

Environmental Science (MS)

Hours Required for Degree: 36

2006-2007 Catalog Year

239-590-7196

Degree: Master of Science

Major: Environmental Science

College: Arts and Sciences

Semester Hours Required for Degree: 36

The following are minimum requirements for admission into the Master of Science in Environmental Science degree in the College of Arts and Sciences:

- A cover letter of introduction.
- A statement of research goals (two page maximum; intended to identify a potential research discipline).
- A four-year undergraduate degree from an accredited institution.
- Official copies of undergraduate transcripts and scores from the General Graduate Record Examination (GRE). GRE Subject exam is not required.
- A minimum grade point average of 3.0 (4.0 scale) for up to the last 60 semester hours of upper division undergraduate or graduate coursework.
- A minimum of 400 on the verbal and quantitative sections of the GRE and a combined score minimum of 1000.
- A minimum TOEFL score of 550 (paper-based) or 213 (computer-based) for international students from countries where English is not the primary language.
- At least two letters of recommendation from people familiar with your academic and research potential.

The Master of Environmental Science Program prepares students for a career as an environmental professional or for further study in a PhD program. It is designed to meet the needs of individuals currently employed in the field, those recently completing an undergraduate degree, or those interested in a career change.

A Master of Science in Environmental Science requires successful completion of 36 credit hours, to include:

- 10 credits in core courses
- 6-8 credits in graduate thesis
- 18-20 credits in elective courses

The core of the program focuses on understanding the science of ecology, utilizing the scientific method, and applying of the concept of sustainability. Students demonstrate their acquisition of this knowledge and these skills through the completion of a thesis project. There are no set concentrations, but students are expected to pursue interests in organismal ecology, ecosystem ecology,

marine science, or related fields.

Graduate students in Environmental Science will develop the following:

- understanding of and ability to apply the scientific method, and the capacity to design and conduct a relevant research investigation using qualitative and quantitative techniques;
- ability to understand and apply systems analysis and simulation modeling techniques to environmental education, management, or research;
- advanced ability to use appropriate technologies (statistical analyses, geographic information systems, field and laboratory techniques);
- understanding of geologic, biological, chemical, physical, and evolutionary processes and their impact on ecosystems;
- a strong foundation in ecological principles and their application to the description and interpretation of environmental systems;
- understanding of anthropogenic impacts on ecosystems;
- knowledge of local plant and animal communities and ecosystem dynamics, and the ability to translate this understanding to regional and global levels;
- knowledge and field skills in identifying and investigating a core cluster of life groups;
- expertise in a limited group of organisms, or ecosystems.
- an understanding of the concept of sustainability and its application to the formation and implementation of public policy, decision making, problem identification, ethical dilemmas, creative problem solving, and conflict resolution,
- ability to function in a professional setting; and
- respect for the environment and all life within it, and recognition of the many ways of knowing the environment.

Prerequisite Courses

General Ecology

Introductory Statistics

Transfer of Coursework

A maximum of nine (9) credits of course work may be transferred from other institutions, subject to approval of the Graduate Studies Coordinator.

Core Requirements (16-18 credits):

One of the following ecology courses (more than one can be taken for elective credit):

OCB 6635 Estuarine Ecology (3)

PCB 6064C Advanced Ecology (3)

(continued on reverse)

Plus the following:

EVR 6022 Environmental Research Methodology (3)

EVS 6920 Graduate Seminar in Current Topics (1)

EVS 6970 Master's Thesis (total of 6-8 credits)

Plus one of the following courses:

EVR 6322 Concepts and Applications of Sustainability (3)

EVS 6937 Environmental Policy (3)

PAD 5620 Environmental Law (3)

URP6421 Environmental Planning (3)

Electives (18 – 20 credits):

Science Electives

EVR 5145 Ecotoxicology (3)

EVR 6907 Independent Graduate Study in Environmental Science (this course may be taken more than once) (1-3)

EVR 6936 Special Topics in Graduate Study in Environmental Science (this course may be taken more than once for other topics) (3)

EVS 6941 Environmental Practicum (3-6)

GLY 5575 Coastal and Estuarine Sediment Dynamics (3)

GLY 5658 Geobiology (3)

OCB 6646 Marine Biogeography (3)

OCB 6931 Special Topics in Ichthyology (3)

OCC 5115C Advanced Marine Chemistry (3)

OCG 6053 Coastal and Watershed Geology (3)

Policy / Management / Education Electives (none are required but no more than 6 credits hours permitted):

EVR 5414 Interpreting the Environment (3)

EVR 5925 Environmental Education for a Sustainable Future (3)

EVR 6322 Concepts and Applications of Sustainability (3)

EVS 6937 Environmental Policy (3)

PAD 5620 Environmental Law (3)

URP 6421 Environmental Planning (3)

Alternative electives must be approved by the student's Graduate Committee.

Additional Requirements

- Successful completion of each core course requires a grade of B or better.
- Elective courses require a grade of C or better.
- All coursework must be completed with a minimum cumulative grade point average of 3.0.
- Students are required to provide two, signed, bound copies of their thesis, one to the FGCU Library and the other to the Department of Marine and Ecological Sciences.
- Each student must have a graduate committee composed of a minimum of 3 individuals, 2 of which must be part of the Graduate Faculty in Environmental Science.