS 640	Assistive Teaching	(3)
EDS 641	Assistive Technology Assessment	(3)
EDS 647	Seminar In Special Education Technology (Variable Topic)	(1-3)
EDS 648	Coordinting Special Education Technology Programs	(3)
EDS 649	Advanced Practicum: Special Education Technology	(1-9)
EDS 651	Distance Education: Delivery	(3)
EDS 652	Distance Education: Management And Support	(3)
EDS 701	Seminar For Special Education Leadership Personnel	(1)
EDS 710	Seminar In Mild Disabilities	(3)
EDS 711	Seminar In Moderate And Severe Disabilities	(3)
EDS 712	Seminar In Special Education Professional Services	(3)
EDS 720	Seminar In Special Education Teacher Preparation	(3)
EDS 721	Practicum In Special Education Personnel Preparation	(1-9)
EDS 730	Seminar In Special Education Administration	(3)
EDS 731	Advanced Practicum: Special Education Administration	(1-9)
EDS 748	Master's Thesis Research	(0)
EDS 749	Dissertation Research	(0)
EDS 767	Dissertation Residency Credit	(2)
EDS 768	Residence Credit For The Master's Degree	(1-6)
EDS 769	Residence Credit For The Doctoral Degree	(0-12)
EDS 779	Seminar In Special Education (Variable Topic)	(1-3)
EDS 789	Independent Study In Special Education	(1-6)

Statistics

College of Arts & Sciences

The Department of Statistics offers programs of study leading to the degrees of Master of Science (Plan A or B available), Doctor of Philosophy, and Master of Applied Statistics (Online). The M.S. degree is professionally oriented for the student who plans a career in government, business or industry and is preparatory for the Ph.D. The Ph.D. program offers a broad training in both statistical theory and methods while affording options to suit the student's interests. The statistics Ph.D. is well-suited for academic, business, government and industrial positions. In addition to formal course work and research training, the advanced student has opportunities to gain valuable practical experience by participating in consulting activities under faculty supervision. Master of Applied Statistics is an innovative online professional graduate degree which is designed to train professional, practice-oriented statisticians who have both data analytic and computing skills.

Both, the M.S. and the Ph.D. program offer a Mathematical Statistics track, as well as a Biostatistics track. The latter tracks are designed for students who envision a future at the interface of Statistics and the Life Sciences.

Course work is available in areas associated with statistics such as biological modeling, probability, inference, experimental design and analysis, computational statistics, nonparametric methods, Bayesian analysis, mixed modeling, multivariate analysis, survival analysis, clinical trials, and many other selected topics of the student's choice.

The University of Kentucky is represented on the Committee on Statistics of the Southern Regional Education Board.

Admission Requirements
Students with an undergraduate major in any of the mathematical, physical, biological, social or applied sciences are encouraged to apply.

The minimum GRE and GPA admissions requirements for the M.S. and Ph.D. programs in Statistics are the same as for the Graduate School. However, the number of admissions is limited and admissions decisions are made on a competitive basis. All M.S. applicants must have successfully completed a three or four semester sequence in calculus and a course in linear algebra and have good communication skills. In addition, all Ph.D. applicants must have mastered the equivalent of MA 471G. All Master of Applied Statistics applicants must have completed two semesters of calculus and a course in statistical methodology. Students wishing to apply for teaching assistantships and/or fellowships must submit three letters of recommendation.. Applicants wishing to be admitted directly to the Ph.D. program must have an M.S. in Statistics and the permission of the Director of Graduate Studies.

Please see the departmental website for up-to-date information and answers to frequently asked questions about the admissions process.

Master of Science

The Statistics Department offers the degree of Master of Science with (Plan A) or without (Plan B) a thesis, and in two different tracks: a Mathematical Statistics track and a Biostatistics track.

Shared Core (Required for all students)
- STA 602 (4) Introduction to Statistical Methods
- STA 603 (4) Introduction to Linear Models and Experimental Design
- STA 605 (3) Computational Inference
- STA 606 (3) Theory of Statistical Inference I
- STA 623 (3) Theory of Probability
- STA 632 (3) Longitudinal Data Analysis

Mathematical Statistics Track
Curriculum requirements for the Mathematical Statistics track are the shared core courses above, plus the following courses:
- STA 607 (3) Theory of Statistical Inference II
- STA 624 (3) Applied Stochastic Processes
- STA 643 (3) Advanced Experimental Design

Biostatistics Track
Curriculum requirements in the Biostatistics track are the shared core courses above, plus:
- STA 635 (3) Survivability and Life Testing
- STA 653 (3) Clinical Trials
- STA 665 (3) Analysis of Categorical Data
- STA 693 (2) Biostatistical Practicum, 1 unit course in each of the two semesters in the second year

Programs of study for Plan B require a total of at least 35 semester hours. Students will typically fulfill this requirement by taking electives (additional courses besides the shared core and track requirements) in the Fall and Spring of their second year. Programs of study for Plan A (with thesis) require a total of at least 29 semester hours which are satisfied by either of the two course lists above.

