Class Descriptions

FWCE 110 (3 cr) - Introduction to Natural Resource Management
Introduction to managing natural resources with an emphasis on historical and current issues affecting the management of renewable natural resources.

FWCE 255 (3 cr) - Principles of Fish and Wildlife Management
Basic principles of fish and wildlife management including history, ecology, economics, and policy. Uses an ecosystem approach. Pre/Corequisite: FWCE 110.

FWCE 301 (3 cr) - Applied Ecology
General ecological theory with emphasis on concepts including biogeography, species interactions, population dynamics and disease ecology as they relate to the management and conservation of vertebrates. Prerequisite: BIOL 111.

FWCE 330 (4 cr) - Natural History of the Vertebrates
Evolution, ecology, and diversity of vertebrates. Topics include comparative anatomy and physiology, biogeography, community ecology, behavior, and conservation. Laboratory emphasizes identification of local taxa. Field trips required. Prerequisite(s): BIOL 111G and BIOL 111L. Pre/Corequisite: BIOL 322 Zoology.

FWCE 359 (3 cr) - Advanced Studies in Fishery and Wildlife Sciences
Preparation for competing in the Western Regional Quiz Bowl. Prerequisite: FWCE 330, 3.0 GPA or above.

FWCE 360 (3 cr) - Wildlife Behavior
Behavior of wild vertebrates and management implications. Topics include social organization, marking, territoriality, environmental influences, mother-offspring relationships, and field procedures. Prerequisite: junior standing or above.

FWCE 393 (3 cr) - Professional Experience
Professional work experience under the supervision of employer and/or a faculty member. Pre/Corequisite: FWCE 255.

FWCE 402 (1 cr) - Seminar
Review of current topics in natural resource management. Prerequisite: senior standing or above.

FWCE 409 (3 cr) - Population Ecology
Quantitative analysis of vital statistics and mechanisms affecting dynamics of wild populations. Patterns of growth, age structure, survival, and natality. Population theories and life tables. Prerequisites: MATH 142G and FWCE 255.

FWCE 430 (4 cr) - Avian Field Ecology
Principles of avian ecology and management with an emphasis on taxonomy, physiology, behavior and field studies. Includes weekly field trips. Focusing on identification and
behavior of Southwest birds. Pre/Corequisite: FWCE 330.

FWCE 431 (3 cr) - Mammalogy
Classification, identification, anatomy, physiology, life history, and ecology of mammals. Field trips required. Prerequisites: FWCE 255 and FWCE 330.

FWCE 432 (4 cr) - Environmental Biology of Fishes
What makes a fish, a fish? Mechanisms of circulation, gas exchange, osmotic and ionic regulation, swimming, migration, reproduction, and chemoreception. Prerequisite: senior standing or consent of instructor.

FWCE 434 (4 cr) - Aquatic Contaminants and Toxicology
Basic principles and methodologies of aquatic toxicity testing. Routes of exposure and modes of action. Environmental legislation and ecological risk assessment. Prerequisite: senior standing or consent of instructor.

FWCE 437 (3 cr) - Wildlife Damage Control
Introduction to basic need and appropriate methods for control of animal damage. Socioeconomic, ecological, and political factors. Prerequisite: BIOL 111G.

FWCE 455 (3 cr) - Environmental Risks and Decisions
Risk assessment and decision analysis in the context of environmental and conservation issues. Concepts of risk perception and uncertainty; precautionary principle; the roles of experts and stakeholders; the use of conceptual and probabilistic models in risk assessment. Pre/Corequisite: MATH 142 or 191, E ST 311, FWCE 301.

FWCE 457 (3 cr) - Ecological Biometry
Use of ecological data to test scientific hypotheses. Stochastic and statistical models for environmental data, data visualization, likelihood-based and information-based model selection. Emphasis on open-source software tools. Pre/Corequisite MATH 142 or 191, E ST 311, FWCE 301.

FWCE 459 (4) - Aquatic Ecology
Ecological functions of plant and animal communities in aquatic ecosystems with emphasis on chemical and physical properties, productivity, species interactions, population dynamics and concepts for diagnosing problems and restoring aquatic ecosystems. Prerequisites: CHEM 112, BIOL 301, and MATH 142G.

FWCE 462 (3 cr) - Conservation Biology
Examination of the value of biological diversity, the natural processes that control biological diversity, and the ways in which human activities have resulted in the loss of biological diversity, both regionally and globally. Prerequisite: BIOL 301.

FWCE 464 (4 cr) - Management of Aquatic and Terrestrial Systems
Principles and methods for managing aquatic and terrestrial ecosystems and their fish and wildlife resources. Emphasis on quantitative techniques, data collection and analysis for
management of systems at a landscape spatial scale. Prequisites: FWCE 301 or BIOL 301, FWCE 330, E ST 311G.

**FWCE 466 (3 cr) - Advanced Management of Mammals**
Ecological principles, production and harvest, habitat management, and techniques of mammal management. Prerequisite: FWCE 464

**FWCE 482 (4 cr) - Ichthyology**
Classification, morphology, identification, life history, and ecology of fishes. Prerequisite: WLSC 330 or consent of instructor.

**FWCE 488 (3 cr) - Conservation Genetics**
Application of evolutionary theory and biotechnologies used in conservation of populations including concepts in population structure, gene flow, inbreeding, hybridization and forensics. Prerequisite BIOL 305 or AGRO 305.

**FWCE 536 (3) - Advanced Avian Ecology**
Consent of instructor required.