

BACHELOR OF SCIENCE IN BIOLOGY - GENERAL

Effective Spring 2020: The School of Biological Sciences has transitioned all undergraduate Biology (BIOL) and Applied Physiology (APPH) courses to Biological Sciences (BIOS) to reflect the merger of the two Schools. Courses under the BIOL- and APPH- may still apply to these requirements. Students should consult with advisors to determine which requirements have been met.

Code	Title	Credit Hours
Wellness		
APPH 1040	Scientific Foundations of Health or APPH 10 The Science of Physical Activity and Health or APPH 10 Flourishing: Strategies for Well-being and Resilience	2
Core A - Essential Skills		
ENGL 1101	English Composition I	3
ENGL 1102	English Composition II	3
MATH 1552	Integral Calculus or MATH 15 Calculus for Life Sciences	4
Core B - Institutional Options		
Select one of the following:		3
CS 1301	Introduction to Computing	
CS 1315	Introduction to Media Computation	
CS 1371	Computing for Engineers	
Core C - Humanities		
Any HUM		6
Core D - Science, Math, & Technology		
PHYS 2211	Introductory Physics I	4
PHYS 2212	Introductory Physics II	4
MATH 1551	Differential Calculus	2
MATH 1553	Introduction to Linear Algebra	2
Core E - Social Sciences		
Select one of the following:		3
HIST 2111	The United States to 1877	
HIST 2112	The United States since 1877	
INTA 1200	American Government in Comparative Perspective	
POL 1101	Government of the United States	
PUBP 3000	American Constitutional Issues	
Any SS		9
Core F - Courses Related to Major		
BIOS 1207 & 1207L	Biological Principles for Majors and Biological Principles Project Laboratory or BIOS 110 Biological Principles & 1107L and Biological Principles Laboratory	4
CHEM 1211K	Chemical Principles I	4
CHEM 1212K	Chemical Principles II	4
CHEM 2311	Organic Chemistry I	3
CHEM 2312	Organic Chemistry II or CHEM 23 Organic and Bioorganic Chemistry	3
Major Requirements		

BIOS 1208 & 1208L	Organismal Biology for Majors and Organismal Biology Project Laboratory or BIOS 110 Organismal Biology & 1108L and Organismal Biology Laboratory	4
BIOS 2300	Ecology or BIOS 2310 Problems in Ecology	3
BIOS 3450	Cell and Molecular Biology	3
BIOS 2600	Genetics or BIOS 2610 Integrative Genetics	3
Biology Lab ¹		2
BIOS 3600	Evolutionary Biology	3
BIOS 4460	Communicating Biological Research	1
Select one of the following:		3
BIOS 4590	Research Project Lab	
BIOS 4690	Independent Research Project	
Non-Biology Courses		
CHEM 2380	Synthesis Laboratory I or CHEM 2380L Synthesis Laboratory I	2
Select one of the following:		3
BIOS 3400	Mathematical Models in Biology	
BIOS 4150	Genomics and Applied Bioinformatics	
BIOS 4401	Experimental Design and Statistical Methods in Biological Sciences	
Biology Electives		
Biology Electives 3000-level or higher ²		21
Free Electives		
Free Electives ^{3,4}		11
Total Credit Hours		122

¹ Students must complete two of the three lab categories listed below. Each lab should be taken concurrently with the associated lecture course when possible. If you choose to take all three lab courses, then the 3000-level course may count toward Biology Electives instead of the Core Lab requirement.

- Ecology or Problem-based Ecology lab: BIOS 2301 or BIOS 2311
- Genetics or Integrative Genetics lab: BIOS 2601 or BIOS 2611
- Cell and Molecular Biology lab: BIOS 3451

² Students are required to complete 21 credit hours of Biology electives defined as follows:

- 12 'depth' credit hours must be 3000-level or higher courses with 'BIOS' prefix, excluding BIOS 4694-BIOS 4699. BIOS courses that are cross-listed with other departments are included in these 12 depth credit hours.
- The remaining 9 'breadth' credit hours can be selected from: other BIOS 3000-level or higher courses, BIOS experiential learning courses*, and/or the list of approved courses offered in other departments**.
- **Experiential learning courses include: BIOS 4695, BIOS 4697, BIOS 4699, and VIP courses (VIP courses must have a Biological Sciences instructor). A maximum of 6 credits of each experiential learning course may be used to fulfill 'breadth' credit hours. Additional experiential learning coursework may be used to fulfill Free Electives.
- **Approved breadth elective courses in other departments include 3000-level or higher BMED, CHEM, EAS, NEUR, MATH, PHYS, PSYC; EXCEPT the following: BMED 4699, BMED

4900-BMED 4903, CHEM 4601, CHEM 4699, CHEM 4901-CHEM 4903, EAS 4651, EAS 4699, EAS 4900, MATH 4080, MATH 4090, MATH 4699, MATH 4999, NEUR 4699, NEUR 4901, PHYS 4601, PHYS 4602, PHYS 4699, PSYC 4600, PSYC 4601, PSYC 4699, PSYC 4900-PSYC 4910.

³ CETL 2000 may be applied to free electives.

⁴ Pass-Fail allowed for Free Electives only. Refer to Institute Rules for maximum Pass-Fail Credits allowed.