The electives can be selected from the menu of courses listed below. Before the end of the second semester, the M.S. candidate must present a proposed plan of study for approval by the Director of Graduate Studies. There are no formal minor requirements.

Comprehensive Exams
All master's candidates are required to pass a comprehensive departmental written examination on the content of the courses STA 602, STA 603, STA 605, STA 606, and STA 623. This examination is normally administered in late May/early June. It is truly comprehensive also in the sense that all parts must be taken together: If a student decides not to take a part of the examination, that part is automatically counted as failed. Students taking the comprehensive exam will receive either a pass at the doctoral level, a pass at the master's level, or a failure. The examination may be repeated only once. Successful completion of the comprehensive examination at the doctoral level is required for admission into the PhD program.

Electives
The electives may be chosen from any course in the following menu that is NOT used as a track requirement.
- MA 471G (3) Advanced Calculus I
- STA 607 (3) Theory of Statistical Inference II
- STA 612 (3) Sequential Analysis
- STA 616 (3) Design and Analysis of Sample Surveys
- STA 621 (3) Nonparametric Inference
- STA 624 (3) Applied Stochastic Processes
- STA 626 (3) Time Series Analysis

- STA 630 (3) Bayesian Inference
- CPH 631 (3) Design and Analysis of Health Survey
- STA 635 (3) Survivability and Life Testing
- CPH 636 (3) Data Mining in Public Health
- STA 643 (3) Advanced Experimental Design
- STA 644 (3) Advanced Linear and Nonlinear Models
- STA 653 (3) Clinical Trials
- STA 661 (3) Multivariate Analysis I
- STA 662 (3) Resampling and Related Methods
- CPH 664 (3) Design and Analysis of Clinical Trials
- STA 665 (3) Analysis of Categorical Data

Any course on this list NOT required for the chosen track may be used as an elective. Thus, for example, STA 665 would count as an elective for the Mathematical Statistics track, but it is a track requirement for the Biostatistics track. Similarly, STA 624 would be an elective for the Biostatistics track but is a track requirement for the Mathematical Statistics track.

* A student who takes both STA 653 and CPH 664 may only receive credit towards the degree for one of these two courses.

Doctor of Philosophy

The core curriculum in statistics is designed to provide doctoral candidates with a firm foundation in probability theory, inference, and classical methodology. In addition, the theory and application of computational statistics, biostatistics, and state-of-the-art inferential procedures are an integral part of the core curriculum.

Students in the doctoral program in statistics will choose one of two areas of specialization, 1) mathematical statistics/probability or 2) biostatistics. The requirements for these areas of specialization are:

Mathematical Statistics/Probability
- STA 701 – Advanced Statistical Inference I
- STA 703 – Advanced Probability
- STA 705 – Advanced Computational Inference
- STA 707 – Advanced Data Analysis
- STA 702 – Advanced Statistical Inference II

Biostatistics
- STA 701 - Advanced Statistical Inference I
- STA 703 - Advanced Probability
- STA 705 - Advanced Computational Inference
- STA 707 - Advanced Data Analysis
- STA 709 - Advanced Survival Analysis

All students must take an additional six elective courses chosen by the student and approved by the DGS. These courses must be chosen from among STA 612, STA 616, STA 621, STA 624, STA 626, STA 630, STA 635, STA 643, STA 644, STA 653, STA 661, STA 662, STA 665, CPH 631, CPH 636, and CPH 664. STA 695 will also be considered on a case by case basis. If a student completes both STA702 and STA709, the student may choose their official track and count the non-required course as an elective. Note that STA715 (reading course) may not be used to satisfy elective requirements. Students must successfully complete a common written exam over STA 701 and STA 703 plus respective prerequisites.

* A student who takes both STA 653 and CPH 664, may only receive credit towards the degree for one of these two courses.

