

ZOOLOGY, BS

The Zoology major is a gateway to the diverse areas of modern biology with a focus on animal biology. Students can focus on various areas in biological science, including:

- ecology, evolution, and animal behavior;
- anatomy, physiology, and organismal biology;
- and cellular, molecular, and developmental biology.

Students in Zoology learn about aquatic ecosystems, vertebrate anatomy, identifying various birds, and the development of animals.

The department encourages undergraduate participation in research and offers summer research scholarships (<https://integrativebiology.wisc.edu/undergraduate-student-scholarships/>) to outstanding students.

The Zoology major emphasizes critical thinking and conceptual skills that come from an understanding of how scientific information is obtained and evaluated, and of how this information can be applied to societal issues. The major provides a solid foundation in genetic, cellular, physiological, ecological, and evolutionary principles, and in the related disciplines of chemistry, physics, and mathematics. As a result, the major fosters an understanding of biological complexity including the interrelationships among humans and natural systems.

The unique characteristics of the Zoology major include:

- broad-based, yet integrated training in wide-ranging areas of biology;
- solid foundation of basic principles and processes in biology;
- flexibility and advising needed to allow students to tailor the major to their specific goals; and
- wide range of opportunities for undergraduate involvement in independent research and senior thesis.

The major can be tailored to prepare students for advanced study and careers in many different areas: veterinary medicine; health professions and public health; law; life sciences research in university, government, and industrial settings; education including museum, nature center, secondary and college education; biotechnology; and environmental studies.

HOW TO GET IN

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Requirements	Details
How to get in	No application required. All students who meet the requirements listed below are eligible to declare. For information on how to declare, visit Advising & Careers.
Courses required to get in	None
GPA requirements to get in	None
Credits required to get in	None
Other	None

REQUIREMENTS

UNIVERSITY REQUIREMENTS

All undergraduate students must complete both the following Core General Education (Core GenEd) and University Degree and Quality of Work requirements. The requirements below apply to students whose first term at UW-Madison or whose earliest post-high school college attendance at any institution is Summer 2026 or later.

Students whose first term at UW-Madison or whose earliest post-high school college attendance at any institution occurred before Summer 2026 should refer to the archived Guide (<https://guide.wisc.edu/archive/>) for the requirements that apply to them.

CORE GENERAL EDUCATION (CORE GENED) REQUIREMENTS

Civics & Perspectives 3 credits of Civics & Perspectives coursework.

Communication & Literacy 6 credits of Communication & Literacy coursework. This requirement may be partially satisfied by a qualifying placement test score. More information: <https://go.wisc.edu/qualifyingenglishplacement> (<https://go.wisc.edu/qualifyingenglishplacement/>)

Humanities & Arts 6 credits of Humanities & Arts coursework.

Mathematics & Quantitative Reasoning 6 credits of Mathematics & Quantitative Reasoning coursework. This requirement may be partially satisfied by a qualifying placement test score. More information: <https://go.wisc.edu/qualifyingmathplacement> (<https://go.wisc.edu/qualifyingmathplacement/>)

Natural Science & Wellness Complete both:

- 6 credits of Natural Science & Wellness or Natural Science & Wellness + Laboratory coursework.
- one course must be in Natural Science & Wellness + Laboratory coursework.

Social & Behavioral Science 3 credits of Social & Behavioral Science coursework.

Total Credits 30 credits.

For more information see the policy (<https://policy.wisc.edu/library/UW-1095/>).

UNIVERSITY DEGREE AND QUALITY OF WORK REQUIREMENTS

All undergraduate degree recipients must complete the following minimum requirements. Requirements for some programs will exceed these requirements; see program requirements for additional information.

Total Degree	120 degree credits.
Residency	Complete 30 credits in residence. A course is considered "in residence" if it is taken when in undergraduate degree-seeking status and: <ul style="list-style-type: none"> is offered by UW-Madison and completed on the UW-Madison campus or at an approved off-site location, or is offered by UW-Madison in an online or distance format, or is completed during participation in a UW-Madison study abroad/study away program.
Quality of Work	Achieve at least the minimum grade point average specified by the school, college, and/or academic program.
Math	Demonstrate minimal mathematics competence by: <ul style="list-style-type: none"> placing above MATH#160;96, or successfully completing MATH#160;96, or successfully completing a more advanced mathematics course such as MATH#160;112, MATH#160;113, MATH#160;114, MATH#160;141, MATH#160;211, or MATH#160;221.
English Language	If required to take the UW-Madison English as a Second Language Assessment Test (MSN-ESLAT), demonstrate minimal English language competence by: <ul style="list-style-type: none"> earning credit for ESL#160;118, or achieving a qualifying MSN-ESLAT placement test score.
Language	Complete one: <ul style="list-style-type: none"> 2 high school units of a single language other than English, or one course with the second semester Language designation.
Major Declaration	Declare and complete the requirements for at least one major.

