**GENERAL CURRICULUM IN BIOLOGY**

The General Curriculum in Biology is followed by default if no concentration is declared.

### Biodiversity Courses

Select from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 321</td>
<td>Mammalogy</td>
</tr>
<tr>
<td>BIO 322</td>
<td>Ichthyology</td>
</tr>
<tr>
<td>BIO 323</td>
<td>Ornithology</td>
</tr>
<tr>
<td>BIO 324</td>
<td>Herpetology</td>
</tr>
<tr>
<td>BIO 329</td>
<td>Vertebrate Field Zoology</td>
</tr>
<tr>
<td>BIO 335</td>
<td>General Entomology</td>
</tr>
<tr>
<td>BIO 336</td>
<td>Invertebrate Zoology</td>
</tr>
<tr>
<td>BIO 429</td>
<td>Parasitology</td>
</tr>
<tr>
<td>BOT 313</td>
<td>Taxonomy of Vascular Plants</td>
</tr>
<tr>
<td>MCRO 224</td>
<td>General Microbiology I</td>
</tr>
<tr>
<td>MCRO 402</td>
<td>General Virology</td>
</tr>
<tr>
<td>MSCI 324</td>
<td>Marine Mammals, Birds and Reptiles</td>
</tr>
</tbody>
</table>

### Upper Division Electives

Select from any 300-400 level BIO/BOT/MCRO/MSCI, except BIO 330, BIO 400, BIO 450, BIO 461, BIO 462, BIO 463, BIO 470, BIO 471, BIO 472, ENGR 322/SCM 302. Select a minimum of 11 units of 400-level courses.

### Additional Electives

Select from any BIO/BOT/MCRO/MSCI open to BIO majors (including courses cross-listed with other departments), or course from any other concentration in BIO, with the following restrictions:
- Maximum of 7 units of Lower Division.
- Maximum of 6 units of the following:
  - BIO 330: Extended Field Biology Activity
  - BIO 400: Special Problems for Advanced Undergraduates
  - BIO 450: Undergraduate Laboratory Assistantship
  - BIO 461: Senior Project - Research Proposal
  - BIO 462: Senior Project - Research
  - BIO 463: Honors Research
  - BIO 470: Selected Advanced Topics
  - BIO 471: Selected Advanced Laboratory
  - BIO 472: Current Topics in Biological Research
  - ENGR 322/SCM 302: The Learn By Doing Lab Teaching Practicum

Maximum of 15 units of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>ASCI 329</td>
<td>Principles of Range Management</td>
</tr>
<tr>
<td>ASCI 351</td>
<td>Reproductive Physiology</td>
</tr>
<tr>
<td>ASCI 403</td>
<td>Applied Biotechnology in Animal Science</td>
</tr>
<tr>
<td>ASCI 405</td>
<td>Domestic Livestock Endocrinology</td>
</tr>
</tbody>
</table>

### Additional Courses

- ASCI 438: Systemic Animal Physiology
- ASCI 503: Advanced Molecular Techniques in Animal Science
- CHEM 217: Organic Chemistry II
- CHEM 218: Organic Chemistry III
- CHEM 220: Organic Chemistry Laboratory For Life Sciences II
- CHEM 223: Organic Chemistry Laboratory For Life Sciences III
- CHEM 313: Survey of Biochemistry and Biotechnology
  - or CHEM 371: Biochemical Principles
- CHEM 331: Quantitative Analysis
- CHEM 341: Environmental Chemistry: Water Pollution
- CHEM 372: Metabolism
- CHEM 377: Chemistry of Drugs and Poisons
- CHEM 474: Protein Techniques Laboratory
- CHEM 528: Nutritional Biochemistry
- ENGR 322: The Learn By Doing Lab Teaching Practicum
- ERSC/GEOG 250: Physical Geography
- ES/WGS 350: Gender, Race, Culture, Science and Technology
- FSN 310: Maternal and Child Nutrition
- FSN 429: Clinical Nutrition I
- KINE 406: Neuroanatomy
- KINE 445: Electrocardiography
- KINE 446: Echocardiography
- LA/NR 218: Applications in GIS
- NR 141: Introduction to Forest Ecosystem Management
- NR 142: Environmental Management
- NR 404: Environmental Law
- NR 416: Environmental Impact Analysis and Management
- NR 418: Applied GIS
- NR 425: Applied Resource Analysis and Assessment
- PHIL 339: Biomedical Ethics
  - or PHIL 341: Professional Ethics
  - or SCM 451: Ethics in the Sciences
- PSC 201: Physical Oceanography
- PSY 340: Biopsychology
- SS 121: Introductory Soil Science
- SS 321: Soil Morphology
- SS 322: Soil Plant Relationships
- SS 422: Soil Ecology
- STAT 313: Applied Experimental Design and Regression Models
- STAT 324: Applied Regression Analysis
  - or STAT 334: Applied Linear Models
General Curriculum in Biology

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<tr>
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<tbody>
<tr>
<td>STAT 330</td>
<td>Statistical Computing with SAS</td>
</tr>
<tr>
<td>STAT 416</td>
<td>Statistical Analysis of Time Series</td>
</tr>
<tr>
<td>STAT 419</td>
<td>Applied Multivariate Statistics</td>
</tr>
<tr>
<td>STAT 421</td>
<td>Survey Sampling and Methodology</td>
</tr>
</tbody>
</table>

Total units 43

1. Excess units will be applied to Electives in the General Curriculum in Biology.
2. Consultation with advisor is recommended prior to selecting electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.
3. If any of these courses is taken to meet a major or support requirement in the degree, it cannot be double-counted as an elective.
4. Selecting a GE Area F course that double counts as an elective may cause an upper-division unit shortage. Take care to ensure that you have selected enough 300 and 400-level courses to meet the University Upper-Division Requirement (60 units).
5. If BIO 461 or BIO 462 is used to meet the Senior Project Requirement, it cannot also be counted as an Elective.