Conservation Biology and Planning

An Area of Concentration within the Professional Master’s Degree in Wildlife and Fisheries Conservation

The Conservation Biology and Planning Concentration in the Wildlife and Fisheries Conservation Graduate Program is designed for students who want professional training in the multi-disciplinary field of Conservation Biology. The primary focus of the program is on the interface between socio-political and biophysical drivers of threats to conservation of biodiversity. Students will gain a broad overview of contemporary issues in conservation of species and natural communities and to the tools and techniques available to address these issues. The academic requirements of this concentration in combination with an internship experience provide students the necessary training for employment with state, federal, NGO and private consulting firm programs involved in conservation planning and monitoring of plan success.

A. Prerequisites
Candidates for this program will be admitted on the basis of their academic training and professional experience. At a minimum, candidates will be expected to possess a bachelor’s degree in:

• natural resources, or
• environmental sciences, or
• biological sciences with an emphasis in ecology, or
• any field with strong background in the biological and physical sciences

Prerequisites exist for many of the required courses. Students are expected to have satisfied these prerequisites prior to commencing the program or in addition to the curriculum requirements outlined below.

B. Requirements
1) A minimum of 40 credits is required, 12 of which must be at the 600-level or above,
2) A 6-credit professional internship/project practicum approved by the student's graduate advisor and other committee members (see below),
3) A publishable-quality professional paper presenting the results of the degree project,
4) Successful completion of courses listed below, and.
5) A general Master's examination by a committee composed of at least three persons, including your major advisor and the concentration coordinator; two of these persons must have WFCON graduate faculty status.

C. Curriculum

1. Core Science (16-17 credits)

   A. Conservation Biology (take all of the following courses)
   • WFCONSV 697A Conservation Biology (3 credits)
   • NRC 549 Ecosystem Management (4 credits)
   • NRC 621 Landscape Ecology (4 credits) OR
WFCON 757 Conservation of Aquatic Ecosystems (3 credits)
- WFCONSV 791C Communicating Science (1 credit)
- NRC 601 Research Concepts (3 credits)
- NRC 691A – Two semesters of Departmental Seminar (2 credits)

2. Courses providing breadth to the student’s curriculum. NOTE that the student will be expected to demonstrate competence in all of the core science areas AS WELL AS each of the following areas that provide breadth to the student’s curriculum:

A. Social/political. Take at least two courses from among the following areas (6 or more credits):
- Human dimensions (e.g., NRC 697D Social Conflict and Natural Resource Policy or NRC 697E Human Dimensions of Resource Mgmt
- Natural Resources Policy (e.g., RES-ECON 605 Economics and Public Policy)
- Sociology (SOCIOL 727 Social Change)
- Economics (e.g., RES-ECON 720 Natural Resources Economics)

B. Taxonomic diversity. Take at least one course from two or more of the following areas (6 or more credits).
- Vertebrate ecology (e.g., WFCON564 Wildlife Habitat Management)
- Invertebrate Ecology (ENTOMOL 683 Insect Ecology)
- Plant ecology (e.g., BIOLOGY 526 Plant Geography)

C. Drivers of Risk to Biodiversity. Take at least one course from two or more of the following areas (6 or more credits).
- Land Use (e.g., 697U Urban-Suburban Wildlife Ecology and Management)
- Climate Change (e.g., ENVIRSCI 504 Air Pollution and Climate Change Biology)
- Invasive Species (e.g., NRC 697B Invasion Biology)
- Watershed Dynamics (e.g., NRC 597R Watershed Science and Management)

D. Internship/Project

Each student in the program not already professionally employed in a conservation biology and planning position is required to complete at least a 3-month professional internship. There are numerous internship opportunities with programs associated with state and federal agencies in the Northeast, such as the U.S. Fish and Wildlife Service, National Park Service, National Marine Fisheries Service, Forest Service, Army Corps of Engineers as well as state Natural Heritage programs, and NGOs in New England and Washington, D.C., among others. All of these opportunities offer real-world experience in conservation biology planning. Regardless of employment status, students are required to complete a professional paper which may consist of publishable professional paper or a conservation plan acceptable to their institution providing the internship opportunity.

E. Matriculation and Financial Aid

This program should take a full–time student 4 semesters. Some exceptionally well–prepared students may be able to transfer in up to 6 credits of previous course work, and finish the program in 3 semesters, including an internship. Funding opportunities are limited, and most students should be financially able
to complete the program without relying on assistantships.

**F. The “Professional” Degree**

This Professional Degree is intended solely for students who want professional training in the field of conservation biology and planning and who do not intend to pursue a career as a research scientist. Students enrolled in this “non-thesis” option are not allowed to transfer into the “thesis” option of the WFCON degree program. This program is designed as a *terminal* degree (i.e., the last degree sought); individuals who intend to seek a Ph.D. in this or any other field should enroll in the WFCON Thesis Degree Option.

**G. Program Contact**

For all inquiries and information pertaining to this concentration, please contact:

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