

# BIOLOGY, BS

Students pursuing a degree in biology typically have interests in science, the environment, and/or the health professions. High school preparation should include a solid background in mathematics, introductory biology, and/or chemistry.

## Admission into the Major

Students are expected to formally declare a major no later than the fourth semester of full-time enrollment (or at 61 semester hours for transfer students). Students can declare a major by completing the Change of Major/Minor Application online under the Student tab of myBama.

## Special Opportunities

The Department of Biological Sciences offers an abundance of special opportunities for students, including an honors program, a scholars program, and a number of special areas of concentration.

### Honors Program

The Biological Sciences Honors Program is available to students majoring in either biology or microbiology after the completion of 16 hours of biological science courses with at least a 3.4 GPA overall and in BSC courses. Admission into the program is made through an application that is submitted to the undergraduate program coordinator. Requirements for the program include: four to eight hours of BSC 390 Honors Thesis Research, maintenance of a 3.4 GPA in BSC courses and overall, and submission and defense of an acceptable honors thesis. Additional details are available in the office of the Department of Biological Sciences.

### Accelerated Masters Program

The Department of Biological Sciences also participates in the Accelerated Master's Program, which allows highly motivated students to pursue closely integrated undergraduate and graduate programs that may lead to the simultaneous completion of requirements for both master's and bachelor's degrees. Students usually apply for admission prior to the junior or senior year. For more information about the Accelerated Master's Program, visit [graduate.ua.edu](http://graduate.ua.edu) or consult The University of Alabama graduate catalog.

Students earning the bachelor of science (BS) degree with a major in biology must complete all University, College and departmental degree requirements. These include the general education requirements, the following major requirements and other sufficient credits to total a minimum of 120 applicable semester hours.

Code and Title	Hours
<b>Major Courses</b>	
Select one of the following:	4
BSC 114 Principles Of Biology I & BSC 115 and Laboratory Biology I	
BSC 118 Honors General Biology I	
Select one of the following:	4
BSC 116 Principles Biology II & BSC 117 and Laboratory Biology II	
BSC 120 Honors Gen Biology II	
BSC 300 Cell Biology	3
BSC 315 Genetics	3
BSC 385 Ecology and Evolution	3
Credit Hours Subtotal:	17

<b>Electives</b>	
Select 19 hours of BSC or MS electives above 250	19
Credit Hours Subtotal:	19

<b>Ancillary Courses</b>		
Grades in ancillary courses are not computed into the major GPA. The major in biology requires the successful completion of the following courses outside the major:		
CH 101 or CH 117	General Chemistry Honors General Chemistry	4
CH 102 or CH 118	General Chemistry Honors General Chemistry	4
CH 231	Elem Organic Chemistry I	3
CH 232	Elem Organic Chem II	3
CH 237	Elem Organic Chem Lab	2
MATH 125 or MATH 145	Calculus I Honors Calculus I	4
Select one of the following:		4
PH 101	General Physics I	
PH 105	General Physics W/Calc I	
PH 125	Honors Gen Ph W/Calculus	
Select one of the following:		4
PH 102	General Physics II	
PH 106	General Physics W/Calc II	
PH 126	Honors Gen Ph W/Calculus II	
Credit Hours Subtotal:		28

<b>Additional Major Requirements</b>	
The department offers a number of courses designed to enrich the learning experience of students beyond the traditional classroom setting. Four hours of the courses below may be applied to the major:	
BSC 391	Tutorial In Biol Science
BSC 393	Biology Outreach
BSC 396	Resident Study
BSC 398	Undergraduate Research
BSC 399	Presentation of UG Research
BSC 403	Intro To Bsc Instruction
BSC 404	Honors Bsc Instruction
BSC 407	Honors Seminar In Bsc

<b>Total Hours</b>	<b>64</b>
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**Footnotes**

<sup>1</sup> Beyond specific restrictions listed for each course, a total of four hours from this group may be applied to the requirements of the biology major or minor. An additional four hours may be applied as electives to the requirement for 120 hours for the degree. BSC 409 Pre-Health Apprenticeship I and BSC 410 Pre-Health Apprenticeship II are not applicable to the major in biology.

