Wildlife, Fish, and Conservation Biology (WFCB) is an ecologically oriented major that addresses the interactions of humans with animals in both natural and disturbed environments. Students are trained in the basic sciences, mathematics, and the biology and conservation of vertebrates in California and in many other parts of the world. The emphasis on basic sciences provides our students with the intellectual flexibility to handle the varied and often unexpected problems faced by biologists in the field and laboratory. It also makes sure students are prepared for graduate and professional schools and for alternative careers.

### Preparatory Subject Matter Requirements

<table>
<thead>
<tr>
<th>Preparatory Subject Matter</th>
<th>Quarter(s) Offered***</th>
<th>Units</th>
<th>Completed</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Written/Oral Expression</strong></td>
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<tr>
<td>University Writing Program 1</td>
<td>Expository Writing</td>
<td>I, II, III, IV</td>
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<tr>
<td>Communication 1</td>
<td>Introduction to Public Speaking</td>
<td>I, II, III, IV</td>
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<tr>
<td><strong>Chemistry</strong></td>
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<tr>
<td>Chemistry 2A</td>
<td>General Chemistry</td>
<td>I, II, IV</td>
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<tr>
<td>Chemistry 2B</td>
<td>General Chemistry</td>
<td>II, III, IV</td>
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<tr>
<td>Chemistry 8A</td>
<td>Organic Chemistry</td>
<td>I, III, IV</td>
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<tr>
<td>Chemistry 8B</td>
<td>Organic Chemistry</td>
<td>I, II, IV</td>
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<tr>
<td><strong>Biological Sciences</strong></td>
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<tr>
<td>BIS 2A</td>
<td>Introductory Biology</td>
<td>I, II, III, IV</td>
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<tr>
<td>BIS 2B</td>
<td>Introductory Biology</td>
<td>I, II, III, IV</td>
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<td>BIS 2C</td>
<td>Introductory Biology</td>
<td>I, II, III, IV</td>
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<td><strong>Mathematics</strong></td>
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<tr>
<td>Mathematics 16A</td>
<td>Short Calculus</td>
<td>I, II, III, IV</td>
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<tr>
<td>Mathematics 16B</td>
<td>Short Calculus</td>
<td>I, II, III, IV</td>
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<td><strong>Physics</strong></td>
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<tr>
<td>Physics 1A</td>
<td>Principles of Physics</td>
<td>I</td>
<td>3</td>
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<tr>
<td>Physics 1B</td>
<td>Principles of Physics</td>
<td>II</td>
<td>3</td>
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<tr>
<td><strong>Statistics</strong></td>
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<tr>
<td>Statistics 100</td>
<td>Applied Statistics for Bio Sciences</td>
<td>I, II, III, IV</td>
<td>4</td>
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<tr>
<td>Plant Sciences 120</td>
<td>Applied Statistics in Ag Science</td>
<td>I</td>
<td>4</td>
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<tr>
<td><strong>Wildlife &amp; Conservation</strong></td>
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<tr>
<td>Choose one of the following</td>
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<tr>
<td>WFC 10</td>
<td>Wildlife Ecology and Conservation</td>
<td>I, III</td>
<td>4</td>
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<tr>
<td>WFC 11*</td>
<td>Introduction to Conservation Biology</td>
<td>III</td>
<td>3</td>
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<tr>
<td>WFC 50</td>
<td>Natural History of CA Vertebrates</td>
<td>II</td>
<td>3</td>
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</tr>
</tbody>
</table>

I = fall quarter, II = winter quarter, III = spring quarter, IV = summer session

*Course is offered in odd years only (2013, 2015, etc.)

**Course is offered in even years only (2012, 2014, etc.)

***Course offerings are subject to change. Check with your adviser for the most updated listings.
# Depth Subject Matter Requirements

NOTE: Students graduating with this major are required to attain at least a C average (2.0 GPA) in all courses taken at the university in Depth Subject Matter and pass all coursework. See requirements of the College in the UCD General Catalog.

