

BIOTECHNOLOGY CERTIFICATE, STATEWIDE PROGRAM

Total Credits: 26

Catalog Edition: 2025-2026

Program Description

(G): 219

This certificate curriculum is intended to prepare people for immediate employment in the biotechnology field. This curriculum is suitable for students currently working in the biotechnology or medical technology field who want to upgrade or update their skills, or for those who have obtained a bachelor's degree in the life sciences and want additional training. Students must obtain consent of the biotechnology program coordinator before enrolling in the certificate curriculum. To enter directly into the certificate curriculum, students must have met the prerequisites for the biotechnology courses.

Program Outcomes

Upon completion of this program, a student will be able to:

- Independently and in teams, complete basic laboratory tasks common to biotechnology such as documentation, pipetting, buffer preparation, dilutions, and gel electrophoresis.
- Define and explain the basic principles, concepts, and techniques of biotechnology.

Program Advisors

Germantown

- Dr. Lori Kelman, 240-567-6929,
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For more information, please visit <https://www.montgomerycollege.edu/academics/programs/biotechnology/biotechnology-certificate.html> or GT STEP Advising <https://www.montgomerycollege.edu/gtstep>

2025-2026

Program Advising Guide

An Academic Reference Tool for Students

BIOTECHNOLOGY CERTIFICATE, STATEWIDE PROGRAM

Program Requirements

A suggested course sequence for full-time students follows. All students should review this advising guide and consult an advisor.

Program Requirements

BIOT 110 - Introduction to Biotechnology *3 semester hours*

BIOT 120 - Introduction to Cell Culture *2 semester hours*

BIOT 121 - Aseptic Technique and Cell Culture Skills *1 semester hour*

BIOL 150 - Principles of Biology I *4 semester hours* *

BIOT 200 - Protein Biotechnology *3 semester hours*

BIOT 201 - Protein Biotechnology Skills *1 semester hour*

BIOT 230 - Applied Immunology *3 semester hours*

BIOT 231 - Immunological Methods *1 semester hour*

BIOT 240 - Principles of Nucleic Acid Methods *3 semester hours*

BIOT 241 - Nucleic Acid Methods *1 semester hour*

CHEM 131 - Principles of Chemistry I *4 semester hours*

Total Credit Hours: 26

* MATH 117 or higher if needed for BIOL 150

Transfer Opportunities

Montgomery College has partnerships with multiple four-year institutions and the tools to help you transfer. To learn more, please visit <https://www.montgomerycollege.edu/transfer> or <http://artsys.usmd.edu>.

Get Involved at MC!

Employers and Transfer Institutions are looking for experience outside the classroom.

MC Student Clubs and Organizations: <https://www.montgomerycollege.edu/life-at-mc/student-life/>

Related Careers

Some require a Bachelor's degree.

Biological Technician, Microbiologist, Molecular and Cellular Biologist, Medical and Clinical Laboratory Technologist, Biofuels/Biodiesel Technology and Product Development Manager, Bioinformatics Technician, Clinical Data Manager & Regulatory Affairs Specialist.

Career Services

Montgomery College offers a range of services to students and alumni to support the career planning process. To learn more, please visit <https://www.montgomerycollege.edu/career>

Career Coach

A valuable online search tool that will give you the opportunity to explore hundreds of potential careers or job possibilities in Maryland and the Washington D.C. metropolitan area. Get started today on your road to a new future and give it a try. For more information, please visit <https://montgomerycollege.emsicc.com>

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