WILDLIFE (WLF)

College of Natural Science and Mathematics
Department of Biology and Wildlife (https://www.bw.uaf.edu/)
907-474-7671

WLF F101  Survey of Wildlife Science  
2 Credits  
Offered Fall  
An introduction to wildlife science for research, conservation and management. Lectures, presentations, labs and other outside class activities will familiarize students with the field of wildlife biology and the wildlife profession. Special fees apply.  
**Letter Grades with option of Plus/Minus**  
Lecture + Lab + Other: 1 + 2 + 1  
Grading System: Letter Grades with option of Plus/Minus

WLF F104L  BIOL F104X Laboratory  
0 Credit  
Offered Fall  
Laboratory portion of BIOL F104X/WLF F104X.  
Co-requisites: BIOL F104X or WLF F104X.  
Attributes: UAF GER Natural Science Req  
**Letter Grades with option of Plus/Minus**  
Lecture + Lab + Other: 0 + 3 + 0  
Grading System: Non-Graded

WLF F104X  Natural History of Alaska  
4 Credits  
Offered Fall  
Survey of the physical and biological environment of Alaska, including terrestrial and aquatic systems. Topics include the past, present and future climate of Alaska, life histories of common plants and animals, adaptations of organisms to the northern environment, human influences on ecosystems and the management of wildlife and ecosystems.  
**Letter Grades with option of Plus/Minus**  
Prerequisites: Placement in WRTG F111X; placement in MATH F105.  
Co-requisites: BIOL F104L or WLF F104L.  
Cross-listed with BIOL F104X.  
Attributes: UAF GER Natural Science Req  
Lecture + Lab + Other: 3 + 3 + 0  
Grading System: Letter Grades with option of Plus/Minus

WLF F301  Design of Wildlife Studies  
3 Credits  
Offered Spring  
Study designs for wildlife populations and their habitats. Probability theory, finite population sampling, capture-mark-recapture sampling and research design will be examined through lectures, labs and a term project.  
**Letter Grades with option of Plus/Minus**  
Prerequisites: WLF F101 (may be taken concurrently); MATH F151X (may be taken concurrently).  
Recommended: STAT F200X or STAT F300.  
Lecture + Lab + Other: 2 + 3 + 0  
Grading System: Letter Grades with option of Plus/Minus

WLF F304  Wildlife Internships  
1-3 Credits  
Offered Fall and Spring  
Practical experience in wildlife management in public or private agencies. Projects are approved by faculty member and supervised by professional agency staff. May not be substituted for courses required for major.  
**Letter Grades with option of Plus/Minus**  
Lecture + Lab + Other: 1-3 + 0 + 0  
Grading System: Letter Grades with option of Plus/Minus  
**Repeatability**  
May be taken 3 times for up to 3 credits

WLF F305  Wildlife Diseases  
3 Credits  
Offered Fall Even-numbered Years  
Basic concepts of parasitic, infectious, environmental and nutritional diseases. Specific study of Alaska wildlife diseases. Basic necropsy technique and chemical immobilization.  
**Letter Grades with option of Plus/Minus**  
Prerequisites: BIOL F115X and BIOL F116X.  
Recommended: BIOL F310.  
Lecture + Lab + Other: 3 + 0 + 0  
Grading System: Letter Grades with option of Plus/Minus

WLF F322  Principles and Techniques of Wildlife Management  
3 Credits  
Offered Fall  
This course applies ecology to the study and management of animals and their habitats. We will discuss management for consumptive and non-consumptive uses of birds, mammals, reptiles and amphibians.  
**Letter Grades with option of Plus/Minus**  
Prerequisites: BIOL F371; WLF F101; WRTG F111X; WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X.  
Lecture + Lab + Other: 2 + 3 + 0  
Grading System: Letter Grades with option of Plus/Minus

WLF F335  Global Change Biology  
3 Credits  
Offered Spring  
Causes of climate change, the climate record, and the effects of past and forecast climate change on biophysical systems. Consideration of impacts on plants, animals, ice, and people with an emphasis on Alaska and the Arctic.  
**Letter Grades with option of Plus/Minus**  
Prerequisites: BIOL F115X; BIOL F116X; Junior or Senior standing.  
Cross-listed with BIOL F385.  
Lecture + Lab + Other: 3 + 0 + 0  
Grading System: Letter Grades with option of Plus/Minus

WLF F421  Ecology and Management of Large Mammals  
3 Credits  
Offered Fall Even-numbered Years  
Identification, distribution, life history, ecology and management of North American large mammals. Exploration of roles of reproduction, predation, nutrition, habitat alteration and competition in population dynamics of large mammals, and management and research practices designed for conservation of habitats and populations.  
**Letter Grades with option of Plus/Minus**  
Prerequisites: BIOL F371; WLF F322.  
Stacked with WLF F623.  
Lecture + Lab + Other: 3 + 0 + 0  
Grading System: Letter Grades with option of Plus/Minus

WLF F425  Ecology and Management of Birds  
3 Credits  
Offered Spring Odd-numbered Years  
Ecology of avian populations with a focus on harvest and habitat management for North American birds. Distributions, life-history, population dynamics, and monitoring and research techniques will be considered.  
**Letter Grades with option of Plus/Minus**  
Prerequisites: BIOL F371; COM F131X or COM F141X; WLF F322.  
Lecture + Lab + Other: 3 + 0 + 0  
Grading System: Letter Grades with option of Plus/Minus
WLF F433 Conservation Genetics
3 Credits
Offered Fall Even-numbered Years
Concepts of population genetics, phylogenetics, pedigree analysis, systematics and taxonomy as they apply to conservation of species. Evaluating the impact of small population size, population fragmentation, inbreeding, hybridization, taxonomic uncertainties and other factors on viability and management of species.
Prerequisites: BIOL F260; BIOL F371.
Recommended: NRM F277.
Cross-listed with BIOL F433.
Stacked with BIOL F633; WLF F633.
Lecture + Lab + Other: 3 + 0 + 0
Grading System: Letter Grades with option of Plus/Minus