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. Some courses satisfy more than one L&S degree requirement (visit College of Letters & Science: Requirements (<https://guide.wisc.edu/undergraduate/letters-science/#requirementstext>) for details).

This major can be paired with either the Bachelor of Arts or the Bachelor of Science degree requirements.

BACHELOR OF SCIENCE DEGREE REQUIREMENTS

CommunicatioComplete both:

- Part A: one course with the Communication A designation or eligible UW Placement Score; and
- Part B: one course with the Communication B designation

Quantitative Reasoning	Complete both: <ul style="list-style-type: none"> Part A: one course with the Quantitative Reasoning A designation or eligible UW Placement Score; and Part B: one course with the Quantitative Reasoning B designation
Ethnic Studies	one 3+ credit course with the Ethnic Studies designation
Language	the third unit of a language other than English
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.
L&S Breadth: Humanities	Complete 12 credits with the Humanities or Literature designation, which must include at least 6 credits with the Literature designation.
L&S Breadth: Social Sciences	Complete 12 credits with the Social Science designation.
L&S Breadth: Natural Sciences	Complete 12 credits, which must include both: <ul style="list-style-type: none"> 6 credits with the Biological Science designation, and 6 credits with the Physical Science designation.
Liberal Arts and Science (LAS) Coursework	at least 108 credits
Depth of Intermediate/Advanced Coursework	at least 60 credits at the Intermediate or Advanced level
Major	Declare and complete at least one major.
Total Credits	at least 120 credits
UW-Madison Experience	<ul style="list-style-type: none"> 30 credits in residence, overall, and 30 credits in residence after the 86th credit

Quality of Work	<ul style="list-style-type: none"> 2.000 in all coursework at UW-Madison 2.000 in Intermediate/Advanced level coursework at UW-Madison
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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
Math—complete one:		4-10
MATH 112 & MATH 113	College Algebra and Trigonometry	
MATH 114	Precalculus	
MATH 211	Survey of Calculus 1	
Chemistry—complete one:		5-9

CHEM 103 & CHEM 104	General Chemistry I and General Chemistry II
CHEM 109	Advanced General Chemistry

Physics—complete one: 8-10

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

Total Credits 17-29

BIOLOGY AND ZOOLOGY

Complete 30 credits from the sections below.

Introductory Biology

Code Title Credits

Option 1: Introductory Biology 10

ZOOLOGY/ BIOLOGY/ BOTANY 151 & ZOOLOGY/ BIOLOGY/ BOTANY 152	Introductory Biology and Introductory Biology
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Option 2: BIOCORE—complete both: 10

BIOCORE 381 & BIOCORE 382	Evolution, Ecology, and Genetics and Evolution, Ecology, and Genetics Laboratory
BIOCORE 383 & BIOCORE 384	Cellular Biology and Cellular Biology Laboratory

Option 3: Animal Biology¹ 5

ZOOLOGY/ BIOLOGY 101 & ZOOLOGY/ BIOLOGY 102	Animal Biology and Animal Biology Laboratory
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Total Credits 5-10

¹ 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 Lab
ZOOLOGY/ ENTOM 302	Introduction to Entomology
ZOOLOGY 303	Aquatic Invertebrate Biology
ZOOLOGY 304	Marine Biology
ZOOLOGY/ ENVIR ST 315	Limnology—Conservation of Aquatic Resources
ZOOLOGY 316	Laboratory for Limnology— Conservation of Aquatic Resources
ZOOLOGY 320	Field Marine Biology
ZOOLOGY 335	Human/Animal Relationships: Biological and Philosophical Issues

