

# DEPARTMENT OF FISH, WILDLIFE, AND CONSERVATION BIOLOGY



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[warnercnr.colostate.edu/departments/fwcb](http://warnercnr.colostate.edu/departments/fwcb) (<http://warnercnr.colostate.edu/departments/fwcb>)

Professor Kenneth R. Wilson, Department Head

The Department of Fish, Wildlife, and Conservation Biology offers one major of Fish, Wildlife, and Conservation Biology with three concentrations. Those concentrations are Conservation Biology, Fisheries and Aquatic Sciences, and Wildlife Biology. We also offer a minor in Fishery Biology.

Students are encouraged to visit the the Department of Fish, Wildlife, and Conservation Biology (<http://warnercnr.colostate.edu/departments/fwcb>).

## Undergraduate Majors

- Major in Fish, Wildlife, and Conservation Biology
  - Conservation Biology Concentration
  - Fisheries and Aquatic Sciences Concentration
  - Wildlife Biology Concentration

## Minors

- Minor in Fishery Biology

## Graduate Graduate Programs in Fish, Wildlife, and Conservation Biology

Graduate programs lead to a fish, wildlife, and conservation biology, Master of Science, and Doctor of Philosophy degrees. Students interested in graduate work should refer to the Graduate and Professional Bulletin and the Department of Fish, Wildlife, and Conservation Biology (<http://warnercnr.colostate.edu/fwcb-graduate-study/graduate-program>).

## Certificate

- Conservation Actions with Lands, Animals, and People

## Master Program

- Master of Science in Fish, Wildlife, and Conservation Biology, Plan A\*
- Master of Science in Fish, Wildlife, and Conservation Biology, Plan B\*
- Master of Fish, Wildlife, and Conservation Biology, Plan C (M.F.W.C.B.)

## Ph.D.

- Ph.D. in Fish, Wildlife, and Conservation Biology\*

\* Please see department for program of study.

## Courses Fish, Wildlife, and Conservation Biology (FW)

**FW 104 Wildlife Ecology and Conservation (GT-SC2) Credits: 3 (3-0-0)**

**Course Description:** Essentials of wildlife ecology as a foundation for understanding issues on the origins, management and conservation of biodiversity.

**Prerequisite:** None.

**Registration Information:** Sections may be offered: Online.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**Additional Information:** Biological & Physical Sciences 3A, Natural & Physical Sciences w/o lab (GT-SC2).

**FW 111 Basic Outdoor Skills in FWCB Credit: 1 (.5-1-0)**

**Course Description:** Basic outdoor skills for FWCB and outdoor novices. History of wildlife conservation and reasons for declining outdoor participation.

**Prerequisite:** None.

**Registration Information:** Must register for lecture and laboratory. May be taken up to 3 times for a maximum of 3 credits. Required field trips.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**FW 179 New-to-the-Major Seminar Credit: 1 (0-0-1)**

**Course Description:** Introduces students new to the Fish, Wildlife, and Conservation Biology major to curriculum, faculty, research, key concepts, careers, professional development, and other students.

**Prerequisite:** None.

**Registration Information:** This is a partial semester course.

**Terms Offered:** Fall, Spring.

**Grade Mode:** S/U Sat/Unsat Only.

**Special Course Fee:** No.

**FW 204 Introduction to Fishery Biology Credits: 3 (2-3-0)**

**Course Description:** Exposure to sampling techniques, agencies, and topics in fishery biology careers.

**Prerequisite:** None.

**Registration Information:** Must register for lecture and laboratory. Required field trips.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**FW 260 Principles of Wildlife Management Credits: 3 (3-0-0)**

**Course Description:** Ecology principles applied to conservation and management of fish/wildlife resources. Quantitative methods, socioeconomic factors, population dynamics.

**Prerequisite:** (MATH 124 or MATH 160) and (BZ 110 or LIFE 103).

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 300 Biology and Diversity of Fishes Credits: 2 (2-0-0)**

**Course Description:** Biology and zoology of fishes: anatomy, taxonomy, evolution, physiology, behavior, ecology, zoogeography, and conservation.

