

Biological Science

Degree Type

Associate in Arts

The Biological Science Associate in Arts Degree serves students who are interested in Biological Sciences and intend to transfer to a 4-year institution, but are either unsure of the specific transfer program that interests them, are potentially interested in a Biology minor, or who are interested in programs such as Wildlife Conservation, Sustainable Agriculture, or Marine Biology that require a more varied set of major-related courses at the sophomore level. In comparison to the A.S. degree in Biological Science, students enrolled in the A.A. degree program in Biological Science will graduate with a greater number of general education credits completed, but with fewer credits in the sciences. When selected appropriately, all courses are transferrable to the University of New Hampshire, with the exception of College Algebra.

Program Outcomes

Students will be able to:

- Understand theoretical principles across a broad range of sub-disciplines in biological sciences and chemistry.
- Understand and be able to apply principles of mathematics as they pertain to the study of biological science and chemistry.
- Understand and be able to apply the scientific method.
- Understand and be able to execute a wide variety of laboratory techniques in microbiology, biochemistry, cell biology, ecology, genetics, and chemistry.
- Generate and maintain accurate lab documentation, including a laboratory notebook.
- Analyze and draw conclusions from generated scientific data, and present findings both orally and in formal laboratory reports.
- Conduct basic bioinformatics-based analysis.
- Qualify for transfer to a four-year college or university with the necessary foundation in biology, chemistry, and mathematics for upper level study in a wide variety of biological disciplines.

Technical Standards

Students enrolling in Biological Science degree programs must, in addition to meeting the specific pre-requisite requirements for each course, meet the following general, technical standards:

- Students must be able to comprehend the English language, both oral and written, and must have sufficient manual dexterity to produce legible written documents in a timely manner.
- Students must be able to sit or stand at a desk/ laboratory bench and must possess the necessary focus to stay on task for extended periods of time.
- Students must be able to comprehend and follow instructions in the classroom and laboratory in a timely manner.
- Students must possess the necessary manual dexterity to carry out assigned laboratory tasks.
- Students must be able to perform required classroom and laboratory operations, including mathematical operations, without reference to notes, as directed.

First Year

Fall Semester

Item #	Title	Theory Hours	Lab Hours	Credits
	ENGL110G/111G	4	0	4-5
BIOL108G	General Biology I	3	3	4
MATH150G	College Algebra	4	0	4
	Humanities/Foreign Language/Fine Arts Elective*	3	0	3
Sub-Total Credits		14	3-5	15-16

Students who do not test directly into MATH150G (College Algebra) may substitute MATH152G (College Algebra Plus). Students with appropriate test scores may substitute a higher-level course from the Calculus Math pathway: MATH210G (Pre-Calculus), MATH230G (Calculus I), MATH235G (Statistics for Engineers and Scientists), or MATH250G (Calculus II).

Spring Semester

Item #	Title	Theory Hours	Lab Hours	Credits
BIOL109G	General Biology II	3	3	4
CHEM115G	General Chemistry I	3	3	4
MATH210G	Pre-Calculus	4	0	4
ENGL214G	Introduction to Creative Nonfiction	3	0	3
	Social Science Elective*	3	0	3-4
Sub-Total Credits		16-17	6	18-19

Students with appropriate test scores or the appropriate prerequisite may substitute a higher-level course from the Calculus Math pathway: MATH230G (Calculus I), MATH235G (Statistics for Engineers and Scientists), MATH250G (Calculus II), or MATH265G (Differential Equations).

(Students should consider completing one of these courses over the summer.)

Second Year

Fall Semester

Item #	Title	Theory Hours	Lab Hours	Credits
CHEM116G	General Chemistry II	3	3	4
	Math Elective/Lab Science Elective	3	3	4
	Social Science Elective*	3	0	3-4
	Humanities/Foreign Language/Fine Arts Elective*	3	0	3
Sub-Total Credits		12-13	6	14-15

Spring Semester

Item #	Title	Theory Hours	Lab Hours	Credits
	Biology Elective	3	3	4
	Math Elective/Lab Science Elective	3	3	4
	Social Science Elective*	3	0	3-4
	Humanities/Foreign Language/Fine Arts Elective*	3	0	3
	Sub-Total Credits	12-13	6	14-15
	Total Credits			61-65