

BIOLOGY | CLAS

The Biology majors combine the faculty and resources of the College of Agricultural and Life Sciences and the College of Liberal Arts and Sciences to prepare undergraduates for careers in the biological sciences, advanced study in professional and graduate schools, productive citizenship and leadership, and lifelong learning. The program is comprehensive and flexible, emphasizing the diverse forms, processes, and systems of life. Students in the program complete required and elective courses that promote critical thinking through the investigation and understanding of principles and unifying themes that govern living systems. The Biology major offers a broader approach to biology than is available through a major in botany, zoology, or other specialized biological sciences majors.

About this Program

- **College:** Liberal Arts and Sciences (<http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/>)
- **Degrees:** Bachelor of Arts (http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/BIO_BA_BS/BIO_BA/) | Bachelor of Science
- **Specializations:** Integrative Biology (BS) (http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/BIO_BA_BS/BIO_BS03/) | Preprofessional Biology (BS) (http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/BIO_BA_BS/BIO_BS04/)
- **Credits for Degree:** 120
- **More Info**

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

Department Information

The Department of Biology studies life at all levels from molecules to the biosphere to understand the evolution, structure, maintenance and dynamics of biological systems. Our teaching and research provide the integrative and conceptual foundations of the life sciences.

Website (<https://biology.ufl.edu/>)

CONTACT

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Map (<http://campusmap.ufl.edu/#/index/0747>)

Curriculum

- Biology UF Online
- Biology | CALS
- Biology | CLAS
- Botany CALS
- Botany Minor
- Botany | CLAS
- Combination Degrees
- Zoology
- Zoology Minor

The biology degrees develop fundamental knowledge of animals, plants and microorganisms. The degrees and specializations are tailored to meet the needs of preprofessional students, those students preparing for graduate studies in biology or specialized areas, and those seeking careers in education, the allied health professions and interdisciplinary fields such as environmental or biotechnology law, science journalism, and bioscience management.

Bachelor of Science

The CLAS Bachelor of Science in biology offers two specializations.

Bachelor of Science | Integrative Biology

Designed for students preparing for graduate studies in biology or specialized areas such as ecology, evolution, genetics, molecular biology, physiology, and systematics.

Bachelor of Science | Preprofessional Biology

Designed for students preparing for admission to medical, dental, optometry, veterinary, or other professional schools.

Bachelor of Arts

The CLAS Bachelor of Arts in biology is a flexible degree that is best suited for students interested in a career in education, the allied health professions, and interdisciplinary fields such as environmental or biotechnology law, science journalism, and bioscience management.

Coursework for the Majors

The B.S. biology specializations require significant introductory coursework and credits in general biology, calculus and/or statistics, general chemistry, organic chemistry, and physics. The B.A. requires less preparation in mathematics, chemistry and physics. Students who are uncertain about the program that best suits their goals should consult a biology advisor for information and curriculum planning. Students can also individualize their curricula with additional life science courses from other departments, colleges and units at UF.

Relevant Minors and/or Certificates

UFTeach Program

There is a severe shortage of qualified secondary school biology teachers in Florida and nationwide. Students interested in becoming part of this high-demand profession should see a biology advisor or the UFTeach advisor. UFTeach students complete the UFTeach minor in science teaching with their B.A. or B.S. in biology and have the coursework and preparation for professional teacher certification in Florida when they graduate.

More Info (<http://education.ufl.edu/uf-teach/>)

Research

All biology majors are encouraged to participate in research. Research experience is valuable on many levels: it diversifies the college experience, teaches how scientists apply the knowledge gained in the classroom to real world questions, provides the opportunity to work with and get to know researchers who are the best in their field, enables participation in cutting edge scientific questions and techniques, enhances the student's resume/CV when applying to graduate or professional school and, finally, it is essential to help the student determine if science is an appropriate career choice.

More Info (<http://major.biology.ufl.edu/do-research/>)

CLAS biology majors may participate in research for course credit, as a scholar (e.g., University Scholar), as a volunteer, or, in rare cases, as a paid research assistant.

Academic Learning Compact

Biology is the study of the many diverse forms, processes and systems of life. These studies range across all levels of the biological hierarchy, from the simplest to the most complex life forms, across all environments on the earth and across recent and evolutionary time that interconnects ancestors to their descendants.

To understand this vast diversity, the field of biology correspondingly relies on integrative and comparative approaches for the resolution of the general processes, principles and unifying themes that govern living systems. Biology is therefore very interdisciplinary and biologists rely on knowledge from the physical sciences and mathematics, as well as from across the disciplines and subdisciplines of biology for advances and breakthroughs.

The biology major is administered jointly by the College of Agricultural and Life Sciences and the College of Liberal Arts and Sciences.

Before Graduating Students Must

- Achieve a passing score for all content subsections of the Major Field Test for Biology. Content subscore areas are molecular biology and genetics, organismal biology, evolution, ecology and population biology.
- Achieve a passing score on the analytical skills assessment indicator of the Major Field Test for Biology.
- Achieve a passing score on the bioethics module quiz in BSC 4936. The content of the module and quiz are reviewed and approved by a faculty committee.
- Achieve a passing score on the scientific literacy paper assignment given in BSC 4936. This paper is graded using a faculty-developed rubric.
- 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 explain 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

I = Introduced; R = Reinforced; A = Assessed

Courses	SLO 1	SLO 2	SLO 3	SLO 4
AGR 3303 or PCB 3063 or PCB 4522	R	R		R
ANS 3319C or BOT 3503 or HOS 4304 or PCB 3713C or PCB 4723C	R	R		R
BSC 1920	I		I	I
BSC 2010	I	I	I	
BSC 2011	I	I	I	
BSC 4936	A	A	A	A
MCB 3020 and MCB 3020L, or PCB 3134 or PCB 4674	R	R		R

Assessment Types

- Major field test for biology
- Bioethics module
- Scientific literacy paper