

GAME H2201: Gameplay Programming I

Language of Instruction: English RFQ Level: 10 Module Advice: 1 programme(s) Module Advice: 1 programme(s) Module Advice: 1 programme(s) Module Advice: 1 programme(s) Introduce learners to the skill of gameplay programming for specific genres. Students will understand the formation of harmony through actions and feedback through visuals, haptics, reactions, events and understand the formation of harmony through actions and feedback through visuals, haptics, reactions, events and sound metrics will be the creation of titles with engaging playability. Cearning Outcometer Interpretation of this module the learner should be able to: On successer Interpretation of this module the game play programming and appreciation of the game engine solutions LO2 Problem solving techniques applied to game play programming and appreciation of the game engine solutions LO3 Interpretation and construction of algorithms to solve problems the implement sub-systems within a game title LO4 Programming are shalt respond to game input for specific genres Module Advices simulations of gravity, forces, acceleration, velocity and time Profequiet Implement sub-systems within a game title LO5 Apply trigonowerty, vectors and matrices within a game title No recouinter Implement sub-systemstin	Module Title:			Gameplay Programming I	
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Module Content & Assessment

Indicative Content

Architecture of common game engines Game engine technology and graphic api's

Mathematics for Graphics

Implementation of coordinate geometry, trigonometry and the unit circle. Vector and matrix operations applied to Game Objects. Implementation of Game Object Physics.

Drawing Primitives Drawing primitives including lines, ellipses, boxes, sprites and application of color

Gamer Input Handling user input from keyboard, mouse, game controllers, motion control, multi-touch haptic input and gesture based systems

Immersion

Identification of appropriate game control, expression of gameplay goals, events, responses to gamer actions, responses to systems events, implementation of game rules and refinement of game balance

Game Object Assets Integration of (assets) content pipeline

Game State Management

Implementation of Game state persistence

Case Study Implementation of titles internal economy, key millstones and checkpoints. Implementation of replica game(s) titles within a Game Studio environment

Assessment Breakdown	%
Continuous Assessment	100.00%

Continuous Assessment

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Project	Create 3D Game Scene	1,5	33.00	n/a
Project	Create 3D Game Scene	1,6	33.00	n/a
Project	Create 3D Game Scene	1,2,3,4	34.00	n/a

No Project

No Practical

No End of Module Formal Examination

ITCarlow reserves the right to alter the nature and timings of assessment



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Module Workload

Workload: Full Time				
Workload Type	Frequency	Average Weekly Learner Workload		
Lecture	Every Week	1.00		
Laboratory	Every Week	3.00		
	Total Hours	4.00		

Module Delivered In					
Programme Code	Programme	Semester	Delivery		
CW_KCCGD_B	Bachelor of Science (Honours) in Computer Games Development	2	Mandatory		