

Chemistry

Degree Type

Associate in Arts

The Chemistry degree is designed for students who wish to transfer to a four-year institution to pursue a degree in chemistry, biochemistry or chemical engineering. It provides a basic foundation in chemistry, along with appropriate coursework in the related disciplines of mathematics, biology and physics.

Program Outcomes

Students graduating with the Associate of Arts degree in Chemistry will be able to:

- Understand and be able to apply principles of chemistry across the sub-disciplines.
- Understand principles of mathematics, biology and physics at a level appropriate to preparation for an undergraduate major in chemistry, biochemistry, or chemical engineering.
- Understand and be able to apply the scientific method.
- Understand and be able to execute a wide variety of laboratory techniques in chemistry and related fields.
- Generate and maintain accurate lab documentation including a laboratory notebook.
- Analyze and draw conclusions from generated scientific data, and present findings in a formal laboratory report.
- Qualify for transfer to a four-year college or university.

Technical Standards

Students enrolling in the Chemistry program 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.

Transfer Credit Policy

In addition to Great Bay transfer credit policies, transfer of courses more than ten years old will be evaluated by the department chair or program coordinator on an individual basis.

First Year

Fall Semester

Item #	Title	Theory Hours	Lab Hours	Credits
	ENGL110G/111G	4	0	4-5
CHEM115G	General Chemistry I	3	3	4
	MATH150/152G (Chem)	4	0	4-5
	Social Science Elective*	3	0	3-4
	Sub-Total Credits	14-15	3-5	15-18

Spring Semester

Item #	Title	Theory Hours	Lab Hours	Credits
CHEM116G	General Chemistry II	3	3	4
MATH210G	Pre-Calculus	4	0	4
BIOL108G	General Biology I	3	3	4
	Social Science Elective*	3	0	3-4
	Humanities/Foreign Language/Fine Arts Elective*	3	0	3
Sub-Total Credits		16-17	6	18-19

Second Year

Fall Semester

Item #	Title	Theory Hours	Lab Hours	Credits
CHEM200G	Organic Chemistry	3	3	4
MATH230G	Calculus I	4	0	4
ENGL214G	Introduction to Creative Nonfiction	3	0	3
	Humanities/Foreign Language/Fine Arts Elective*	3	0	3
Sub-Total Credits		13	3	14

MATH230G: Students with appropriate test scores or the appropriate prerequisite may substitute a higher- level course from the Calculus math pathway: MATH230G, [MATH235G](#), [MATH250G](#), [MATH265G](#).

Spring Semester

Item #	Title	Theory Hours	Lab Hours	Credits
CHEM205G	Biochemistry	3	3	4
PHYS290G	University Physics I	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

Curriculum Recommendations

Students who do not test directly into MATH 150G may substitute MATH 152G. Students with appropriate test scores may substitute a higher-level course from the Calculus math pathway: MATH210G, MATH230G, MATH235G, MATH250G.

Students with appropriate test scores or the appropriate prerequisite may substitute a higher- level course from the Calculus math pathway: MATH230G, MATH235G, MATH250G, MATH265G.

Social Science Elective, Foreign Language/Humanities/Fine Arts Elective: Students intending to transfer should take care to select a course that will transfer appropriately to their intended institution.

Total Credits			61-66
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