## Ecology Concentration

### Ecology Levels
Select from the following: 12
- BIO 442  Behavioral Ecology
- BIO 444  Population Ecology
- BIO 445  Community Ecology
- BIO 446  Ecosystem Ecology

### Systems and Applications
Select from the following: 12
- BIO 327  Wildlife Ecology
- BIO 401  Principles of Conservation Biology
- BIO 415  Biogeography
- BOT 326  Plant Ecology
- MSC 328  Marine Ecology

### Biodiversity Courses
Select from the following: 4
- BIO 321  Mammalogy
- BIO 322  Ichthyology
- BIO 323  Ornithology
- BIO 324  Herpetology
- BIO 329  Vertebrate Field Zoology
- BIO 335  General Entomology
- BIO 336  Invertebrate Zoology
- BIO 429  Parasitology
- BOT 313  Taxonomy of Vascular Plants
- MC 424  General Microbiology I
- MC 436  Microbial Ecology
- MSCI 328  Marine Ecology
- MSCI 437  Marine Botany
- MSCI 439  Fisheries Science and Resource Management
- MSCI 440  Communicating Ocean Sciences to Informal Audiences

### Biology Electives
Select from the following: 7
- BIO 321  Mammalogy
- BIO 322  Ichthyology
- BIO 323  Ornithology
- BIO 324  Herpetology
- BIO 327  Wildlife Ecology
- BIO 329  Vertebrate Field Zoology
- BIO 330  Extended Field Biology Activity
- BIO 335  General Entomology
- BIO 336  Invertebrate Zoology
- BIO 361  Principles of Animal Physiology
- BIO 400  Special Problems for Advanced Undergraduates
- BIO 401  Principles of Conservation Biology
- BIO 415  Biogeography
- BIO 419  Analytical Methods in Ecology
- BIO/NR/SS 421  Wetlands
- BIO 427  Wildlife Management
- BIO 429  Parasitology
- BIO 434  Environmental Physiology
- BIO 435  Plant Physiology
- BIO/Chem 441  Bioinformatics Applications
- BIO 442  Behavioral Ecology
- BIO 444  Population Ecology
- BIO 445  Community Ecology
- BIO 446  Ecosystem Ecology

### Approved Electives
Select from the following: 8
- AG/EDES/ENGR/SCM/UNIV 350  The Global Environment
- BIO 321  Mammalogy
- BIO 322  Ichthyology
- BIO 323  Ornithology
- BIO 324  Herpetology
- BIO 327  Wildlife Ecology
- BIO 329  Vertebrate Field Zoology
- BIO 330  Extended Field Biology Activity
- BIO 335  General Entomology
- BIO 336  Invertebrate Zoology
- BIO 361  Principles of Animal Physiology
- BIO 400  Special Problems for Advanced Undergraduates
- BIO 401  Principles of Conservation Biology
- BIO 415  Biogeography
- BIO 419  Analytical Methods in Ecology
- BIO/NR/SS 421  Wetlands
- BIO 427  Wildlife Management
- BIO 429  Parasitology
- BIO 434  Environmental Physiology
- BIO 435  Plant Physiology
- BIO/Chem 441  Bioinformatics Applications
- BIO 442  Behavioral Ecology
- BIO 444  Population Ecology
- BIO 445  Community Ecology
- BIO 446  Ecosystem Ecology
<table>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>BIO 461</td>
<td>Senior Project - Research Proposal 4, 5</td>
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<td>BIO 462</td>
<td>Senior Project - Research 4, 5</td>
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<td>BIO 463</td>
<td>Honors Research 5</td>
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<td>BIO 472</td>
<td>Current Topics in Biological Research 5</td>
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<td>BIO/CHEM 475</td>
<td>Molecular Biology Laboratory</td>
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<td>BOT 311</td>
<td>Plants, People and Civilization</td>
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<td>BOT 313</td>
<td>Taxonomy of Vascular Plants</td>
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<td>BOT 326</td>
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<td>BOT 433</td>
<td>Field Botany: California Plant Diversity</td>
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<td>ENGR 322/SCM 302</td>
<td>The Learn By Doing Lab Teaching Practicum 5</td>
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<td>ERSC/GEOG 250</td>
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<td>Advanced-Applications in GIS</td>
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<td>STAT 313</td>
<td>Applied Experimental Design and Regression Models</td>
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<td>STAT 419</td>
<td>Applied Multivariate Statistics</td>
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Total units: 43

1. Excess units will be applied to subsequent concentration electives.
2. Consultation with advisor is recommended prior to selecting approved electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.
3. Courses taken to meet a major or support requirement cannot be double-counted as an elective.
4. If BIO 461 or BIO 462 is used to meet the Senior Project Requirement, it cannot also be counted as an Elective.
5. Maximum of 6 units may be applied toward Approved Electives from "by arrangement" courses: BIO 400, BIO 461, BIO 462, BIO 463, BIO 472, ENGR 322/SCM 302.
6. Recommended for students interested in health science careers.