

H8GS: Game Systems

Module Code:	H8GS
Long Title	Game Systems APPROVED
Title	Game Systems
Module Level:	LEVEL 8
EQF Level:	6
EHEA Level:	First Cycle
Credits:	10
Module Coordinator:	
Module Author:	Alex Courtney
Departments:	School of Computing
Specifications of the qualifications and experience required of staff	PhD or Master's degree in a business and/or tech-related field. May have industry experience also.
Learning Outcomes	
<i>On successful completion of this module the learner will be able to:</i>	
#	Learning Outcome Description
LO1	Demonstrate fundamental concepts and an in-depth understanding of games, game systems, and design principles to recognise the mindset of a gamer to systematically design games that promote engagement, interactivity, and fun.
LO2	Design the entire player experience by building game mechanics that work together to create that experience by creating gameplay, storytelling, level design and core loops
LO3	Analyse and apply the latest technologies to build a game with high-level background design, diverse characters, various effects such as lighting, sound, etc.
LO4	Demonstrate your game is ready for production by documenting, playtesting, and iterating early prototypes.
Dependencies	
Module Recommendations	
No recommendations listed	
Co-requisite Modules	
No Co-requisite modules listed	
Entry requirements	Learners should have attained the knowledge, skills and competence gained from stage 3 of the BSc (Hons) in Computing.

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Module Content & Assessment			
Indicative Content			
Concepts and Process History of games, Game systems, Kinds of Play, The player experience, Game strategy			
Designing Games Game mechanics, game dynamics, game aesthetics, Objects and Properties, Follow up, Behaviours, Relationships, Balance, Emergence, The structure of systems, Narrative, Stories			
Level design and story telling Process, Premise, Sketch, Level design and storytelling, Level design practices			
Characters Playable characters, NPCs and enemies, Character statistics, Character design, Diversity			
UI, User Experience, and Accessibility Listing and prioritising information, UI tips and tricks, Style guides, Theme and pacing, in-game teaching techniques, increasing accessibility, teaching game systems, Localisation			
Sound, lighting, camera, and effects Adding sound, types of illumination, camera and projections, various effects			
Playtesting and Game Feedback QA, GUR principles, Usability, Analytics and metrics, Follow up, System design & agency, Tight and loose systems, Machinations to model systems, Game balancing,			
Documentation and production Purpose, Structure, Asset list, Gameplay features, Art style/Visual design, Story/narrative, level design, Getting ready for production and case studies			
Assessment Breakdown			%
Coursework			100.00%
Assessments			
Full Time			
Coursework			
Assessment Type:	Formative Assessment	% of total:	Non-Marked
Assessment Date:	n/a	Outcome addressed:	1,2,3,4
Non-Marked:	Yes		
Assessment Description: Formative assessment will be provided on the in-class individual or group activities.			
Assessment Type:	Proposal	% of total:	30
Assessment Date:	n/a	Outcome addressed:	1,2
Non-Marked:	No		
Assessment Description: Propose a game that you want to build and describe how it meets design principles by building game mechanics and creating gameplay, storytelling, level design and core loops			
Assessment Type:	Project	% of total:	70
Assessment Date:	n/a	Outcome addressed:	1,2,3,4
Non-Marked:	No		
Assessment Description: The students will be asked to first produce a document that details their game design. The design of the game will reflect the understanding of design principles, game mechanics, game dynamics, aesthetics. Module assessments will make sure the students who pass this module not only have in-depth knowledge, but can analyse, design, develop and evaluate a game based on various parameters that are listed below: What games are, and how systems thinking can help you think about them more clearly How to systematically promote engagement, interactivity, and fun What you can learn from MDA and other game design frameworks How to create gameplay and core loops How to design the entire player experience, and how to build game mechanics that work together to create that experience How to capture your game's "big idea" and Unique Selling Proposition How to establish high-level and background design and translate it into detailed design How to build, play, test, and iterate early prototypes How to build your game design career in a field that keeps changing at breakneck speed			
No End of Module Assessment			
No Workplace Assessment			
Reassessment Requirement			
Repeat examination <i>Reassessment of this module will consist of a repeat examination. It is possible that there will also be a requirement to be reassessed in a coursework element.</i>			
Reassessment Description Coursework Only This module is reassessed solely on the basis of re-submitted coursework. There is no repeat written examination. This module is reassessed solely on the basis of re-submitted coursework. There is no repeat written examination. The student will submit the game and a report on game design, testing, and documentation.			

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Module Workload				
Module Target Workload Hours 0 Hours				
Workload: Full Time				
Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload
Lecture	Classroom & Demonstrations (hours)	24	Every Week	24.00
Tutorial	Other hours (Practical/Tutorial)	24	Every Week	24.00
Independent Learning	Independent learning (hours)	202	Every Week	202.00
Total Weekly Contact Hours				48.00

Module Resources	
<i>Recommended Book Resources</i>	
David Baron ,. (2019), , Hands-On Game Development Patterns with Unity. Jesse Schell ,. (2019), ,The Art of Game Design: A Book of Lenses ,Third. Adam Kramarzewski and Ennio De Nucci ,. (2018), ,Practical Game Design: Learn the art of game design through applicable skills and cutting-edge insights.	
<i>Supplementary Book Resources</i>	
Brenlla Ramos, Brais and P. Doran, John ,Unreal Engine 4 Shaders and Effects Cookbook: Over 70 recipes for mastering post-processing effects and advanced shading techniques. Ross Berger ,. (2019), ,Dramatic Storytelling & Narrative Design: A Writer's Guide to Video Games and Transmedia. Macklin / Sharp, Colleen ,. (2016), , Games, Design and Play: A Detailed Approach to Iterative Game Design.	
<i>This module does not have any article/paper resources</i>	
<i>This module does not have any other resources</i>	
Discussion Note:	