CONSERVATION BIOLOGY, B.S.

REQUIREMENTS

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

All undergraduate students at the University of Wisconsin–Madison are required to fulfill a minimum set of common university general education requirements to ensure that every graduate acquires the essential core of an undergraduate education. This core establishes a foundation for living a productive life, being a citizen of the world, appreciating aesthetic values, and engaging in lifelong learning in a continually changing world. Various schools and colleges will have requirements in addition to the requirements listed below. Consult your advisor for assistance, as needed. For additional information, see the university Undergraduate General Education Requirements (http://guide.wisc.edu/undergraduate/#requirementsforundergraduatestudytext) section of the Guide.

General Education

• Breadth—Humanities/Literature/Arts: 6 credits
• Breadth—Natural Science: 4 to 6 credits, consisting of one 4- or 5-credit course with a laboratory component; or two courses providing a total of 6 credits
• Breadth—Social Studies: 3 credits
• Communication Part A & Part B *
• Ethnic Studies *
• Quantitative Reasoning Part A & Part B *

* The mortarboard symbol appears before the title of any course that fulfills one of the Communication Part A or Part B, Ethnic Studies, or Quantitative Reasoning Part A or Part B requirements.

COLLEGE OF LETTERS & SCIENCE DEGREE REQUIREMENTS: BACHELOR OF SCIENCE (B.S.)

Students pursuing a Bachelor of Science degree in the College of Letters & Science must complete all of the requirements below. The College of Letters & Science allows this major to be paired with either the Bachelor of Arts or the Bachelor of Science degree requirements.

BACHELOR OF SCIENCE DEGREE REQUIREMENTS

Mathematics

Complete two courses of 3+ credits at the Intermediate or Advanced level in MATH, COMP SCI, or STAT subjects. A maximum of one course in each of COMP SCI and STAT subjects counts toward this requirement.

Foreign Language

Complete the third unit of a foreign language.

L&S Breadth

Complete:
• 12 credits of Humanities, which must include at least 6 credits of Literature; and
• 12 credits of Social Science; and
• 12 credits of Natural Science, which must include 6 credits of Biological Science and 6 credits of Physical Science.

Liberal Arts and Science Coursework

Complete at least 108 credits.

Depth of Intermediate/Advanced Coursework

Complete at least 60 credits at the Intermediate or Advanced level.

Major

Declare and complete at least one major.

Total Credits

Complete at least 120 credits.

UW-Madison Experience

Complete both:
• 30 credits in residence, overall, and
• 30 credits in residence after the 86th credit.

Quality of Work

• 2.000 in all coursework at UW–Madison
• 2.000 in Intermediate/Advanced level coursework at UW–Madison

NON–L&S STUDENTS PURSUING AN L&S MAJOR

Non–L&S students who have permission from their school/college to pursue an additional major within L&S only need to fulfill the major requirements. They do not need to complete the L&S Degree Requirements above.

REQUIREMENTS FOR THE MAJOR

Conservation biology majors must take at least 50 credits in the major. When selecting courses to meet major requirements, students are encouraged to meet with their faculty advisor or student services coordinator to discuss courses that align with their areas of academic interest.

INTRODUCTORY COURSES

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introductory Biology</td>
<td></td>
<td>10</td>
</tr>
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</table>

Complete one of the following options:

Option 1:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOLOGY/ZOOLOGY 101</td>
<td>Animal Biology</td>
<td></td>
</tr>
<tr>
<td>BIOLOGY/ZOOLOGY 102</td>
<td>Animal Biology Laboratory</td>
<td></td>
</tr>
<tr>
<td>BIOLOGY/BOTANY 130</td>
<td>General Botany</td>
<td></td>
</tr>
</tbody>
</table>

Option 2:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOLOGY/ZOOLOGY 151</td>
<td>Introductory Biology</td>
<td></td>
</tr>
<tr>
<td>BIOLOGY/BOTANY/ZOOLOGY 152</td>
<td>Introductory Biology</td>
<td></td>
</tr>
</tbody>
</table>

Option 3:

