

BIOLOGY, B.A.

The Department offers a full range of courses leading to the B.A. degree. The degree may lead to further study in graduate school, medicine, dentistry, veterinary medicine, medical technology, biotechnology, and environmental biology. See also Preprofessional Programs. Both study and laboratory facilities are available to advanced undergraduates.

Overall Requirements

- 120 credit hours, to include at least 36 credits at or above the 300 course level; note that licensure programs may require hours beyond the minimum listed.
- Students must have a grade point average of at least 2.0 in Biology courses completed at UNC Greensboro.
- A minimum of 30 credits of Biology course above the 100 level.
- BIO 280 and BIO 280L will not be counted towards the major; instead Biology majors should take BIO 481 and BIO 481L.

Degree Program Requirements

Code	Title	Credit Hours
University Requirements (https://catalog.uncg.edu/academic-regulations-policies/undergraduate-requirements/undergraduate-degrees-and-degree-requirements/)		
General Education Requirements (MAC) (https://catalog.uncg.edu/academic-regulations-policies/undergraduate-requirements/general-education-program/#generaleducationcorerequirementstext)		
College of Arts and Sciences Additional Requirements (CIC) (https://catalog.uncg.edu/arts-sciences/#additionalundergraduateresquirementstext)		

Major Requirements

Code	Title	Credit Hours
Program Qualifications *		8
BIO 111 & 111L	Principles of Biology I and Principles of Biology I Laboratory	
BIO 112 & 112L	Principles of Biology II and Principles of Biology II Laboratory	
Core Courses **		16
BIO 301	Principles of Ecology	
BIO 355	Cell Biology	
BIO 392	Genetics	
BIO 330	Evolution	
BIO 315	Ecology and Evolution Laboratory	
BIO 375	Cell Biology and Genetics Laboratory	
Related Area Requirements		11-15
CHE 111 or CHE 103 & CHE 104	General Chemistry I General Descriptive Chemistry I and General Descriptive Chemistry II	
CHE 112 or CHE 110	General Chemistry I Laboratory Introductory Chemistry Laboratory	
CHE 114 & CHE 115	General Chemistry II and General Chemistry II Laboratory	
MAT 183	Mathematics for the Life Sciences	

- or MAT 151 Precalculus II
- or MAT 190 Precalculus
- or MAT 184 Calculus for the Life Sciences
- or MAT 191 Calculus I
- or MAT 196 Calculus A

* Students are strongly encouraged to take BIO 100.

** In meeting the requirement for hours above the 100 level, all B.A. in Biology majors must complete the following core courses; completion of at least four of these requirements is strongly recommended prior to enrollment in courses numbered 400 and higher.

Recommended

The department highly recommends the course listed below in addition to the required courses listed above.

Code	Title	Credit Hours
BIO 100	Orientation to Biology	
CHE 351	Organic Chemistry I	
CHE 352	Organic Chemistry II	
CHE 354	Organic Chemistry Laboratory	
MAT 196	Calculus A	
MAT 296 or STA 271	Calculus B Fundamental Concepts of Statistics	
PHY 211	General Physics I	
PHY 212	General Physics II	

Optional Concentration

The optional concentration as detailed following the major requirements may be added, but is not required.

- Biology Major with Comprehensive Science High School Teaching Licensure

Electives

Electives sufficient to complete the 120 credit hours required for the degree.

Biology Major with Comprehensive Science High School Teaching Licensure Concentration Requirements

The Comprehensive Science High School Licensure (BIOL) program provides a strong background in biology as well as licensure for high school biology teaching. In addition, successful completion of this program qualifies candidates to teach other high school science subjects as well.

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Students seeking admission to the UNC Greensboro Teacher Education Program with a major in Biology must meet the following minimum requirements of the Department of Biology:

1. Completion of a minimum of 9 credit hours in biology courses, with at least six of those hours from courses taken at UNC Greensboro.
2. A grade point average of at least 2.50 for biology courses completed at UNC Greensboro.

Students already admitted to the UNC Greensboro Teacher Education Program with a major in Biology who are seeking admission to Student Teaching must meet the following requirements of the Department of Biology:

1. Completion of a minimum of 18 credits of biology courses, with at least 15 of those credits from courses taken at UNC Greensboro.
2. A grade point average of at least 2.50 for biology courses completed at UNC Greensboro.

Additional Requirements for Teacher Licensure*

Code	Title	Credit Hours
Required		12
PHY 211 & 211L	General Physics I and General Physics Lab I	
GES 103 & 103L	Introduction to Earth Science and Earth Science Laboratory	
<i>Select one or more of the following:</i>		
GES 111 & 111L	Physical Geology and Physical Geology Laboratory	
GES 314 & 314L	Physical Geography: Landscape Processes and Physical Geography Laboratory	
GES 319 & 319L	Weather and Climate and Climatology Laboratory	
Teacher Licensure Requirements		27
<i>The following courses must be taken in a specified sequence terminating in student teaching in the spring semester of the senior year. See the online Secondary Education Handbook for more information.</i>		
TED 435	Literacy in the Content Area	
ERM 405	Measurement and Assessment in Teaching	
TED 444	Educational Psychology for the Secondary Grades	
TED 445	Human Diversity, Teaching, and Learning	
TED 459	Teaching Practices and Curriculum in Science	
TED 465	Student Teaching: Secondary School	
TED 466	Student Teaching Seminar	
Strongly Recommended		
LIS 120	Introduction to Instructional Technology for Educational Settings	

* The Teaching Licensure program in Biology includes a diverse science curriculum in order to align with licensure requirements of the North Carolina Department of Public Instruction.

