ZOOLOGY

Zoology majors focus on the study of individual organisms and populations, as well as their relationships to each other and the environment, with the core foundation of evolution and ecology. Courses also emphasize the disciplines of anatomy, behavior, genetics, physiology, and other specialized fields.

About this Program

- **College:** Liberal Arts and Sciences
- **Degree:** Bachelor of Science
- **Credits for Degree:** 120
- **Additional Information**
- **Related Zoology Programs**

To graduate with this major, students must complete all university, college, and major requirements.

Courses introduce zoology majors to a wide variety of topics while allowing individual interests to be pursued. Advanced undergraduate students are encouraged to participate in research with faculty.

Most career opportunities require advanced studies beyond the bachelor’s degree. This includes preparation for graduate studies or employment in disciplines such as zoology, ecology, conservation, and biology research; preparation for medical, dental or veterinary programs; or preparation for secondary-school teaching.

Ultimately, the undergraduate degree in zoology will be shaped by students’ coursework, laboratory experience, field work, and the instructors they encounter. These experiences will help to shape their goals as biologists with a focus on zoology.

Majors should work both with a department advisor and a CLAS advisor. CLAS advisors will assist with degree requirements, university and college policy and course selection. Department advisors will help students select appropriate graduate programs, guide them in the admissions process, and help identify appropriate career choices.

Coursework for the Major

A zoology major consists of a minimum of 32 credits of core coursework plus a minimum of 31 credits of related coursework in chemistry, physics, and mathematics/statistics. Courses used toward the major must be completed with minimum grades of C.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Foundation Coursework</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHM 2045 &amp; 2045L</td>
<td>General Chemistry 1 and General Chemistry 1 Laboratory</td>
<td>8</td>
</tr>
<tr>
<td>CHM 2046 &amp; 2046L</td>
<td>General Chemistry 2 and General Chemistry 2 Laboratory</td>
<td>8</td>
</tr>
<tr>
<td>CHM 2210</td>
<td>Organic Chemistry 1</td>
<td>3</td>
</tr>
<tr>
<td>&amp; 2211L</td>
<td>and Organic Chemistry Laboratory</td>
<td></td>
</tr>
<tr>
<td>MAC 2311</td>
<td>Analytic Geometry and Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>MAC 2312</td>
<td>Analytic Geometry and Calculus 2 or STA 2023</td>
<td>3-4</td>
</tr>
<tr>
<td>or STA 2023</td>
<td>Introduction to Statistics 1</td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
<td>8-10</td>
<td></td>
</tr>
<tr>
<td>Option A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHY 2053 &amp; 2053L</td>
<td>Physics 1 and Laboratory for Physics 1</td>
<td></td>
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</tbody>
</table>

Students should begin the chemistry and math sequences as soon as possible. A full year of calculus and a course in statistics (such as STA 2023) are highly recommended.

Transfer students must take at least three courses from the Department of Biology (excluding ZOO 4905, ZOO 4926 and ZOO 4940) at the University of Florida as part of the requirements for the major.

Required Minors and/or Certificates

Majors in zoology can minor in most other disciplines, and this is a good way to organize students’ electives around areas of interest. For instance, a zoology major can earn a minor in chemistry by adding just two chemistry courses: CHM 3400, CHM 3610 or any 4000-level CHM course. Students could also consider language and humanities minors. Note that zoology majors cannot minor in biology, nor can biology majors minor in zoology (the curricula for the zoology and biology majors are too similar).

Zoology students might want to consider the UFTeach Program. There is a severe shortage of qualified high school science teachers in Florida and nationwide. Students interested in the high-demand teaching profession
should see a biology department advisor or the UFTeach advisor. Students who complete the UFTeach minor in science teaching and a B.S. in zoology will have the coursework and preparation for professional teacher certification in Florida when they graduate.

Research

More Info

All zoology majors are strongly encouraged to participate in research. Research experience is valuable on many levels: it diversifies your college experience; it teaches you how scientists apply the knowledge gained in the classroom to real-world questions; it gives you the opportunity to work with and get to know researchers who are the best in their field; it introduces you to cutting-edge scientific questions and techniques; it enhances your resume/CV if you apply to graduate or professional school; and finally, it is essential in helping you determine if science is a good career choice for you.

CLAS zoology majors may participate in research for course credit, as a scholar (e.g., University Scholar, HHMI Science for Life Scholar, Beckman Scholar), as a volunteer, or, in rare cases, as a paid research assistant. Please visit Undergraduate Research for more information regarding course credit. Students who plan to enroll for course credit must contact potential research mentors before the end of drop/add. If they miss the drop/add window, they should still contact potential research mentors, if only to discuss upcoming opportunities.

Related Zoology Programs

- Zoology minor

Critical Tracking

Critical Tracking records each student’s progress in courses that are required for entry to each major. Please note the critical-tracking requirements below on a per-semester basis.

For degree requirements outside of the major, refer to CLAS Degree Requirements: Structure of a CLAS Degree.

Equivalent critical-tracking courses as determined by the State of Florida Common Course Prerequisites may be used for transfer students.

