



**KENTUCKY STATE
UNIVERSITY**

MASTER OF SCIENCE IN ENVIRONMENTAL STUDIES

Introduction

Kentucky State University's Master of Science in Environmental Studies (MES) program's primary goal is the pursuit and dissemination of knowledge in the interdisciplinary field of environmental studies. The program broadens the scope of scientific and technological studies of the environment through a multidisciplinary approach based on ecological principles encompassing the social and legal aspects of environmental concerns. The field includes, but is not limited to, studies of environmental degradation, population and community ecology, ecological modeling, toxicology, water and air pollution, waste management, environmental economics, environmental law, policy and justice, and aquatic, terrestrial, and wetland systems, and study of environmental problems using Geospatial (GIS and remote sensing) tools and applications. The program emphasizes basic research on ecological processes and effects, applied research, and teaching to solve the current environmental issues facing the Commonwealth and the nation.

Global environmental and climate change problems will be among mankind's biggest challenges in the next millennium. Ecological issues involving environmental degradation and resource depletion are often the ultimate cause of economic and political upheaval. To deal with these issues, it is important to understand the processes and principles of the environment. This type of understanding requires research on the problems themselves and the basic science underlying them.

The traditional farming and mining-based economy of Kentucky is changing rapidly. As the workforce strives to find alternatives to tobacco farming for people who have depended on such practices for generations, higher education needs to consider not only current job opportunities in technology-oriented sectors but also future job market scenarios. Efficient use of current energy sources and exploration of alternative energy sources will constitute a major segment of future job opportunities and challenges. Kentucky is blessed with substantial coal reserves. The use of this major domestic energy source in a way that minimizes the degradation of land, water, and air quality will require highly trained scientists and engineers as well as graduates with a broad understanding of the complex interrelated issues.

Scientists and professionals are needed who, after achieving a solid disciplinary education in science-related fields as undergraduates, have learned integrated and interdisciplinary approaches to deal with these problems. The MES program is designed to cut across traditional academic disciplines and to provide sound and effective graduate education and research on these important environmental issues.

The MES degree requires the completion of 36 credit hours, including a 6-credit capstone project or 9-credit thesis research. The core curriculum deals with the interaction between environmental science and current environmental issues along with the development of appropriate policy

responses. The electives and the capstone/thesis project allow students to develop specialized expertise in their area of interest.

Graduates of the MES program are expected to hold positions as environmental professionals in state and local government agencies and in non-profit and private enterprises. The MES program produces graduates who can provide critical leadership in improving the overall quality of life for all Kentuckians and global citizens as they address the needs and demands of our growing demographics. The program is designed to appeal to students seeking meaningful employment with a commitment to human values and prepare them for a wide range of jobs and leadership opportunities. Some students will use the MES program to prepare for doctoral studies in various environmental fields.

Certificates in the Master of Science in Environmental Studies Program

The Master of Science in Environmental Studies offers three certificate programs that allow students to focus on specific areas of environmental studies, which will assist in greater job readiness and competitiveness after graduation. These certificates are available to anyone with a bachelor's degree who wishes additional training and can be completed by any student regardless of area of study.

Graduate Research Assistantships

A number of graduate research assistantships are available for qualified full-time MES thesis option students. Some of these assistantships are funded by state and federal agencies. MES graduate research assistantship recipients are required to work 20 hours per week during the school year and 37.5 hours per week during the summer to receive a stipend.

Admission

The interdisciplinary nature of the program will allow students with diverse undergraduate backgrounds to enroll in the MES program. All applicants (part-time and full-time) must meet the minimum standards for admission to graduate study at Kentucky State University. However, applicants are admitted into the specific graduate program to which they apply. It should be noted that successful completion of a college mathematics course (e.g., statistics, algebra, etc.) is required as part of their undergraduate degree regardless of their major. The MES Graduate Admissions Committee will use the following materials for admission considerations:

- Applicants write a personal statement outlining their goals and career objectives. The application is through GradCAS and it can be found at <https://gradcas.liaisoncas.org/apply/>.
- Transcripts: Copies of all official transcripts must be submitted through GradCAS.
- GRE scores are not required.
- Three letters of recommendation (professional and/or academic) on official letterhead with a signature must be uploaded to GradCAS.
- A resume

The following types of admission will be available to candidates for the MES program:

1. **Regular:** Requirements for this unconditional admission are:
 - a. A complete application package in GradCAS, including official transcripts, test scores, and letters of recommendation.

- b. A baccalaureate degree from an institution in the United States with regional accreditation or a foreign institution with equivalent accreditation.
 - c. Satisfactory completion of course prerequisites for the MES program.
 - d. An overall undergraduate grade-point-average of 3.0 (on a 4.0 scale).
 - e. "TOEFL (Internet Based 70), IELTS (6.0) or Duolingo (100) score is required for international students.
2. **Provisional:** If an applicant is unable to provide all the necessary documents before the application deadline prior to matriculation but otherwise meets the admissions criteria, he/she may be granted provisional admission. Provisional admission may not be permitted for more than one semester, and all credentials must be received before the end of the semester in which the student has registered. Students must meet all regular admissions requirements to move from provisional status to regular admission status.
3. **Non-degree:** Non-degree seeking status is allowed for students that wish to take graduate courses or pursue a certificate but do not intend to seek the MES degree. The student must hold a baccalaureate degree from an accredited institution. Non-degree seeking students need to complete an application for admission to graduate studies through GradCAS.