Complete at least 10 credits from the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>BIOCORE 381</td>
<td>Evolution, Ecology, and Genetics</td>
</tr>
</tbody>
</table>
BIOCORE 382  Evolution, Ecology, and Genetics Laboratory
BIOCORE 383  Cellular Biology
BIOCORE 384  Cellular Biology Laboratory
BIOCORE 485  Principles of Physiology
BIOCORE 486  Principles of Physiology Laboratory

**Chemistry**  4-5

Complete one of the following:

- CHEM 103  General Chemistry I
- CHEM 108  Chemistry in Our World
- CHEM 109  Advanced General Chemistry (for those who might take more chemistry)

**Physical Environment**  3-5

Complete one of the following:

- ATM OCN/GEOSCI  Survey of Oceanography 105
- ENVIR ST/GEOSCI  Environmental Geology 106
- ENVIR ST/ GEOG  120  Introduction to the Earth System
- ENVIR ST/ GEOG  127  Physical Systems of the Environment
- GEOSCI 100  Introductory Geology: How the Earth Works
- GEOSCI 202  Introduction to Geologic Structures
- GEOSCI 204  Geologic Evolution of the Earth

**Ecology and Evolution**  6-7

Complete two of the following, each from a different category (students are encouraged to take courses in all three areas):

**Ecology:**

- BOTANY/ F&W ECOL/ ZOOLOGY  460  General Ecology

**Evolution:**

- GEOSCI 110  Evolution and Extinction
- or ANTHRO/ BOTANY/ ZOOLOGY  410  Evolutionary Biology

**Extinction:**

- ENVIR ST/F&W ECOL/ZOOLOGY  360  Extinction of Species

**Statistics**  3

Complete one of the following:

- STAT 371  Introductory Applied Statistics for the Life Sciences
- STAT 301  Introduction to Statistical Methods
- STAT/F&W ECOL/ HORT  571  Statistical Methods for Bioscience I

