COMPUTER GAME DEVELOPMENT - DEGREE

Associate of Applied Science Degree Program | mhcc.edu/CIS (https://mhcc.edu/CIS/)

Faculty Adviser

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This program can now be completed 100% online!

MHCC's Computer Game Development program teaches students software and techniques used in the computer game industry, such as: standard software; 2D and 3D game asset creation; modeling; rigging and animation; texturing; design fundamentals; desktop and mobile app creation; programming; and common game engines. Students who complete this program: learn skills for entry level jobs in the game industry; have the option for advanced learning at other schools; and have access to careers that require computer and 3D imaging skills.

All core courses must be completed within 5 years in order for the degree to be awarded.

Program Outcomes

At the completion of this program, students should be able to:

- Create appropriate asset types for use in different interactive applications
- Create design, technical and analysis documentation for individual and team-based interactive projects
- Evaluate a broad range of game genres and demonstrate appropriate design application to them
- Apply gaming techniques to non-game uses such as marketing, simulations, education and social networking
- Evaluate balance, function, fairness and intention in level elements
- Work collaboratively in a real-world-like team to identify, design and create a game using developmental techniques commonly used in industry
- Contrast the benefits of various publishing and funding platforms
- Produce an entry-level portfolio in their chosen discipline
- Demonstrate an applied understanding of programming fundamentals
- Analyze changing technology and its influence on game design as an industry and a medium

For the most part, courses that fulfill general education requirements can be taken in any term. Students should work with the faculty adviser(s) to create a custom academic plan based on course placement levels, career goals, and full time/part time status.

Admitted students may also log on to Navigate (https://mhcc.campus.eab.com/home/) to start the process of building an academic plan based on this major and can notify an adviser for review.

First Quarter

Fall

		Credits
CIS125WP	Word Processing ★	3
CIS125GA	Beginning Game Programming ★	3
CIS135GMA	Introduction to 3-D Modeling ★	3
CIS135GRA	Graphics for Game Asset Development I ★	3
CIS195	Interface Design for Interactive Applications ★	3
CIS125SS	Spreadsheets ★	3
	Credits	**18**

Second Quarter

Winter

CIS135	Introduction to Game Industry ★	3
CIS135GMB	Intermediate Game Modeling ★	3
CIS135GRB	Graphics for Game Asset Development II ★	3
CIS197WAA or CIS197HTM	Web Authoring: Applications or Web Authoring: HTML5 and CSS3 ★	3
ISTM133P	Introduction to Python ★	4
	Credits	**16**

Third Quarter

Spring

CIS135GMC	Advanced 3-D Modeling ★	3
CIS135TXP	Special Topics in Emerging Technologies ★	3
CIS235ANM	Introduction to 3-D Animation ★	3
WR121Z	Composition I ★	4
Approved Elective (p. 2)		3-4
	Credits	**16-17**

Fourth Quarter

Fall

CIS235DD	Introduction to Digital Painting and Concepting ★	3
CIS235RIG	Rigging for Animation and Games ★	3
CIS235TLC	Team Level Creation ★	3
MTH065	Beginning Algebra II ★ (or higher, excluding MTH098)	4
Health and Physical Education requirement (https://catalog.mhcc.edu/degree-certificate-requirements/aas/#health)		3
	Credits	**16**

Fifth Quarter

Winter

CIS235CXP	Career Specific Exploration for Game Majors ★	3
CIS235UNA	Small Games Programming I ★	3
CIS235	Game Design Theory	3
Approved Elective (p. 2)		3-4
Human Relations requirement (https://catalog.mhcc.edu/degree-certificate-requirements/aas/#human)		3-4
	Credits	**15-17**

Sixth Quarter

Spring

BA150 or BT271	Developing a Small Business ★ or Advanced Business Projects	3
CIS235ST	Game Studio ★	3
CIS235UNB	Small Games Programming II ★	3
CIS235PUB	Publishing for the Game Industry ★	3

Approved Elective (p. 2)		3-4
	Credits	15-16
	Total Credits	96-100

Students planning to transfer should take MTH111Z Precalculus I: Functions ★ or higher.

Approved Electives

Students can choose any 3 from the following approved electives list or select from any Modern Language or ASL courses.

Code	Title	Credits
ART117	Basic Design III: Three- Dimensional	4
ART211	Survey of Visual Arts ★ ⊕	4
ART231	Drawing I	4
ART234	Figure Drawing I	4
ISTM235MA	Mobile Apps 1: Introduction to iOS Mobile Applications Development	3
ISTM235MB	Mobile Apps 2: Intermediate iOS Mobile Applications Development	3
CIS197CSP	Web Authoring: Client-Side Programming ★	3
MUS117	Electronic Music Production I	3
MUS118	Electronic Music Production II	3
MUS119	Electronic Music Production III	3
WR241	Creative Writing: Fiction I ★	4
WR245	Creative Writing: Fiction II	4
Any Modern Language course(s)		
ASL101	First-year American Sign Language I	
ASL102	First-year American Sign Language II	
ASL103	First-year American Sign Language III	
ASL201	Second-year American Sign Language I ⊕	
ASL202	Second-year American Sign Language II ⊕	
ASL203	Second-year American Sign Language III ⊕	
JPN101	First-year Japanese I	
JPN102	First-year Japanese II	
JPN103	First-year Japanese III	
JPN201	Second-year Japanese I ⊕	
JPN202	Second-year Japanese II ⊕	
JPN203	Second-year Japanese III ⊕	
SPAN101	First-year Spanish I	
SPAN102	First-year Spanish II	
SPAN103	First-year Spanish III	
SPAN201	Second-year Spanish I ⊕	
SPAN202	Second-year Spanish II ⊕	
SPAN203	Second-year Spanish III ⊕	

Exploring **Computer Game Development** as your major? Learn more with MHCC's Career Coach (https://mhcc.lightcastcc.com/programs/computer-game-development-degree/209250/?region=Greater%20Multnomah%20County%20Area&radius=100%20miles), which covers: skills needed for each career, wages, employment rates, and live job postings in the Greater Multnomah County Area.

Careers related to computer game development:

- Video Game Designers (https://mhcc.lightcastcc.com/careers/video-game-designer/?region=Greater%20Multnomah%20County%20Area&radius=100%20miles)
- Software Developers (https://mhcc.lightcastcc.com/careers/software-developer/?region=Greater%20Multnomah%20County%20Area&radius=100%20miles)
- Special Effects Artists and Animators (https://mhcc.lightcastcc.com/careers/multimedia-artist-and-animator/?region=Greater%20Multnomah%20County%20Area&radius=100%20miles)
- Software Quality Assurance Analysts and Testers (https://mhcc.lightcastcc.com/careers/software-quality-assurance-analyst-or-tester/?region=Greater%20Multnomah%20County%20Area&radius=100%20miles)