



BAKER COLLEGE

STUDENT LEARNING OUTCOMES

CS4310 Unity Game Programming I
3 Semester Hours

Student Learning Outcomes and Enabling Objectives

1. Design a computer game using the Unity 3D game engine processes
 - a. Setup the Camera for different game types.
 - b. Control the player's avatar.
 - c. Use different resources from simple game shapes to complex models to accomplish game element and design tasks.
 - d. Evaluate the role lighting will play in your game design
 - e. Determine whether using the baking or dynamic lighting process is appropriate for your game design
 - f. Evaluate the use of the physics engine in your game design
 - g. Determine the appropriate use of movement in your game design
 - h. Analyze how the concept of gravity will impact your game objects
 - i. Use the principles of speed and acceleration as appropriate in your game design
 - j. Select audio tools to develop appropriate sound effects for your game design
 - k. Add elements to your game design
2. Create a functional 3D computer game by combining design and programming for the Unity 3D game engine
 - a. Use scripting to help program a 3D computer game
 - b. Select appropriate uses of a particle accelerator in your game design
 - c. Add game details using the animation editor

Big Ideas

Game engine processes

- Start to finish game building.
- Physics engine
- Audio
- Simple A.I.
- Game flow

Game engine programming

- Scripting
- Best practices

Essential Questions

1. How do I use the game engine processes to build a game?
2. How does the type of game determine the programming needed to work within the game engine?

These SLOs are not approved for experiential credit.

Effective: Fall 2017