



Course Weekly Outline

Course Name: Game Programming

Course Instructor					
E-mail					
Title					
Course Coordinator					
Course Objective	<ul style="list-style-type: none"> - Learn the concepts of game programming and the techniques used in game development. - Acquire programming and design skills necessary for developing electronic games. - Understand the role of graphics and audio in creating the game experience. - Apply acquired concepts to a practical project for game development. 				
Course Description	Introduction to game programming				
Textbook					
References					
Course Assessments	Term Tests	Laboratory	Quizzes	Project	Final Exam
	30%	15%	5%		50%
General Notes					



Course Weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1		Definition of game programming and its history.		
2		Overview of game development technologies and programming tools.		
3		Programming Fundamentals: Introduction to programming languages commonly used in game development (e.g., C++, C#, Java).		
4		Variables, data types, and control structures. Functions, classes, and object-oriented programming concepts.		
5		Game Development Frameworks and Engines: Introduction to popular game development frameworks and engines (e.g., Unity, Unreal Engine). Overview of their features, capabilities, and workflow.		
6		Graphics and Animation: Fundamentals of computer graphics and rendering techniques. Introduction to 2D and 3D graphics programming. Animation principles and techniques.		
7		Game Physics and Collision Detection: Simulation of physics in games (e.g., gravity, forces, collisions). Collision detection algorithms and implementation. User Input and Controls		
8		Handling user input through keyboard, mouse, and game controllers.		
9		Implementing controls and user interfaces.		
10		Introduction to game audio design and implementation.		
11		Working with sound effects and music		
12		Basics of game AI and behavior modeling.		
13		Implementing AI algorithms for non-player characters (NPCs).		
14				
15		Final Exam		

Instructor Signature:

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