<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Offered</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Lecture + Lab + Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLF F101</td>
<td>Survey of Wildlife Science</td>
<td>2</td>
<td>Fall</td>
<td>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.</td>
<td></td>
<td>1 + 2 + 1</td>
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<tr>
<td>WLF F301</td>
<td>Design of Wildlife Studies</td>
<td>3</td>
<td>Spring</td>
<td>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.</td>
<td>WLF F101 (may be taken concurrently); MATH F151X (may be taken concurrently) or MATH F122X (may be taken concurrently).</td>
<td>2 + 3 + 0</td>
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<tr>
<td>WLF F304</td>
<td>Wildlife Internships</td>
<td>1-3</td>
<td>Fall/Spring</td>
<td>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.</td>
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<td>1-3 + 0 + 0</td>
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<tr>
<td>WLF F305</td>
<td>Wildlife Diseases</td>
<td>3</td>
<td>Spring</td>
<td>Basic concepts of parasitic, infectious, environmental and nutritional diseases. Specific study of Alaska wildlife diseases. Basic necropsy technique and chemical immobilization.</td>
<td>BIOL F115X and BIOL F116X.</td>
<td>3 + 0 + 0</td>
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<tr>
<td>WLF F322</td>
<td>Principles and Techniques of Wildlife Management</td>
<td>(W) 3</td>
<td>Spring</td>
<td>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.</td>
<td>BIOL F371; WLF F101; WRTG F111X; WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X.</td>
<td>2 + 3 + 0</td>
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<tr>
<td>WLF F385</td>
<td>Global Change Biology</td>
<td>(W,n) 3</td>
<td>Spring</td>
<td>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.</td>
<td>BIOL F115X; BIOL F116X; Junior or Senior standing. Cross-listed with BIOL F385.</td>
<td>3 + 0 + 0</td>
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<tr>
<td>WLF F421</td>
<td>Ecology and Management of Large Mammals</td>
<td>3</td>
<td>Spring</td>
<td>Identification, taxonomy, distribution, life history and ecology of North American large mammals. Exploration of roles of reproduction, predation, nutrition, habitat alteration and competition in population dynamics of large mammals, and management practices designed for conservation of habitats and populations.</td>
<td>BIOL F371; WLF F322.</td>
<td>3 + 0 + 0</td>
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<tr>
<td>WLF F425</td>
<td>Ecology and Management of Birds</td>
<td>3</td>
<td>Spring</td>
<td>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.</td>
<td>BIOL F371; COJO F131X or COJO F141X; WLF F322.</td>
<td>3 + 0 + 0</td>
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<tr>
<td>WLF F469</td>
<td>Landscape Ecology and Wildlife Habitat</td>
<td>(O) 3</td>
<td>Spring</td>
<td>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.</td>
<td>BIOL F371; COJO F121X or COJO F131X or COJO F141X. Cross-listed with BIOL F469.</td>
<td>2 + 3 + 0</td>
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<tr>
<td>WLF F470</td>
<td>Human Dimensions of Wildlife Management</td>
<td>3</td>
<td>Spring</td>
<td>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 F670</td>
<td>WLF F101; WLF F322; BIOL F371.</td>
<td>2 + 3 + 0</td>
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<tr>
<td>WLF F602</td>
<td>Research Design</td>
<td>3</td>
<td>Fall</td>
<td>An introduction to the philosophy, performance and evaluation of hypothetical/deductive research in the biological sciences, with emphasis on hypothesis formulation and testing. Each student will develop a research proposal.</td>
<td>Graduate standing. Cross-listed with BIOL F602.</td>
<td>3 + 0 + 0</td>
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<tr>
<td>WLF F606</td>
<td>Research Design</td>
<td>3</td>
<td>Fall</td>
<td>An introduction to the philosophy, performance and evaluation of hypothetical/deductive research in the biological sciences, with emphasis on hypothesis formulation and testing. Each student will develop a research proposal.</td>
<td>Graduate standing. Cross-listed with BIOL F602.</td>
<td>3 + 0 + 0</td>
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**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

**WLF F625  Population Dynamics of Vertebrates**  
3 Credits  
Offered Spring Odd-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

**WLF F669  Landscape Ecology and Wildlife Habitat**  
3 Credits  
Offered Spring Even-numbered Years  
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

**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

**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

**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