Semester 1

- Complete one of the following in BSC, CHM or MAC: BSC 2010/2010L; CHM 1025 or CHM 2045/2045L; MAC 1144, 1140, 1147 or 2311
- 2.0 UF GPA required

Semester 2

- Complete CHM 2045/CHM 2045L; and BSC 2010/BSC 2010L or MAC 2311
- 2.0 UF GPA required

Semester 3

- Complete BSC 2010/BSC 2010L and MAC 2311 with a 2.5 critical-tracking GPA
- 2.0 UF GPA required

Semester 4

- Complete CHM 2046/CHM 2046L and BSC 2011/BSC 2011L with a 2.5 critical-tracking GPA
- 2.0 UF GPA required

Semester 5

- Complete CHM 2210 with a 2.5 critical-tracking GPA
- 2.0 UF GPA required

Model Semester Plan

Students are expected to complete the writing requirement while in the process of taking the courses below. Students are also expected to complete the general education international (GE-N) and diversity (GE-D) requirements concurrently with another general education requirement (typically, GE-C, H or S).

To remain on track, students must complete the appropriate critical-tracking courses, which appear in bold. These courses must be completed by the terms as listed above in the Critical Tracking criteria.

This semester plan represents an example progression through the major. Actual courses and course order may be different depending on the student’s academic record and scheduling availability of courses. Prerequisites still apply.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 2045 &amp; 2045L</td>
<td>General Chemistry 1 and General Chemistry 1 Laboratory (Critical Tracking; State Core Gen Ed Physical Sciences)</td>
<td>4</td>
</tr>
<tr>
<td>IUF 1000</td>
<td>What is the Good Life (Gen Ed Humanities)</td>
<td>3</td>
</tr>
<tr>
<td>MAC 2311</td>
<td>Analytic Geometry and Calculus 1 (Critical Tracking; State Core Gen Ed Mathematics)</td>
<td>4</td>
</tr>
<tr>
<td>BSC 1920</td>
<td>First Year Introduction: Biology at UF (recommended elective)</td>
<td>1</td>
</tr>
<tr>
<td>State Core Gen Ed Social and Behavioral Sciences</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Credits</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>MAC 2312</td>
<td>Analytic Geometry and Calculus 2 (Gen Ed Mathematics)</td>
<td>3-4</td>
</tr>
<tr>
<td>STA 2023</td>
<td>Introduction to Statistics 1 (Gen Ed Mathematics)</td>
<td>3</td>
</tr>
<tr>
<td>State Core Gen Ed Composition; Writing Requirement</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Gen Ed Social and Behavioral Sciences</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Credits</td>
<td></td>
<td>13-14</td>
</tr>
<tr>
<td>BSC 2010 &amp; 2010L</td>
<td>Integrated Principles of Biology 1 and Integrated Principles of Biology Laboratory 1 (Critical Tracking; Gen Ed Biological Sciences)</td>
<td>4</td>
</tr>
<tr>
<td>CHM 2210</td>
<td>Organic Chemistry 1 (Critical Tracking)</td>
<td>3-4</td>
</tr>
<tr>
<td>CHM 3217</td>
<td>Organic Chemistry/Biochemistry 1 (Critical Tracking)</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>State Core Gen Ed Humanities</td>
<td>3</td>
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</table>

Zoology
Academic Learning Compact

The Bachelor of Science in zoology offers students an education in the life sciences with an emphasis on animal systems. Students gain knowledge about the diversity of life (its evolution and significance) and about the structure of organisms and ecosystems and how they function (i.e., the acquisition, flow, organization and uses of information, energy and nutrients in living systems). They will learn about the scientific method and how it facilitates the discovery of new knowledge in zoology and biology. This includes how to critically evaluate hypotheses and conclusions in science using verifiable data and how to clearly and effectively communicate the major concepts and hypotheses in zoology and biology and in an appropriate style of presentation.

Before Graduating Students Must

- Pass an assessment in the two or three 3000/5000-level zoology courses.
- Complete requirements for the baccalaureate degree, as determined by faculty.

Students in the Major Will Learn to

Student Learning Outcomes (SLOs)

Content

1. Identify, describe and define the basic terminology, concepts, methodologies and theories used within the biological sciences.

Critical Thinking

2. Analyze biological information and develop reasoned solutions to problems using the processes and applications of scientific inquiry.

3. Discriminate ethical behavior from unethical behavior in scientific research.

Communication

4. Communicate knowledge, ideas and reasoning clearly and effectively in written or oral forms appropriate to the biological sciences.

Curriculum Map

\[
\begin{array}{cccc}
\text{Courses} & \text{SLO 1} & \text{SLO 2} & \text{SLO 3} \\
\text{BSC 2010} & I & I & I \\
\text{BSC 2011} & I & I & I \\
\text{PCB 3063} & R & R & I \\
\text{PCB 3713} & R & R & R \\
\text{PCB 4043C} & R/A & R/A & R/A \\
\text{PCB 4674} & R/A & R/A & R/A \\
\text{PCB 4723C} & R/A & R/A & R/A \\
\text{ZOO 4205C} & R & R & R \\
\text{ZOO 4307C} & R & R & R \\
\text{Total Credits} & 120
\end{array}
\]

\[
\begin{array}{cccc}
\text{Assessment Types} & & & \\
\text{Major field test in zoology} & \text{Bioethics module quiz} & \text{Scientific literacy paper}
\end{array}
\]

Credits

- 15-16
- 13-18
- 16-18
- 17-18

Select CHM 2211 if CHM 2210 was taken Semester 3.