**Prerequisite:** BZ 111 or LIFE 103.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 301 Ichthyology Laboratory Credit: 1 (0-2-0)**

**Course Description:** Anatomy, taxonomy, evolution and ecology of North American freshwater fishes.

**Prerequisite:** FW 300, may be taken concurrently.

**Registration Information:** Required field trips.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**FW 350 Teaching Shooting Responsibility Credits: 4 (3-2-0)**

**Course Description:** Education and instructor certification course to develop knowledge, skills, behavior for teaching about firearms, shooting sports, and associated ethics.

**Prerequisite:** None.

**Registration Information:** Must register for lecture and laboratory.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 355 Hunter Education for Instructors. Credits: 2 (0-0-2)**

**Course Description:** Principles of learning and teaching for instructors of state hunter education courses.

**Prerequisite:** None.

**Registration Information:** Offered as a correspondence course only.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 370 Design of Fish and Wildlife Projects Credits: 3 (2-2-0)**

**Course Description:** Design, analysis, and evaluation of wildlife projects; lab exercises in design and data analysis; preparation and presentation of project proposals.

**Prerequisite:** (LIFE 320 or LAND 220 or LIFE 220) and (FW 260 or FW 360) and (NR 220) and (MATH 155 or MATH 160) and (STAT 301 or STAT 307).

**Registration Information:** Must register for lecture and laboratory.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 373A Travel Abroad : Wildlife Conservation–Baja California Sur Credits: 3 (0-0-3)**

**Course Description:** Study tour of various overseas ecosystems and natural resources conservation programs; discussions with local ecologists/managers.

**Prerequisite:** None.

**Registration Information:** Written consent of instructor. Students need a minimum of a 2.500 GPA per Education Abroad standards. Credit allowed for only one of the following: FW 373A, FW 382, or FW 382A.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 375 Field Wildlife Studies Credits: 3 (1-4-0)**

**Course Description:** Field trips to see wildlife management and habitats and to discuss problems and practices with professional ecologists and resources managers.

**Prerequisite:** (LIFE 320 or LAND 220 or LIFE 220) and (FW 260).

**Registration Information:** Must register for lecture and laboratory. Required field trips.

**Terms Offered:** Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 382A Travel Abroad: Wildlife Conservation Credits: 3 (0-0-3)**

**Course Description:** Study tour of various overseas ecosystems and natural resources conservation programs; discussions with local ecologists/managers.

**Prerequisite:** None.

**Registration Information:** Written consent of instructor. Students need a minimum of a 2.500 GPA per Education Abroad standards.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 384 Supervised College Teaching Credits: Var[1-5] (0-0-0)**

**Course Description:** Instruction and practice in laboratory instruction in lower-division departmental courses.

**Prerequisite:** None.

**Registration Information:** Written consent of instructor. A maximum of 10 combined credits for all 384 and 484 courses are counted towards graduation requirements.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FW 400 Conservation of Fish in Aquatic Ecosystems Credits: 3 (2-0-1)**

**Course Description:** Ecological processes that create habitat and biotic template for fish in aquatic ecosystems; human effects; strategies for conserving fishes.

**Prerequisite:** LIFE 320 and FW 300.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**FW 401 Fishery Science Credits: 3 (2-3-0)**

**Course Description:** Theory, philosophy, and applications for study and management of fishery resources.

**Prerequisite:** (FW 300) and (STAT 301 or STAT 307 or ERHS 307) and (MATH 141 or MATH 155 or MATH 160).

**Registration Information:** Computer literacy. Must register for lecture and laboratory.

**Term Offered:** Fall.

**Grade Modes:** S/U within Student Option, Trad within Student Option.

**Special Course Fee:** Yes.

**FW 402 Fish Culture Credits: 4 (3-2-0)**

**Course Description:** Principles and practices to produce food, bait, and sport fishes.

**Prerequisite:** FW 300.

**Registration Information:** Must register for lecture and laboratory.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**FW 405 Fish Physiology Credits: 3 (2-3-0)**

**Course Description:** Physiological ecology of fish; functional adaptations and adjustments used to cope with environmental and physiological states.

