



BIOTECHNOLOGY & BIOMANUFACTURING



SUPPORTED BY THE U.S. DEPARTMENT OF LABOR

Funded, in part, by a grant awarded under the President's Community-Based Job Training Grants, as implemented by the U.S. Department of Labor's Employment and Training Administration.

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B iotechnology 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.

MWCC was recently awarded a Department of Labor Workforce Development grant. This grant will support the establishment of biotechnology/ biomanufacturing training labs at the Devens campus and allow the college to increase enrollments in the curriculum.

We have three programs:

1. 2 year associates degree
2. 1 year certificate program
3. 12 Week Biomanufacturing Workforce Training Program



Devens Campus, One Jackson Place, 27 Jackson Rd., Devens, MA 01434

BIOTECHNOLOGY BIOMANUFACTURING PROGRAMS



- **Two Year Degree**
- **One Year Certificate**
- **12-Week Non-credit**

Biotechnology & Biomanufacturing Programs

Biotech 2 Year Degree

Number	Suggested Course Order	Cr
BIO109	General Biology	4
BTC101	Introduction to Biotechnology	4
CIS127	Computer Technologies	3
CHE203	Introduction to Inorganic, Organic and Biochemistry	4
ENG101	English Composition I	3
HUM212	Medical Ethics	3
BIO160	Principles of Biochemistry	4
ENG102	English Composition II	3
BTC102	Basic Solution & Media Preparation	3
	General Elective	3
BTC110	Biotechnology Experience I: Concepts and Procedures	4
	Professional Elective	3
MAT143	Probability and Statistics	3
PER126/130	Health, Fitness, & Wellness Elective	2/3
	Social Science Elective	3
BTC120	Biotechnology Experience: Biomanufacturing	4
BIO170	Cell Biology	4
BTC200	Biotechnology Seminar	5

Total: 60/61

Biotech 1 Year Certificate

Number	Suggested Course Order	Cr
CHE203	Introduction to Inorganic, Organic and Biochemistry	4
BIO160	Principles of Biochemistry	4
MAT126	Topics in Mathematics	3
BTC101	Intro. to Biotechnology	4
BTC102	Basic Solution and Media Prep.	3
	Professional Elective	3
BTC120	Biotech Experience: Biomanufacturing	4
BTC200	Biotech Seminar	3

Total: 28



MWCC Main page: <http://www.mwcc.edu>

Info. Packet and Applications:
<http://www.mwcc.edu/PDFs/BiotechInfoPacket.pdf>

12 Week Biomanufacturing Workforce Training Program

MWCC has added a non-credit Workforce Training Program to its Biotechnology Curriculum as a result of a grant from the U.S. Department of Labor. Students will complete a 12-week training course designed to provide the skills necessary to enter the biomanufacturing workforce. They will be expected to keep up with an accelerated learning program and thus will best be served by a strong science background.

This intensive course covers a wide variety of topics necessary for success in gaining and advancing in the biomanufacturing industry. Strong emphasis will be placed on learning and practicing the laboratory skills required for employment as a Downstream or Upstream Process Operator, Quality Assurance Microbiologist, Quality Control Chemist, and other entry and mid-level positions. Classroom topics include a review of related science courses, biotechnology, safety and regulatory requirements, computer skills, statistics, and separation science.

Labs will demonstrate and apply aseptic techniques, upstream and downstream processes, process support functions, and chemistry and microbiology techniques. Efforts will be made to place students in internships and full-time jobs through interaction with industry.

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