



**BAKER COLLEGE**  
**STUDENT LEARNING OUTCOMES**

**GSD3820 Unreal Game Programming II**  
**3 Semester Hours**

---

**Student Learning Outcomes & Enabling Objectives**

1. Demonstrate how games are created in the Unreal5 engine using C++.
    - a. Work with meshes, animations and sound assets.
    - b. Explore different terrains and environments in game design.
    - c. Construct particles and special effects.
  
  2. Use Visual Studio and the Unreal5 tools and pipelines to create gameplay, characters and environments.
    - a. Construct gameplay using Visual Studio and the Unreal5 tools.
    - b. Construct characters using Visual Studio and the Unreal5 tools.
    - c. Construct different terrains and environments using Visual Studio and the Unreal5 tools.
  
  3. Develop solutions to gameplay programming problems using C++ language constructs.
    - a. Apply iteration, selection, and variables by using C++ language constructs.
    - b. Apply inheritance, polymorphism, classes, and objects by using C++ language constructs.
    - c. Apply templates, containers, and dynamic memory allocation by using C++ language constructs.
    - d. Apply game systems, actors, npcs, and monsters by using C++ language constructs.
    - e. Apply inventory and interactive items using C++ language constructs.
    - f. Apply combat systems, spells, ranged, and melee using C++ language constructs.
- 

**Big Ideas and Essential Questions**

**Big Ideas**

- Create game content in the editor
  - working with meshes, animations and sound assets
  - creating terrains and environments
  - creating particles and special effects

- Create game logic
  - using C++
    - iteration, selection, variables
    - inheritance, polymorphism, classes, objects
    - templates, containers, dynamic memory allocation
    - game systems, actors, npcs, monsters, inventory, interactive items
    - combat systems, spells, ranged, melee

### Essential Questions

1. How is game logic creating in C++?
2. How do we integrate our C++ work into Unreal gameplay
3. What role does visual scripting play in a C++ Unreal5 project

---

These SLOs are not approved for experiential  
credit. **Effective: Fall 2023**