

Biotechnology/Biomanufacturing Degree (BTD)

Biotechnology uses living organisms, usually microscopic, to manufacture drugs or other chemicals for the purpose of enhancing medical care or altering a process which improves living conditions for the general population. Careers in biotechnology/biomanufacturing will continue to advance. The biotechnology/biomanufacturing curriculum will offer excellent academic and skill development for anticipated positions. For more information, please call 978-630-9578.

Number	Suggested Course Order	Cr	Semester	Grade	Prerequisites/Notes
BIO109	Biology I	4			MAT092, RDG100, or placement
BTC101	Introduction to Biotechnology	4			ENG100, RDG100, FYE101, MAT096, or placement
BTC102	Basic Solution and Media Preparation	3			ENG100, RDG100, FYE101, MAT096, or placement
ENG101	English Composition I	3			ENG100, RDG100, FYE101, or placement
	General Elective	3			Electives: Any course see page 66 for exceptions
CHE203	Introduction to Inorganic, Organic, and Biochemistry	4			ENG100, RDG100, FYE101, MAT096, or placement
BTC185	Industrial Microbiology	4			BTC101, ENG100
CIS127	Computer Technologies	3			ENG100, RDG100, FYE101, or placement
ENG102	English Composition II	3			ENG101
MAT143	Statistics	3			MAT096 or higher (MAT128 recommended)
BTC190	Principles of Protein Purification	4			BTC101, BTC102 (or co-requisite), CHE203
BTC110	Biotechnology Experience: Concepts and Procedures	4			BTC101, BTC102, CHE203
HUM212	Medical Ethics	3			ENG101
	Health Elective	2/3			Electives: BIO101, BIO103, BIO112, BIO230, CHC101, CHC108, CHC220, EXS201, PER126, PER127, PER130
BTC120	Biotechnology Experience: Biomanufacturing	4			BTC101, BTC102; BTC190 (co-requisite)
BTC200	Biotechnology Seminar (Capstone Course)	3			BTC101, 102, 110, 120 (pre or co-requisite)
	Professional Elective	3/4			Electives: BIO205, CHE107, CHE108, ENG106, MAS208, MAT163 or higher, BIO170, BTC180
	Social Science Elective	3			Electives: ANT, DSI, PSY, SOC, GEO, HIS, POL, ECO, SSC
Total: 60/62 credits					

See page 83 of the college catalog for program competencies and technical standards.

Campus/format: A majority of this can be completed at the Devens Campus. Many general education classes must be completed at the Leominster or Gardner Campuses.

Helpful hints: Biotechnology/Biomanufacturing will require a substantial background and interest in science and mathematics. Potential students should recognize the need for a strong background and may be required, through testing and an interview with the admissions office, to enroll in math and science courses as prerequisites. The curriculum will be offered days and evenings.

Special requirements: Technical standards must be met with or without accommodations. Students will need a grade of C or better in all BTC courses.

Career options: Graduates can pursue technician-level positions throughout the biomanufacturing industry.

Earning potential: \$17.17 per hour.