

Bachelor of Science in Biology (Pre-Clinical)

About This Program

The Bachelor of Science in Biology pre-clinical track is intended for students who are interested in applying to a graduate level health professions program such as medical, dental, pharmacy, physician assistant, optometry, physical therapy, occupational therapy, and veterinary programs.

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/generalcorerequirements/>)

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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 U.S. 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-SC 1131	STUDENT SUCCESS	1
or UNIV-SC 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
CHEM 4311	BIOCHEMISTRY I	3
COMS 1301	FUNDAMENTALS OF PUBLIC SPEAKING	3
or COMS 2302	PROFESSIONAL AND TECHNICAL COMMUNICATION FOR SCIENCE AND ENGINEERING	

Select any course.

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Select two 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 2444	GENERAL MICROBIOLOGY	4
BIOL 3315	GENETICS	3
BIOL 3442	HUMAN PHYSIOLOGY	4
BIOL 3446	HUMAN ANATOMY	4
Select 16 hours from the following:		16
BIOL 3101	CURRENT TOPICS IN BIOLOGY	
BIOL 3301	CELL PHYSIOLOGY	
BIOL 3312	IMMUNOLOGY	
BIOL 3342	DEVELOPMENTAL BIOLOGY IN HEALTH AND DISEASE	
BIOL 3359	MEDICAL MOLECULAR BIOLOGY	
BIOL 4311	HISTOLOGY	
BIOL 4312	INTRODUCTION TO VIROLOGY	
BIOL 4321	ADVANCED PROBLEM SOLVING IN BIOLOGY	
BIOL 4379	RESEARCH AND DIRECTED STUDY	
CHEM 4312	BIOCHEMISTRY II	
SCIE 3348	PRE-MEDICAL PRECEPTORSHIP	

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-SC 1131 or 1101		1	
		16	15

Second Year

First Semester	Hours	Second Semester	Hours
CHEM 2321		3 CHEM 2322	3
CHEM 2181		1 CHEM 2182	1
BIOL 2300		3 BIOL 3315	3
BIOL 2444		4 BIOL 3454	4
POLS 2311		3 POLS 2312	3
		14	14

Third Year

First Semester	Hours	Second Semester	Hours
PHYS 1441		4 PHYS 1442	4
BIOL 4321		3 BIOL 3442 or 3446	4
CHEM 4311		3 CHEM 4312	3
Foundational Component Area Core		3 COMS 2302	3
HIST 1301		3 Creative Arts Core	3
		16	17

Fourth Year

First Semester	Hours	Second Semester	Hours
BIOL 3301		3 BIOL 3101	1
BIOL 3312		3 BIOL 4311	3
Any Level Elective		3 Advanced Electives	3
Advanced Elective		3 Language, Philosophy, & Culture Core	3
Social & Behavioral Science Core		3 HIST 1302	3
		15	13

Total Hours: 120

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/>)