**SPECIES & FIELD BIOLOGY**

Complete 12 credits from:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>AGRONOMY/ BOTANY/ SOIL SCI 370</td>
<td>Grassland Ecology</td>
</tr>
<tr>
<td>ENTOM/ ZOOLOGY 371</td>
<td>Medical Entomology</td>
</tr>
<tr>
<td>AN SCI/ F&amp;W ECOL/ ZOOLOGY 520</td>
<td>Ornithology</td>
</tr>
<tr>
<td>AN SCI/ F&amp;W ECOL/ ZOOLOGY 521</td>
<td>Birds of Southern Wisconsin</td>
</tr>
<tr>
<td>ANTHRO 391</td>
<td>Bones for the Archaeologist</td>
</tr>
<tr>
<td>ANTHRO 420</td>
<td>Introduction to Primatological Research</td>
</tr>
<tr>
<td>ANTHRO 458</td>
<td>Primate Behavioral Ecology</td>
</tr>
<tr>
<td>ANTHRO 668</td>
<td>Primate Conservation</td>
</tr>
<tr>
<td>BOTANY 330</td>
<td>Algae</td>
</tr>
<tr>
<td>BOTANY/ PL PATH 332</td>
<td>Fungi</td>
</tr>
<tr>
<td>BOTANY 400</td>
<td>Plant Systematics</td>
</tr>
<tr>
<td>BOTANY 401</td>
<td>Vascular Flora of Wisconsin</td>
</tr>
<tr>
<td>BOTANY/ F&amp;W ECOL  402</td>
<td>Dendrology</td>
</tr>
<tr>
<td>BOTANY 403</td>
<td>Field Collections and Identification</td>
</tr>
<tr>
<td>BOTANY 422</td>
<td>Plant Geography</td>
</tr>
<tr>
<td>BOTANY/ F&amp;W ECOL  455</td>
<td>The Vegetation of Wisconsin</td>
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<tr>
<td>BOTANY/ENTOM/ ZOOLOGY  473</td>
<td>Plant-Insect Interactions</td>
</tr>
<tr>
<td>ENTOM/ ZOOLOGY 302</td>
<td>Introduction to Entomology</td>
</tr>
<tr>
<td>ENTOM 331</td>
<td>Taxonomy of Mature Insects</td>
</tr>
<tr>
<td>ENTOM 432</td>
<td>Taxonomy and Bionomics of Immature Insects</td>
</tr>
<tr>
<td>ENTOM 468</td>
<td>Studies in Field Entomology</td>
</tr>
<tr>
<td>ENVIR ST/ ZOOLOGY  315</td>
<td>Limnology-Conservation of Aquatic Resources</td>
</tr>
<tr>
<td>ENVIR ST 375</td>
<td>Field Ecology Workshop</td>
</tr>
<tr>
<td>ENVIR ST/ ZOOLOGY  510</td>
<td>Ecology of Fishes</td>
</tr>
<tr>
<td>ENVIR ST/ ZOOLOGY  511</td>
<td>Ecology of Fishes Lab</td>
</tr>
<tr>
<td>F&amp;W ECOL 306</td>
<td>Terrestrial Vertebrates: Life History and Ecology</td>
</tr>
<tr>
<td>F&amp;W ECOL 401</td>
<td>Physiological Animal Ecology</td>
</tr>
<tr>
<td>F&amp;W ECOL/ SURG SCI  548</td>
<td>Diseases of Wildlife</td>
</tr>
<tr>
<td>F&amp;W ECOL 655</td>
<td>Animal Population Dynamics</td>
</tr>
<tr>
<td>GEOSCI/ ZOOLOGY  541</td>
<td>Paleobiology</td>
</tr>
<tr>
<td>GEOSCI/ ZOOLOGY  542</td>
<td>Invertebrate Paleontology</td>
</tr>
<tr>
<td>Code</td>
<td>Title</td>
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<tr>
<td>-----------------------</td>
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</tr>
<tr>
<td>LAND ARC/ ENVIR ST 361</td>
<td>Wetlands Ecology</td>
</tr>
<tr>
<td>LAND ARC 375</td>
<td>Special Topics (Ecological Series: Prescribed Fire)</td>
</tr>
<tr>
<td>MICROBIO 303</td>
<td>Biology of Microorganisms</td>
</tr>
<tr>
<td>MICROBIO 304</td>
<td>Biology of Microorganisms Laboratory</td>
</tr>
<tr>
<td>M &amp; I/ENTOM/ PATH-BIO/ ZOOLOGY 350</td>
<td>Parasitology</td>
</tr>
<tr>
<td>PSYCH 449</td>
<td>Animal Behavior ¹</td>
</tr>
<tr>
<td>or ZOOLOGY 421 Behavioral Ecology</td>
<td></td>
</tr>
<tr>
<td>PSYCH 450</td>
<td>Primates and Us: Insights into Human Biology and Behavior</td>
</tr>
<tr>
<td>ZOOLOGY 304</td>
<td>Marine Biology</td>
</tr>
<tr>
<td>ZOOLOGY/ ENVIR ST 315</td>
<td>Limnology-Conservation of Aquatic Resources</td>
</tr>
<tr>
<td>ZOOLOGY 316</td>
<td>Laboratory for Limnology-Conservation of Aquatic Resources</td>
</tr>
<tr>
<td>ZOOLOGY 430</td>
<td>Comparative Anatomy of Vertebrates</td>
</tr>
</tbody>
</table>

### ELECTIVES

#### Code                  Title                                                                 |
#### Social Science Electives

Complete at least one 3 credit course from Social Science elective list:

- A A E 215  Introduction to Agricultural and Applied Economics
- A A E/ ENVIR ST 244  The Environment and the Global Economy
- AMER IND/ GEOG 410  Critical Indigenous Ecological Knowledges
- BOTANY/ AMER IND/ ANTHRO 474  Ethnobotany
- C&E SOC/ SOC 140  Introduction to Community and Environmental Sociology
- C&E SOC/ F&W ECOL/ SOC 248  Environment, Natural Resources, and Society
- ECON 101  Principles of Microeconomics
- ECON/ENVIR ST/ POLI SCI/ URB R PL 449  Government and Natural Resources
- ENVIR ST/ GEOG 139  Global Environmental Issues
- ENVIR ST/ AMER IND 306  Indigenous Peoples and the Environment
- ENVIR ST/ GEOG 339  Environmental Conservation
- ENVIR ST/ PHILOS 441  Environmental Ethics
- ENVIR ST/ GEOG/ HISTORY 460  American Environmental History

