CONSERVATION BIOLOGY, BS

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 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 (BS)

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.

Language Complete the third unit of a language other than English.

LS 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 Academic Advising Manager 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>
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<tbody>
<tr>
<td>Introductory Biology</td>
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<td>10</td>
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</table>

Complete one of the following options:

Option 1:
- BIOLOGY/ ZOOLOGY 101 Animal Biology
- BIOLOGY/ ZOOLOGY 102 Animal Biology Laboratory
- BIOLOGY/ BOTANY 130 General Botany

Option 2:
- BIOLOGY/ BOTANY/ ZOOLOGY 151 Introductory Biology
- BIOLOGY/ BOTANY/ ZOOLOGY 152 Introductory Biology

Option 3:
Complete at least 10 credits from the following:
- BIOCORE 381 Evolution, Ecology, and Genetics
**Conservation Biology, BS**

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOCORE 382</td>
<td>Evolution, Ecology, and Genetics Laboratory</td>
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<tr>
<td>BIOCORE 383</td>
<td>Cellular Biology</td>
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<tr>
<td>BIOCORE 384</td>
<td>Cellular Biology Laboratory</td>
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<tr>
<td>BIOCORE 485</td>
<td>Principles of Physiology</td>
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<tr>
<td>BIOCORE 486</td>
<td>Principles of Physiology Laboratory</td>
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**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 105  Survey of Oceanography
- ENVIR ST/GEOSCI 106  Environmental Geology
- 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

**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 or ANTHRO/BOTANY/ZOOLOGY 410  Evolution and Extinction/ Evolutionary Biology

**Extinction**

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

**Statistics** 3

Complete one of the following:

- STAT 240  Data Science Modeling I
- STAT 301  Introduction to Statistical Methods
- STAT 371  Introductory Applied Statistics for the Life Sciences

**SPECIES & FIELD BIOLOGY**

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BOTANY/</td>
<td>Plant Insect Interactions</td>
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<tr>
<td>F&amp;W ECOL/</td>
<td>Introduction to Entomology</td>
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<tr>
<td>ZOOLOGY 373</td>
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<tr>
<td>ENTOM/</td>
<td>Taxonomy of Mature Insects</td>
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<td>ZOOLOGY 302</td>
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<tr>
<td>ENVC 432</td>
<td>Taxonomy and Bionomics of Immature Insects</td>
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<td>ENTOM 468</td>
<td>Studies in Field Entomology</td>
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<tr>
<td>ENVIR ST/</td>
<td>Limno-Conservation of Aquatic Resources</td>
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<td>ZOOLOGY 315</td>
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<tr>
<td>ENVIR ST/</td>
<td>Field Ecology Workshop</td>
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<td>ZOOLOGY 510</td>
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<tr>
<td>ENVIR ST/</td>
<td>Ecology of Fishes</td>
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<td>ZOOLOGY 511</td>
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<tr>
<td>F&amp;W ECOL 306</td>
<td>Terrestrial Vertebrates: Life History and Ecology</td>
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<td>F&amp;W ECOL 401</td>
<td>Physiological Animal Ecology</td>
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<td>F&amp;W ECOL/SURG SCI 548</td>
<td>Diseases of Wildlife</td>
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<td>F&amp;W ECOL 655</td>
<td>Animal Population Dynamics</td>
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<tr>
<td>GEOSCI/</td>
<td>Paleobiology</td>
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<td>ZOOLOGY 541</td>
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<td>GEOSCI/ZOOLOGY 542</td>
<td>Invertebrate Paleontology</td>
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<td>LAND ARC/ENVIR ST 361</td>
<td>Wetlands Ecology</td>
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<td>LAND ARC/ENVIR ST 581</td>
<td>Prescribed Fire: Ecology and Implementation</td>
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<tr>
<td>MICROBIO 303</td>
<td>Biology of Microorganisms</td>
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Complete 12 credits from:

- AGRONOMY/BOTANY/SoIL SCI 370  Grassland Ecology
### Electives to attain 50 credits in the major

- **AGRONOMY/HORT 376** Tropical Horticultural Systems
- **ANTHRO 405** Introduction to Museum Studies in Anthropology
- **ATM OCN 100** Weather and Climate
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- **ATM OCN/ENVR ST 171** Global Change: Atmospheric Issues and Problems
- **BOTANY/PL PATH 123** Plants, Parasites, and People
- **BOTANY/ENVR 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/ZOOLOGY 540** Plant-Microbe Interactions: Molecular and Ecological Aspects
- **C&E SOC/ENVIR ST/GEOG 434** People, Wildlife and Landscapes
- **ENTOM/ENVR ST 201** Insects and Human Culture—a Survey Course in Entomology
- **ENTOM/ZOOLOGY 540** Theoretical Ecology
- **ENTOM 699** Special Problems
- **ENVR ST/ILS 126** Principles of Environmental Science
- **ENVR ST/GEOG/SOIL SCI 230** Soil: Ecosystem and Resource
- **ENVR ST 307** Literature of the Environment: Speaking for Nature
- **ENVR ST/SOIL SCI 324** Soils and Environmental Quality
- **ENVR ST/CIV ENGR/GEOG 377** An Introduction to Geographic Information Systems
- **ENVR ST/POP HLTH 471** Introduction to Environmental Health
- **ENVR ST/F&W ECOL 515** Natural Resources Policy
- **ENVR ST/GEOG 537** Culture and Environment
- **ENVR ST/SOIL SCI 575** Assessment of Environmental Impact
RESIDENCE AND QUALITY OF WORK

• 2.000 GPA in all major courses
• 2.000 GPA on 15 upper-level major credits, taken in residence ²
• 15 credits in the major, taken on the UW–Madison campus

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 ³

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.