

Environmental Studies and Public Administration Dual Program

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Program Description

The Master of Environmental Studies and the Master of Public Administration programs offer a dual degree program that allows students the ability to attain two master's degrees in three years rather than four. This program is aimed at preparing students for professional level positions in public organizations that address environmental issues.

Program Missions

The Master of Environmental Studies (MES) program provides students with an appreciation of the interdisciplinary nature of environmental problems without sacrificing the training rigor of a specific academic discipline. The interdisciplinary emphasis is established through a carefully designed set of required courses that provide students with an understanding of environmental issues. The MES curriculum addresses these issues by teaching students the principles of scientific research, by giving students the tools to evaluate the potential environmental risks, and by helping students examine the role of public policy in environmental decision making.

The Master of Public Administration (MPA) mission is to prepare public service leaders. Upon graduation MPA students will have the ability to think critically and creatively about public issues, the dedication and capacity to serve a diverse community and the skills to enter a professional position in a public organization. To accomplish this mission, the MPA program provides the following:

- A rigorous core curriculum that examines the theoretical underpinnings of public service and provides concentrated areas of study in arts management, environmental policy, nonprofit management, and urban and regional planning;
- An environment that nurtures a commitment to service;
- Opportunities to support collaboration and the creation of partnerships among communities and public service organizations.

Degree Requirements

To attain both the MES and MPA degree separately, students must complete at least 80 hours of coursework. The joint program allows students to earn both degrees with a minimum of 56 hours rather than the 80. Each student is required to complete a set of core courses, a series of approved electives and an internship or thesis.

Core Curriculum

EVSS 601	Economic Theory for Policy Analysis (3)
EVSS/PUBA 602	Public Policy (3)
EVSS 646	Core Seminar (1)
EVSS 659	Environmental Statistics (3) or
EVSS 624	Biometry (4)
EVSS 680	Case Studies in Environmental Issues (4)
EVSS 610	Environmental Biology (3) or
EVSS 640	Earth Systems Science (3) or
EVSS 632	Pollution in the Environment (3)
EVSS 650	Energy Production Management (3)
PUBA 600	Public Service Roles and Responsibilities (3)
PUBA 601	Research and Quantitative Methods for Public Administration (3)
PUBA 603	Managing Public Organizations (3)
PUBA 604	Managing Human Resources (3)
PUBA 605	Managing Financial Resources (3)
PUBA 701	Capstone Seminar (3)
EVSS/PUBA	Internship/Thesis (6)

Total core — minimum 41 hours

The student then selects a minimum of 5 elective courses from either program and approved by their advisor.

Advising

An advisor will be assigned based on the student's program of interest. Students are expected to meet the standards of both programs as addressed in the Student Handbooks.

Admission Requirements

Admission to the dual program requires a baccalaureate degree from an accredited institution. Students from any undergraduate discipline are encouraged to apply. Minimum requirements include:

- Overall undergraduate GPA of 3.0 (on a scale of 4.0)
- Combined GRE of 1100 and a 4 (out of 6) on the writing assessment
- Must have undergraduate coursework in biology (two courses with labs), chemistry (two courses with labs), statistics (one course) and American government (one course). One year of another physical or natural science may be substituted for either biology or chemistry
- Three letters of recommendation
- A statement of goals

Admission decisions will be made by the admissions committees in both programs. When decisions are mixed or an applicant appeals, both program directors must agree to admit the applicant to the joint program. Students currently enrolled in either the MES or MPA program are eligible to apply to the joint program.

Environmental Studies and Public Administration Core Course Descriptions

EVSS 646 Core Seminar (1)

This seminar course on environmental studies topics will offer a capstone review of the disciplines available to natural and policy scientists working on environmental related scholarship activities. Students will review recent scholarship with an emphasis on interdisciplinarity, providing them in their final year an environmental studies review. Pre/corequisites: All core courses.

EVSS 601 Economic Theory for Policy Analysis (3)

This course covers the application of microeconomic theories to the analysis of contemporary public sector issues, with an emphasis on environmental problems. Attention is given to the conceptual and practical problems associated with resource allocation decisions when there is conflict among efficiency, equity and limited information in policy making. The foundations of welfare economics and applications of cost-benefit analysis as they relate to specific environmental policies and programs are examined as well.

