Beginning Game Programming

Outline of Instruction

Course Information
Course Number: CIS 267
Division: Business
Potential Hours of Instruction: 45
Total Credits: 3

Description
The course will cover the fundamental principles and practices of designing and programming computer games. Students will write programs that demonstrate major lecture topics. Students will also design and implement complete computer games. The programs and games created will utilize a variety of programming techniques and tools, including: C++ programming language, graphics API, a game engine, software engineering, audio editing and playback, user input, image editing software, network programming, collision detection and game design.

Prerequisites
CIS 250 Computer Science II

Exit Learning Outcomes

Program Outcomes
A. Demonstrate the necessary technical knowledge and skills both in breadth and depth, to pursue the practice or advanced study of computer science.
B. Distinguish the importance of life-long learning and how it relates to new technological developments in their field.
C. Conceptualize the ethical and technical context of their computer science contributions and their obligations therein.
D. Develop the communication, teamwork, and leadership skills necessary to function productively and professionally.

Course Outcomes: In order to evidence success in this course, students will be able to:

1. Design and develop complete programs
2. Create proper WinMain program
3. Demonstrate Windows message handling
4. Demonstrate proper use of graphics API
5. Demonstrate drawing animated sprites
6. Create a program that uses collision detection
7. Create a program that plays audio sound effects
8. Create a program that supports user control of on screen items
9. Demonstrate proper use of a game engine
10. Create a complete computer game
11. Demonstrate proper software engineering techniques