

Bachelor of Science in Biology

Degree Requirements

Candidates for the Bachelor of Science in Biology must meet the following requirements.

- 1. Hours Required for the Degree:** Completion of a minimum of 131 total semester hours; 42 must be advanced.
- 2. General University Requirements:** See “General Degree Requirements” in the Academics section of this catalog.
- 3. College of Arts and Sciences Core Curriculum:** Minimum 61 hours (includes requirements of University Core Curriculum). See “Arts and Sciences Core Curriculum” in the College of Arts and Sciences section of this catalog for specific core requirements and list of approved courses. See specific degree plan for exact hours.

Students may complete either of two options to satisfy the College of Arts and Sciences foreign language requirement:

Option I: Complete two semesters of foreign language at the 2000 level or pass appropriate proficiency exam(s) as specified by the College of Arts and Sciences.

Option II: Complete four math or science classes (a minimum of 12 hours). A student who wishes to fulfill the foreign language requirement by Option II must first be counseled by an undergraduate advisor of the Department of Biological Sciences and must obtain written approval of Option II for inclusion in the student’s degree plan. This approval must include a specific listing of each course to be taken to fulfill the option. All courses approved must contribute in a logical and significant fashion to the student’s academic preparation for a stated professional school or career goal. No course substitutions from an approved Option II plan will be allowed without prior written approval from the department.

All courses must be appropriate for majors within the department that offers them. Normal limitations for undergraduate enrollment in graduate classes will still apply. Other requirements are specified below:

- **Biochemistry:** Upper-division and graduate-level biochemistry classes are acceptable if they are not used to complete a chemistry minor.
- **Biology:** Biology classes must be at the 3000 level or higher. A total of 6 hours of Honors Research (BIOL 4940) and Honors Thesis (BIOL 4950) may be used. Special Problems (4900-4910) and Cooperative Education in Biological Sciences (4920) may not be used to fulfill this requirement although they may be used to complete the upper-division biology and advanced elective requirements for the degree.
- **Chemistry:** Chemistry classes must be at the 3000 level or higher and may not be used to complete a chemistry minor.
- **Computer Science:** Classes must be above the level of CSCI 1100 and must open to computer science majors.
- **Math:** Math classes must be above the level of MATH 1710.
- **Physics:** Physics classes must be beyond the 1000 level.
- **Other Science Classes:** Other science classes open to majors in their respective disciplines (e.g., materials science, geology, psychology or anthropology) may be used to fulfill this requirement if approved by the appropriate Department of Biological Sciences undergraduate advisor.

4. Major Requirements: A major of 43 hours in the biological sciences, of which 28 must be advanced. See Supplemental Information below for requirements.

5. Minor Requirements: A minor in chemistry of at least 20 hours, of which a minimum of 6 hours must be advanced.

6. Electives: See four-year plan.

7. Other Course Requirements: CHEM 1410 or 1413/1430, 1420 or 1423/1440, 2370/3210 and 2380/3220; PHYS 1410/1430 and 1420/1440; MATH 1650, 1710 or equivalent.

8. Other Requirements: A minimum of 76 hours in the sciences, of which 34 must be advanced. A minimum 2.5 grade point average must be maintained on all advanced courses in the sciences.

DRED (Traffic Safety) courses may not be used to satisfy any portion of a degree in the College of Arts and Sciences.

BS in Biology

*Following is **one** suggested four-year degree plan. Students are encouraged to see their adviser each semester for help with program decisions and enrollment.*

BS in Biology

FRESHMAN YEAR

FALL	HOURS
BIOL 1710, Principles of Biology I	3
BIOL 1730, Principles of Biology I Laboratory	1
CHEM 1410, General Chemistry, or CHEM 1413, Honors General Chemistry ¹⁰	3
CHEM 1430, General Chemistry Laboratory	1
ENGL 1310, College Writing I	3
MATH 1650, Pre-Calculus I ⁴	<u>5</u>
Total	16

FRESHMAN YEAR

SPRING	HOURS
BIOL 1720, Principles of Biology II	3
BIOL 1740, Principles of Biology II Laboratory	1
CHEM 1420, General Chemistry, or CHEM 1423, Honors General Chemistry ¹⁰	3
CHEM 1440, General Chemistry Laboratory	1
ENGL 1320, College Writing II ⁶	3
MATH 1710, Calculus I	4
CSCI ¹	<u>3</u>
Total	18

SOPHOMORE YEAR

FALL	HOURS
BIOL 2040, Biology of Microorganisms	4
CHEM 2370, Organic Chemistry	3
CHEM 3210, Organic Chemistry Laboratory ²⁰	1
ENGL 2210, World Literature I	3
PSCI 1040, American Government I	3
Oral Communication ²	<u>3</u>
Total	17

