MODULE SPECIFICATION PROFORMA

Module Code:	ARD545

Module Title:	Virtual Reality: Level Design and Creation

Level:	5	**Credit Value:**	20

Cost Centre(s):	GADC	JACS3 **code**: HECoS code:	I710 100363

Faculty:	Arts, Science and Technology	**Module Leader:**	Steve Jarvis

Scheduled learning and teaching hours	40 hrs
Guided independent study	160 hrs
Placement	0 hrs
Module duration (total hours)	200 hrs

Programme(s) in which to be offered (not including exit awards)	Core	Option
BA (Hons) / MDes Game Art	✓	☐

Pre-requisites
None

Office use only
Initial approval: 01/05/2018 Version no: 1
With effect from: 01/09/2019
Date and details of revision: Version no:

Module Aims

This module provides the key concepts and practical applications of level design and virtual reality for video games. Students will need to design, develop and create a foundational practical experience with Virtual Reality. Students will need to understand the uses and limitations of VR level design in order to produce an immersive user experience.

Intended Learning Outcomes

Key skills for employability

KS1	Written, oral and media communication skills
KS2	Leadership, team working and networking skills
KS3	Opportunity, creativity and problem-solving skills
KS4	Information technology skills and digital literacy
KS5	Information management skills
KS6	Research skills
KS7	Intercultural and sustainability skills
KS8	Career management skills
KS9	Learning to learn (managing personal and professional development, self-management)
KS10	Numeracy

At the end of this module, students will be able to		Key Skills	
1	Define and identify VR/AR concepts and principles, both immersive and non-immersive, in the context of video games.	KS3	KS6
		KS4	
		KS5	
2	Demonstrate a creative approach to designing for Virtual Reality.	KS1	KS4
		KS2	KS5
		KS3	KS6
3	Develop and produce a working VR experience for a video game level/game prototype.	KS4	KS8
		KS6	KS2
		KS7	
4	Apply practical skills in the creation of VR and immersive environments and present outcomes professionally.	KS4	KS8
		KS5	KS9
		KS7	KS10

Transferable skills and other attributes

- ability manage an independent workload
- contribute proactively to group critique
- communication skills
- understanding the requirements of virtual reality and the capability of a Game Engine
- note-taking; recording, referring and responding to information

Derogations
None.

Assessment:

Indicative Assessment Tasks:

Students will be required to produce coursework in response to set assignments that demonstrate the student's ability to, create, develop, and adapt 3D Models for Video Games, based on ideas, design and peer review.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)	Duration (if exam)	Word count (or equivalent if appropriate)
1	1-4	Coursework	100%		

Learning and Teaching Strategies:

- Contextualising information for this module will be delivered as a keynote lecture/s.
- Assignments *presented to students* will be designed to enable students to produce a body of work that demonstrates their ability in the production of 'Virtual Reality levels' for the video game industry.
- Lectures, workshops and critiques will enable the student to appreciate the similarities, divergences and application of creating custom geometry, terrain etc. with in-engine tools for different purposes.
- Tutorial guidance, group critique and student seminars will underpin of the skill development and understanding of the student.

Syllabus outline:

Key lectures will examine virtual reality theories and best practices, within the Game industry. Students will be introduced to the methods used in the development of 3D models, game level and virtual reality requirements for the video game industry.

During the practical based sessions, students will focus on project planning and process of project discussion. Underpinning theory and concepts will be introduced in lectures and further reinforced through peer review and group critiques. Projects will be set to challenge the students to make use of technical equipment and produce work relevant to their chosen theme and style.

Throughout the module, students will share work and will contribute constructively to feedback upon the work of their peers to form a community of practice. To complete this module, students will submit a portfolio of work which demonstrates the culmination of their project in response to set assignments. In addition to the body of work submitted for assessment, students will be expected to design, develop, and present a working level (game prototype) within a virtual world for their portfolio websites, or other industry related websites.

Indicative Bibliography:

Essential reading

Bucher, J. (2018). Storytelling for Virtual Reality. Focal Press.
McCaffrey, M. (2017). Unreal engine VR cookbook. Boston: Addison-Wesley.
Ramirez, M. (2016). Virtual reality for beginners!. CreateSpace Independent Publishing

Other indicative reading

Galuzin, A. (2016), *Preproduction Blueprint: How to Plan Game Environments and Level Designs.* 2nd ed. CreateSpace Independent Publishing Platform.
Kremers, R. (2010). *Level Design: Concept, Theory and Practice*. Natick, MA: A.K. Peters.
Rogers, S. (2014). Level up!. 2nd ed. Chichester: Wiley.
Pv, S. (n.d.). Unreal Engine 4 game development essentials. Packt Publishing (25 Feb. 2016).
Shannon, T. (2017). Unreal Engine 4 For Design Visualization. Addison-Wesley (14 Aug. 2017).

Periodicals and Websites

Creative Review
http://creativecrash.com
http://www.cgsociety.org
http://www.digitaltutors.com
https://www.unrealengine.com/en-US/what-is-unreal-engine-4
http://www.simplymaya.com