WLF F469 Landscape Ecology and Wildlife Habitat
3 Credits
Offered Spring
A problem-based learning and critical thinking approach to modern methods in landscape ecology, including geographic information systems, remote sensing, modeling, software and the Internet. Graduate students are expected to help undergraduates with problems and questions.
Prerequisites: BIOL F371; COM F121X, COM F131X or COM F141X.
Cross-listed with BIOL F469.
Stacked with BIOL F669; WLF F669.
Lecture + Lab + Other: 2 + 3 + 0
Grading System: Letter Grades with option of Plus/Minus

WLF F470 Human Dimensions of Wildlife Management
3 Credits
Offered Spring
Study of the interactions and relationships between people and wildlife, and the thoughts and behaviors of people related to wildlife and their management. This course also considers the social psychology, economic and political components of wildlife management.
Prerequisites: WRTG F111X, WRTG F211X, WRTG F213X; WLF F322; BIOL F371.
Stacked with WLF F670.
Lecture + Lab + Other: 2 + 3 + 0
Grading System: Letter Grades with option of Plus/Minus

WLF F604 Scientific Writing, Editing and Revising in the Biological Sciences
3 Credits
Offered Spring
For students who are ready to produce a manuscript or thesis chapter. Topics include the publication process, selecting a journal, authorship, the components of the scientific paper, revising and editing manuscripts, and responding to reviews. Students will produce a complete manuscript.
Prerequisites: Graduate standing in Biology, Wildlife, or related discipline; permission of instructor.
Cross-listed with BIOL F604.
Lecture + Lab + Other: 3 + 0 + 0
Grading System: Letter Grades with option of Plus/Minus

WLF F623 Ecology and Management of Large Mammals
3 Credits
Offered Fall Even-numbered Years
Identification, distribution, life history, ecology and management of North American large mammals. Exploration of roles of reproduction, predation, nutrition, habitat alteration and competition in population dynamics of large mammals, and management and research practices designed for conservation of habitats and populations.
Stacked with WLF F421.
Lecture + Lab + Other: 3 + 0 + 0
Grading System: Letter Grades with option of Plus/Minus

WLF F625 Population Dynamics of Vertebrates
3 Credits
Offered Spring Even-numbered Years
Sampling vertebrate populations, modeling their population dynamics and the implications for management. Focus will be on study design, model assumptions, estimation of population parameters and inference. State-of-the-art computer applications will be employed in laboratory exercises of actual and simulated data.
Prerequisites: BIOL F371; STAT F401.
Cross-listed with FISH F625.
Lecture + Lab + Other: 2 + 3 + 0
Grading System: Letter Grades with option of Plus/Minus

WLF F633 Conservation Genetics
3 Credits
Offered Fall Even-numbered Years
Concepts of population genetics, phylogenetics, pedigree analysis, systematics and taxonomy as they apply to conservation of species. Evaluating the impact of small population size, population fragmentation, inbreeding, hybridization, taxonomic uncertainties and other factors on viability and management of species.
Prerequisites: BIOL F260; BIOL F371.
Recommended: NRM F277.
Cross-listed with BIOL F633.
Stacked with BIOL F433; WLF F433.
Lecture + Lab + Other: 3 + 0 + 0
Grading System: Letter Grades with option of Plus/Minus
WLF F669  Landscape Ecology and Wildlife Habitat
3 Credits
Offered Spring
A problem-based learning and critical thinking approach to modern methods in landscape ecology, including geographic information systems, remote sensing, modeling, software and the Internet. Graduate students are expected to help undergraduates with problems and questions.
Prerequisites: Graduate standing.
Cross-listed with BIOL F669.
Stacked with BIOL F469; WLF F469.
Lecture + Lab + Other: 2 + 3 + 0
Grading System: Letter Grades with option of Plus/Minus

WLF F670  Human Dimensions of Wildlife Management
3 Credits
Offered Spring
Study of the interactions and relationships between people and wildlife, and the thoughts and behaviors of people related to wildlife and their management. This course also considers the social psychology, economic and political components of wildlife management.
Stacked with WLF F470.
Lecture + Lab + Other: 2 + 3 + 0
Grading System: Letter Grades with option of Plus/Minus

WLF F680  Data Analysis in Biology
3 Credits
Offered Spring
Course covers major statistical concepts and techniques using the statistical software R, with emphasis on applications in biology. Reviews probability theory, hypothesis testing, ANOVA, regression, least squares fitting, parametric and nonparametric approaches, and then focuses on random and mixed-effects models, likelihood based fitting, GAMs, GLMs, ordination, and model selection.
Prerequisites: STAT F200X; STAT F401; graduate standing in a biologically oriented field.
Cross-listed with BIOL F680.
Lecture + Lab + Other: 2 + 3 + 0
Grading System: Letter Grades with option of Plus/Minus

WLF F692  Graduate Seminar
1-6 Credits
Topics in fish and wildlife management explored through readings, talks, group discussions and guest speakers with a high level of student participation.
Prerequisites: Graduate standing.
Lecture + Lab + Other: 0 + 0 + 1-6
Grading System: Letter Grades with option of Plus/Minus
Repeatable for Credit: May be taken unlimited times for up to 99 credits