# Fish/Wildlife/Conserv Bio-FW (FW)

## Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Course Description</th>
<th>Prerequisite</th>
<th>Registration Information</th>
<th>Terms Offered</th>
<th>Grade Mode</th>
<th>Special Course Fee</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>FW 104 Wildlife Ecology and Conservation (GT-SC2)</td>
<td>3</td>
<td>Essentials of wildlife ecology as a foundation for understanding issues on the origins, management and conservation of biodiversity.</td>
<td>None</td>
<td>Sections may be offered: Online.</td>
<td>Fall, Spring</td>
<td>Traditional</td>
<td>No</td>
<td>Biological &amp; Physical Sciences 3A, Natural &amp; Physical Sciences w/o lab (GT-SC2).</td>
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<tr>
<td>FW 111 Basic Outdoor Skills in FWCB</td>
<td>1 (.5-1-0)</td>
<td>Basic outdoor skills for FWCB and outdoor novices. History of wildlife conservation and reasons for declining outdoor participation.</td>
<td>None</td>
<td>Must register for lecture and laboratory. Required field trips.</td>
<td>Fall, Spring</td>
<td>Traditional</td>
<td>Yes</td>
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<tr>
<td>FW 204 Introduction of Fishery Biology</td>
<td>3 (2-3-0)</td>
<td>Exposure to sampling techniques, agencies, and topics in fishery biology careers.</td>
<td>None</td>
<td>Must register for lecture and laboratory. Required field trips.</td>
<td>Fall</td>
<td>Traditional</td>
<td>Yes</td>
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<tr>
<td>FW 260 Principles of Wildlife Management</td>
<td>3 (3-0-0)</td>
<td>Ecology principles applied to conservation and management of fish/wildlife resources. Quantitative methods, socioeconomic factors, population dynamics.</td>
<td>(MATH 124 or MATH 160) and (BZ 110 or LIFE 103).</td>
<td>Fall, Spring. Required field trips.</td>
<td>Fall, Spring</td>
<td>Traditional</td>
<td>No</td>
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<tr>
<td>FW 300 Ichthyology</td>
<td>2 (2-0-0)</td>
<td>Biology of fishes: anatomy, taxonomy, physiology, behavior, ecology, evolution, and zoogeography.</td>
<td>BZ 111 or LIFE 103.</td>
<td>Spring.</td>
<td>Spring</td>
<td>Traditional</td>
<td>No</td>
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<tr>
<td>FW 350 Teaching Shooting Responsibility</td>
<td>4 (3-2-0)</td>
<td>Education and instructor certification course to develop knowledge, skills, behavior for teaching about firearms, shooting sports, and associated ethics.</td>
<td>None</td>
<td>Must register for lecture and laboratory.</td>
<td>Fall, Spring</td>
<td>Traditional</td>
<td>No</td>
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<tr>
<td>FW 355 Hunter Education for Instructors</td>
<td>2 (0-0-2)</td>
<td>Principles of learning and teaching for instructors of state hunter education courses.</td>
<td>None</td>
<td>Offered as a correspondence course only.</td>
<td>Fall, Spring, Summer</td>
<td>Traditional</td>
<td>No</td>
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<tr>
<td>FW 356 Leopold's Ethic for Wildlife and Land</td>
<td>3 (0-0-3)</td>
<td>Philosophy, art, history, and science of wildlife and land management from writings of Aldo Leopold.</td>
<td>None</td>
<td>Offered as a correspondence course only.</td>
<td>Fall, Spring, Summer</td>
<td>Traditional</td>
<td>No</td>
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<tr>
<td>FW 357 Wildlife Habitat on the Great Plains</td>
<td>3 (0-0-3)</td>
<td>Management of cover, food, and water for wildlife and fish in the Great Plains. Emphasis on practices compatible with other uses of private land.</td>
<td>None</td>
<td>Offered as a correspondence course only.</td>
<td>Fall, Spring, Summer</td>
<td>Traditional</td>
<td>No</td>
<td></td>
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<tr>
<td>FW 370 Design of Fish and Wildlife Projects</td>
<td>3 (2-2-0)</td>
<td>Design, analysis, and evaluation of wildlife projects; lab exercises in design and data analysis; preparation and presentation of project proposals.</td>
<td>(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).</td>
<td>Must register for lecture and laboratory.</td>
<td>Fall, Spring</td>
<td>Traditional</td>
<td>No</td>
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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.
Prerequisites: (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 382 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.
Terms Offered: Fall, Spring (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

FW 384 Supervised College Teaching Credits: Var[1-5]
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.
Prerequisites: LIFE 320 and FW 300.
Term Offered: Fall.
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.
Terms 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.
Prerequisites: (FW 260 and LIFE 320) and (STAT 301 or STAT 307).
Registration Information: 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.
Terms 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.
Prerequisites: (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.
Prerequisites: 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.
Prerequisites: (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.
Prerequisites: (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.
Prerequisites: (FW 260) and (NR 319 or NR 322).
Registration Information: Credit not allowed for both FW 477 and FW 677. Required field trips.
Term Offered: Fall (even years).
Grade Mode: Traditional.
Special Course Fee: Yes.

FW 482 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.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

FW 487 Internship Credits: Var[1-6]
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]
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]
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 495A Group Study: Fishery Biology Credits: Var[1-18]
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 495B Group Study: Wildlife Biology Credits: Var[1-18]
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.
Prerequisites: (LIFE 320 or LAND 220 or LIFE 220) and (STAT 301 or STAT 307).
Registration Information: Must register for lecture and recitation.
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 (3-0-0)
Course Description: Survey sampling theory and techniques, including distance sampling, with emphasis on wildlife and fish studies.
Prerequisite: STAT 301 or STAT 307.
Term Offered: Spring (even 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 401 or FW 471.
Term Offered: Spring (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

FW 555 Conservation Biology Credits: 3 (3-0-0)
Course Description: Ecological factors in conservation of biological diversity.
Prerequisites: (LIFE 320 or LAND 220 or LIFE 220) and (STAT 301 or STAT 307).
Registration Information: Credit not allowed for FW 555 and FW 455.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

FW 561A Advanced Topics: Fishery Biology Credits: Var[1-3]
Course Description: 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]
Course Description: 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]
Course Description: 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]
Course Description: None.
Registration Information: Written consent of instructor.
Terms Offered: Fall, 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.
Prerequisites: (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 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.
Prerequisites: (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.
Prerequisites: 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 not allowed for both FW 677 and FW 477. Required field trips.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: Yes.

FW 684 Supervised College Teaching Credits: Var[1-5]
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 692A Seminar: Fishery Biology Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

FW 692B Seminar: Wildlife Biology Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

FW 695A Independent Study: Fishery Biology Credits: Var[1-18]
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]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

FW 696A Group Study: Fishery Biology Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

FW 696B Group Study: Wildlife Biology Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

FW 698A Research: Fishery Biology Credits: Var[1-18]
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]
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]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.
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]
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]
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]
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]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.