**Prerequisite:** BZ 214 or FW 300.

**Registration Information:** Must register for lecture and laboratory. Credit not allowed for both FW 405 and FW 605.

**Term Offered:** Spring (odd years).

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**FW 455 Principles of Conservation Biology Credits: 3 (3-0-0)**

**Course Description:** Review of efforts to study and conserve biological diversity, focused on fish and wildlife populations.

**Prerequisite:** (FW 260 and LIFE 320) and (STAT 301 or STAT 307).

**Registration Information:** Credit allowed for only one of the following courses: NR 300 or FW 455. Credit not allowed for both FW 455 and FW 555.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 465 Managing Human-Wildlife Conflicts Credits: 3 (2-2-0)**

**Course Description:** Methods for resolving conflicts caused by wildlife; integrating animal behavior, population dynamics, economics, and human dimensions into solutions.

**Prerequisite:** FW 260.

**Registration Information:** Must register for lecture and laboratory. Required field trips.

**Term Offered:** Spring (odd years).

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**FW 467 Wildlife Disease Ecology Credits: 3 (2-0-1)**

**Course Description:** Ecological, epidemiological, and evolutionary principles of disease in fish and wildlife populations; contemporary issues in disease ecology.

**Prerequisite:** LIFE 320.

**Term Offered:** Fall (even years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 468 Wild Bird Management Credits: 3 (2-3-0)**

**Course Description:** Ecology and management of game, pest, and rare bird populations and nongame bird communities.

**Prerequisite:** FW 260.

**Registration Information:** Must register for lecture and laboratory.

**Term Offered:** Spring (odd years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 469 Conservation and Management of Large Mammals Credits: 3 (3-0-0)**

**Course Description:** Principles of behavior, ecology, population dynamics, and conservation related to large mammals.

**Prerequisite:** (BZ 330 and FW 260 and LIFE 320) and (STAT 301 or STAT 307).

**Registration Information:** Required field trips.

**Term Offered:** Fall (odd years).

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**FW 471 Wildlife Data Collection and Analysis Credits: 4 (2-4-0)**

**Course Description:** Analysis methods used in wildlife management and research; adaptive resource management with emphasis on learning through field and computer labs.

**Prerequisite:** FW 370 and NR 220.

**Registration Information:** Must register for lecture and laboratory. Required field trips.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**FW 472 Issues in Animal Conservation and Management Credits: 3 (2-0-1)**

**Course Description:** Current and emerging issues in fish and wildlife conservation and management at the state, national, and global scales.

**Prerequisite:** (FW 260) and (LIFE 320).

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 475 Conservation Decision Making Credits: 3 (3-0-0)**

**Course Description:** Structured approaches to conservation and management of vertebrates; articulating objectives, developing management options, and predicting outcomes.

**Prerequisite:** (MATH 155 or MATH 160) and (STAT 301).

**Registration Information:** Junior or senior standing.

**Term Offered:** Spring (odd years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 477 Wildlife Habitat Use and Management Credits: 3 (1-3-1)**

**Course Description:** Wildlife habitat evaluation, classification, and improvement; analysis of habitat use patterns; planning and implementation of management plans.

**Prerequisite:** (FW 260) and (NR 319 or NR 322).

**Registration Information:** Credit allowed for only one of the following courses: FW 477, FW 577, or FW 677. Required field trips.

**Term Offered:** Fall (even years).

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**FW 482A Travel Abroad: Conserving Desert/Marine Animals Credits: 3 (0-0-3)**

**Course Description:** Ecology of desert and marine animals and application to problems of animal conservation.

**Prerequisite:** LIFE 320.

**Registration Information:** Written consent of instructor. Students need a minimum of a 2.5 GPA per Education Abroad standards.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 487 Internship Credits: Var[1-6] (0-0-0)**

**Course Description:** Field experience in fish and wildlife management.

**Prerequisite:** None.

**Registration Information:** Written consent of instructor.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FW 492 Seminar-Wildlife Biology Credit: 1 (0-0-1)**

**Course Description:**

**Prerequisite:** None.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FW 495A Independent Study: Fishery Biology Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** LIFE 320 or FW 104 or NR 220 or LAND 220 or LIFE 220.

