

Bioprocessing Technology

■ Letter of Recognition (Career)

Course		Credits
Requirements		
BPM 102	Bioprocessing Environment	3
BPM 103	Laboratory Techniques I	1
BPM 110	Bioprocessing Measurements	4
		8

■ Certificate (Career) *

Requirements		
BI 101	General Biology	4
BI 120	Microbiology for Allied Health or	
BI 203	Elements of Microbiology	4
BI 140	Biotechnology and Society	3
BI 220	Cell Biology and Tissue Culture	4
BPM 102	Bioprocessing Environment	3
BPM 103	Laboratory Techniques I	1
BPM 110	Bioprocessing Measurements	4
BPM 214	Techniques in Bioproduction	4
CH 101	General Chemistry	4
CH 102	General Chemistry	4
		35

■ A.A.S. Degree (Career)

Requirements		
English		
EN 101	English Composition	3
Mathematics		
Mathematics Elective (GenEd course list)		3/4
Arts & Humanities		
† Communications Elective (GenEd course list)		3
Interdisciplinary & Emerging Issues		
CIS 101	Introduction to Computers & Information Processing	3
PE/Health Elective		1/3
Social & Behavioral Sciences		
† Social & Behavioral Sciences Elective (GenEd course list)		3
Biological & Physical Sciences		
BI 101	General Biology	4
CH 101	General Chemistry	4
CH 102	General Chemistry	4
Other Requirements		
BI 120	Microbiology for Allied Health or	
BI 203	Elements of Microbiology	4
BI 140	Biotechnology and Society	3
BI 220	Cell Biology and Tissue Culture	4
BPM 102	Bioprocessing Environment	3
BPM 103	Laboratory Techniques I	1
BPM 110	Bioprocessing Measurements	4
BPM 214	Techniques in Bioproduction	4
INTR 103	Internship or	
Elective	(If an internship is not taken, the qualified elective must be approved by the program manager and must be at least a 200-level math or science course)	3
† Electives (Recommend BI 240, BU 273, CH 201, CMSP 107, EN 115)		6/7
		60/64

Courses in bold satisfy general education requirements.

† These courses fulfill the cultural competence graduation requirement.

Frederick Community College

Bioprocessing Technology

Keri-Beth Pettengill 301.846.2564 kpettengill@frederick.edu

Bioprocessing Technology

Manufacturing of biological products for use in industry and research is a cutting-edge industry in Frederick County and nation-wide. Rapid expansion and growth of the local biotechnology industry is fueling the demand for qualified process operators, providing employment opportunities in a dynamic field, with employer-supported career development and continued education possibilities.

Program of Study

The Bioprocessing Technology program prepares individuals for employment in the local biotech industry. The program emphasizes science, communication and critical-thinking skills, manufacturing technologies and laboratory environmental health and safety. Students work in small collaborative groups to apply current manufacturing techniques, while using problem-solving and critical-thinking skills.



Program Benefits

- Study in a small class of 15-20 students for more hands-on learning opportunities
- Interact with industry professionals who bring work-place experience to the classroom
- Be part of the growing trend by learning necessary skills for successful employment in government facilities and the local biotech industry
- Take relevant courses in a career program that can be applied to continuing education, career enhancement or a career shift
- Courses in the program of study lead to a Letter of Recognition, a Certificate*, or an Associate of Applied Science degree, based on the requirements fulfilled and the needs of the individual student.



Acquired Job Skills

- Understand and apply basic laboratory skills, documentation practices and aseptic techniques to monitor production, maintain workplace safety, and prevent contamination of bio-products
- Perform upstream bioprocessing techniques to culture cells and microorganisms to create a bulk bio-product for research and industry
- Perform downstream bioprocessing techniques to separate and refine bulk bio-products into a suitable form for end use in industry
- Manufacture assays for diagnostic testing for research
- Implement cell culture, fermentation, separation, purification and sterilization techniques in a laboratory setting

Financial Aid/Scholarship Opportunities

Frederick Community College (FCC) participates in federal, state and local financial aid programs. Students are encouraged to apply for financial aid and for scholarships offered by the community. Information regarding scholarship and financial aid is available on the FCC website, www.frederick.edu, under Apply & Register.

Transfer Note

FCC has articulation agreements with the following institutions for students graduating with an A.A.S. in Bioprocessing Technology and who are looking for transfer opportunities. For more information, contact the Counseling & Advising Office at 301.846.2471.

- University of Maryland University College—B.T.P.S. Biotechnology, B.S. Laboratory Management
- Stevenson University, B.S. Biotechnology
- Hood College, B.A. Biology

The College prohibits discrimination against any person on the basis of race, religion, gender, color, national origin, ancestry, age, sexual orientation, marital status, physical or mental disability of otherwise qualified individuals and any other category protected by federal, State or local law. Frederick Community College subscribes to full access to all college facilities as outlined in the Americans with Disabilities Act of 1990 and as amended. The designated coordinator for the college's compliance with Section 504 of the Rehabilitation Act of 1973 and for the Americans with Disabilities Act is Kate Kramer-Jefferson, 301.846.2409.

Frederick Community College makes every effort to accommodate individuals with disabilities. If you have accommodation needs, please call 301.846.2408. To request a sign language interpreter, please call 301.846.2476 (Voice) or 240.575.2366/866.616.7243 (Videophone). Requests for any accommodation should be made at least five working days prior to attending a scheduled event.

*** Gainful employment** • For more information about our graduation rates, the median debt of students who completed the program, and other important information, please visit our website at www.frederick.edu/gainfulemployment.

Contact **Keri-Beth Pettengill** at **301.846.2564** or email **kpettengill@frederick.edu**