A maximum of 12 hours of 100-level biology courses (BSC 108 Intro Biology Non Maj I, BSC 109 Intro Biology Non Maj II, BSC 114 Principles Of Biology I, BSC 115 Laboratory Biology I, BSC 116 Principles Biology II, BSC 117 Laboratory Biology II, BSC 118 Honors General Biology I or BSC 120 Honors Gen Biology II) may be applied to degree requirements.

Students are responsible for ensuring that they have met all University, College, major and minor requirements. However, each student must meet with an adviser in the major department for academic planning and to be approved for registration each semester. College advisers are also available for additional assistance with minor, College, and University requirements.

**Electives**

Other BSC courses numbered 250 and above, including two laboratory courses from the following list of laboratory courses (also see the Additional Major Requirements section):

Code and Title	Hours
BSC 303 Field Zoology	3
BSC 313 Gen Bacteriology Lab	3
BSC 314 Dendrology	3
BSC 320 Freshwater Studies	4
BSC 360 Plant Biology	4
BSC 373 Vertebrate Zoology	4
BSC 390 Honors Thesis Research	1-8
BSC 396 Resident Study	1-6
BSC 398 Undergraduate Research	1-4
BSC 400 Vertebrate Funct Morphol	4
BSC 425 Human Physiology Lab	2
BSC 428 Biology Of Fishes	4
BSC 432 Pathogenic Mibrobiol Lab	3
BSC 434 Plant Systematics	4
BSC 439 Bch/Molecular Biology Lab	3
BSC 442 Integrated Genomics	4
BSC 460 Human Developmental Biology	4
BSC 464 Biology Of Algae	4
BSC 469 Histology Of Vertebrates	4
BSC 472 Mycology	4
BSC 475 General Entomology	4
BSC 476 Aquatic Insects	4
BSC 490 Stream Ecology	4
MS 306 Marine Biology	4
MS 408 Marine Invertebrate Zoology	4
MS 419 Marine Ecology	4
MS 452 Marine Vertebrate Zoology	4
MS 453 Marine Botany	4

The two laboratory courses may not be fulfilled by BSC 390 Honors Thesis Research AND BSC 398 Undergraduate Research.

**Grade Point Average**

A 2.0 grade point average in the major is required for completion of the degree. Please see the Grades and Grade Points section of this catalog for an explanation on grade point average calculations.

**Upper-level Residency**

A minimum of 12 hours of 300- and 400-level courses in the major must be earned on this campus.

**Required Minor**

The biology major does not require a minor.

**Prerequisites**

Prerequisites for all BSC courses at the 300- and 400-level must be passed with a minimum grade of C-.

**Restrictions on course attempts**

No undergraduate course offered by the Department of Biological Sciences may be attempted more than three times. Mid-semester withdrawal (any withdrawal that results in a final grade of W) is not considered an attempt. Students who, in three attempts, fail to pass a required course or fail to make a C- or better in a Biology course that is a prerequisite for a required upper level course may no longer major in Biology.

A major in biology prepares students for a wide range of employment opportunities in the medical fields (medicine, dentistry, pharmacy), research, pharmaceutical sales, and education.

**Types of Jobs Accepted**

Recent graduates have worked in entry-level positions in research laboratories, medical equipment and pharmaceutical sales, and K-12 education. A large number of graduates enter professional school (e.g. medicine, dentistry, veterinary, optometry, pharmacy, physical therapy) or graduate school (master's degree, Doctor of Philosophy [Ph.D.]).

**Jobs of Experienced Alumni**

physician, dentist, optometrist, veterinarian, pharmacist, physician's assistant, physical therapist, laboratory technician, teacher, university professor, pharmaceutical representative, medical equipment sales representative

Learn more about opportunities in this field at the Career Center