- ENVIR ST/GEOG/ HISTORY 469  The Making of the American Landscape
- GEOG 344  Changing Landscapes of the American West
- GEOG 359  Australia: Environment and Society
- GEOG 538  The Humid Tropics: Ecology, Subsistence, and Development

#### Electives to attain 50 credits in the major

- AGRONOMY/ ENTOM/ F&W ECOL/ M&ENVTOX 632  Ecotoxicology: The Chemical Players
- AGRONOMY/ ENTOM/ F&W ECOL/ M&ENVTOX 633  Ecotoxicology: Impacts on Individuals
- AGRONOMY/ ENTOM/ F&W ECOL/ M&ENVTOX 634  Ecotoxicology: Impacts on Populations, Communities and Ecosystems
- ANTHRO 405  Introduction to Museum Studies in Anthropology
- ATM OCN 100  Weather and Climate
- ATM OCN 101  Weather and Climate
- ATM OCN/ ENVIR ST 171  Global Change: Atmospheric Issues and Problems
- BOTANY/ PL PATH 123  Plants, Parasites, and People
- BOTANY/ ENVIR ST/ ZOOLOGY 260  Introductory Ecology
- BOTANY 300  Plant Anatomy
- BOTANY 305  Plant Morphology and Evolution
- BOTANY/ ZOOLOGY 450  Midwestern Ecological Issues: A Case Study Approach
- BOTANY/ENTOM/ PL PATH 505  Plant-Microbe Interactions: Molecular and Ecological Aspects
- BOTANY/ ENVIR ST/ F&W ECOL/ ZOOLOGY 651  Conservation Biology
- C&E SOC/ ENVIR ST/ GEOG 434  People, Wildlife and Landscapes
- ENTOM/ ENVIR ST 201  Insects and Human Culture-a Survey Course in Entomology
- ENTOM/ ZOOLOGY 540  Theoretical Ecology
- ENTOM 699  Special Problems
- ENVIR ST/ ILS 126  Principles of Environmental Science
- ENVIR ST/GEOG/ SOIL SCI 230  Soil: Ecosystem and Resource
- ENVIR ST 307  Literature of the Environment: Speaking for Nature
- ENVIR ST/ SOIL SCI 324  Soils and Environmental Quality
HONORS IN THE MAJOR

Students may declare Honors in the Conservation Biology Major in consultation with the Conservation Biology undergraduate advisor.

HONORS IN THE CONSERVATION BIOLOGY MAJOR REQUIREMENTS

To earn Honors in the Major in Conservation Biology, students must satisfy both the requirements for the major (above) and the following additional requirements:

- Earn a 3.300 overall university GPA
- Complete at least 16 credits, taken for Honors, with a grade of B or better, in the conservation biology major, to include a two-semester Senior Honors Thesis in an appropriate department.

FOOTNOTES

1. Students may NOT apply both ZOOLOGY 425 Behavioral Ecology and PSYCH 449 Animal Behavior in the conservation biology program.
2. Courses in the major numbered 300 through 699 are considered upper level.
3. Examples include Botany, Zoology, Environmental Studies; see the Conservation Biology advisor to verify that your thesis department will be acceptable.

UNIVERSITY DEGREE REQUIREMENTS

Total Degree

To receive a bachelor’s degree from UW–Madison, students must earn a minimum of 120 degree credits. The requirements for some programs may exceed 120 degree credits. Students should consult with their college or department advisor for information on specific credit requirements.

Residency

Degree candidates are required to earn a minimum of 30 credits in residence at UW–Madison. "In residence" means on the UW–Madison campus with an undergraduate degree classification. "In residence" credit also includes UW–Madison courses offered in distance or online formats and credits earned in UW–Madison Study Abroad/Study Away programs.

Quality of Work

Undergraduate students must maintain the minimum grade point average specified by the school, college, or academic program to remain in good academic standing. Students whose academic performance drops below these minimum thresholds will be placed on academic probation.