

COMPUTER GAMING AND SIMULATION CERTIFICATE

Total Credits: 31

Catalog Edition: 2025-2026

Program Description

(R): 232A

Computer gaming and simulation is part of a rapidly growing and exciting new industry. Gaming is not only the fastest growing segment of the technology industry but also the fastest growing segment of the entertainment industry. Gaming is not just about entertainment -- game technology is increasingly being applied in a variety of settings, from medical and corporate training to advocacy, advertising, and emergency response simulation. This interdepartmental certificate presents students with an introduction to the skills needed to explore the emerging technology area of game and simulation development. Completion of this certificate will expose students to core game development skills and theory, introduce gaming and computer simulation technology applications, and provide an introduction to computer graphics technology. Electives allow students an opportunity to further explore their particular area of interest, such as programming, 3D modeling, mobile games, and other topics. **This program can be completed either on campus or online.**

For more information, please visit <https://www.montgomerycollege.edu/academics/programs/computer-gaming-and-simulation/computer-gaming-and-simulation-certificate.html>

To view the Advising Worksheet, please visit <https://www.montgomerycollege.edu/documents/counseling-and-advising/advising-worksheets/current-catalog/232a.pdf>

Program Outcomes

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

- Demonstrate knowledge of the vocabulary of gaming and simulation.
- Create an online portfolio containing game development related coursework.
- Demonstrate working knowledge of analyzing, designing, and developing games in a team environment.

Program Advisors

Rockville

- Prof. Deborah Solomon, 240-567-5136, Deborah.Solomon@montgomerycollege.edu
- Prof. Katherine Hubley, 240-567-7522, Katherine.Hubley@montgomerycollege.edu

2025-2026

Program Advising Guide

An Academic Reference Tool for Students

232A

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Program Requirements

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

Program Requirements

GDES 140 - Introduction to Animation *4 semester hours*

GDES 240 - Animation 2: 3-D Modeling *4 semester hours*

TECH 190 - Introduction to Game and Simulation
Development *4 semester hours*

TECH 225 - Game Programming *4 semester hours*

TECH 272 - Website Development *4 semester hours*

TECH 290 - Building Game Worlds *4 semester hours*

TECH 295 - Tabletop and Mixed Media Game Design *4 semester hours*

Program Elective *3 semester hours* †

Total Credit Hours: 31

† Choose from the following program electives: BSAD 101, CMAP 120, CMAP 252, MUSC 174, any CMSC, ENGL, GDES, MATH, NWIT, TECH, TVRA course, or any General Education course.

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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.

Software Developer, Video Game Designer, Multimedia Artist and Animator.

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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