

# ZOOLOGY, BA

## 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 (<https://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 ARTS (BA)

Students pursuing a bachelor of arts 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 a bachelor of arts or a bachelor of science curriculum.

### BACHELOR OF ARTS DEGREE REQUIREMENTS

**Mathematics** Complete the University General Education Requirements for Quantitative Reasoning A (QR-A) and Quantitative Reasoning B (QR-B) coursework.

|          |                                                                                                           |
|----------|-----------------------------------------------------------------------------------------------------------|
| Language | • Complete the fourth unit of a language other than English; OR                                           |
|          | • Complete the third unit of a language and the second unit of an additional language other than English. |

|             |                                                                                                                                        |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------|
| L&S Breadth | • 12 credits of Humanities, which must include 6 credits of literature; and                                                            |
|             | • 12 credits of Social Science; and                                                                                                    |
|             | • 12 credits of Natural Science, which must include one 3+ credit Biological Science course and one 3+ credit Physical Science course. |

|                                     |                                                                                                                                                                    |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Liberal Arts and Science Coursework | Complete at least 108 credits.                                                                                                                                     |
| Depth of Intermediate/Advanced work | 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               | <ul style="list-style-type: none"> <li>• 30 credits in residence, overall; and</li> <li>• 30 credits in residence after the 86th credit.</li> </ul>                |
| Quality of Work                     | <ul style="list-style-type: none"> <li>• 2.000 in all coursework at UW-Madison</li> <li>• 2.000 in Intermediate/Advanced level coursework at UW-Madison</li> </ul> |

### 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 MATH, CHEMISTRY & PHYSICS

| Code                           | Title                                                                                  | Credits      |
|--------------------------------|----------------------------------------------------------------------------------------|--------------|
| <b>Math—complete one:</b>      |                                                                                        | <b>4-10</b>  |
| MATH 112 & MATH 113            | College Algebra and Trigonometry                                                       |              |
| MATH 114                       | Precalculus                                                                            |              |
| MATH 171 & MATH 217            | Calculus with Algebra and Trigonometry I and Calculus with Algebra and Trigonometry II |              |
| MATH 211                       | Survey of Calculus 1                                                                   |              |
| <b>Chemistry—complete one:</b> |                                                                                        | <b>5-9</b>   |
| CHEM 103 & CHEM 104            | General Chemistry I and General Chemistry II                                           |              |
| CHEM 109                       | Advanced General Chemistry                                                             |              |
| <b>Physics—complete one:</b>   |                                                                                        | <b>8-10</b>  |
| PHYSICS 103 & PHYSICS 104      | General Physics and General Physics                                                    |              |
| PHYSICS 201 & PHYSICS 202      | General Physics and General Physics                                                    |              |
| PHYSICS 207 & PHYSICS 208      | General Physics and General Physics                                                    |              |
| <b>Total Credits</b>           |                                                                                        | <b>17-29</b> |

## BIOLOGY AND ZOOLOGY

Complete 30 credits from the sections below.

### Introductory Biology

| Code                                                                       | Title                                                                                  | Credits     |
|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------|
| <b>Option 1: Introductory Biology</b>                                      |                                                                                        | <b>10</b>   |
| ZOOLOGY/<br>BIOLOGY/<br>BOTANY 151<br>& ZOOLOGY/<br>BIOLOGY/<br>BOTANY 152 | Introductory Biology<br>and Introductory Biology                                       |             |
| <b>Option 2: BIOCORE—complete both:</b>                                    |                                                                                        | <b>10</b>   |
| BIOCORE 381<br>& BIOCORE 382                                               | Evolution, Ecology, and Genetics<br>and Evolution, Ecology, and<br>Genetics Laboratory |             |
| BIOCORE 383<br>& BIOCORE 384                                               | Cellular Biology<br>and Cellular Biology Laboratory                                    |             |
| <b>Option 3: Animal Biology<sup>1</sup></b>                                |                                                                                        | <b>5</b>    |
| ZOOLOGY/<br>BIOLOGY 101<br>& ZOOLOGY/<br>BIOLOGY 102                       | Animal Biology<br>and Animal Biology Laboratory                                        |             |
| <b>Total Credits</b>                                                       |                                                                                        | <b>5-10</b> |

<sup>1</sup> BOTANY/BIOLOGY 130 is recommended, but not required for students pursuing Option 3 (Animal Biology).