Students must pass a uniform written exam over STA 701 and STA 703 plus respective prerequisites. This exam will normally be offered in January and students will usually sit for the written examination at the beginning of the Spring semester in the third year of the program. The uniform exam can be repeated once. After completion of tract course requirements and successful completion of the written exam, students must also successfully complete an oral qualifying exam which is scheduled through the Graduate School and administered by the student's advisory committee. A significant part of this exam is to be a dissertation proposal.
Areas of current research interest can be found by going to the Department of Statistics faculty web page https://stat.as.uky.edu/.

All students, master's and doctoral, will be required to take part in an internship program. This will usually consist of teaching (three or six semester hours) or an equivalent amount of work in a research assistantship working with researchers across campus.

Master of Applied Statistics

The Master of Applied Statistics is a thirty hour, online, Plan B, professional graduate degree that can be completed in a summer and two consecutive semesters or on a part-time basis. The program is unique in that it uses data visualization and statistical computing to teach fundamental concepts in statistical inference to students with a career-oriented focus on data analysis

Core Courses (Required for all students)

- STA 645(3) Computational Theory and Data Visualization
- STA 646(4) Foundations of Probability and Inference
- STA 647(2) Statistical Computing with SAS
- STA 648(4) Regression Modeling
- STA 649(4) Design of Experiments

The electives can be selected from the menu of courses listed below.

- STA 650(3) Applied Multivariate Analysis
- STA 651(1) Advanced Programming with R
- STA 652(3) Advanced Statistical Modeling
- STA 654(3) Applied Bayesian Analysis
- STA 656(3) Statistical Quality Control
- STA 659(3) Advanced Statistical Methods (subtitle required)

Graduate Courses

STA 417G	Principles Of Operations Research II (Same As MA 417G)	(3)
STA 422G	Basic Statistical Theory II	(4)
STA 515	Mathematical Programming And Extensions (Same As MA 515)	(3)
STA 524	Probability (Same AS Or 524)	(3)
STA 525	Introductory Statistical Inference (Same as OR 525)	(3)
STA 570	Basic Statistical Analysis	(4)
STA 580	Biostatistics I	(3)
STA 600	Communicating In Statistics	(0)
STA 602	Introduction To Statistical Methods	(4)
STA 603	Introduction To Linear Models And Experimental Design	(4)
STA 605	Computational Inference	(3)
STA 606	Theory Of Statistical Inference I	(3)
STA 607	Theory Of Statistical Inference II	(3)
STA 612	Sequential Analysis	(3)
STA 616	Design And Analysis Of Sample Surveys	(3)
STA 621	Nonparametric Inference	(3)
STA 623	Theory Of Probability	(3)
STA 624	Applied Stochastic Processes (Same As OR 624)	(3)
STA 626	Time Series Analysis (Same As ECO 790)	(3)
STA 630	Bayesian Inference	(3)
STA 632	Longitudinal Data Analysis	(3)
STA 635	Survivability And Life Testing	(3)
STA 643	Advanced Experimental Design	(3)
STA 644	Advanced Linear And Nonlinear Models	(3)
STA 645	Computational Theory And Data Visualization	(3)
STA 646	Foundations Of Probability And Inference	(4)
STA 647	Statistical Computing With SAS	(2)
STA 648	Regression Modeling	(4)
STA 649	Design Of Experiments	(4)
STA 650	Applied Multivariate Analysis	(3)
STA 651	Advanced Programming With R	(1)
STA 652	Advanced Statistical Modeling	(3)
STA 653	Clinical Trials (Same As BST 713)	(3)
STA 654	Applied Bayesian Analysis	(3)
STA 656	Statistical Quality Control	(3)
STA 659	Advanced Statistical Methods (Subtitle Required)	(3)
STA 661	Multivariate Analysis I	(3)
STA 662	Resampling And Related Methods	(3)
STA 665	Analysis Of Categorical Data (Same As Bst 763)	(3)
STA 671	Regression And Correlation	(2)
STA 672	Design And Analysis Of Experiments (2)	
STA 673	Distribution-Free Statistical Inference And Analysis Ofcategorical Data	(2)
STA 675	Survey Sampling	(2)
STA 676	Quantitative Inheritance In Plant Populations (Same As PLS 676)	(3)
STA 677	Applied Multivariate Methods	(3)
STA 679	Design And Analysis Of Experiments II	(3)
STA 681	Biostatistics II (Same As CPH 630)	(3)
STA 690	Seminar In Statistics	(1)
STA 691	Special Topics In The Planning And Analysis Of Experiments	(1-3)
STA 692	Statistical Consulting	(3)
STA 693	Biostatistical Practicum	(1-2)
STA 695	Special Topics In Statistical Theory (Subtitle Required)	(1-3)
STA 700	Foundations Of Probability And Inference	(3)
STA 701	Advanced Statistical Inference I	(3)
STA 702	Advanced Statistical Inference II	(3)
STA 703	Advanced Probability	(3)
STA 704	Advanced Probability - Stochastic Processes	(3)
STA 705	Advanced Computational Inference	(3)
STA 707	Advanced Data Analysis	(3)
STA 709	Advanced Survival Analysis	(3)

