

## Careers

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. This interdepartmental degree presents students with an introduction to the skills needed to explore this emerging area of game and simulation development.

## Salary

According to the National Association of Colleges and Employers, starting salary offers for graduates with a bachelor's degree in computer science averaged \$50,820 a year in 2005. According to Robert Half International, a firm providing specialized staffing services, average annual starting salaries in 2005 ranged from \$52,500 to \$83,250 for applications development programmers/analysts, and from \$55,000 to \$88,250 for software developers. Average starting salaries for main-frame systems programmers ranged from \$50,250 to \$67,500 in 2005.

## Job Outlook

According to the International Game Developers Association, interactive entertainment takes in about \$9 billion in the United States alone. Games are expected to surpass film box-office revenues in the next couple of years, making it the fastest growing segment of the entertainment market, and an excellent field for career advancement. In addition, game technology is not just for entertainment. It is increasingly being applied in a variety of settings, from medical and corporate training to advocacy, advertising, and emergency response simulation.

## Education & Training Options

Montgomery College offers an associate of arts (A.A.) degree that recognizes mastery in the liberal and fine arts and is intended for transfer to equivalent bachelor of arts programs at four-year schools. The A.A. is awarded in four programs: arts and sciences, business, computer science and technologies, and general studies. Montgomery College also offers a certificate in Internet games and simulation.

### ■ Degree

Completion of this degree 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.

### ■ Certificate

A certificate is offered in Internet games and simulation. Please see the Web Careers fact sheet for more information.

## Contact @ MC

Rockville Campus . . . . . 240-567-5136  
[www.montgomerycollege.edu/ca/gaming](http://www.montgomerycollege.edu/ca/gaming)

# Computer Gaming and Simulation

## Computer Gaming and Simulation A.A.: 606

### General Education and Other Requirements (33 credit hours)

EN 101	Techniques of Reading and Writing I (If a student is required to take this course, it can be taken as an elective.)	3
	English foundation (EN 109 suggested for students transferring to University of Baltimore)	3
	Health foundation	1
	Mathematics foundation	3
	Speech foundation	3
	CG 120	4
	Arts or humanities distribution (AR 103 recommended for all students; required for graphic design track students)	3
	Behavioral and social sciences distribution	6
	Humanities distribution	3
	Natural sciences lab distribution	7

### Gaming Programming Track (29-31 credit hours)

CA 190	Introduction to Game and Simulation Development	4
CA 125	Introduction to Flash	4
CA 272	Professional Web Site Development	4
CA 225	Flash Action Script for Web Publishing and Gaming	4
CA 195	Building Game Worlds	4
	Select one of the following database courses: CA 141, CA 278, CA 288, CS 270, NW 220	3-4
	Select one of the following introductory programming courses:*	
	CS 140 or CS 213	3
	Elective: Select one from the following groups:** Graphic Design Electives: AR 103, CG 121, CG 210, <b>CG 222</b> , CG 226, PR 131, PR 232	

Programming and Database Electives:  
CA 141, CA 273, CA 274, CA 276,  
CA 277, CA 278, CA 288, CS 140,  
CS 200, CS 204, CS 213, CS 214,  
CS 218, **CS 226**, **CS 249**, CS 270, NW 220  
Other Electives: BA 101, EN 101,  
**TR 101** 3-4

### Total credit hours for gaming programming track 62-64

\* CS 140 is recommended for students planning to take CS 226 because CS 140 is a prerequisite for CS 226.

\*\* Students who test out of a required class must substitute an elective from the list of electives. Electives listed in bold are recommended for this track. Please see an adviser before choosing an elective. Game programming track students may waive CG 121 as a prerequisite for CG 210 and CG 222, and may waive CG 210 as a prerequisite for CG 222 if they have completed CA 125 (formerly PR 125).

### Game Production Track: 606B (26-30 credit hours)

CA 190	Introduction to Game and Simulation Development	4
CA 125	Introduction to Flash	4
CA 272	Professional Web Site Development	4
PR 131	Photoshop Digital Production for Printing and Publishing I	4
CA 225	Flash ActionScript for Web Publishing and Gaming	4
	Electives: Select two or more from the following groups: *	
	Graphic Design Electives: AR 103, CG 121, CG 210, <b>CG 222</b> , CG 226, PR 232	
	Programming and Database Electives: CA 141, CA 273, CA 274, CA 276, CA 277, CA 278, CA 288, CS 140, CS 213, CS 200, CS 204, CS 214, CS 218, CS 226, CS 249, CS 270, NW 220	
	Other Electives: <b>BA 101</b> , <b>CA 195</b> , EN 101, <b>TR 101</b>	6-10†

### Total credit hours for game production track 60-63

(more)

# Computer Gaming and Simulation

(continued)

\*\* Students who test out of a required class must substitute an elective from the list of electives. Electives listed in bold are recommended for this track. Please see an advisor before choosing an elective. Game Production track students may waive CG 210 as a prerequisite for CG 210 and CG 222, and may waive CG 210 as a prerequisite for CG 222 if they have completed PR 125.

‡ Students must have a minimum of 60 credits to graduate.

**Game Graphic Design Track: 606C (27–29 credit hours)**

CA 190	Introduction to Game and Simulation Development	4
CA 125	Introduction to Flash	4
CA 272	Professional Web Site Development	4
CA 195	Building Game Worlds: Level Design, Mods and Quality Assurance	4
CG 210	Computer Graphics: Introduction to Animation	4
CG 222	Computer Graphics: 3-D Modeling	4
	Electives: Select one or more from the following groups: *	
	Graphic Design Electives: AR 103, <b>CG 121, CG 226</b> , PR 131, PR 232	
	Programming and Database Electives: CA 141, <b>CA 225</b> , CA 273, CA 274, CA 276, CA 277, CA 278, CA 288, CS 113, CS 140, CS 200, CS 204, CS 213, CS 214, CS 218, CS 226, CS 249, CS 270, NW 220	
	Other Electives: BA 101, EN 101, <b>TR 101</b>	3-5‡

**Total credit hours for game graphic design track: 60-62**

\* Students who test out of a required class must substitute an elective from the list of electives. Electives listed in bold are recommended for this track. Please see an advisor before choosing an elective. Game design track students may waive CG 121 as a prerequisite for CG 210 and CG 222.

† Students must have a minimum of 60 credits to graduate.