### Electives

| Code                                       | Title                                                              | Credits |
|--------------------------------------------|--------------------------------------------------------------------|---------|
| ZOOLOGY 299                                | Directed Studies in Zoology                                        |         |
| ZOOLOGY 300                                | Invertebrate Biology and Evolution                                 |         |
| ZOOLOGY 301                                | Invertebrate Biology and Evolution<br>Lab                          |         |
| ZOOLOGY/<br>ENTOM 302                      | Introduction to Entomology                                         |         |
| ZOOLOGY 303                                | Aquatic Invertebrate Biology                                       |         |
| ZOOLOGY 304                                | Marine Biology                                                     |         |
| ZOOLOGY/<br>ENVIR ST 315                   | Limnology—Conservation of Aquatic<br>Resources                     |         |
| ZOOLOGY 316                                | Laboratory for Limnology—<br>Conservation of Aquatic Resources     |         |
| ZOOLOGY 320                                | Field Marine Biology                                               |         |
| ZOOLOGY 335                                | Human/Animal Relationships:<br>Biological and Philosophical Issues |         |
| ZOOLOGY/<br>ENTOM/M M & I/<br>PATH-BIO 350 | Parasitology                                                       |         |
| ZOOLOGY/<br>ENVIR ST/<br>F&W ECOL 360      | Extinction of Species                                              |         |
| ZOOLOGY 370                                | General Molecular Biology                                          |         |
| ZOOLOGY/<br>ENTOM 371                      | Medical Entomology: Biology of<br>Vector and Vector-borne Diseases |         |
| ZOOLOGY 400                                | Topics in Biology                                                  |         |
| ZOOLOGY 401                                | Topics in Biology                                                  |         |

|                                                  |                                                           |
|--------------------------------------------------|-----------------------------------------------------------|
| ZOOLOGY 405                                      | Introduction to Museum Studies in<br>the Natural Sciences |
| ZOOLOGY/<br>ANTHRO/<br>BOTANY 410                | Evolutionary Biology                                      |
| ZOOLOGY 415                                      | Genetics of Human History                                 |
| ZOOLOGY 425                                      | Behavioral Ecology                                        |
| ZOOLOGY 430                                      | Comparative Anatomy of<br>Vertebrates                     |
| ZOOLOGY/<br>BOTANY 450                           | Midwestern Ecological Issues: A<br>Case Study Approach    |
| ZOOLOGY/<br>BOTANY/<br>F&W ECOL 460              | General Ecology                                           |
| ZOOLOGY 470                                      | Introduction to Animal Development                        |
| ZOOLOGY/<br>BOTANY/<br>ENTOM 473                 | Plant-Insect Interactions                                 |
| ZOOLOGY 500                                      | Undergraduate Neurobiology<br>Seminar                     |
| ZOOLOGY/<br>ENVIR ST 510                         | Ecology of Fishes                                         |
| ZOOLOGY/<br>ENVIR ST 511                         | Ecology of Fishes Lab                                     |
| ZOOLOGY/<br>BOTANY/<br>ENVIR ST/<br>F&W ECOL 516 | Conservation Biology                                      |
| ZOOLOGY/<br>AN SCI/<br>F&W ECOL 520              | Ornithology                                               |
| ZOOLOGY/<br>AN SCI/<br>F&W ECOL 521              | Birds of Southern Wisconsin                               |
| ZOOLOGY/<br>PSYCH 523                            | Neurobiology                                              |
| ZOOLOGY/<br>GEOSCI 542                           | Invertebrate Paleontology                                 |
| ZOOLOGY 555                                      | Laboratory in Developmental<br>Biology                    |
| ZOOLOGY/<br>F&W ECOL/<br>LAND ARC 565            | Principles of Landscape Ecology                           |
| ZOOLOGY 570                                      | Cell Biology                                              |
| ZOOLOGY 603                                      | Endocrinology                                             |
| ZOOLOGY 604                                      | Computer-based Gene and<br>Disease/Disorder Research Lab  |
| ZOOLOGY 611                                      | Comparative and Evolutionary<br>Physiology                |
| ZOOLOGY 612                                      | Comparative Physiology Laboratory                         |
| ZOOLOGY/<br>ANTHRO/<br>PSYCH 619                 | Biology of Mind                                           |
| ZOOLOGY 620                                      | Neuroethology Seminar                                     |
| ZOOLOGY/<br>ENTOM/<br>GENETICS 624               | Molecular Ecology                                         |