STA 715	Readings In Statistics And Probability	(1-6)
STA 748	Master's Thesis Research	(0)
STA 749	Dissertation Research	(0)
STA 767	Dissertation Residency Credit	(2)
STA 768	Residence Credit For Master's Degree	(1-6)
STA 769	Residence Credit For The Doctor's Degree	(0-12)

STEM Education

College of Education

The mission of the Department of Science, Technology, Engineering, and Mathematics (STEM) Education is to engage in innovative scholarship, teaching, and service that contributes to improving the quality of P20 science, technology, engineering, and mathematics education in the Commonwealth, the nation, and the world. Faculty members in the department are committed to improving the lives of Kentuckians through scientific literacy, mathematical literacy, and technological literacy from preschool through graduate school and beyond. Faculty members have expertise in a diverse spectrum of specialties relating to research, teaching, and service in STEM Education, and have developed curricula that are widely disseminated locally and nationally. They conduct research on STEM Education issues, conceptual understanding in STEM education, curriculum implementation and teacher professional development. In addition, faculty members have developed a variety of novel courses in STEM Education to foster problem solving, critical thinking, and innovation in STEM Education. The department offers both master and doctoral programs in STEM Education with the flexibility of focusing on a specific discipline (i.e., mathematics education, science education), or a broader focus on STEM Education.

Master of Science

The Department of STEM Education offers programs leading to a Masters of Science in STEM Education and offers a strand option in the Education Sciences PhD program (see Education Sciences for more info). The MS in STEM Education program is a 30-hour program designed to prepare candidates for advanced roles in K-12 educational settings in the STEM content areas or for a terminal degree route in a STEM Education field. Full-time students in the STEM Education graduate programs are not required to serve in a funded assistantship, but those interested are eligible for the positions available. Part-time enrollment in the program is allowed and the program can be completed in evening hours.

Admission Requirements

Admission to the MS in STEM Education program requires completion of a bachelor's degree from an accredited institution of higher education. While this degree does not have to be specific to a STEM Education field, the applicant does need to have strong content knowledge and an interest in the STEM field as evidenced by the rest of the application materials. The applicant must have adequate GRE scores, GPA of at least 2.75 at the undergraduate level and 3.0 at the graduate level, transcripts from previous institutions, a statement of career goals, and three letters of recommendation. The TOEFL is required for students in which English is not their first language. Once the application has been reviewed, applicants will be required to participate in an impromptu writing sample and interview with STEM Education faculty before a final admission decision is determined.

Doctor of Philosophy

The Department of STEM Education offers a PhD program through the Education Sciences Interdisciplinary PhD. For more information, see the information on Education Sciences in the Graduate Bulletin or contact the Director of Graduate Studies or Department chair for the Department of STEM Education.

Graduate Courses

The department offers a variety of coursework in order to design a degree program that best meets the needs of the students in the program. Each student in the MS in STEM Education program is required to complete 12 hours of a specialization in a STEM content area (non-STEM Education courses). With the

addition of 6 hours of electives, candidates in the program can acquire 18 hours of graduate coursework in a content area to meet the minimum guidelines needed to teach college-level courses in that content area. The remaining 12 hours of the program are dedicated to STEM Education coursework with the following courses as options:

SEM 504	Designing Project-Enhanced Environments In STEM Education	(3)
SEM 603	Curriculum And Instruction In STEM Education (Required)	(3)
SEM 604	History Of STEM Education	(3)
SEM 610	Effective Use Of Technology For Modeling-Based Inquiry In STEM Education	(3)
SEM 620	Equity In STEM Education	(3)
SEM 670	Advanced Elementary Mathematics Methods	(3)
SEM 674	Advanced Studies In Teaching Elementary School Science	(3)
SEM 575	Mathematics Clinic	(3)
SEM 701	History Of Mathematics Education	(3)
SEM 706	Research In STEM Education	(3)
SEM 708	Engineering In STEM Education	(3)
SEM 770	Special Topics In STEM Education	(3)

Teaching World Languages

College of Arts & Sciences

The College of Arts and Sciences (Department of Modern and Classical Languages, Literatures and Cultures, and the Department of Hispanic Studies) and the College of Education (Curriculum and Instruction) offer a graduate program leading to the MATWL (Master of Arts in Teaching World Languages).

