Short Title:	Game Design and Development APPROVED
Full Title:	Game Design and Development
Language of Instruction:	English

Module Code:	INME H4001

Credits:	5

Field of Study:	Computer Science

Module Delivered in	3 programme(s)

Reviewed By:	FINBARR FEENEY

Module Author:	ENDA LEE

Module Description:	This module develops computer graphics and game development skills.

Learning Outcomes	
On successful completion of this module the learner will be able to:	
LO1	Design 2D and 3D computer graphics for games.
LO2	Discuss the mathematical concepts underpinning computer graphics.
LO3	Critically evaluate gaming platforms and their features.
LO4	Design & Develop Computer Games.
LO5	Discuss the techniques learned on the course and their used in commercial games.

Module Content & Assessment

Course Work

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	Develop a 2D web based computer game using JavaScript and the HTML canvas.	1,2,4	20.00	Week 6
Project	Typical elapsed assessment would require developing a 2D or 3D computer game using a Game development platform such as Unity3D.	1,2,3,4,5	20.00	Week 13
Essay	Research a current or emerging gaming topic with in-depth analysis.	2,3,5	20.00	Week 5

End of Module Formal Examination

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Formal Exam	End-of-Semester Final Examination	1,2,3	40.00	End-of-Semester

TU Dublin – Tallaght Campus reserves the right to alter the nature and timings of assessment

Module Workload

Workload: Full Time

Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload
Lecture	Lectures	2.00	Every Week	2.00
Lab	Labs	2.00	Every Week	2.00
			Total Weekly Learner Workload	4.00
			Total Weekly Contact Hours	4.00

This module has no Part Time workload.

Module Resources

Eric Lengyel 2016, *Foundations of Game Engine Development, Volume 1: Mathematics***, Terathon Software LLC [ISBN: 0985811749]**

Joesph Hocking 2018, *Unity in Action, Second Edition: Multiplatform game development in C#***, 2 Ed., Manning Publications [ISBN: 1617294969]**

Steve Marschner,⌐Peter Shirley 2016, *Fundamentals of Computer Graphics***, 4 Ed., A K Peters/CRC Press [ISBN: 1482229390]**

Casey Fictum 2016, *VR UX: Learn VR UX, Storytelling & Design***, CreateSpace Independent Publishing Platform [ISBN: 1533273022]**

Website: Unity 2018, *Unity - Learn*
https://unity3d.com/learn

Website: Mozilla 2018, *The Future of (Web) Games*
https://games.mozilla.org/

Module Delivered in

Programme Code	Programme	Semester	Delivery
TA_KCOMP_B (1 year add on)	Bachelor of Science (Honours) in Computing	8	Mandatory
TA_KACOS_B	Bachelor of Science (Honours) in Computing with Software Development	8	Elective
TA_KCOSD_B	Bachelor of Science (Honours) in Computing with Software Development - Year 4 (Add on)	2	Elective

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TA_KCOSD_B	Bachelor of Science (Honours) in Computing with Software Development - Year 4 (Add on)		