



TEACHER NAME: ZACH BRYKALIUK

COURSE DESCRIPTION: This course introduces you to the fundamentals of game development through 3D modelling, game design, and character development. You will learn to create 3D assets using Blender, build interactive 3D environments using the Unity game engine, and bring your creations to life through character rigging and animation.

RESOURCES: BLENDER 3.6 & UNITY 2022

SPECIFIC LEARNING OUTCOMES

Unit	Learning Outcomes	Estimated Timeline
01 Blender	• Create and modify 3D models using Blender's modelling tools. • Apply materials, textures, and basic lighting to 3D objects. • Use modifiers and other modelling techniques to efficiently create detailed assets. • Export 3D assets in formats suitable for use in game engines. • Apply principles of 3D design to create original game-ready assets.	~ 6 weeks
02 Unity	• Navigate and work within the Unity game development environment. • Create and organize 3D environments using models, terrain, lighting, and other assets. • Implement basic gameplay mechanics using C#. • Use components, physics, collisions, and other Unity systems to create interactive experiences. • Design and develop a playable 3D game environment.	~ 7 weeks
03 Character Creation	• Prepare 3D models for character rigging and animation. • Create and apply skeletal rigs to 3D characters. • Create basic character animations using Blender. • Export animated characters and implement them in Unity. • Combine modelling, animation, and game development skills to create an interactive playable character.	~ 7 weeks

GENERAL LEARNING OUTCOMES:

- Students will demonstrate Digital Citizenship .
- Students will demonstrate effective communication skills in listening, speaking, reading, writing, viewing, and representing.
- Students will demonstrate appropriate problem-solving skills while seeking solutions to technological challenges.
- Students will develop the abilities to use, manage, and understand information and communication technologies by exploring programming languages and computer-controlled devices.
- Students will problem-solve by testing and debugging projects.
- Students will use independent research skills to solve problems.

ASSESSMENT PLAN

Category	Weight
Projects	50%
Portfolio Work	25%
Final Project	25%

PHONE / ELECTRONICS POLICY

Phones and other electronics are not to be used for anything outside of education purposes.

LATE POLICY

Late assessments will be marked as a zero (NHIO) until work is completed and submitted.

INTEGRITY POLICY

All code submitted for this course must be your own original work. Copying code from online resources or fellow classmates without proper acknowledgment is considered academic dishonesty.

POLICY ENFORCEMENT

Any assessment found to contain stolen or copied work will receive a grade of 0 with no opportunity for resubmission.

Collaboration is encouraged for learning purposes, but direct sharing or copying of work is strictly prohibited