

COMPUTER GAME PROGRAMMING SKILLS CERTIFICATE

Division: Business and Computer Information Systems

PROGRAM CODE: 2C40677

The **Computer Game Programming Skills Certificate** provides students with an opportunity to learn how to create interactive computer games, including Web-based ones. It targets students who want to acquire skills needed for game design and programming. The required Game Programming course utilizes programming language chosen by instructor. The Certificate offers a choice between the three most popular programming languages: Java, C++ and C#. The certificate is designed to prepare students to become game programming generalists. Before beginning core courses in programming, students should have a thorough understanding of computer operating systems. A minimum grade of C is required in each course taken. This certificate requires 15 units.

Code	Title	Units
Required Courses (12 units):		
CISG 100 F	Introduction to Computer Game Design	3
CISG 110 F	Introduction to Programming for Computer Games	3
CISG 182 F	DirectX Graphics Programming	3
CISG 190 F	Programming Multiuser Online Games	3
Restricted Electives (3 units):		3
CISG 160 F	C# for Game Programming	3
CISG 165 F	C++ for Game Programming	3
CISG 170 F	Java for Game Programming	3
CISG 175 F	Multimedia Game Programming	3
CISG 185 F	Artificial Intelligence in Game Programming	3
Total Units		15

Outcome 1: Plan the major programming components of a typical computer game.

Outcome 2: Create a basic game that implements a defined set of game mechanics.

Outcome 3: Create a basic game that manipulates and manages game resources such as graphics, sound, and video.

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