



CSIS 3737 - Game Programming

Fall 2026 Syllabus, Section 01, CRN 41574,

Credit hours: 3

Instructor

Zachary McConnell

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Public Instructor Information

Instructor Title: Mr. Zach McConnell

Instructor Professional Qualifications: Masters of Science in Computing and Information Systems, Youngstown State University, 2022

Bachelors of Science in Geography Information Systems, Youngstown State University, 2020

Instructor Office Location: Meshel Hall- 339B

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Course Description

3737. Game Programming. Programming and development of computer games using a game programming environment. Software tools for coding 2D and 3D graphics and animation, sprites and other assets, and handling input events, motion, and collisions. Object-oriented programming and AI concepts for game development. Prereq.: CSIS 1595 or CSIS 2610. 3 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Developing 2D Games with Unity: Independent Game Programming with C#, Jared Halpern, ISBN: 978-1484237717.		

Textbook Required

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Week of	Proposed Topic	Due/To Prepare for Class
8/24	Introduction to game engines and Unity; C# scripting in Unity	
8/31	Manipulating game object properties	
9/7	Motion in 2D games (no class monday)	
9/14	Event handling; Colliders and collision detection	
9/21	Dynamically generated game objects; Parenting objects	
9/28	Cameras; Visibility layers; Spritesheets	Programming Assignment 1 due
10/5	Scripted animation; Tilemaps	
10/12	Side scroller games; Game physics	Programming Assignment 2 due
10/19	Local forces and coordinate systems; Generating projectiles	
10/26	Scriptable objects; UI components	
11/2	Inventory and dropdowns; Particles	Programming Assignment 3 due
11/9	Waypoints and path following; Scenes and Levels	Project proposal due
11/16	Camera control: Scripting and Cinemachine ; Sound and audio	Programming Assignment 4 due

11/23	Raycasting (No class Wednesday and Friday)	
11/30	Introduction to gaming AI	
12/7	Project presentations	Project Due

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.