<table>
<thead>
<tr>
<th>Depth Subject Matter</th>
<th>(54-60 Units)</th>
<th>Prerequisites</th>
<th>Qtr(s)***</th>
<th>Units</th>
<th>Completed</th>
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<tbody>
<tr>
<td><strong>Ecology</strong> (Choose one of the following)</td>
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<tr>
<td>ESP 100</td>
<td>General Ecology</td>
<td>BIS 2A-C; MAT 16A-B; STA 13 recommended</td>
<td>I, II</td>
<td>4</td>
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<tr>
<td>EVE 101</td>
<td>Introduction to Ecology</td>
<td>BIS 2A-C; MAT 16A-C (or equiv.)</td>
<td>I, II, III, IV</td>
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<tr>
<td><strong>Genetics</strong></td>
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<tr>
<td>BIS 101</td>
<td>Genes and Gene Expression</td>
<td>BIS 2A-C (2C may be concurrent); CHE 8B (may be concurrent)</td>
<td>I, II, III, IV</td>
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<tr>
<td><strong>Evolution</strong></td>
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<tr>
<td>EVE 100</td>
<td>Introduction to Evolution</td>
<td>BIS 2A-C; BIS 101; MAT 16A-C or equiv; STA 13 or 100</td>
<td>I, II, III, IV</td>
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<td><strong>Physiology</strong></td>
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<tr>
<td>WFC 130</td>
<td>Physiological Ecology</td>
<td>EVE 101 or ESP 100 or equivalent</td>
<td>II</td>
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<tr>
<td><strong>Animal Behavior</strong> (Choose one of the following)</td>
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<tr>
<td>NPB 102</td>
<td>Animal Behavior</td>
<td>BIS 2A-C</td>
<td>II, III, IV</td>
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<tr>
<td>WFC 141**</td>
<td>Behavioral Ecology</td>
<td>EVE 101 or ESP 100 or equivalent</td>
<td>II</td>
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<tr>
<td><strong>Conservation Biology</strong></td>
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<tr>
<td>WFC 154</td>
<td>Conservation Biology</td>
<td>EVE 101 or ESP 100 or equivalent</td>
<td>I</td>
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<tr>
<td><strong>Population Biology</strong></td>
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<tr>
<td>WFC 122</td>
<td>Population Dynamics and Estimation</td>
<td>MAT16A-B; STA13 or equiv; EVE 101, ESP 100, or equiv</td>
<td>III</td>
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<tr>
<td><strong>Organismal Core</strong> (Choose 3 lecture courses and 2 laboratory courses)</td>
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<tr>
<td>WFC 110</td>
<td>Biology &amp; Conservation of Wild Mammals</td>
<td>BIS 2A-C; EVE 101 or ESP 100 or equivalent</td>
<td>III</td>
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<tr>
<td>WFC 110L</td>
<td>Lab in Biology &amp; Conservation of Wild Mammals</td>
<td>WFC 110 (may be concurrent); consent of instructor</td>
<td>III</td>
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<tr>
<td>WFC 111</td>
<td>Biology &amp; Conservation of Wild Birds</td>
<td>BIS 2A-C; EVE 101 or ESP 100 or equivalent</td>
<td>I</td>
<td>3</td>
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<tr>
<td>WFC 111L</td>
<td>Lab in Biology &amp; Conservation of Wild Birds</td>
<td>WFC 111 (may be concurrent); consent of instructor</td>
<td>I</td>
<td>3</td>
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<tr>
<td>WFC 120</td>
<td>Biology &amp; Conservation of Fishes</td>
<td>BIS 2A-C</td>
<td>I</td>
<td>3</td>
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<tr>
<td>WFC 120L</td>
<td>Lab in Biology &amp; Cons of Fishes</td>
<td>WFC 120 (may be concurrent)</td>
<td>I</td>
<td>2</td>
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<tr>
<td>WFC 134*</td>
<td>Herpetology</td>
<td>BIS 2A-C; EVE 101, ESP 100 or equivalent rec.</td>
<td>II</td>
<td>3</td>
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<tr>
<td>WFC 134L*</td>
<td>Herpetology Laboratory</td>
<td>EVE 134 concurrently</td>
<td>II</td>
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<tr>
<td><strong>Research Methods</strong> (Choose one of the following)</td>
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<tr>
<td>WFC 100</td>
<td>Field Methods in Wildlife, Fish, &amp; Cons. Bio</td>
<td>EVE 101 or ESP 100 or equivalent; consent of instructor</td>
<td>III</td>
<td>4</td>
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<tr>
<td>WFC 101/L**</td>
<td>Field Research in Wildlife Ecology + Lab</td>
<td>Consent of instructor &amp; 1 upper division course in ecology, statistics, and ornithology, mammalogy, or herpetology</td>
<td>I</td>
<td>2/4</td>
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<tr>
<td><strong>GIS Technology</strong> (Strongly recommended, but not required)</td>
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<tr>
<td>ABT/LDA 150</td>
<td>Geographic Info Systems</td>
<td>PLS 21 or equivalent with consent of instructor</td>
<td>I</td>
<td>4</td>
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<tr>
<td><strong>Anatomy</strong> (Strongly recommended, but not required)</td>
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<tr>
<td>APC 100</td>
<td>Comparative Organanology of Vertebrates</td>
<td>BIS 2A-B</td>
<td>II</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