EVSS 602/PUBA 602 Public Policy (3)

This course seeks to develop a firm understanding of the public policy-making process in the United States. Students study policy making through various perspectives on implementation. The roles of major institutions including the executive, legislative and judicial branches of government, the bureaucracy and interest groups in this process are addressed. Includes various perspectives and interpretations of policymaking, including incrementalism, rationalism, pluralism and elitism. Selected areas of public policy, including transportation, poverty, energy and the environment are used to illustrate both the process and the different perspectives.

EVSS 659 Environmental Statistics (3)

This course provides an introduction to environmental statistics and risk assessment. Topics include probability, correlation, regression, hypothesis testing, analysis of variance, model testing, residual analysis, and nonparametric models. Environmental applications will be provided throughout the course.

Prerequisites: Math 250: Statistical Methods I (or an equivalent college-level statistics course) or pass an entrance exam.

EVSS 610 Environmental Biology (3)

This course emphasizes the application of fundamental toxicological and microbiological concepts to problems which exist in the real world. The course should prepare the student interested in environmental problems with the necessary practical information to make sound judgments in assessing meaningful solutions to existing environmental problems.

EVSS 624 Biometry (4)

A broad treatment of statistics concentrating on specific statistical techniques used in biological research. Topics covered include sampling procedures and analysis of distributions (binomial, poisson, and normal), hypothesis testing and estimation with emphasis on analysis of frequencies, regression and correlation. Several nonparametric and multivariate methods are also discussed. Emphasis is on application of statistical techniques and not theory; therefore knowledge of mathematics through calculus is expected.

EVSS 631 Pollution in the Environment (3)

Multidisciplinary study of fundamental physical, chemical, and biological processes that affect transport and fate of human-induced and natural pollutants in the environment. This course is for students who have strong interests in environmental sciences, with basic preparation in sciences such as chemistry, geology, and/or biology.

EVSS 640 Earth Systems Science

This course investigates the interactions among the atmosphere, ocean, ice, solid-Earth, and biological systems. Students study the evolution of solid Earth, the formation of the atmosphere and oceans, and the origin of life. Rate and scale of changes of the Earth's environment are examined through an analysis of changing climates. Finally, the course examines human evolution and technological development to gain an understanding of human impacts on the global environment.

EVSS 650 Energy Production Management (3)

A study of the nature of energy and scientific issues relating to its production, storage, distribution, and use from a physics perspective. Production methods to be studied include: hydroelectric, fossil fuel, fission, fusion, wind, photovoltaic, biomass and solar-dynamic. Scientific issues will be related to the cultural and philosophical framework surrounding energy infrastructure and policy.

PUBA 600 Public Service Roles and Responsibilities (3)

This course explores the evolution and current status of the public sector in the United States. Students will study the ethical, legal, political, and professional dimensions of public service.

PUBA 603 Managing Public Organizations (3)

This course provides students with an understanding of the challenges of managing public organizations. Topics of study include leadership, motivation, group behavior, culture, decision making, accountability and organizational change and development.

PUBA 604 Managing Human Resources (3)

This course considers the context and practice of effective human resource management, with special emphasis on the political, legal, historical, and ethical dimensions of public employment. Students will apply personnel management theories and techniques to contemporary organizational challenges to investigate the tensions inherent to balancing competing values and demands.

PUBA 605 Managing Financial Resources (3)

This course examines the organization and techniques of governmental financial management, budgetary theories and intergovernmental financial relations.

PUBA 701 Capstone Seminar (3)

The capstone seminar is designed to be a culminating experience that helps the student integrate knowledge and skills acquired throughout the program. Students engage in applied research.

Prerequisite: Completion of all M.P.A. core courses and at least 30 semester hours or permission of the instructor or M.P.A. director.

EVSS 680 Case Studies in Environmental Issues (4)

This course investigates specific case studies. Case studies impart a unique opportunity to explore basic principles of biology, chemistry, geology and physics through practical applications. This approach to problems will be similar to that used by the practitioners of science and public policy.

EVSS 601 Economic Theory for Policy Analysis (3)

This course covers the application of microeconomic theories to the analysis of contemporary public sector issues, with an emphasis on environmental problems. Attention is given to the conceptual and practical problems associated with resource allocation decisions when there is conflict among efficiency, equity and limited information in policy making. The foundations of welfare economics and applications of cost-benefit analysis as they related to specific environmental policies and programs are examined as well.