

WILDLIFE AND FISHERIES BIOLOGY PROGRAM

<https://www.uvm.edu/rsenr/wildlife-fisheries-biology>

The Wildlife and Fisheries Biology curriculum focuses on the biology, ecology, management, and conservation of animal populations that range from species common enough to be hunted/fished to species that are rare, threatened, or endangered. The curriculum centers on using science to address complex problems facing species and populations, such as habitat loss, invasive species, and climate change, and balancing solutions with the needs of people. Courses emphasize applied ecology, techniques to sustainably manage populations given the tradeoffs between human demand and ecological realities, and hands-on experiences in labs and in the field. Students take required core courses in Wildlife and Fisheries Biology and then can select remaining courses tailored to their interests.

MAJORS

WILDLIFE AND FISHERIES BIOLOGY MAJOR

Wildlife and Fisheries Biology B.S.

MINORS

WILDLIFE AND FISHERIES BIOLOGY MINOR

Wildlife and Fisheries Biology

Courses

WFB 1740. Wildlife Conservation. 3 Credits.

Historical and contemporary values of wildlife; impacts on habitats and populations; strategies for conservation, allocation, and use. Nonmajors only. Catamount Core: SU.

WFB 1990. Special Topics. 1-18 Credits.

See Schedule of Courses for specific title.

WFB 1991. Internship. 1-3 Credits.

On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

WFB 1993. Independent Study. 1-18 Credits.

A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

WFB 2010. Methods Fisheries and Wildlife. 4 Credits.

Familiarizes students with early-stage wildlife and fisheries biology techniques that are commonly used for both data collection and analysis; takes a multi-taxa approach to highlight key similarities and differences in habitat and life history that may influence how research and management studies are designed and conducted. Prerequisites: Wildlife and Fisheries Biology major; minimum Sophomore standing.

WFB 2170. Scientific Writing and Interpr. 4 Credits.

Focus on effective communication within the genre of scientific research by focusing on technical writing, revising and editing, interpreting data, creating figures and tables, critically reading and data mining the literature, and producing an original scientific research manuscript. Prerequisites: BIOL 1000 or BIOL 1400 or BCOR 1400; Wildlife and Fisheries Biology majors; Minimum Sophomore standing. Catamount Core: WIL2.

WFB 2300. Ornithology. 3 Credits.

Taxonomy, classification, identification, morphology, physiology, behavior, and ecology of birds. Prerequisites: BIOL 1400, BCOR 1400, or BIOL 1000, and BIOL 1450, BCOR 1450, or BIOL 1005; or BCOR 1425.

WFB 2310. Field Ornithology. 2 Credits.

Identification and field studies of birds, emphasizing resident species. Prerequisite: WFB 2300.

WFB 2410. Field Herpetology. 4 Credits.

Introduction to the identification, life histories, habitats, conservation, and field study of Vermont's reptiles and amphibians.

WFB 2740. Prin of Wildlife Management. 3 Credits.

Application of ecology and sociology to the management of wildlife populations and habitat; integration of wildlife management with demands for other resources; consideration of game species, endangered species, and biological diversity. Prerequisite: NR 2030 or BCOR 2100.

WFB 2990. Special Topics. 1-18 Credits.

See Schedule of Courses for specific titles.

WFB 2991. Internship. 1-18 Credits.

On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

WFB 2993. Independent Study. 1-18 Credits.

A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

WFB 2994. Teaching Assistantship. 1-3 Credits.

Undergraduate student service as a teaching assistant, usually in an introductory level course in the discipline, Offered at department discretion.

WFB 2995. Undergraduate Research. 1-18 Credits.

Undergraduate student work on individual or small research projects under the supervision of a faculty member for which credit is awarded. Formal report required. Offered at department discretion.

WFB 3100. Wildlife Disease Ecology. 3 Credits.

Wildlife diseases are "wicked" problems that are challenging to solve due to ecological complexity, uncertainty about treatment efficiency, and differing values systems. However, gaining traction on wildlife disease problems is critical not just for conserving biodiversity, but also for maintaining agricultural interests and protecting human health. This course seeks to produce disease-literate community members and knowledgeable professionals who understand the importance and challenges of managing wildlife diseases. Prerequisites: BIOL 1400 or BCOR 1400; BIOL 1450 or BCOR 1450; NR 2030 or BCOR 2100.

WFB 3240. Conservation Biology. 0 or 4 Credits.

Conservation of biological diversity at genetic, species, ecosystem, and landscape levels. Emphasis on genetic diversity, population viability, endangered species, critical habitats, international implications. Discussion section covers basic genetic principles, population genetics, and population modeling. Prerequisites: NR 2030 or BCOR 2100; BIOL 1000 or BIOL 1400, and BIOL 1450; or PBIO 1040; or BCOR 1400 and BCOR 1450.

WFB 3610. Fisheries Biology & Techniques. 0 or 4 Credits.

Introduction to freshwater fish, habitats, and life histories. Overview of fishery techniques, including sampling and assessment methods, stocking, harvest regulations, population and habitat evaluation. Prerequisites: BIOL 1000, BIOL 1400, or BCOR 1400; BIOL 1450 or BCOR 1450.

WFB 3990. Special Topics. 1-18 Credits.

See Schedule of Courses for specific titles.

WFB 3991. Internship. 1-18 Credits.

On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

WFB 3993. Independent Study. 1-18 Credits.

A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

WFB 3994. Teaching Assistantship. 1-3 Credits.

Undergraduate student service as a teaching assistant, usually in an introductory level course in the discipline, for which credit is awarded. Offered at department discretion.

WFB 3995. Undergraduate Research. 1-18 Credits.

Undergraduate student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

WFB 3996. Wildlife & Fisheries Honors. 1-6 Credits.

Honors project dealing with wildlife or fisheries biology.

WFB 4320. Ichthyology. 3 Credits.

Biology of fishes. Focus is on form and function, morphology, physiology, behavior, life history, and ecology of modern fishes. Prerequisites: BIOL 1000 or BIOL 1400, and BIOL 1450; or BCOR 1400, BCOR 1450; Junior standing.

WFB 4610. Fisheries Management. 3 Credits.

Principles of fisheries management, including population assessment, analytical methods, harvest allocation models, human dimensions, policy and emerging issues. Prerequisites: BIOL 1000, BIOL 1400, or BCOR 1400; BIOL 1450 or BCOR 1450; WFB 3610.

WFB 4750. Wildlife Behavior. 3 Credits.

Behavior and social organization of game and nongame species as they pertain to population management. Prerequisites: BIOL 1400, BCOR 1400, or BIOL 1000; BIOL 1450 or BCOR 1450; NR 2030 or BCOR 2100.

WFB 4830. Terrestrial Wildlife Ecology. 4 Credits.

Wildlife ecology with an emphasis on the management and conservation of species, populations, and ecosystems. Prerequisite: WFB 2740, and NR 2030 or BCOR 1450.

WFB 4990. Special Topics. 1-18 Credits.

See Schedule of Courses for specific titles.

WFB 4996. Wildlife & Fisheries Honors. 1-6 Credits.

Honors course.