WILDLIFE ADMINISTRATION AND MANAGEMENT

SIU offers the Professional Science Master's in Wildlife Administration and Management to elevate your education to the next level of biological, ecological, and land management knowledge, as well as providing the coursework to meet requirements to be recognized as a Wildlife Society Certified Wildlife Biologist. The PSM will take you above and beyond a typical bachelor's degree while simultaneously providing training in human dimensions, conflict resolution, and consensus building - skills critically important for modern land managers.

The Professional Science Masters of Wildlife Administration and Management program is a collaborative effort between SIU, state and federal agencies, and non-government organizations and is accredited by the National Professional Science Master's Association. The program seeks to provide employers with graduates that not only have adequate knowledge of biological and ecological principles to make appropriate land management decisions but also the social and practical skills to carry out those management actions.

REQUIREMENTS

This is a non-thesis degree in which students will be required to take courses that provide training in the more practical skills needed by the modern wildlife administrator and land manager in addition to providing the opportunity to complete requirements of The Wildlife Society's Certified Wildlife Biologist. The program requires 24 credit hours of coursework and a 6 credit hour internship. The degree will culminate in a capstone project consisting of the preparation and submission of a grant proposal supporting habitat restoration activities at the internship site.

WHY DO STUDENTS NEED A PROFESSIONAL SCIENCE MASTER'S IN WILDLIFE ADMINISTRATION AND MANAGEMENT?

In the 1930s, Aldo Leopold first recognized the need to actively manage wildlife to preserve them for future generations. Thus, he formed the first academic program emphasizing the management of wildlife populations. In the 1940s and 50s, universities across the country began developing curriculum for programs that trained applied ecologists in the science and art of managing wildlife habitat and populations. Over the following 60-70 years, universities developed graduate programs that emphasized applied research of wildlife population dynamics, habitat management, and habitat-wildlife interactions, dramatically increasing our understanding of the information required to properly manage and administer wildlife populations and habitat while simultaneously providing an option for students wishing to pursue advanced degrees in wildlife research or administration.

Despite the acquisition of this tremendous amount of new information, most of those managing lands for wildlife conservation and recreational activities, the actual land managers, continue to be trained with the same Bachelors of Science (B.S.) degree in Wildlife Biology, Wildlife Ecology, Zoology, or a closely related field that was introduced in the 1940s. This is primarily due to the limited number of credit hours required for a B.S. degree. Most B.S. degrees require 120 credit hours, which was probably adequate in the 1940s when information on wildlife management was limited. For example, in the 1940s, most of the information available regarding the management of wildlife could be provided in a 3-credit course entitled "Wildlife Management", where today adequate knowledge would require

separate courses in waterfowl ecology and management, game mammal management, and conservation biology.

The Wildlife Society (TWS) has attempted to address this issue with their current requirements for certification as a wildlife biologist, utilizing an advisory board of both educators and practicing wildlife biologists or land managers. Because of limitations imposed by the 120 credit-hour B.S. degree, however, even TWS' efforts have been less than successful in the eyes of many employers. Some individual students have attempted to address this shortcoming by taking additional credit hours before completion of their B.S. degree, but time to graduation has become an important metric for university program assessment, thus, this practice is discouraged by university administrators. An alternative approach is for the student to acquire a more advanced degree such as a Master of Science (M.S.) in Wildlife Biology or a closely related field. While this more traditional M.S. certainly provides an opportunity for students to acquire a more in-depth understanding of basic ecological principles and greater writing and field experience, even these highly-educated graduates often have not acquired the necessary skills required of practicing land managers. For example, in addition to the supplementary course work needed to acquire the tremendous amount of knowledge available since the first B.S. Degrees in Wildlife Management were offered, modern land managers are expected to achieve the difficult task of meeting the needs of multiple special interest groups, often with conflicting expectations. Combined, these two factors leave typical graduates with a B.S. degree unprepared for the day-to-day activities of a modern land manager.

ADMISSION:

It is not necessary that applicants have an undergraduate major in zoology. However the following academic background is required:

- 24 semester hours (or equivalent) in courses covering the basic principles of zoology (including animal diversity, ecology, and evolution);
- 9 credit hours of physical sciences (physics, chemistry, soil science, geology – at least 2 disciplines must be represented);
- one year of college mathematics including college algebra and trigonometry (calculus and statistics are also desirable);
- be within 9 credit hours of meeting class requirements for a Certified Wildlife Biologist (details can be found on The Wildlife Society web page);
- an undergraduate grade point average of at least 3.0 (A = 4.0).