Degree Requirements

The MES program is made up of 36 credits including thesis or capstone project work. It should be noted that the capstone project is typically less comprehensive than a traditional master's thesis, so students choosing this option are required to take two additional elective courses. Students interested in pursuing the master's degree full-time should plan to spend about two years in residence. Students in the online MES program will complete all classes and capstone research without needing to be on campus.

Thesis Option

The purpose of the thesis option is to demonstrate the student's ability to investigate a research topic and report the findings in proper scientific publication style. This enables the student to gain experience in a specific area of environmental studies and to report research results in a publishable document. The program has a student handbook that gives more specific requirements for the formatting and process that need to be followed. It is distributed at the orientation at the beginning of your first semester. Experience in the literature review, experimental design, data collection, statistical analysis, and manuscript preparation are obtained by students completing the thesis option. Students who intend to further their graduate education (e.g., obtain a doctoral degree) should choose this option because doctoral programs often require students to demonstrate their ability to successfully complete a master's thesis. Required courses and a thesis topic must be approved by the student's graduate committee.

Capstone Project Option

Graduate students enrolled in the non-thesis option are required to complete a capstone project as determined by their major professor and approved by their committee. The MES graduate student Handbook provides specifics on formatting and other requirements and is available to all students during their first semester. Examples might include a literature review, a public service project, or Cooperative Extension work. A detailed proposal is submitted for approval to the student's

committee before the project is conducted, and a final project report must be approved by the student's committee.

Time Limitation of Assistantships

Graduate students are expected to complete the requirements for the M.S. Degree within two years. Graduate Research Assistantships (GRA's) are generally awarded yearly for a maximum period of 2.5 years. The master's degree program must be completed within six years of initial enrollment as a degree-seeking graduate student. Please also see Section II under Graduate Academic Regulations and Policies in this publication.

Graduate Committee

The Graduate Committee consists of three School of Agriculture and Natural Resources (SANR) faculty members, and it can include one additional member from outside of SANR. Students are required to hold their first committee meeting during their first semester and present a thesis/capstone proposal in the second semester of study.

The major professor will guide the student on research, analysis, writing, and other scholarly aspects of the work. Members of the student's committee contribute, but the primary responsibility is that of the major professor.

Submission of a thesis or Capstone manuscript is defined as the time at which the first complete draft of such is submitted to the major professor for review. After the major professor approves the draft for committee revision, the student will then submit the manuscript for critical review by the committee. Each may suggest improvements and refuse approval pending additional work. When committee members and the major professor sign the Approval Page, they certify that the thesis or capstone manuscript is clear and accurate, that it represents an original and worthwhile contribution, that the suggestions made by them are incorporated into the final work, and that the work conforms to the standards of Kentucky State University College of Agriculture, Health, and Natural Resources (CAHNR). No faculty member will sign a thesis until it is of foremost quality and meets all requirements. The major professor and committee members must sign their names personally. There can be no temporary substitute members and no other person may sign a committee member's name on an Approval Page, even with the authorization of the committee member involved and the major professor. Electronic signatures are allowed for students completing their degree online.

Written Comprehensive Exams

All MES students pursuing a thesis or capstone track will complete a written comprehensive exam to be administered by the faculty mentor with questions from the student's faculty mentor and committee members. This exam must be administered before the student defends and must have a majority of the committee members award a passing grade to the questions they have provided.

Core Courses

Code	Title	Hours
ENV 501	Intro to Environmental Studies	3
ENV 502	Population/Community Ecology	3
ENV 503	MES Student Team Project	3
Select one of the following:		3
ENV 506	Exper. Design & App. Stats.	
ENV/AQU 509	Biostatistics	

ENV 511	Energy & the Environment	3
Select one of the following:		9-21
Capstone Project Option		
Thesis Option		
ENV 600	MES Research	1-6
ENV 601	MES Thesis	1-3
Total Hours		26-45

Thesis Option

Code	Title	Hours
ENV 600 & ENV 601	MES Research and MES Thesis	9
Select 12 credit hours of elective courses		12
Total Hours		21

Capstone Project Option

Code	Title	Hours
ENV 699	MES Capstone Research Proj	3-6
Select 15 credit hours of electives		15
Total Hours		18-21

Elective Courses

Code	Title	Hours
ENV 507	Agroforestry	3
ENV 508	Intro Geographic Inf Systems	3
ENV/AQU 513	Aquatic Ecology	4
ENV 515	Environmental Ethics	3
ENV 516	Environmental Justice	3
ENV 517	Environ & Resource Econom	3
ENV 519	Sustainable Agriculture Sys (moved from below)	3
ENV 525	Organic Agriculture	3
ENV 535	Urban Agriculture	3
ENV 540	Ornamental/Landscape Plant Pro	3
ENV 542	Plant Prop. & Prod. Systems	3
ENV 545	Molecular Tech Envir/Aqua Stud	3
ENV 550	Human Health/Environment	3
ENV 551	Livestock Production Practices	3
ENV 555	Food Safety and Microbiology	3
ENV 560	Agricultural & Environ. Policy	3
ENV 565	Environmental Law	3
ENV 585	Special Topics in AFE	3
ENV 589	Remote Sensing of the Env.0	3
ENV 595	Envir Sci/Bioremediation Tech	3