SOPHOMORE YEAR

SPRING	HOURS
BIOL 2140, Principles of Ecology	3
BIOL 3450, Genetics ²⁰	4
CHEM 2380, Organic Chemistry	3
CHEM 3220, Organic Chemistry Laboratory	1
ENGL 2220, World Literature II	3
PSCI 1050, American Government II	<u>3</u>
Total	17

JUNIOR YEAR

FALL	HOURS
BIOL 3510, Cell Biology	3
BIOL 3520, Cell Biology Laboratory	1
LANG 2040, Foreign Language (intermediate) ²³	3
PHYS 1410, General Physics I	3
PHYS 1430, General Physics I Laboratory	1
BIOL (advanced) ²¹	4
Wellness ¹¹	<u>2-3</u>
Total	17-18

JUNIOR YEAR

SPRING	HOURS
LANG 2050, Foreign Language (intermediate) ²³	3
PHYS 1420, General Physics II	3
PHYS 1440, General Physics Laboratory II	1
BIOL (advanced) ²¹	4
CHEM ²²	<u>4</u>
Total	15

SENIOR YEAR

FALL	HOURS
ECON 1110, Principles of Macroeconomics	3
HIST 2610, United States History to 1865 ¹²	3
BIOL (advanced) ²¹	4
Elective (advanced) ¹⁶	4
Visual and Performing Arts ⁷	<u>3</u>
Total	17

SENIOR YEAR

SPRING	HOURS
BIOL (advanced) ²¹	4
BIOL (advanced) ²¹	4
HIST 2620, United States History Since 1865 ¹²	3
Understanding of Ideas and Values ⁸	3
Understanding of Ideas and Values ⁸	<u>3</u>
Total	17

*Actual degree plans may vary depending on availability of courses in a given semester.
Some courses may require prerequisites not listed.
See Arts and Sciences folding key (#2) for footnotes.*

Summary of Degree Requirements:

Biology (28 advanced):	43
Minor (Chemistry, 6 advanced):	20
Physics:	8
Core:	
English	12
History	6
Political Science	6
Wellness	2-3
Economics	3
Mathematics	9
Understanding of Ideas and Values	6
Visual and Performing Arts	3
Foreign Language or 12 hours additional advanced biology, mathematics or biochemistry:	6-12
Electives:	0-8
Computer Science Proficiency:	0-3
Oral Communication Skills Proficiency:	0-3

Note:

42 hours must be advanced;

24 advanced hours must be taken at UNT.

24 of the last 30 hours must be completed at UNT.

Minimum of 76 hours in the sciences, of which 34 must be advanced.

Supplemental Information for BS in Biology

Required courses: BIOL 1710/1730 and 1720/1740; 2040, 2140, 3450 and 3510/3520, plus 20 advanced hours of which 12 must be with laboratory.

General biology, premedical and pre-dental students in consultation with an undergraduate adviser should select the 20 advanced hours from the following: BIOL 3000, 3050, 3370, 3380, 3800/3810, 4070, 4090, 4110, 4200, 4250, 4300, 4420, 4480, 4500, 4530/4540, 4570/4580, 4600, 4750/4760.

By selecting upper-division biology courses from a subdiscipline, it is possible for the BS student to establish, unofficially, an area of study in ecology, microbiology, animal physiology/neuroscience, cell and molecular biology/genetics, or the plant sciences. The subdisciplines of microbiology, botany, ecology and neuroscience have been defined with the courses listed below. Please consult with the undergraduate advising secretary in Room 234 of the Biological Sciences Building for further information.

Microbiology. 20 advanced hours selected from the following: BIOL 3370, 3380, 4090, 4200, 4500, 4530/4540, 4570/4580.

Botany. 20 advanced hours selected from the following: BIOL 3160, 3170, 3370, 4000, 4050, 4070, 4130, 4250, 4260, 4570/4580.

Ecology. 20 advanced hours selected from the following: BIOL 3000, 3150, 3160, 3170, 3800/3810, 4000, 4050, 4070, 4090, 4260, 4380, 4420, 4570/4580.

Neurobiology/Physiology. 20 advanced hours selected from the following: BIOL 3800/3810, 4110, 4250, 4300, 4570/4580, 4750/4760 and PSYC 4640.

A minor in chemistry with a minimum of 20 hours, of which 6 must be advanced, may be completed by taking one course from CHEM 3450, 3530, BIOC 3620, 4540, 4550 or any advanced chemistry. (Premedical and pre-dental students are advised to substitute BIOC 4540-4550 for BIOC 3620.)

Additional required courses: CHEM 1410 or 1413/1430, 1420 or 1423/1440, 2370/3210 and 2380/3220; PHYS 1410/1430 and 1420/1440; MATH 1650, 1710 or equivalent.

Other degree requirements as specified in the College of Arts and Sciences section and "University Core Curriculum Requirements" in the Academics section.