

CELL AND GENE THERAPY CERTIFICATE, STATEWIDE PROGRAM

Total Credits: 19

Catalog Edition: 2025-2026

Program Description

(G): 268

This certificate curriculum is designed to prepare students for immediate employment in the cell and gene therapy industry. This certificate is designed for students who have completed a baccalaureate degree in the life sciences or are enrolled in the biotechnology degree program. Students must obtain consent from 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 courses.

Program Outcomes

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

- Define and explain the basic principles, concepts, and techniques of cell and gene therapy.
- Demonstrate technical skills required for the production and characterization of components such as nucleic acid constructs, vectors, and cells.

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/cell-and-gene-therapy-certificate.html> or GT STEP Advising <https://www.montgomerycollege.edu/gtstep>

2025-2026

Program Advising Guide

An Academic Reference Tool for Students

CELL AND GENE THERAPY 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

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

OR

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

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

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

BIOT 200 - Protein Biotechnology *3 semester hours*

BIOT 201 - Protein Biotechnology Skills *1 semester hour*

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

BIOT 241 - Nucleic Acid Methods *1 semester hour*

BIOT 260 - Introduction to the Principles of Cell and Gene Therapy *3 semester hours*

BIOT 261 - Laboratory Fundamentals for Cell and Gene Therapy Production *1 semester hour*

Total Credit Hours: 19

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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