**Registration Information:** Written consent of instructor.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FW 495B Independent Study: Wildlife Biology Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** LAND 220 or LIFE 320 or FW 104 or NR 220 or LIFE 220.

**Registration Information:** Written consent of instructor.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FW 496A Group Study: Fishery Biology Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** LAND 220 or LIFE 320 or FW 104 or NR 220 or LIFE 220.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FW 496B Group Study: Wildlife Biology Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** LAND 220 or LIFE 320 or FW 104 or NR 220 or LIFE 220.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FW 540 Fisheries Ecology Credits: 3 (2-0-1)**

**Course Description:** Population, community, and ecosystem management for fishes and other aquatic organisms in freshwater habitats.

**Prerequisite:** None.

**Registration Information:** One course in fishery science; one course in aquatic ecology. Must register for lecture and recitation.

**Term Offered:** Spring (even years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 544 Ecotoxicology Credits: 3 (2-0-1)**

**Course Description:** Ecological effects of contaminants on populations, communities, and ecosystems.

**Prerequisite:** (LIFE 320 or LAND 220 or LIFE 220) and (STAT 301 or STAT 307).

**Registration Information:** Must register for lecture and recitation. Sections may be offered: Online.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 551 Design of Fish and Wildlife Studies Credits: 3 (2-0-1)**

**Course Description:** Principles, types of studies, and philosophy of science in design of experimental, observational, and sampling studies for wildlife investigations.

**Prerequisite:** STAT 301 or STAT 307 or ERHS 307.

**Registration Information:** Must register for lecture and recitation. Sections may be offered: Online.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 552 Applied Sampling for Wildlife/Fish Studies Credits: 3 (2-0-1)**

**Course Description:** Survey sampling theory and techniques, including distance sampling, with emphasis on wildlife and fish studies.

**Prerequisite:** STAT 301 or STAT 307.

**Registration Information:** Must register for lecture and recitation. Graduate standing. Sections may be offered: Online.

**Term Offered:** Spring (odd years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 553 Adaptive Fish and Wildlife Management Credits: 3 (2-2-0)**

**Course Description:** Formal approaches to making management decisions about wildlife and fish populations, using tools of decision analysis.

**Prerequisite:** (FW 104 or FW 260 or FW 555 or LIFE 320 or NR 300) and (STAT 301 or STAT 307).

**Registration Information:** Graduate standing. Must register for lecture and laboratory. Sections may be offered: Online.

**Term Offered:** Spring (odd years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 555 Conservation Biology Credits: 3 (2-0-1)**

**Course Description:** Ecological factors in conservation of biological diversity.

**Prerequisite:** (LIFE 320 or LAND 220 or LIFE 220) and (STAT 307).

**Registration Information:** Credit not allowed for both FW 555 and FW 455. Must register for lecture and recitation.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 556 Leopold's Ethic for Wildlife and Land Credits: 3 (0-0-3)**

**Course Description:** Philosophy, art, history, and science of wildlife and land management from writings of Aldo Leopold.

**Prerequisite:** None.

**Registration Information:** Bachelor's degree, or any level ecology or wildlife management course, or written consent of instructor. Offered online only.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 557 Wildlife Habitat Management on Private Land Credits: 3 (0-0-3)**

**Course Description:** Management of cover, food, and water for wildlife and fish in the Great Plains. Emphasis on practices compatible with other uses of private land.

**Prerequisite:** None.

**Registration Information:** Bachelor's degree, or any level ecology or wildlife management course, or written consent of instructor. Offered online only.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 558 Conservation Genetics of Wild Populations Credits: 3 (2-0-1)**

**Course Description:** Examine the background, concepts, and tools required to determine how genetic data can be used to evaluate wild vertebrate species and communities of conservation concern.

