University/Academy:	Arab Academy for Science and Technology & Maritime Transport
Faculty/Institute:	College of Computing and Information Technology
Program:	Computer Science

Course title	Game Programming
Course code	**CS343**

Form no. (11a)
Knowledge and skills matrix for a course

Course content	Week study	Knowledge	Intellectual skills	Professional skills	General skills
Intro, History of games	1	• Describe the main concepts, definitions of game programming • The basic data types for all game programming languages	• Manipulate and apply appropriate theories, principles and concepts relevant to game programming	• Plan, programming and execute practical activities using techniques and procedures Appropriate to game Programming (allegro software)	• Solve problems relevant to game Programming using ideas and techniques some of which are at the forefront of the discipline.
The Game Development Process	2	• Identify an understanding of the contribution and impacts of game concepts in scientific, social, economic, environmental, political and cultural terms. • Review theories and concepts used in game design	• Critically assess and evaluate the literature within the field of game programming	• Plan, programming and execute practical activities using techniques and procedures Appropriate to game Programming	• Solve problems relevant to game Programming using ideas and techniques some of which are at the forefront of the discipline.

Course content	Week study	Knowledge	Intellectual skills	Professional skills	General skills
Game AI Architecture	3	• The basic syntax and semantic analysis of different game languages • The basic data types for all game programming languages	• Manipulate and apply appropriate theories, principles and concepts relevant to game programming • Critically assess and evaluate the literature within the field of game programming	• Execute a piece of independent research using **game,** computer media and techniques.	• Develop appropriate effective written and oral communication skills relevant to the specific course of game Programming • Solve problems relevant to game Programming using ideas and techniques some of which are at the forefront of the discipline.
Movement: Basic Movement	4	• Review theories and concepts used in game design • The animation, decision and design concepts	• Critically assess and evaluate the literature within the field of game programming	• Plan, programming and execute practical activities using techniques and procedures Appropriate to game Programming	• Develop appropriate effective written and oral communication skills relevant to the specific course of game Programming • Demonstrate the ability to work effectively as part of a group • Solve problems relevant to game Programming using ideas and techniques some of which are at

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					the forefront of the discipline.
Movement: Behaviors, Crowds	5	• Identify an understanding of the contribution and impacts of game concepts in scientific, social, economic, environmental, political and cultural terms. • The animation, decision and design concepts	• Manipulate and apply appropriate theories, principles and concepts relevant to game programming • Critically assess and evaluate the literature within the field of game programming	• Plan, programming and execute practical activities using techniques and procedures Appropriate to game Programming • Execute a piece of independent research using **game,** computer media and techniques.	• Demonstrate the ability to work effectively as part of a group • Solve problems relevant to **games** using old and new languages some of which are at the forefront of the discipline;
Movement: Basic Path Finding	6	• Describe the main concepts, definitions of game programming • The basic syntax and semantic analysis of different game languages	• Critically assess and evaluate the literature within the field of game programming • Deduce and interpret information from a variety of sources relevant to game design	• Plan, programming and execute practical activities using techniques and procedures Appropriate to game Programming • Execute a piece of independent research using **game,** computer media and techniques.	• Demonstrate the ability to work effectively as part of a group • Solve problems relevant to game Programming using ideas and techniques some of which are at the forefront of the discipline.
7th Week Exam	7				
Intelligence: Basic Decision-making	8	• Describe the main concepts, definitions of game programming	• Deduce and interpret information from a variety of sources relevant to game design	• Plan, programming and execute practical activities using techniques and procedures Appropriate	• Demonstrate the ability to work effectively as part of a group • Solve problems

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		• The basic syntax and semantic analysis of different game languages		to game Programming • Execute a piece of independent research using **game,** computer media and techniques.	relevant to game Programming using ideas and techniques some of which are at the forefront of the discipline.
Learning: Learning to Predict	9	• The animation, decision and design concepts	• Deduce and interpret information from a variety of sources relevant to game design	• Plan, programming and execute practical activities using techniques and procedures Appropriate to game Programming • Execute a piece of independent research using **game,** computer media and techniques.	• Demonstrate the ability to work effectively as part of a group • Solve problems relevant to game Programming using ideas and techniques some of which are at the forefront of the discipline. •
Networking	10	• Review theories and concepts used in game design • The animation, decision and design concepts	• Manipulate and apply appropriate theories, principles and concepts relevant to game programming • Deduce and interpret information from a variety of sources relevant to game design	• Plan, programming and execute practical activities using techniques and procedures Appropriate to game Programming • Execute a piece of independent research using **game,** computer media and techniques.	• Develop appropriate effective written and oral communication skills relevant to the specific course of game Programming • Solve problems relevant to **games** using old and new languages some of which are at the forefront of

Course content	Week study	Knowledge	Intellectual skills	Professional skills	General skills
					the discipline;
Game Programming	11	• The basic syntax and semantic analysis of different game languages • The basic data types for all game programming languages	• Manipulate and apply appropriate theories, principles and concepts relevant to game programming • Deduce and interpret information from a variety of sources relevant to game design	• Execute a piece of independent research using **game,** computer media and techniques.	• Develop appropriate effective written and oral communication skills relevant to the specific course of game Programming • Demonstrate the ability to work effectively as part of a group • Solve problems relevant to game Programming using ideas and techniques some of which are at the forefront of the discipline.
12th Week Exam	12			•	
GPU Game Programming	13	• The basic syntax and semantic analysis of different game languages	• Manipulate and apply appropriate theories, principles and concepts relevant to game programming	• Plan, programming and execute practical activities using techniques and procedures Appropriate	• Develop appropriate effective written and oral communication

Course content	Week study	Knowledge	Intellectual skills	Professional skills	General skills
				to game Programming • Execute a piece of independent research using **game,** computer media and techniques.	skills relevant to the specific course of game Programming • Demonstrate the ability to work effectively as part of a group • Solve problems relevant to **games** using old and new languages some of which are at the forefront of the discipline;
Sound	14	• Describe the main concepts, definitions of game programming • The basic data types for all game programming languages • The animation, decision and design concepts	• Critically assess and evaluate the literature within the field of game programming	• Plan, programming and execute practical activities using techniques and procedures Appropriate to game Programming • Execute a piece of independent research using **game,** computer media and techniques.	• Develop appropriate effective written and oral communication skills relevant to the specific course of game Programming • Demonstrate the ability to work effectively as part of a group • Solve problems relevant to game Programming using ideas and techniques some of which are at the forefront of

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					the discipline.
Play-testing	15	• Review theories and concepts used in game design • The animation, decision and design concepts	• Deduce and interpret information from a variety of sources relevant to game design	• Execute a piece of independent research using **game,** computer media and techniques.	• Solve problems relevant to game Programming using ideas and techniques some of which are at the forefront of the discipline.

Course Instructor

Name:

Signature:

Head of Department

Name:

Signature: