Course Description Form

1. Course Name:	
Game Design and Programming	
2. Course Code:	
3. Semester / Year:	
Second Semester/ Fourth Year	
4. Description Preparation Date:	
20/10/2024	
5. Available Attendance Forms:	
- Theory Lectures - Practical Lab	
6. Number of Credit Hours (Total) / Number of Units (Total)	
60/3	
7. Course administrator's name (mention all, if more than one name)	
Name: Dr. Safaa Hussein Shwail Email: safaa.husseinshwail@nahrainuniv.edu.iq	
8. Practical Teaching	
Dr. Safaa Hussein Shwail Dr. Gasan Abdulhakim Ass. Pr. Azhar Mawlood Ass. Lec. Basheer Nahid	
9. Course Objectives	
Course Objectives	• Give a complete knowledge about what the player want and expect in the game, also the skills needed in a game designer. • Explain the development concept that should be included in any game. • Show the main steps that should be follow in the project life cycle with the pre and post design concept. • Explain the genre-specific game design and level design. • Explain the including of the math and logic in the game design.
10. Teaching and Learning Strategies	
Strategy	The main strategy that will be adopted in delivering this module is by explaining lectures in an interactive way by letting the students to participate in the presenting through questions and answers while at the same time refining and expanding their critical thinking skills. This will be achieved through classes and labs.
11. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	A Brief History of Computer Games Chronology	Introduction	Theoretical Lectures	Quiz
2	2	What players want What Do Players Expect What Skills Does a Game Designer Need	What players want and expect-designer skills	Theoretical Lectures	Quiz
3	2	Concept Development Genres	Concept Development and Genres	Theoretical Lectures	Quiz
4	2	The Game Proposal Document	Concept Development and Genres	Theoretical Lectures	Quiz
5	2	Preproduction The Game Design Document The Art Production Plan The Technical Design Document The Project Plan	Project Lifecycle	Theoretical Lectures	Quiz
6	2	Development Alpha, Beta, Code Freeze, Patches Upgrades	Project Lifecycle	Theoretical Lectures	Quiz
7	2		Mid-Course Exam 1		
8	2	Action Games Role–playing games	Genre-Specific Game Design Issues I	Theoretical Lectures	Quiz
9	2	Adventure Games Strategy Games	Genre-Specific Game Design Issues I	Theoretical Lectures	Quiz

10	2	Simulations Sports Games Fighting Games	Genre-Specific Game Design Issues II	Theoretical Lectures	Quiz
11	2	Casual Games God Games Educational Games Puzzle Games	Genre-Specific Game Design Issues II	Theoretical Lectures	Quiz
12	2	Building the Level Gameplay	Level Design	Theoretical Lectures	Quiz
13	2	Structure and Progression Flow Control Degree of Difficulty Balance Puzzles	Level Design	Theoretical Lectures	Quiz
14	2	Probability and Statistics Randomization in Games Random Number Generators Percentages	Math and Logic in Games	Theoretical Lectures	Quiz
15	2		Mid-Course Exam 2	Theoretical Lectures	Quiz

12.Practical Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Painting the main craft	Board Drawing	Programming in java	Program complete
2	2	Drawing the main board	Board Drawing	Programming in java	Program complete
3	2	Showing the craft inside the board	Board Drawing	Programming in java	Program complete
4	2	Moving the main craft inside the board by keyboard arrows	Craft Moving	Programming in java	Program complete
5	2		Craft Moving	Programming in java	Program complete

6	2		Craft Moving	Programming in java	Program complete
7	2	Painting the missiles Make the craft shooting missiles using keyboard key	Shooting Missiles	Programming in java	Program complete
8	2		Shooting Missiles	Programming in java	Program complete
9	2		Shooting Missiles	Programming in java	Program complete
10	2	Painting the Aliens craft Drawing a specified number of Aliens crafts inside the board	Drawing Aliens	Programming in java	Program complete
11	2		Drawing Aliens	Programming in java	Program complete
12	2		Drawing Aliens	Programming in java	Program complete
13	2	Make the missiles destroy the Alien crafts by collision detection	Collision	Programming in java	Program complete
14	2		Collision	Programming in java	Program complete
15	2		Mid term Exam		

13. Course Evaluation

10 Quizzes
5 Assignments
15 Lab
10 Report
10 Midterm Exam
50 Final Exam

14. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Fundamentals Of Game Design, 3rd edition, by Ernest Adams**
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	