**Prerequisite:** (BZ 350 or LIFE 201) and (LIFE 220 or LIFE 320) and (STAT 301 or STAT 307).

**Registration Information:** Graduate standing. Written consent of instructor. Must register for lecture and recitation. Offered as an online course only. Admission to a graduate program in Fish, Wildlife, and Conservation Biology.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 561A Advanced Topics: Fishery Biology Credits: Var[1-3] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Registration Information:** Written consent of instructor.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FW 561B Advanced Topics: Wildlife Biology Credits: Var[1-3] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Registration Information:** Written consent of instructor.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 561C Advanced Topics: Population Analysis Credits: Var[1-3] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Registration Information:** Written consent of instructor.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 561E Advanced Topics: Vertebrate Management Credits: Var[1-3] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Registration Information:** Written consent of instructor.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 562 Fish and Wildlife Population Dynamics Credits: 3 (2-0-1)**

**Course Description:** Factors that influence population abundance and density, and how they change over time. It blends ecology, evolution, genetics, and mathematical modeling into a unified field. Concentrate on understanding single-species population growth models, including metapopulation concepts, as well as multi-species topics such as predation and competition.

**Prerequisite:** (MATH 155 or MATH 160) and (LIFE 220 or LIFE 320) and (STAT 301 or STAT 307).

**Registration Information:** Graduate standing. Must register for lecture and recitation. Written consent of instructor. Offered as an online course only.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 563 Methods of Fish & Wildlife Population Studies Credits: 3 (2-0-1)**

**Course Description:** Design of wildlife population studies and the analysis of mark-recapture and occupancy data. Discussion of scientific philosophy, statistical theory, sampling design, and the application of the latest quantitative approaches to the analysis of population data.

**Prerequisite:** FW 260 and STAT 301.

**Registration Information:** Graduate standing. Must register for lecture and recitation. Offered as an online course only.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 564 Science of Managing Human-Wildlife Conflicts Credits: 3 (2-0-1)**

**Course Description:** Human-wildlife conflicts, and in particular, damage caused by wildlife, often termed wildlife damage. Topics such as animal behaviors, population dynamics, public attitudes, economics, and effective strategies in understanding the various types of conflicts and how to manage them.

**Prerequisite:** BZ 110 or LIFE 102 or LIFE 103 or LIFE 220 or LIFE 320 or FW 100 to 499 - at least 3 credits.

**Registration Information:** Must register for lecture and recitation. Offered as an online course only.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 567 Wildlife Disease Ecology Credits: 3 (2-0-1)**

**Course Description:** Ecological, epidemiological, and evolutionary principles of disease in fish and wildlife populations; contemporary issues in disease ecology.

**Prerequisite:** (LIFE 320) and (STAT 301 or STAT 307).

**Registration Information:** Graduate standing. Sections may be offered: Online.

**Term Offered:** Fall (odd years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 573 Travel Abroad-Wildlife Ecology/Conservation Credits: 3 (3-0-0)**

**Course Description:** Study tour of various overseas ecosystems and natural resources conservation programs; discussions with local ecologists/managers.

**Prerequisite:** None.

**Registration Information:** Written consent of instructor.

**Term Offered:** Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 575 Wildlife Habitat Evaluation for Educators Credits: 3 (0-0-3)**

**Course Description:** Teachers or leaders implement wildlife habitat evaluation procedures in classroom or community programs and evaluate performance of students.

**Prerequisite:** None.

**Registration Information:** Graduate standing. Offered as a correspondence course only.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 576 Wildlife Policy, Administration, and Law Credits: 3 (0-0-3)**

**Course Description:** Evolution of policy affecting wildlife and humans using historical, current, philosophical, legal, and administrative constructs.

**Prerequisite:** None.

**Registration Information:** Required: one course in political science; one course in natural resources management. Offered as a correspondence course only.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 577 Management of Wildlife Habitat Credits: 3 (2-0-1)**

**Course Description:** Identifying and implementing management techniques for evaluating, classifying, and improving wildlife habitat to sustain and conserve populations.