Disciplinary Honors in Biology Requirements

- A minimum of 18 credit hours as defined below.
- UNC Greensboro cumulative GPA of 3.30 or better or, for transfer students, cumulative GPA of 3.30 or better from all prior institutions.

- A grade of B or higher in all course work used to satisfy the Honors requirements in Biology.

Code	Title	Credit Hours
Required		6-9
HSS 490	Senior Honors Project	
BIO 493	Honors Work *	
Select two 400-level Biology courses completed with Honors Contracts		6
Select a third Honors Contract course in Biology at the 300 or 400 level		3
Any of the Department's journal clubs		1
<i>Oral presentation of Honors Thesis to a committee of three Biology Faculty or public presentation of research at a local, regional, or national meeting is required.</i>		

* Only 6 credits may be counted toward the 30 credit minimum in the Biology major

Recognition

Receive a Certificate of Disciplinary Honors in Biology; have that accomplishment, along with the title of the Senior Honors Project, noted on the official transcript; and be recognized at a banquet held at the end of the spring semester.

Honors Advisor

Contact John Lepri at jjlepri@uncg.edu for further information and guidance about Honors in Biology. To apply: <https://honorscollege.uncg.edu/disciplinary-honors/disciplinary-honors-admissions/>

Application and Admission

UNC Greensboro undergraduate students who are pursuing a B.A. or B.S. in Biology may apply for admission to the Accelerated Master's Program (AMP) in Biology. Students may apply for admission to the AMP after the completion of 60 credit hours, with at least 30 credits completed at UNCG. Applicants must have a cumulative undergraduate GPA of at least 3.5 at UNCG. All applicants must complete the AMP information when applying for admission to the M.S. in Biology. The standard application requirements for the M.S. in Biology also apply to the AMP.

Undergraduate UNCG students may apply for admission to the AMP after the completion of 60 credit hours, with at least 30 credits completed at UNCG. Applicants must have a cumulative undergraduate GPA of at least 3.5 at UNCG.

Courses

Students admitted to the AMP may apply up to, but not more than, 12 credits of graduate-level course work toward completion of both the undergraduate and graduate degree, provided that they earn a grade of B (3.0) or better in the course and fulfill graduate-level requirements. The graduate courses the students will take in the Accelerated Master's Program in Biology must be approved by the Graduate Program Director. Some biology classes are cross-listed as undergraduate and graduate.

For those cross-listed courses offered to both undergraduate and graduate students, a student may not receive graduate credit for corresponding courses previously taken at the undergraduate level.

The following courses may be counted towards both the B.S. or B.A. and the M.S. degrees:

Code	Title	Credit Hours
BIO 601	Seminar in Animal Ecology	3
BIO 605	Seminar in Ecology	3
BIO 609	Seminar in Molecular Cell Biology	3
BIO 610	Seminar in Molecular Genetics	3
BIO 611	Advanced Topics in Animal Ecology	3
BIO 614	Prenatal Development: Embryology and Teratology	3
BIO 615	Advanced Topics in Animal Physiology	3
BIO 617	Advanced Topics in Genetics	3
BIO 618	Computational Biology	3
BIO 619	Plant Physiology	3
BIO 620	Ecosystem Ecology and Biogeochemistry	3
BIO 624	Advanced Topics in Microbiology	3
BIO 626	Conservation Biology	3
BIO 627	Landscape Ecology	3
BIO 628	Microbial Ecology	3
BIO 629	Aquatic Ecology	3
BIO 630	Advanced Topics in Plant Ecology	3
BIO 635	Molecular Toxicology	3
BIO 636	Ecotoxicology	3
BIO 637	Human Evolutionary Genetics	3
BIO 639	Biochemistry: Metabolic Regulation in Health and Disease	3
BIO 640	Biology of Aging	3
BIO 641	Stream Ecology	3
BIO 642	Genes and Signals	3
BIO 644	Entomology	3
BIO 645 & 645L	Disease Ecology and Disease Ecology Laboratory	4
BIO 646	Advanced Topics in Neurobiology	3
BIO 648	Current Topics in Biology	1-3
BIO 651 & 651L	Vascular Plant Systematics and Vascular Plant Systematics Laboratory	4
BIO 652	Metamorphosis	3
BIO 655	Vertebrate Reproduction	3
BIO 656	Global Change	3
BIO 660	Symbiosis	3
BIO 673	Drugs and the Brain	3
BIO 676	Population Genetics and Molecular Evolution	3
BIO 678	Hormones in Action	3
BIO 680	Environmental Physiology	3
BIO 685	Virology	3
BIO 686	Cell Cycle and Cancer	3
BIO 687	Epigenetics	3
BIO 691	Genetics of Complex Traits	3
BIO 694	Advanced Genetics	3

the Graduate Program Director. Please consult with an undergraduate advisor to determine how courses taken at the graduate level will meet requirements in the bachelor's degree program. All degree requirements for the M.S. in Biology remain the same.

Students must have completed the appropriate prerequisites required for listed courses or have permission of the department. All courses that lead to the completion of the M.S. in Biology must be approved by