## ECOLOGY CONCENTRATION

### Ecology Levels
Select from the following:

- BIO 442 Behavioral Ecology
- BIO 444 Population Ecology
- BIO 445 Community Ecology
- BIO 446 Ecosystem Ecology

### Systems and Applications
Select from the following:

- BIO 327 Wildlife Ecology
- BIO 401 Principles of Conservation Biology
- BIO 415 Biogeography
- BOT 326 Plant Ecology
- MSCI 328 Marine Ecology

### Biodiversity Courses
Select from the following:

- 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
- MSCI 224 General Microbiology I
- MSCI 328 Marine Ecology
- BOT 311 Plants, People and Civilization
- BOT 313 Taxonomy of Vascular Plants
- BOT 326 Plant Ecology
- BOT 433 Field Botany: California Plant Diversity
- MCRO 224 General Microbiology I
- MCRO 424 Microbial Physiology
- MCRO 436 Microbial Ecology
- MSCI 439 Fisheries Science and Resource Management
- MSCI 440 Communicating Ocean Sciences to Informal Audiences

### Ecology Electives
Select from the following:

- 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 402 Organic Geochemistry
- BIO 403 Analytical Methods in Ecology
- BIO 404 Wetlands
- BIO 405 Wildlife Management
- BIO 406 Parasitology
- BIO 407 Environmental Physiology
- BIO 408 Plant Physiology
- BIO 409 Bioinformatics Applications
- BIO 410 Behavioral Ecology
- BIO 411 Community Ecology
- BIO 412 Ecosystem Ecology
- BIO 413 Wetlands
- BIO 414 Wildlife Management
- BIO 415 Parasitology
- BIO 416 Environmental Physiology
- BIO 417 Plant Physiology
- BIO 418 Bioinformatics Applications
- BIO 419 Behavioral Ecology
- BIO 420 Community Ecology
- BIO 421 Ecosystem Ecology
- BIO 422 Wildlife Management
- BIO 423 Parasitology
- BIO 424 Environmental Physiology
- BIO 425 Plant Physiology
- BIO 426 Bioinformatics Applications
- BIO 427 Behavioral Ecology
- BIO 428 Community Ecology
- BIO 429 Ecosystem Ecology
- BIO 430 Wildlife Management
- BIO 431 Parasitology
- BIO 432 Environmental Physiology
- BIO 433 Plant Physiology
- BIO 434 Bioinformatics Applications
- BIO 435 Behavioral Ecology
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- BIO 438 Wildlife Management
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- BIO 470 Wildlife Management
- BIO 471 Parasitology
- BIO 472 Environmental Physiology
- BIO 473 Plant Physiology
- BIO 474 Bioinformatics Applications
- BIO 475 Behavioral Ecology
- BIO 476 Community Ecology
- BIO 477 Ecosystem Ecology

### Approved Electives
Select from the following:

- AG/EDES/ENGR/GEOG/ISLA/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 421 Wetlands
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- BIO 429 Parasitology
- BIO 434 Environmental Physiology
- BIO 435 Plant Physiology
- BIO 436 Bioinformatics Applications
- BIO 442 Behavioral Ecology
- BIO 444 Population Ecology
- BIO 445 Community Ecology
- BIO 446 Ecosystem Ecology
Ecology Concentration

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>BIO 461</td>
<td>Senior Project - Research Proposal</td>
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<tr>
<td>BIO 462</td>
<td>Senior Project - Research</td>
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<tr>
<td>BIO 463</td>
<td>Honors Research</td>
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<tr>
<td>BIO 472</td>
<td>Current Topics in Biological Research</td>
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<td>ENGR 322/SCM 302</td>
<td>The Learn By Doing Lab Teaching Practicum</td>
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<td>ERSC/GEOG 250</td>
<td>Physical Geography</td>
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<td>GEOG 440</td>
<td>Advanced-Applications in GIS</td>
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<td>LA/NR 218</td>
<td>Applications in GIS</td>
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<td>STAT 313</td>
<td>Applied Experimental Design and Regression Models</td>
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<tr>
<td>STAT 419</td>
<td>Applied Multivariate Statistics</td>
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</table>

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.