

Bachelor of Science in Biology

About This Program

The Bachelor of Science in Biology is intended for students studying basic aspects of the biological sciences and prepares students for careers in a variety of the Biological Sciences including Health Professions, Genomics, Forensics, Ecology/Environmental Studies, and other areas.

Competencies

1. Upon completion, students will be able to explain the types of evidence that support the conclusion that evolution explains the diversity of life on Earth and reveal evolutionary relationships amongst groups of organisms.
2. Upon completion, students will be able to explain how the structure and function of cells affects their ability to survive, reproduce, and carry out specific functions in multicellular organisms including how genetic information is stored and passed from one generation to the next.
3. Upon completion, students will be able to describe and demonstrate the scientific methods of observation, experimentation, hypothesis formulation, and hypothesis testing.
4. Upon completion, students will be able to apply quantitative skills such as estimation, graphing data, statistical analyses, and analysis of large datasets.
5. Upon completion, students will be able to apply foundational concepts of general and organic chemistry and apply these concepts to biological systems.

Curriculum

Foundations

General Core Requirements (<https://catalog.uta.edu/academicregulations/degree requirements/generalcore requirements/>)

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Students must complete specific courses in certain core areas:

For Communication select:

ENGL 1301	RHETORIC AND COMPOSITION I
ENGL 1302	RHETORIC AND COMPOSITION II

For Mathematics select:

MATH 1421	PREPARATION FOR CALCULUS
MATH 1426	CALCULUS I ¹

For Life and Physical Science select:

PHYS 1441	GENERAL COLLEGE PHYSICS I
PHYS 1442	GENERAL COLLEGE PHYSICS II

For US History select:

HIST 1301	HISTORY OF THE UNITED STATES TO 1865
HIST 1302	HISTORY OF THE UNITED STATES, 1865 TO PRESENT

Biology Foundations

Additional hours in required core courses.

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UNIV 1131	STUDENT SUCCESS	1
or UNIV 1101	CAREER PREPARATION AND STUDENT SUCCESS	
CHEM 1441	GENERAL CHEMISTRY I	4
CHEM 1442	GENERAL CHEMISTRY II	4
CHEM 2321	ORGANIC CHEMISTRY I	3
CHEM 2322	ORGANIC CHEMISTRY II	3
CHEM 2181	ORGANIC CHEMISTRY I LABORATORY	1
CHEM 2182	ORGANIC CHEMISTRY II LABORATORY	1

Select one of the following in oral communication:

3

COMS 2302	PROFESSIONAL AND TECHNICAL COMMUNICATION FOR SCIENCE AND ENGINEERING
COMS 1301	FUNDAMENTALS OF PUBLIC SPEAKING

Select any course.

3

Select three courses at the 3000/4000 level.

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Biology Specialization

BIOL 1441	BIOLOGY I FOR SCIENCE MAJORS: CELL AND MOLECULAR BIOLOGY	4
BIOL 1442	BIOLOGY II FOR SCIENCE MAJORS: ECOLOGY AND EVOLUTION	4

BIOL 2300	BIostatistics (or approved substitute)	3
BIOL 3315	Genetics	3
BIOL 2444	General Microbiology	4
Select two of the following diversity courses:		8
BIOL 3427	Plant Science	
BIOL 3454	General Zoology	
BIOL 3457	General Ecology	
Select two of the following advanced core courses:		6
BIOL 3301	Cell Physiology	
BIOL 3312	Immunology	
BIOL 3339	Introduction to Evolution	
BIOL 3442	Human Physiology	
BIOL 3446	Human Anatomy	
Select three 3000/4000 level BIOL courses approved by advisor.		10
Total Hours		120

¹ Transfer students must present a minimum of six semester credit hours of equivalent or higher level mathematics courses through transfer or placement examination.

SUGGESTED COURSE SEQUENCE

First Year

First Semester	Hours	Second Semester	Hours
ENGL 1301		3 ENGL 1302	3
MATH 1421		4 MATH 1426	4
BIOL 1441		4 BIOL 1442	4
CHEM 1441		4 CHEM 1442	4
UNIV 1131 or 1101		1	
		16	15

Second Year

First Semester	Hours	Second Semester	Hours
CHEM 2321 & CHEM 2181		4 CHEM 2322 & CHEM 2182	4
BIOL 2300		3 BIOL 3315	3
Language, Philosophy & Culture		3 BIOL 3454	4
BIOL 2444		4 POLS 2312	3
POLS 2311		3	
		17	14

Third Year

First Semester	Hours	Second Semester	Hours
BIOL 3427 or 3457		4 BIOL 3301 or 3339	3
PHYS 1441		4 BIOL 3442 or 3446	4
Foundational Core Area Elective		3 PHYS 1442	4
HIST 1301		3 COMS 2302	3
		Creative Art	3
		14	17

Fourth Year

First Semester	Hours	Second Semester	Hours
BIOL Advanced Electives		3 BIOL Advanced Electives	6
Social and Behavioral Science		3 Advanced General Electives	9
HIST 1302		3	
Any Level Electives		3	
		12	15

Total Hours: 120

Program Completion

Advising Resources

Biology department advising is available for transfer students, prospective students, and first time in college students after meeting transition criteria.

Location:

Life Science Building 3rd floor - 345, 347, 349, 351

Email:

Find advisor emails at link below.

Phone:

817-272-2408

Web:

Contact your advisor - schedule an appointment (<https://www.uta.edu/academics/schools-colleges/science/departments/biology/advising/>)