Admission Requirements
Applicants for admission must be concurrently approved by the Graduate School and the Teacher Education Program (TEP). They are reviewed by the Director of the MATWL Program in consultation with the MATWL Program Faculty Committee.

Candidates seeking admission to the MATWL program should demonstrate proficiency in the target language with a rating of Advanced Low in an ACTFL Oral Proficiency Interview (Latin excepted). Candidates must also document a course of study that reflects mastery of language structure, a broad range of modern and classical literature, and the history of the relevant culture(s). Candidates in Latin must document a course of study that reflects mastery of language structure, knowledge of the literature, history, mythology, and culture of ancient Rome and Greece, and proficiency in oral reading. Documentation of such a course of study typically consists of an undergraduate degree in a world language that includes a major in the appropriate language and/or other coursework sufficient to fulfill the MATWL admission requirements. Although each language area has its unique requirements, candidates typically have 48 to 66 credit hours in their academic teaching specialties.

An applicant may be provisionally admitted without meeting all of the minimum standards if other factors, including letters of recommendation, the writing samples (English and L2), and the oral interviews (English and L2), indicate an ability to perform satisfactorily in graduate-level work. Presentation of a minimum Graduate Record Examination score (GRE) and a minimum Grade Point Average (GPA) does not, however, automatically guarantee admission to the program, as the final decision depends on an evaluation of all materials submitted and the Program Faculty's assessment of the applicant's potential for successful graduate study.

Other Specific Requirements
In addition to assuring that the applicant has met the admission requirements of the Graduate School, the director and the program faculty Committee carefully evaluates the following material:

- an ACTFL rating of Advanced Low or better in language area
- a minimum 2.75 overall undergraduate GPA, a minimum 3.0 GPA in the language-specific field, and a minimum 3.0 GPA in any previous graduate work;
- three letters of recommendation;
- three writing samples with at least one in the target language;
- an interview by the appropriate program faculty;
- a score of at least 150 verbal, 143 quantitative, and 4 in analytic writing in each of the GRE areas, and a rating of 4 in the writing test
- 200 hours of documented experience with children 6 to 13 years of age and/or 14- to 18-year old adolescents as well as community and cross-cultural experience;
- a statement of moral/ethical principles.

Graduate school applications must be returned to the graduate School Office, and the TEP application

to Stayc DuBravac, Director of the MATWL Program, Department of Modern and Classical Languages, Literatures and Cultures, 1055 Patterson Office Tower, University of Kentucky, Lexington KY 40506-0027. For admission in the program, all materials should be received by the MATWL Director no later than February 1.

Degree Requirements
Successful completion of the MATWL program includes:

- an ACTFL rating of Intermediate High or better in language area;
- internship/Student Teaching in language content area reflecting exposure to diversity (MATWL degree candidates spend one semester interning in a program at the elementary or middle school level and in a program at the high school level);
- internship/Student Teaching in a second language area if this is a student's goal (MATWL candidates may complete Student Teaching in two languages but have to add appropriate course work to their curriculum contract in this area as decided upon by their advisory committee);
- an additional ACTFL test for the second language area as necessary;
- successful completion of all course work;
- successful evaluation at mid- and end-point by the program faculty;
- successful performance on comprehensive exams;
- passing scores on PRAXIS II tests (both PLT and Language)
- a complete Portfolio.

The Portfolio
The Kentucky EPSB Teacher Standards are the organizing principle of the Portfolio. Students begin the Portfolio in their first semester and continue it into their last semester. It documents a student's teaching philosophy and reflection on the practicum and field experiences. Because the portfolio is an integral part of the exit requirement, a student must produce a well-designed portfolio if s/he is to be recommended for certification. Portfolios are evaluated for:

- quality and quantity of experiences documented under each of the Standards;
- quality of thought and reflection as related to the underlying pedagogical issues;
- observance of requisite components;
- the style, structure and appearance of the portfolio as a professional document

For further information concerning the MATWL program, consult the Program Director. Students may also want to consider concurrent degrees in the language specialty or in Teaching English as a Second Language.

