

Engineering: Bioengineering

Degree Type

Associate in Science

The Bioengineering Associate in Science degree is a transfer program which meets a majority of the first and second year baccalaureate requirements for math, chemistry, biology, and physics, as well as the engineering principles which are the foundation of a bioengineering program of study. The transfer program has been developed in consultation with the University of New Hampshire's College of Engineering and Physical Sciences to align program requirements for transfer purposes. The core courses in the program are also common to most undergraduate bioengineering programs.

1. Students may transfer with true junior status upon completion of this degree, subject to GPA requirements.
2. Students who place into 100-level or developmental mathematics may still complete the program but will require up to ten (10) additional math credits.
3. General education requirements do not exceed Discovery program requirements at the University of New Hampshire with careful choice of courses.

Program Outcomes

- Students will access, generate, process, and transfer information using appropriate technologies.
- Students will understand mathematics and become mathematically confident by communicating and reasoning mathematically, by applying mathematics in real-world settings, and by solving problems through the integrated study of number systems, geometry, algebra, and trigonometry.
- Students will understand and apply scientific concepts, principles, and theories pertaining to the physical world and recognize the historical development of ideas in science.
- Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems.
- Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to other areas.
- Students will apply the knowledge and skills of mathematics, science, and technology to real-life problems and make informed decisions.
- After completing the program, students will be prepared to begin using mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.

Technical Standards

1. Basic computer skills including software such as web browsers and office applications
2. Good manual dexterity; adequate (basic) keyboarding skills
3. Vision for reading on computer screen and printed material
4. Critical thinking ability
5. Ability to work independently as well as in small groups
6. Ability to communicate effectively verbally and in writing, as in an office/work environment

Transfer Credit Policy

In addition to Great Bay transfer credit policies, transfer of courses in the Bioengineering program that are designated MAJOR courses more than 10 years old will be evaluated by the program coordinator on an individual basis.

First Year

Fall Semester

Item #	Title	Theory Hours	Lab Hours	Credits
CHEM115G	General Chemistry I	3	3	4
	MATH210G (Bioeng)	4	0	4
	ENGL110G/111G	4	0	4-5
SOCI120G	Society and Technological Change	3	0	3
FYE114G	First Year Seminar Engineering	1	0	1
	Sub-Total Credits	15	3-5	16-17

Spring Semester

Item #	Title	Theory Hours	Lab Hours	Credits
	English Elective	3	0	3
CHEM116G	General Chemistry II	3	3	4
BIOL108G	General Biology I	3	3	4
MATH230G	Calculus I	4	0	4
	Sub-Total Credits	13	6	15

Second Year

Fall Semester

Item #	Title	Theory Hours	Lab Hours	Credits
	CHE 501 (UNH) - Introduction to Chemical Engineering I	3	0	3
CHEM200G	Organic Chemistry	3	3	4
MATH250G	Calculus II	4	0	4
PHYS290G	University Physics I	3	3	4
	Humanities/ Foreign Language / Fine Arts Elective*	3	0	3
	Sub-Total Credits	16	6	18

Spring Semester

Item #	Title	Theory Hours	Lab Hours	Credits
	CHE 502 (UNH) - Introduction to Chemical Engineering II	3	0	3
	BIOL210G or BIOL220G or CHEM205G or BTEC220G or PHYS295G	2	3	4
MATH235G	Statistics for Engineers and Scientists	4	0	4
MATH265G	Differential Equations	4	0	4
	Sub-Total Credits	13-14	3-6	15
	Total Credits			64-65