ZOOLOGY/ ENTOM/M M & I/ PATH-BIO 350	Parasitology
ZOOLOGY/ ENVIR ST/ F&W ECOL 360	Extinction of Species
ZOOLOGY 370	General Molecular Biology
ZOOLOGY/ ENTOM 371	Medical Entomology: Biology of Vector and Vector-borne Diseases
ZOOLOGY 403	Endocrinology
ZOOLOGY 400	Topics in Biology
ZOOLOGY 401	Topics in Biology
ZOOLOGY 405	Introduction to Museum Studies in the Natural Sciences
ZOOLOGY/ ANTHRO/ BOTANY 410	Evolutionary Biology
ZOOLOGY 415	Genetics of Human History
ZOOLOGY 425	Behavioral Ecology
ZOOLOGY 430	Comparative Anatomy of Vertebrates
ZOOLOGY/ BOTANY 450	Midwestern Ecological Issues: A Case Study Approach
ZOOLOGY/ BOTANY 460	General Ecology
ZOOLOGY 470	Introduction to Animal Development
ZOOLOGY/ BOTANY/ ENTOM 473	Plant-Insect Interactions
ZOOLOGY 500	Undergraduate Neurobiology Seminar
ZOOLOGY/ ENVIR ST 510	Ecology of Fishes
ZOOLOGY/ ENVIR ST 511	Ecology of Fishes Lab
ZOOLOGY/ BOTANY/ ENVIR ST/ F&W ECOL 516	Conservation Biology
ZOOLOGY/ F&W ECOL 520	Ornithology
ZOOLOGY/ F&W ECOL 521	Birds of Southern Wisconsin
ZOOLOGY/ PSYCH 523	Neurobiology
ZOOLOGY/ GEOSCI 542	Invertebrate Paleontology
ZOOLOGY 555	Laboratory in Developmental Biology
ZOOLOGY/ F&W ECOL/ LAND ARC 565	Principles of Landscape Ecology
ZOOLOGY 570	Cell Biology
ZOOLOGY 604	Computer-based Gene and Disease/Disorder Research Lab

ZOOLOGY 611	Comparative and Evolutionary Physiology
ZOOLOGY 612	Comparative Physiology Laboratory
ZOOLOGY/ ANTHRO/ PSYCH 619	Biology of Mind
ZOOLOGY 620	Neuroethology Seminar
ZOOLOGY/ ENTOM/ GENETICS 624	Molecular Ecology
ZOOLOGY 655	Modeling Neurodevelopmental Disease
ZOOLOGY/ F&W ECOL 660	Climate Change Ecology
ZOOLOGY/ BOTANY 672	Historical Ecology
ZOOLOGY/ NEURODPT/ PSYCH 674	Behavioral Neuroendocrinology Seminar
ZOOLOGY 677	Internship in Ecology
ZOOLOGY 681 & ZOOLOGY 682	Senior Honors Thesis and Senior Honors Thesis
ZOOLOGY 691 & ZOOLOGY 692	Senior Thesis and Senior Thesis
ZOOLOGY 698	Directed Study
ZOOLOGY 699	Directed Studies in Zoology
ANAT&PHY 335	Physiology ¹
ANAT&PHY 338	Human Anatomy Laboratory
ANTHRO 444	Primate Nutritional Ecology
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/ LAND ARC 361	Wetlands Ecology
ENVIR ST 375	Field Ecology Workshop
F&W ECOL 306	Terrestrial Vertebrates: Life History and Ecology
F&W ECOL/ 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- 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.

¹ 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 Residence¹
- 15 credits in ZOOLOGY, or courses that count for the major, taken on the UW-Madison campus

¹ 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.¹

¹ 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.

LEARNING OUTCOMES

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1. Connect and describe the concepts that make up the structure and function of all living things through the principles of genetics, cellular biology, and physiology.
2. Demonstrate an understanding of the diversity of life through the principles of evolution.
3. Make connections between organisms, their habitats, and systems through the principles of ecology.

4. Make connections between the biological sciences to humans and ecological systems and appreciate the complexity of these systems.
5. Identify, think through, and solve a problem using quantitative reasoning and critical thinking skills.
6. Develop an ability to plan and carry out scientific experiments by obtaining and evaluating scientific information and effectively communicating information through oral and written presentations.
7. Understand current issues in biology and apply scientific knowledge to societal issues.
8. Make connections between self and natural world, and personal responsibility with social issues.
9. Develop a sense of competence in the field of study through research experiences and written and oral communication of findings.

FOUR-YEAR PLAN

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This Four-Year Plan is only one way a student may complete an L&S degree with this major. Many factors can affect student degree planning, including placement scores, credit for transferred courses, credits earned by examination, and individual scholarly interests. In addition, many students have commitments (e.g., athletics, honors, research, student organizations, study abroad, work and volunteer experiences) that necessitate they adjust their plans accordingly. Informed students engage in their own unique Wisconsin Experience by consulting their academic advisors, Guide, DARS, and Course Search & Enroll for assistance making and adjusting their plan.