Graduate Courses

College Of Education

EDC 610	Classroom Management	(3)
EDP 500/600	Educational Psychology	(3)
EDS 600	Survey Of Special Education	(3)

College Of Arts And Sciences (Methods Courses)

MCL 510	Methods Of Teaching World Lang: Novice Learners	(3)
MCL 610	Methods Of Teaching World Lang: Adv Learners	(3)
MCL 601	Teaching Internship	(12)

College Of Arts And Sciences (Sample Language Content Courses)

Chinese

CHI 511	Literary Chinese	(3)

Classics (Latin)		
CLA 511	Studies In Roman Philology	(3)
CLA 512	Studies In Roman Philology	(3)
CLA 523	Roman Republican Poetry (Subtitle Required)	(3)
CLA 527	Roman Imperial Poetry (Subtitle Required)	(3)
French		
FR 510	Linguistic Structure Of Modern French	(3)
FR 606	Literature Of The Middle Ages (Subtitle Required)	(3)
FR 609	Seventeenth-Century Studies (Subtitle Required)	(3)
FR 617	Eighteenth-Century Studies (Subtitle Required)	(3)
FR 630	French Language, Literature And Culture Outside France (Subtitle Required)	(3)
German		
GER 507	Advanced German Composition And Conversation	(3)
GER 520	Special Topics Seminar	(3)
GER 616	Studies In Genre	(3)
GER 630	Studies In The 20th Century	(3)
GER 650	Multidisciplinary German Studies Seminar (Subtitle Required)	(3)
GER 721	Special Topics In German Literary And Cultural History	(3)
Japanese		
JPN 400g	Topics In Japan Studies	(3)
JPN 420g	Pre-Modern Literary And Visual Arts Of Japan	(3)
JPN 421g	Contemporary Literary And Visual Arts Of Japan	(3)
JPN 451g	Social Movements In Modern Japan	(3)
JPN 461g	Japanese Colonialism And Its Legacies	(3)
JPN 491g	Japanese Landscapes	(3)
JPN 551	Japanese Multinational Corporations	(3)
Modern And Classical Languages		
MCL 517	Second Language Acquisition	(3)
MCL 650	Topics In Intercultural Teaching	(3)
MCL 690	Culture, Cognition, & Second Language	(3)
Hispanic Studies		
SPA 600	History Of The Spanish Language	(3)
SPA 601	Studies In Spanish Pedagogy (Subtitle Required)	(1)
SPA 602	Studies In Spanish Linguistics (Subtitle Required)	(3)
SPA 608	Special Topics In Spanish Literature And Culture (Subtitle Required)	(3)
SPA 609	Special Topics In Latin American And U.S. Hispanic Literature And Culture (Subtitle Required)	(3)
SPA 690	Studies In Spanish And/Or Latin American Film (Subtitle Required)	(3)

Teaching English as a Second Language

College of Arts & Sciences

The Department of Modern and Classical Languages, Literatures and Cultures offers a graduate program leading to the M.A. degree in Teaching English as a Second Language – MATESL (36 cr.). The general goal of graduate work in the program is to provide students with a quality teacher education program that will prepare candidates for a satisfying career in language teaching.

Admission Requirements
Applicants for admission must first be approved by the Graduate School. They are then reviewed by the Director of the program in the department of Modern and Classical Languages, Literatures and Cultures, who consults with the MATESL Program Faculty Committee before returning recommendations to the Graduate School.

An applicant may be provisionally admitted without meeting all of the minimum standards if other factors, including letters of recommendation, the writing samples, and the oral interviews, indicate an ability to perform satisfactorily in graduate-level work. Presentation of a minimum Graduate Record Examination score (GRE) and a minimum Grade Point Average (GPA) does not, however, automatically guarantee admission to the program, as the final decision depends on an evaluation of all materials submitted and the Program Faculty's assessment of the applicant's potential for successful graduate study.

Other Specific Requirements
In addition to assuring that the applicant has met the admission requirements of the Graduate School, the director and the program faculty Committee carefully evaluates the following material:

- a minimum 2.75 overall undergraduate GPA, a minimum 3.0 GPA in the language-specific field, and a minimum 3.0 GPA in any previous graduate work;
- three letters of recommendation;
- personal statement of interest in language teaching
- an interview by the appropriate program faculty;
- demonstrated basic skills

Graduate school applications must be returned to the Graduate School Office.