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**Why study conservation biology?**

Conservation Biology focuses heavily on the concept of biodiversity, which can be measured at the genetic, species, and ecosystem levels. It is a crisis or action-oriented discipline. Graduates are often asked to help save species and habitats at the last minute. This area of specialization is great for students interested in the study of the conservation of all species, the genetic diversity within each species, and the ecosystems of which they are a part.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Prerequisites</th>
<th>Qtr(s)**</th>
<th>Units Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>WFC 155/L Habitat Conservation &amp; Restoration</td>
<td>EVE 101 or ESP 100 or equivalent; WFC 154 &amp; ENH 160 recommended</td>
<td>II</td>
<td>3</td>
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<tr>
<td>Habitat Conservation &amp; Restoration: Lab</td>
<td>WFC 155 (may be concurrent)</td>
<td>II</td>
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<tr>
<td><strong>Choose one Policy course</strong></td>
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<tr>
<td>ESP 161 Environmental Law</td>
<td>1 course in Environmental Science (ex: ESP 1, 10, 110, BIS 2A or ETX 10)</td>
<td>III</td>
<td>4</td>
</tr>
<tr>
<td>ESP 171 Urban and Regional Planning</td>
<td>ESP 1 &amp; 1 course in Environmental Science and Social Science</td>
<td>III</td>
<td>4</td>
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<tr>
<td>ESP 170* Conservation Biology Policy</td>
<td>ESP 1; ECN 1A; ECN 100 or ARE 100A recommended</td>
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<td>4</td>
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<tr>
<td><strong>Choose two Systems &amp; Conservation courses</strong></td>
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<tr>
<td>EVE 147* Biogeography</td>
<td>BIS 2B</td>
<td>I</td>
<td>4</td>
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<tr>
<td>PLB/EVE 117 Plant Ecology</td>
<td>BIS 2A-C; PLB 111 recommended</td>
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<td>ESP 127 Plant Conservation Biology</td>
<td>EVE 101 or ESP 100 or equivalent</td>
<td>II</td>
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<td>EVE 115* Marine Ecology</td>
<td>EVE 101, ESP 100, BIS 2A or consent of instructor</td>
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<td>WFC 152* Ecology of Human-Wildlife Conflicts</td>
<td>BIS 2A-C or the equivalent</td>
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<td>ENH 160 Restoration Ecology</td>
<td>PLB 117, EVE 121, PLB 147, or equiv.</td>
<td>III</td>
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<tr>
<td>EVE 138* Ecology of Tropical Latitudes</td>
<td>One course in BIS, ENT, WFC, GEO, tropical experience or consent of instructor</td>
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<tr>
<td>WFC 156†† Plant Geography</td>
<td>EVE 101 or ESP 100 or equivalent; PLB 102 or 108 strongly recommended</td>
<td>III</td>
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<tr>
<td>WFC 157†† Coastal Ecosystems</td>
<td>EVE 101, ESP 100 or equiv; course work in organismal bio, phys geography, &amp; geology rec</td>
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<tr>
<td><strong>Choose one Ethics course</strong></td>
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<tr>
<td>ANS 103 Animal Welfare</td>
<td>ANS 104 or NPB 102 or the equivalent or consent of instructor</td>
<td>I</td>
<td>4</td>
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<tr>
<td>ANS 170 Ethics of Animal Use</td>
<td>Any basic course in composition or speech</td>
<td>III</td>
<td>4</td>
</tr>
</tbody>
</table>

1Course is not regularly offered
2Future availability unknown

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