Freshman

Fall	Credits Spring	Credits
CHEM 103 or 109	4-5 CHEM 104	5
MATH 112 or 114	3-5 MATH 113	3
Communication A ¹	3 L&S Breadth	3
Language (if required)	3-4 Social Science Breadth	3
	14	14

Sophomore

Fall	Credits Spring	Credits
ZOOLOGY/BIOLOGY/ BOTANY 151 ¹	5 ZOOLOGY/BIOLOGY/ BOTANY 152 (Satisfies Communication B) ¹	5
Ethnic Studies	3 L&S Breadth	3
INTER-LS 210	1 Social Science Breadth	3
Social Science Breadth	3 Elective	3
Elective	4	
	16	14

Junior

Fall	Credits Spring	Credits
PHYSICS 103, 201, or 207	4-5 PHYSICS 104, 202, or 208	4-5
I/A COMP SCI, MATH, or STAT (if required for the BS)	3-5 I/A COMP SCI, MATH, or STAT (required for the BS)	3-5
I/A ZOOLOGY	3-6 I/A ZOOLOGY	4
Elective	3 L&S Breadth	3
	16	14

Senior

Fall	Credits Spring	Credits
I/A ZOOLOGY	3-4 I/A ZOOLOGY	3-4
Elective	3-4 I/A ZOOLOGY	3-4
L&S Breadth	3 Elective	6
Elective	3-6 Social Science Breadth	3
	17	15

Total Credits 120

¹ 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.

Student may also satisfy Introductory Biology with BIOCORE. Consult the advisor for the program regarding this option.

ADVISING AND CAREERS

ADVISING AND CAREERS DECLARE OR CANCEL THIS MAJOR

Please follow the process described on the Zoology Major website (<https://integrativebiology.wisc.edu/undergraduate-programs/zoology-major/zoology-undergraduate-major-advising/>).

DIRECTED STUDY

The Zoology major is an excellent choice for students interested in an undergraduate research experience.

Directed Studies allows students to gain experience in a wide range of research areas in biology and to learn research techniques that are not easily taught in the classroom. Such experiences allow students to make more informed decisions about their future goals and careers. Before students can enroll in Directed Study, they must set up an appointment with a professor/mentor of their choice.

Students interested in doing in-depth research as undergraduates in an area of interest can elect to do a Senior Thesis or Senior Honors Thesis. Students should contact a department advisor at the beginning of their junior year to explore possible research areas.

STUDY ABROAD

Learning in Letters & Science emphasizes discovery, growth, understanding different perspectives, and challenging yourself, which makes studying abroad an excellent fit for many L&S students: studyabroad.wisc.edu (<https://studyabroad.wisc.edu/>)

As a university with global influence, we have more than 300 study abroad programs (<https://studyabroad.wisc.edu/programs/>) in over 80 countries. These vary in length, academic focus, teaching format, language requirements, cost, and level of independence. There are many programs to complement every major (<https://studyabroad.wisc.edu/academics/major-advising-pages-maps/#L&S>) and any year of college (including the final semester)—and all meet UW–Madison's high academic standards. Students admitted into Letters & Science can even choose a short program in the summer before they start college or their whole first year: studyabroad.wisc.edu/launch (<http://studyabroad.wisc.edu/launch/>).

Talk with your academic advisor about how studying abroad might fit with your academic plan.

SUCCESSWORKS

SuccessWorks (<https://successworks.wisc.edu/>) at the College of Letters & Science helps you turn the academic skills learned in your classes into a fulfilling life, guiding you every step of the way to securing jobs, internships, or admission to graduate school.

Through one-on-one career advising, events, and resources, you can explore career options, build valuable internship and research experience, and connect with supportive alumni and employers who open doors of opportunity.

- What you can do with your major (<https://successworks.wisc.edu/what-you-can-do-with-your-major/>) (Major Skills & Outcomes Sheets)
- Make a career advising appointment (<https://successworks.wisc.edu/make-an-appointment/>)
- Learn about internships and internship funding (<https://successworks.wisc.edu/finding-a-job-or-internship/>)
- Try “Jobs, Internships, & How to Get Them,” (<https://successworks.wisc.edu/canvas/>) an interactive guide in Canvas for enrolled UW–Madison students