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.
Lecture + Lab + Other: 1 + 2 + 1
Grading System: Letter Grades with option of Plus/Minus

WLF F104L  BIOL F104X Laboratory (n)
0 Credit
Offered Fall
Laboratory portion of BIOL F104X/WLF F104X.
Co-requisites: BIOL F104X or WLF F104X.
Attributes: UAF GER Natural Science Req
Lecture + Lab + Other: 0 + 3 + 0
Grading System: Non-Graded

WLF F104X  Natural History of Alaska (n)
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.
Prerequisites: Placement in WRTG F111X; placement in MATH F105.
Co-requisites: BIOL F104X or WLF F104X.
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.
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.
Lecture + Lab + Other: 1-3 + 0 + 0
Grading System: Letter Grades with option of Plus/Minus
Repeatable for Credit: 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.
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.
Prerequisites: BIOL F371; WLF F101; WRTG F111X; WRTG F211X, WRTG F212X, WRTG F213X or WRTG F241X.
Lecture + Lab + Other: 2 + 3 + 0
Grading System: Letter Grades with option of Plus/Minus

WLF F385  Global Change Biology (n)
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.
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.
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.
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 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 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