|                                     |                                                   |
|-------------------------------------|---------------------------------------------------|
| ZOOLOGY 655                         | Modeling Neurodevelopmental Disease               |
| ZOOLOGY/<br>F&W ECOL 660            | Climate Change Ecology                            |
| ZOOLOGY/<br>BOTANY/<br>F&W ECOL 672 | Historical Ecology                                |
| ZOOLOGY/<br>NEURODPT/<br>PSYCH 674  | Behavioral Neuroendocrinology Seminar             |
| ZOOLOGY 677                         | Internship in Ecology                             |
| ZOOLOGY 681<br>& ZOOLOGY 682        | Senior Honors Thesis and Senior Honors Thesis     |
| ZOOLOGY 691<br>& ZOOLOGY 692        | Senior Thesis and Senior Thesis                   |
| ZOOLOGY 698                         | Directed Study                                    |
| ZOOLOGY 699                         | Directed Studies in Zoology                       |
| ANAT&PHY 335                        | Physiology <sup>1</sup>                           |
| ANAT&PHY 338                        | Human Anatomy Laboratory                          |
| ANTHRO 458                          | Primate Behavioral Ecology                        |
| ANTHRO 668                          | Primate Conservation                              |
| BIOCHEM 501                         | Introduction to Biochemistry                      |
| BIOCHEM 507                         | General Biochemistry I                            |
| BOTANY 330                          | Algae                                             |
| ENTOM 331                           | Taxonomy of Mature Insects                        |
| ENTOM 450                           | Basic and Applied Insect Ecology                  |
| ENVIR ST/<br>LAND ARC 361           | Wetlands Ecology                                  |
| ENVIR ST 375                        | Field Ecology Workshop                            |
| F&W ECOL 306                        | Terrestrial Vertebrates: Life History and Ecology |
| F&W ECOL/<br>SURG SCI 548           | Diseases of Wildlife                              |
| GENETICS 466                        | Principles of Genetics                            |
| GENETICS 545                        | Genetics Laboratory                               |
| MICROBIO 303                        | Biology of Microorganisms                         |
| MICROBIO 304                        | Biology of Microorganisms Laboratory              |
| MICROBIO 345                        | Introduction to Disease Biology                   |
| M M & I 341                         | Immunology                                        |
| M M & I/PATH-<br>BIO 528            | Immunology                                        |
| PSYCH 449                           | Animal Behavior                                   |
| PSYCH 450                           | Primate Psychology: Insights into Human Behavior  |
| PSYCH 454                           | Behavioral Neuroscience                           |
| PSYCH 513                           | Hormones, Brain, and Behavior                     |

### Total Credits 20-25

A maximum of 6 credits of approved non-ZOOLOGY subject courses count toward the 30 credits required for the major. Students can take ZOOLOGY/BIOLOGY 101 Animal Biology and ZOOLOGY/BIOLOGY 102 Animal Biology Laboratory for the Introductory Biology requirement is recommended for students who complete this sequence.

<sup>1</sup> Only 3 credits of ANAT&PHY 335 Physiology count toward the 6 credits of approved non-ZOOLOGY subject courses.

## RESIDENCE AND QUALITY OF WORK

- 2.000 GPA in all ZOOLOGY and major courses
- 2.000 GPA on 15 Upper Level major credits, taken in Residence<sup>1</sup>
- 15 credits in ZOOLOGY, or courses that count for the major, taken on the UW-Madison campus

<sup>1</sup> ZOOLOGY 299-699, intermediate/advanced BIOCORE, and courses that count toward the major that have an intermediate/advanced designation are considered Upper Level in the major.

## HONORS IN THE ZOOLOGY MAJOR

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

- Earn a 3.300 University GPA
- Earn a 3.300 GPA in all courses that count toward the major
- Complete 12 credits, taken for Honors, with individual grades of B or better. Select 6 credits from ZOOLOGY 300-680 or approved non-ZOOLOGY subject courses (above).
- Complete ZOOLOGY 681 and ZOOLOGY 682, for a total of 6 credits.<sup>1</sup>

<sup>1</sup> A written thesis proposal must be approved by the thesis mentor and a department advisor. While most theses are completed during the fall and spring of a student's senior year, other combinations of terms are possible. More information about the proposal process, timing, and grading of a thesis can be found on the Department of Integrative Biology website.

## 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.