



UNIVERSITI TEKNOLOGI MARA

CGD443: CREATIVE GAME PROGRAMMING

Course Name (English)	CREATIVE GAME PROGRAMMING APPROVED
Course Code	CGD443
MQF Credit	3
Course Description	This course will introduce the students to the fundamental of creative game programming. It provides a programming solution in the technical aspects of creative game programming. Students will understand and apply the concepts and components of programming such as variables, data types, simple loops, strings and lists as they develop a simple creative game.
Transferable Skills	Technology literacy Teamwork Adaptability
Teaching Methodologies	Lectures, Studio, Tutorial, Self-directed Learning
CLO	CLO1 Identify the creative solution for game development (C1, PO1). CLO2 Display the programming technique that applicable for game development process (P2, PO2). CLO3 Perform a simple game in a teamwork based project (A2, PO5).
Pre-Requisite Courses	No course recommendations
Topics	
1. Game Design: Write a Game 1.1) N/A	
2. Introduction to Computer Program 2.1) N/A	
3. Brief History of Game Programming 3.1) N/A	
4. Game Programming: Architecture 4.1) N/A	
5. Game Programming: Language 5.1) N/A	
6. Techniques and Components in Game Programming 6.1) N/A	
7. Mathematics and Physics in Game Programming 7.1) N/A	
8. Artificial Intelligence (AI) for Game 8.1) N/A	
9. Game Production: Tools & Game Engines 9.1) N/A	
10. Game Production: Contents 10.1) N/A	
11. Game Project Management 11.1) N/A	
12. Game Technology and Industry 12.1) N/A	

Assessment Breakdown		%	
Continuous Assessment		100.00%	

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Formative	20%	CLO1
	Assignment	Formative	40%	CLO2
	Final Project	Summative	40%	CLO3

Reading List	Recommended Text
	<ul style="list-style-type: none"> • Michael Dawson 2011, <i>Beginning C++ Through Game Programming</i>, Cengage Learning Ptr [ISBN: 1435457420] • Rick Rogers 2012, <i>Learning Android Game Programming</i>, Addison-Wesley Professional [ISBN: 0321769627] • Dorling Kindersley, Inc. 2018, <i>Coding Games in Python</i>, DK Children [ISBN: 1465473610] • Jon Woodcock 2019, <i>Coding Games in Scratch</i>, DK Children [ISBN: 1465477330]
Reference Book Resources	<ul style="list-style-type: none"> • Charles Kelly 2012, <i>Programming 2D Games</i>, CRC Press [ISBN: 9781466508682] • John Pile,Jr. 2013, <i>2D Graphics Programming for Games</i>, CRC Press [ISBN: 1466501898] • Jeannie Novak 2011, <i>Game Development Essentials: An Introduction</i>, Cengage Learning [ISBN: 1111307652] • Robert Nystrom, <i>Game Programming Patterns</i> [ISBN: 0990582906] • Ian Millington 2019, <i>AI for Games</i>, CRC Press [ISBN: 1138483974] • Jason Gregory 2018, <i>Game Engine Architecture</i>, A K PETERS [ISBN: 1138035459]
Article/Paper List	This Course does not have any article/paper resources
Other References	This Course does not have any other resources