Degree Requirements
All candidates are required to meet the following set of learning outcomes. Candidates must:

I. Language & Learning

1. demonstrate professional level knowledge of the English language, including English as a linguistic system and as a tool for social and cognitive functioning;
2. demonstrate knowledge of research in second language acquisition processes;
3. demonstrate knowledge of learning differences among students, including learning disabilities;
4. demonstrate the ability to inform teaching practices through the study of social learning and cognitive research and theories and the use of inquiry into specific teaching contexts.

II. Culture

1. demonstrate knowledge of the major research and theories related to the nature and role of culture in instruction and learning;
2. demonstrate knowledge of a specific cultural context for ESL/EFL teaching;
3. demonstrate skill in inquiring into cultural groups, processes, and identities to support language

development.

III. Planning, Implementing and Managing Instruction

1. demonstrate the ability to create lesson plans and effectively implement them according to current educational research, concepts and "best practices;"
2. demonstrate an understanding that teaching involves relationship building with learners;
3. demonstrate knowledge of curriculum design, standards-based curricula and materials and strategies and techniques for classroom implementation;
4. demonstrate the ability to use technology as an effective resource in the classroom;
5. demonstrate the ability to differentiate instruction for the diverse learning needs of ESL/EFL students;

IV. Assessment

1. demonstrate knowledge of various assessment instruments and issues as they affect ELLs;
2. demonstrate the ability to use standards-based assessment instruments to show language growth and inform instruction;
3. demonstrate the ability to inquire into students' personal histories and linguistic, cultural and educational backgrounds in order to adapt instruction to learner needs.

V. Professionalism

1. demonstrate knowledge of the history, research, public policy and current practices in the field of ESL teaching and apply this knowledge to inform teaching and learning;
2. demonstrate the characteristics of a "reflective practioner," through questioning and inquiry into their own teaching practices and using professional development opportunities;
3. demonstrate the ability to build partnerships with colleagues and students' families, serve as a community resource, and advocate for ELLs;
4. demonstrate the ability to adhere to ethical standards for Kentucky educators

For further information concerning the MATESL program, consult the Program Director.

The Portfolio

The successful submission of the TESL Professional Portfolio is the culminating requirement of the program. The portfolio has three core functions: 1) reflective tool for professional development; 2) advance an argument that you are a competent language teacher and have met the program TESL Standards; 3) document that you have met the requirements for the TESL MA Program.

TESL Knowledge Areas & Graduate Courses

TESL Knowledge Areas	TESL Curriculum
Language (12 cr.)	MCL 575: Introduction to Linguistics for Teachers (3cr.)
	TSL 560: Literacy Development in the ESL Classroom (3 cr.)
	MCL 665: Second Language Curriculum & Assessment (3 cr.)
	TSL 675: English Grammar: Analysis & Pedagogy (3 cr.)
Learning (9 cr.)	MCL 517/LIN 517: Second Language Acquisition (3cr.) MCL 690: Culture, Cognition and L2 Language Learning (3 cr.) 500/600 level course from Education (3 cr.)

Pedagogy (15 cr.)	MCL 510: L2 Teaching Methods: Young & Beg. Level Learners (3cr.) MCL 610: Second Language Teaching Methods: 9-12, Adult & Advanced Students TSL 697: ESL Teaching Internship (9 cr.)

Toxicology

College of Medicine

The Department of Toxicology and Cancer Biology is a multidisciplinary unit for research and graduate education in the broad areas of toxicology and cancer biology. Our mission is to provide students with an education in toxicology and cancer biology that is based on an understanding of biochemistry, physiology, molecular biology, cell biology, genetics and systems biology. This is coupled with in-depth research experience on the mechanisms by which environmental agents cause disease, with primary emphases in the areas of cancer, cardiovascular disease, and neurodegeneration. The roles of redox signaling, DNA repair and metabolism are areas of focus. Our department consists of 19 tenured/tenure track core faculty with a primary appointment in The Department of Toxicology and Cancer Biology. The diversity of training opportunities is enhanced by a large number of faculty who have joint appointments in the department, but whose primary appointments are in departments and colleges across the University of Kentucky including Agriculture, Biochemistry, Chemistry, Nutritional Sciences, Pathology, Pharmacy, Pharmacology, Radiation Medicine, and Veterinary Medicine. The Department of Toxicology and Cancer Biology has graduated more than 170 PhDs who have gone on to careers in academia as faculty members at major research universities, government agencies, such as the Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA), and in the pharmaceutical and chemical industries. The department maintains a robust extramurally supported training environment, including an NIEHS T32 training grant for doctoral students in Toxicology and Cancer Biology, which has been continuously funded since 1990.