Applicants that do not meet these requirements will be considered on individual merit.

DEGREE COMPLETION:

All requirements of the Graduate School must be satisfied. At least of 30 hours of graduate credit (15 hours at the 500 level) is required beyond the bachelor's degree, including 24 hours of graded courses required by the program. Because of the diversity in backgrounds and interests of students accepted into this program, with the exception of the 6 credit hour summer internship, there are no specific courses required,only 3 specific learning objectives (Basic Ecological Knowledge [8-10 credit hours], Habitat Manipulation Skills [10-12 credit hours], and Social Management Skills [6-9 credit hours]. A

grade-point average of 3.2 in graduate coursework must be maintained. Failure to meet this requirement will result in academic probation. A capstone project consisting of a grant proposal presented to the agency providing the summer internship and approved by the Program Director must be completed prior to graduation.

COURSES:

PREFERRED COURSES

- ZOOL 589-2 Zoology Colloquium
- PLB 440-3 Grassland Ecology or
- ZOOL 462a-2 Waterfowl and Wetland Ecology and Management
- ZOOL 462b-1 Waterfowl and Wetland Ecology Management Laboratory
- FOR 405-3 Forest management for Wildlife
- GEOG 506-3 Introductory to remote Sensing
- GEOG 433-3 Field methods in Geography
- ZOOL 574-6 Internship in Wildlife Administration and Management
- ZOOL 505-2 Wildlife Administration and Management Constituencies
- ERP 502-3 Environmental Decision Making
- CMST 460-3 Small Group Theory and Research

ALTERNATIVE COURSES

- ERP 500-3 Physical and Biological Environmental Systems
- PLB 451-3 Flora of Southern Illinois
- PLB/ZOOL 490-3 Energetics, Food Webs, and Ecosystems
- PLB 530-3 Plant Ecophysiology
- ZOOL 461-3 Mammalogy
- ZOOL 467-3 Ornithology
- ZOOL 408-3 Herpetology
- ZOOL 465-3 Ichthyology
- ZOOL 413-4 The invertebrates
- ZOOL 414-4 Freshwater invertebrates
- ZOOL 471-4 Entomology
- ZOOL 473-4 Aquatic entomology
- ZOOL 478-4 Animal behavior
- FOR 506-3 Advanced Landscape Ecology
- FOR 515-3 Advanced Urban Ecosystem Management

- FOR 520-2 Advanced Park Planning
- FOR 523-2 Advanced Resource Interpretation
- FOR 551-3 Wildlife-Habitat Relationships
- FOR 480-3 Natural Resource Conflict Management
- FOR 521-2 Recreation Behavior in Wildlands Environments
- FOR 585-3 Human Dimensions of Natural Resource Management
- GEOG 458-3 Applied GIS
- GEOG 502-3 Geographic Information Systems
- GEOG 506-3 Introduction to Remote Sensing
- GEOG 454-3 Conservation and Environmental Movements
- GEOG 526-3 US Environmental Policy
- GEOL 405-2 Science Writing and Scientific Communication
- GEOL 474-3 Geomorphology
- REC 401-3 Fundamentals of Environmental Education
- REC 423-3 Environmental Interpretation
- REC 565-3 Environmental Issues in Outdoor Recreation
- CMST 441-3 Advanced Intercultural Communication

CAREER:

This program prepares student for jobs in many areas. Below are examples of the government and non-government areas for this field.

FEDERAL:

- US Fish and Wildlife Service
- Natural Resource Conservation Service
- US forest Service
- National Park Service
- Bureau of Land Management
- Environmental Protection Agency

STATE:

- Departments of Conservation
- Departments of Wildlife
- Departments of Natural Resources

NON-GOVERNMENT ORGANIZATIONS:

- Ducks Unlimited Inc.
- The Nature Conservancy
- The Audubon Society
- The Wild Turkey Federation
- Quail/Pheasants Unlimited
- White-tails Unlimited
- Private environmental consulting

PROGRAM EXTERNAL ADVISORY BOARD:

- Matt Bowyer - Missouri Department of Conservation
- Aaron K. Kuehl - Pheasants Forever
- Megan Wandag - United States Fish and Wildlife Service
- John Coluccy – Ducks Unlimited Inc.
- Ed Burns - Natural Resource Conservation Service
- Leonard Pitcher - United States Forest Service
- Andy West - Ozark Koala Ecosystem Services
- Jeff Walk - The Nature Conservancy