**Prerequisite:** (FW 260) and (GR 311 or GR 323 or NR 323 or GR 420 or NR 319 or NR 322 or NR 422 or SOCR 377).

**Registration Information:** Written consent of instructor. Must register for lecture and recitation. Offered as an online course only. Admission to graduate program in Fish, Wildlife, and Conservation Biology. Credit allowed for only one of the following courses: FW 477, FW 577, or FW 677.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 578 Conservation Decision Analysis Credits: 3 (2-0-1)**

**Course Description:** Identifying decision making processes and adaptive management techniques used in conservation; consideration of objectives, options and outcomes.

**Prerequisite:** (MATH 155 or MATH 160) and (STAT 301).

**Registration Information:** Offered as an online course only. Written consent of instructor. Must register for lecture and recitation. Admission to a graduate program in Fish, Wildlife, and Conservation Biology.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 605 Advanced Physiological Ecology of Fishes Credits: 4 (2-3-1)**

**Course Description:** Physiological ecology of fishes; functional adaptations and adjustments used to cope with environmental and physiological states.

**Prerequisite:** FW 300.

**Restriction:** Must be a: Graduate, Professional.

**Registration Information:** Must register for lecture, laboratory, and recitation. Credit not allowed for both FW 605 and FW 405.

**Term Offered:** Spring (odd years).

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**FW 662 Wildlife Population Dynamics Credits: 3 (1-2-1)**

**Course Description:** Population models; experimental evidence and analysis of theories of population regulation; case studies.

**Prerequisite:** (FW 260 and STAT 301) and (MATH 155 or MATH 160).

**Restriction:** Must be a: Graduate, Professional.

**Registration Information:** Must register for lecture, laboratory and recitation.

**Term Offered:** Spring (odd years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 663 Sampling and Analysis of Vertebrate Populations Credits: 5 (3-3-1)**

**Course Description:** Sampling and analysis of fish and wildlife populations, including survival estimation, capture-recapture sampling, and transect sampling.

**Prerequisite:** FW 260 and STAT 301.

**Restriction:** Must be a: Graduate, Professional.

**Registration Information:** Must register for lecture, laboratory and recitation.

**Term Offered:** Spring (even years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 673 Hierarchical Modeling in Ecology Credits: 3 (3-0-0)**

**Also Offered As:** STAT 673.

**Course Description:** Hierarchical ecological modeling using common forms of data in fish and wildlife studies and emphasizing spatial and temporal aspects of analysis.

**Prerequisite:** ESS 575 or STAT 420.

**Restriction:** Must be a: Graduate, Professional.

**Registration Information:** Credit not allowed for both FW 673 and STAT 673.

**Term Offered:** Fall (odd years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FW 677 Wildlife Habitat Management Credits: 3 (1-3-1)**

**Course Description:** Habitat models; vegetation manipulation and monitoring for wildlife; extended field trips.

**Prerequisite:** FW 260.

**Restriction:** Must be a: Graduate, Professional.

**Registration Information:** Must register for lecture, laboratory and recitation. Credit allowed for only one of the following courses: FW 477, FW 577, or FW 677. Required field trips.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**FW 684 Supervised College Teaching Credits: Var[1-5] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Professional.

**Registration Information:** Written consent of instructor.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FW 692 Seminar: Fish, Wildlife, and Conservation Biology Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Professional.

**Registration Information:** Sections may be offered: Online.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FW 695A Independent Study: Fishery Biology Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Professional.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FW 695B Independent Study: Wildlife Biology Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**FW 696 Group Study: Fish, Wildlife, Conservation Biology Credits: Var[1-18] (0-0-0)****Course Description:** Group study projects on topics in fish, wildlife, and conservation biology.**Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Registration Information:** Written consent of instructor. Sections may be offered: Online.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**FW 698A Research: Fishery Biology Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**FW 698B Research: Wildlife Biology Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**FW 699A Thesis: Fishery Biology Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**FW 699B Thesis: Wildlife Biology Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**FW 798A Research: Fishery Biology Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**FW 798B Research: Wildlife Biology Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**FW 799A Dissertation: Fishery Biology Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**FW 799B Dissertation: Wildlife Biology Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.