The department is housed in the Health Sciences Research Building in the Medical Center within easy walking distance of all major research units and colleges. Excellent research support facilities are available, including transgenic mouse, macromolecular structure, mass spectrometry, nuclear magnetic resonance, proteomics, genomics, and metabolomics.

Admission Requirements
Applicants must meet the following requirements for admission to the University of Kentucky Graduate School and the Toxicology and Cancer Biology program.

1. An appropriate degree (e.g., Chemistry, Biological Sciences) from an accredited college or university.
2. A minimum grade point average of 3.0 on a 4.0 scale.
3. An average Graduate Record Examination (GRE) score on the verbal, quantitative and analytical sections that is great than 50th percentile.
4. For international applicants, the minimum acceptable TOFEL score is 550 (paper-based), 213 (computer-based), or 79 (internet-based). The minimum IELTS score is 6.5.

Applicants with lesser qualifications will be accepted only if other indices of performance and qualification are outstanding.

Graduate Courses

IBS 601	Biomolecules and Metabolism	(3)
IBS 602	Molecular Biology & Genetics	(3)
IBS 603	Cell Biology & Cell Signaling	(3)
IBS 606	Physiological Communications	(3)
IBS 608	Special Topics in IBS	(2)
IBS 610	Critical Reading/Small Groups	(2)

IBS 611	Practical Statistics	(1)
IBS 607	Seminar in Integrated Biomedical Sciences	(0)
IBS 609	Research in Integrated Biomedical Sciences	(1)
TOX 600	Ethics in Scientific Research	(1)
TOX663	Drug Metabolism and Disposition	(2)
TOX 680	Molecular Mechanism in Toxicology	(5)
TOX 770-001	Toxicology Seminar	(0-1)
TOX 770-002	Journal Club for First Year Toxicology Students	(1)
TOX 780	Special Problems in Toxicology /Grant Writing	(2)

Veterinary Science

College of Agriculture, Food & Environment

The Department of Veterinary Science offers a program of study and research leading to the Master of Science (Plan A only) and Doctor of Philosophy degrees. Possible areas of concentration are pathology, genetics, immunology, musculoskeletal sciences, parasitology, reproductive physiology, pharmacology and toxicology, microbiology and virology. Individual programs of study must conform to the general rules and regulations of the Graduate School.

Students pursuing both the M.S. and Ph.D. degrees in Veterinary Science are required to take two semesters of graduate-level biochemistry/cell biology/molecular biology (selected from CHE 550 and CHE 552 or IBS 601-603, 606) and one semester of graduate-level statistics (STA 570 or STA 580), or demonstrate that they have previously taken equivalent courses. A limited number of research assistantships and fellowships are available.

Admission Requirements

1. This Department's deadline for applications for fall semester enrollment is February 1.
2. Review of applications begins in February and most assistantship offers are extended in March.
3. This Department does not conduct separate recruiting for spring enrollment, and only in exceptional cases will an applicant be accepted for spring enrollment. Applicants for spring enrollment are advised to first contact this Department's Director of Graduate Studies during the normal application review period.

More information is available on the Web at http://vetsci.ca.uky.edu/education

Graduate Courses

Vs 500	Advanced Equine Reproduction	(3)
Vs 597	Special Topics In Veterinary Science	(1-9)
Vs 600	Ethics In Scientific Research (Same As Tox 600)	(1-2)
Vs 650	Cellular And Histotoxicology (Same As Tox 650)	(2)
Vs 690	Practical Analytical Toxicology (Same As Tox 690)	(3)
Vs 748	Master's Thesis Research	(0)
Vs 767	Dissertation Residency Credit	(2)
Vs 768	Residence Credit For The Master's Degree	(1-6)
Vs 770	Veterinary Science Seminar	(1)
Vs 777	Current Literature In Equine Reproduction	(1)
Vs 781	Correlative Pathology	(1-3)
Vs 782	Advanced Virology (Same As Bio 782)	(3)
Vs 785	Advanced Veterinary Parasitology	(3)
Vs 786	Advanced Veterinary Pathology	(3)
Vs 791	Techniques In Veterinary Microbiology	(1-9)
Vs 792	Techniques In General Veterinary Pathology	(1-9)