

Biology, B.A.

Learn more about the Bachelor of Arts in Biology (<https://www.temple.edu/academics/degree-programs/biology-major-st-biol-bs>).

The Bachelor of Arts in Biology, which also provides the essential background for professional schools, is appropriate for those who are planning for careers in fields where a science background with additional breadth is advantageous.

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Bachelor of Arts

Summary of Requirements for the Degree

1. University Requirements

- MATH 0701 (4 s.h.) and/or ENG 0701 (4 s.h.), if required by placement testing.
- All Temple students must take a minimum of two writing-intensive courses at Temple as part of their major. Following is a list of courses that can be used to satisfy the writing-intensive requirement:

Code	Title	Credit Hours
BIOL 2296	Genetics (S)	4
BIOL 3096	Cell Structure and Function (F)	4
BIOL 3396	Scientific Writing for Biology: The Art of Communicating (S)	3

- Students must complete the General Education (GenEd) requirements.
 - See the General Education (<http://bulletin.temple.edu/undergraduate/general-education>) section of the *Undergraduate Bulletin* for the GenEd curriculum.
 - Students who complete CST majors typically receive a waiver for 2 Science & Technology (GS) and 1 Quantitative Literacy (GQ) GenEd courses.
- Students must satisfy general Temple University residency requirements (<http://bulletin.temple.edu/undergraduate/academic-policies/academic-residency-requirements>).

2. College Requirements

- 45 Upper Level (2000+) credits within the College of Science & Technology (CST) or the College of Liberal Arts (CLA).
- 90 credits within the College of Science & Technology (CST) or the College of Liberal Arts (CLA).
- Two (2) Upper Level (2000+) Liberal Art courses.
- Second (2nd) Level of a Foreign Language (1002).
- First Year Seminar Requirement: All students in the College of Science & Technology (CST) are required to take a 1 credit first year seminar course, SCTC 1001 CST First Year Seminar. Other courses that fulfill this requirement may be found on the CST College Requirements (<http://bulletin.temple.edu/undergraduate/science-technology/#collegerequirementstext>) page. Only one course in this category may count towards graduation.

3. Major Requirements for Bachelor of Arts (60-63 s.h.)

At least 7 courses required for the major must be completed at Temple. At least 4 Biology courses must be completed at Temple.

Code	Title	Credit Hours
Biology		
BIOL 1111 or BIOL 1911	Introduction to Organismal Biology Honors Introduction to Organismal Biology	4
BIOL 2112 or BIOL 2912	Introduction to Cellular and Molecular Biology Honors Introduction to Cellular and Molecular Biology	4
BIOL 2227	Principles of Ecology	3
BIOL 2296	Genetics (S)	4
BIOL 3096	Cell Structure and Function (F)	4
Select 3 Biology electives 2200 or above (see course descriptions for exceptions)		9-12
Chemistry		
Select one of the following:		4
CHEM 1031 & CHEM 1033	General Chemistry I and General Chemistry Laboratory I	
CHEM 1951 & CHEM 1953	Honors General Chemical Science I and Honors Chemical Science Laboratory I (F)	
Select one of the following:		4
CHEM 1032 & CHEM 1034	General Chemistry II and General Chemistry Laboratory II	
CHEM 1952 & CHEM 1954	Honors General Chemical Science II and Honors Chemical Science Laboratory II (S)	
Select one of the following:		4
CHEM 2201 & CHEM 2203	Organic Chemistry I and Organic Chemistry Laboratory I	
CHEM 2211 & CHEM 2213	Organic Chemistry for Majors I and Organic Majors Laboratory I (F)	
CHEM 2921 & CHEM 2923	Organic Chemistry for Honors I and Organic Honors Laboratory I (F)	
Select one of the following:		4
CHEM 2202 & CHEM 2204	Organic Chemistry II and Organic Chemistry Laboratory II	
CHEM 2212 & CHEM 2214	Organic Chemistry for Majors II and Organic Majors Laboratory II (S)	
CHEM 2922 & CHEM 2924	Organic Chemistry for Honors II and Organic Honors Laboratory II (S)	
Mathematics		
Select one of the following:		4
MATH 1041	Calculus I	
MATH 1941	Honors Calculus I	
Select one of the following:		4
MATH 1044	Introduction to Probability and Statistics for the Life Sciences	
MATH 1042	Calculus II	
MATH 1942	Honors Calculus II	
Physics		
PHYS 2021 or PHYS 2921	General Physics I Honors General Physics I	4
PHYS 2022 or PHYS 2922	General Physics II Honors General Physics II	4
Total Credit Hours		60-63

Code	Title	Credit Hours
(F) - Fall only course		
(S) - Spring only course		

Note: Grades of C or higher in both CHEM 1031 and CHEM 1032 or their Honors alternates are required to take BIOL 2112. Grades of C or higher in BIOL 1111 and BIOL 2112 or their Honors alternates are required to take upper-level Biology courses, and a C- or higher is required unless otherwise specified in all other courses for the major, including course prerequisites. Most research and independent study courses do not count as Biology electives, such as:

Code	Title	Credit Hours
BIOL 2082	Independent Research I	1 to 4
BIOL 3082	Independent Research II	1 to 4
BIOL 3091	Research Methods	3
BIOL 3681	Cooperative Studies	2 to 4
BIOL 3685	Externship Studies	3
BIOL 4291	Extrdepartmental Research	1 to 4
BIOL 4483	Accelerated Research in Biochemistry	3
BIOL 4491	Research in Biochemistry	3
BIOL 4591	Research in Neuroscience	1 to 4

A GPA of 2.0 or better is required in Biology courses in order to graduate.

