

Interactive Design and Game Development



What is interactive design and game development?

Interactive design and game development (IDGD) is an area of study where students can take real events and represent them in a virtual environment using computers and modern technologies. Students also learn to break down complex ideas into a visual medium where they can be viewed in an easy and understandable way.

Interactivity has become a large part of the IDGD field. This includes the large and growing field of video games. Video game making has become a strong staple both in entertainment and in education, especially in Maryland. HCC's program enables students to take a concept and produce an image or an animation. Then, interactive components are taught to enhance the visual experience.

After completing this program, students can look forward to careers in the following areas:

- application, e-learning, game, and software development
- software testing and quality assurance
- software engineering
- 2D and 3D animation
- game, level, and user interface design
- 3D and computer-generated environment and concept art
- virtual reality and augmented reality application development
- motion graphics design
- User Experience Designer / User Interface Designer



What is the employment outlook for this career?

Employment in IDGD is large and growing. In the Maryland/Washington D.C. area, over 80 game and simulation companies already exist, and that number is growing. Opportunities in serious games for defense, corporate training, law enforcement, medicine, and education are very high.

Billions of dollars are being acquired by game and simulation companies annually. These dollars provide good salaries to people throughout Maryland.

PROGRAM OPTIONS

- 🎓 A.A.S. Degree, Interactive Design and Game Development Concentration

CAREER OUTLOOK

MEDIAN SALARY

\$109K

for Software Developers

EMPLOYMENT



1.6M jobs in U.S.
25% growth in next ten years

Maryland is the number one state on the east coast for game developers. Game development has grown so large that it now grosses more than the movie-making industry.

(source: www.bls.gov/ooh)

Why should I attend HCC?

HCC offers two areas of specialization:

- Interactive Design
- Game Development

HCC has multiple computer labs and software that includes Adobe Aftereffects, Game Maker, Blender 3d, Adobe Animate, Adobe XD, Unreal Engine, Unity3d, Figma, Android Studio, Adobe Photoshop, and Adobe Illustrator. The IDGD Program also has motion capture and virtual reality/augmented reality technology.

Successful educational institutions, combined with Web application and gaming companies, have worked with the IDGD program in order to establish what they need in potential students and employees. HCC has ties with other colleges and universities to help students transfer to four-year institutions. Strong business relationships are being built to ensure students' success after college. Internships are also available.

"In the long run with this major, I have gotten more experience in group work, the development process of animations and games, and the fundamentals of what it takes to see a project come to life. By far the best major for those candid students wanting to get into this field."

- Ryan Tucker, IDGD Graduate; Founder, Evlox Studios

Information Systems Technology Concentration: Option in Interactive Design and Game Development

The Interactive Design and Game Development (IDGD) concentration provides students with the skills to design and develop computer games, detailed simulations and interactive technologies. Program concentration may be chosen from two separate tracks. Choosing from one of the tracks allows students to specialize in an area that is most beneficial. Course concentration is on game design, virtual modeling, animation, interactive application creation, programming, documentation, structured design principles, problem solving, and business ethics. Classes are conducted in hands-on labs. Credits from all three options transfer to the University of Baltimore.

General Education Requirements 18-19 credits

Arts/Humanities

Select from approved General Education course list ...3

Behavioral/Social Sciences

Select from approved General Education course list ...3

Biological/Physical Science

Select from approved General Education course list 3-4

Diversity

Select from approved General Education course list...3

English

*minimum grade of "C" or better is required for ENG-112

ENG 112 Technical Writing I 3

Mathematics

Select one course from the approved General Education course list in the Mathematics category (3 Credits);

*(MAT 114 or MAT 160 are recommended for the Game Development Track A)

*(MAT 115 is recommended for the Interactive Design Track B)

Program Requirements 21 credits

CSC 102 Introduction to Information Technology..... 3

GDT 112 Computer Graphics 3

SDE 102 2D Animation and Interactive Design 3

SDE 104 Game Design and Programming I 3

SDE 130 Introduction to Object-Oriented Programming..... 3

SDE 201 Mobile Applications Design and Development 3

SDE 207 Multimedia Project Development 3

Track A: Game Development 6 credits

CSC 132 Introduction to C and C++ Programming..... 3

SDE 205 Game Design and Programming II ... 3

* Note: 14-15 restricted elective credits are required. See the listing below.

Track B: Interactive Design 18 credits

GDT 116 Digital Imaging..... 3

GDT 142 Computer Illustration: Adobe Illustrator..... 3

SDE 203 3D and Advanced Animation 3

WEB 101 Web Design I..... 3

WEB 115 Web Developer I..... 3

WEB 215 Javascript and Multimedia..... 3

* Note: 2-3 restricted elective credits are required. See the listing below.

*Restricted Electives

2-15 credits

Electives should be selected in consultation with the programs lead faculty or the Technology and Computer Studies Division Director to satisfy career goals and/or transfer college requirements. Select Restricted Elective credits to complete your track from the following list:

ART 102 Two-Dimensional Design 3

ART 103 Drawing I..... 3

CAD 152 Computer-Aided Design 3

COM 103 Public Speaking..... 3

OR

COM 108 Introduction to Human Communication.....(3)

CSC 109 UNIX/Linux Operating System..... 3

CSC 132 Introduction to C and C++ Programming..... 3

CSC 134 Introduction to JAVA Programming.. 3

CSC 232 Advanced C++ Programming..... 3

GDT 116 Digital Imaging..... 3

GDT 142 Computer Illustration: Adobe Illustrator 3

GDT 220 Digital Video and Audio..... 3

IST 173 Database Fundamentals 3

MUS 175 Introduction to Electronic Music..... 3

SDE 203 3D and Advanced Animation 3

SDE 205 Game Design and Programming II ... 3

SDE 269 Internship I I-3

SDE 270 Internship II I-3

WEB 101 Web Design I..... 3

WEB 110 Web Design II..... 3

WEB 115 Web Developer I..... 3

WEB 215 Javascript and Multimedia..... 3

Degree Requirement..... 60

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Contact Information

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Recommended Professional Resources

International Game Developers
Association: www.igda.org

SIGGRAPH
www.siggraph.org

www.hagerstowncc.edu/IDGD