Distinction in the Major

To be eligible for distinction in the major, a student must retain a grade point average of 3.2 or better (overall and in the major); should register for BIOL 4391 Accelerated Research in Biology or BIOL 4291 Extrdepartmental Research for a total of 6 s.h. over two semesters; and must write a final research paper and present his/her research at a departmental research poster session before graduation. A student, however, does not have to enroll in the distinction program in order to participate in departmental research. Other courses (BIOL 2082 Independent Research I and BIOL 3082 Independent Research II), provide credit toward graduation and research experience, and are available to undergraduate students from their sophomore through their senior year. A student may register for BIOL 3082 more than one semester, however only one semester may be completed for a grade. The additional semester may be taken for credit/no credit. In all cases, permission of the faculty and application to the department Honors Committee is required before registering for research credits.

Calculation of Major GPA

Courses listed under the major requirements for the degree will be included in the calculation of the major GPA. Courses that could not apply toward the major as an elective or required course would not be counted in the calculation of the major GPA. This would include BIOL 1011, for example.

A total of up to 3 s.h. of Biology research courses numbered lower than 4000 (to include: BIOL 2082, BIOL 3082, BIOL 3181, BIOL 3281, and BIOL 3681) may be taken for a letter grade. Any additional credits in research courses in this category can be taken only on a CR/NC basis. No research courses numbered lower than 4000 may be used for Biology elective credit.

Suggested Academic Plan

Bachelor of Arts in Biology

Requirements for New Students starting in the 2019-2020 Academic Year

Year 1		Credit Hours
Fall		
Select one of the following:		4
CHEM 1031 & CHEM 1033	General Chemistry I	
CHEM 1951 & CHEM 1953	Honors General Chemical Science I (F)	
MATH 1041 or 1941	Calculus I	4
SCTC 1001	CST First Year Seminar	1

General Education/Elective Credits		6
	Term Credit Hours	15
Spring		
BIOL 1111 or 1911	Introduction to Organismal Biology	4
Select one of the following:		4
CHEM 1032 & CHEM 1034	General Chemistry II	
CHEM 1952 & CHEM 1954	Honors General Chemical Science II (S)	
Select one of the following:		4
MATH 1044	Introduction to Probability and Statistics for the Life Sciences	
MATH 1042	Calculus II	
MATH 1942	Honors Calculus II	
General Education/Elective Credits		3
	Term Credit Hours	15
Year 2		
Fall		
BIOL 2112 or 2912	Introduction to Cellular and Molecular Biology	4
Select one of the following:		4
CHEM 2201 & CHEM 2203	Organic Chemistry I	
CHEM 2211 & CHEM 2213	Organic Chemistry for Majors I (F)	
CHEM 2921 & CHEM 2923	Organic Chemistry for Honors I (F)	
General Education/Elective Credits		7
	Term Credit Hours	15
Spring		
Select one of the following:		3-4
BIOL 2227	Principles of Ecology	
BIOL 2296	Genetics [WI] (S)	
Select one of the following:		4
CHEM 2202 & CHEM 2204	Organic Chemistry II	
CHEM 2212 & CHEM 2214	Organic Chemistry for Majors II (S)	
CHEM 2922 & CHEM 2924	Organic Chemistry for Honors II (S)	
General Education/Elective Credits		9-8
	Term Credit Hours	16
Year 3		
Fall		
BIOL 3096	Cell Structure and Function [WI] (F)	4
PHYS 2021 or 2921	General Physics I	4
General Education/Elective Credits		8
	Term Credit Hours	16
Spring		
Select one of the following:		4-3
BIOL 2227	Principles of Ecology	
BIOL 2296	Genetics [WI] (S)	
PHYS 2022 or 2922	General Physics II	4
General Education/Elective Credits		7-8
	Term Credit Hours	15

Year 4	
Fall	
Upper-Level 2200+ Biology Elective ¹	3-4
Upper-Level 2200+ Biology Elective ¹	3-4
General Education/Elective Credits	9-7
Term Credit Hours	15
Spring	
Upper-Level 2200+ Biology Elective ¹	3-4
General Education/Elective Credits	13-12
Term Credit Hours	16
Total Credit Hours:	123

Code	Title	Credit Hours
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(F) - Fall only course

(S) - Spring only course

¹ If the student has taken the necessary prerequisite courses, some of the Biology elective courses may be taken before the Fall semester of Year 4.