Module Title:	2D and 3D Environmental Modeling
Language of Instruction:	English

Credits:	5

NFQ Level:	8

Module Delivered In	1 programme(s)

Teaching & Learning Strategies:	Tutorials, Demonstrations, project work, case studies, videos, field trip , location research. Module will be delivered though a studio based environment with lecture / practical and project work running in conjunction with each other

Module Aim:	The aim of the module is to introduce the process by which a game environment is created, from concept art to final game environment in industry standard software. Through a practical project framework, students learn the tools and skills needed to create 2D & 3D environments for games, 3D props, 3D modeling and 3D assets for use across the interactive digital art and design area.

Learning Outcomes
On successful completion of this module the learner should be able to:

LO1	Develop an understanding of the interactive experience, and environment creation process from concept and planning to practical production of the final environments. Understand and develop skills in the area of photogrammetry to aid in the development of effective and immersive environment and props.
LO2	Be fluent in the range of tools and skills necessary for environment modeling including poly Modeling, Texture creation/ Material creation, optimizing assets for real time use
LO3	Be aware of the role of the environment artist / designer in a design development process, consider dependencies in other aspects of design production, assess technical requirements and limitations of a target platform or technology and successfully design and produce assets to specification. Understand the work flow and process of a studio environment and collaborate effectively allowing for an adaptive design process, taking on critical evaluation and adapting design work to incorporate it.

Pre-requisite learning
Module Recommendations *This is prior learning (or a practical skill) that is recommended before enrolment in this module.*
No recommendations listed
Incompatible Modules *These are modules which have learning outcomes that are too similar to the learning outcomes of this module.*
No incompatible modules listed
Co-requisite Modules
No Co-requisite modules listed
Requirements *This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.*
No requirements listed

Module Content & Assessment

Indicative Content
Concept analysis and planning Concept analysis and planning immersive environments for Story telling purposes. Interpreting story concept for world design.
Modeling & Sculpting Polygonal modeling. Navigation, object creation, polygonal modeling, Box modeling.
Scene Layout Scene Layout, Low poly modeling, working from designs/ Blueprints, using reference, Scene blocking,testing iterative development.
Modular Design Modular Design, Asset Linking techniques. generated and repeating materials/ texture maps. Designing for re-use.
Materials and Lighting Materials and Lighting, Texture painting, tiling textures, Light baking.
Game engine integration Game engine integration, Physics, collisions, engine prep.

Assessment Breakdown	%
Project	40.00%
Practical	60.00%

No Continuous Assessment

Project				
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Project	The subject will be assessed through the completion of project briefs and the submission of a final solution and research journal/ notebook / Sketchbook. The assessment and feedback will be an opportunity for the student to focus on their work and evaluate their own progress and development.	1,2,3	20.00	Week 6
Project	The subject will be assessed through the completion of multiple project briefs and the submission of a final solution and research journal/ notebook / Sketchbook. The assessment and feedback will be an opportunity for the student to focus on their work and evaluate their own progress and development. Projects will be run as part of a studio based environment	1,2,3	20.00	Week 13

Practical				
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	The subject will be assessed through the completion of in-class tutorials & practical assignments. The assessment and feedback will be an opportunity for the student to focus on their work and evaluate their own progress and development.	1,2	5.00	Week 2
Practical/Skills Evaluation	The subject will be assessed through the completion of in-class tutorials & practical assignments. The assessment and feedback will be an opportunity for the student to focus on their work and evaluate their own progress and development.	1,2	10.00	Week 3
Practical/Skills Evaluation	The subject will be assessed through the completion of in-class tutorials & practical assignments. The assessment and feedback will be an opportunity for the student to focus on their work and evaluate their own progress and development.	1,2	5.00	Week 4
Practical/Skills Evaluation	The subject will be assessed through the completion of in-class tutorials & practical assignments. The assessment and feedback will be an opportunity for the student to focus on their work and evaluate their own progress and development.	1,2	5.00	Week 5
Practical/Skills Evaluation	The subject will be assessed through the completion of in-class tutorials & practical assignments. The assessment and feedback will be an opportunity for the student to focus on their work and evaluate their own progress and development.	1,2	5.00	Week 7
Practical/Skills Evaluation	The subject will be assessed through the completion of in-class tutorials & practical assignments. The assessment and feedback will be an opportunity for the student to focus on their work and evaluate their own progress and development.	1,2	10.00	Week 8
Practical/Skills Evaluation	The subject will be assessed through the completion of in-class tutorials & practical assignments. The assessment and feedback will be an opportunity for the student to focus on their work and evaluate their own progress and development.	1,2	5.00	Week 9
Practical/Skills Evaluation	The subject will be assessed through the completion of in-class tutorials & practical assignments. The assessment and feedback will be an opportunity for the student to focus on their work and evaluate their own progress and development.	1,2	10.00	Week 10
Practical/Skills Evaluation	The subject will be assessed through the completion of in-class tutorials & practical assignments. The assessment and feedback will be an opportunity for the student to focus on their work and evaluate their own progress and development.	1,2	5.00	Week 11

No End of Module Formal Examination

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

Module Workload

Workload: Full Time

Workload Type	Frequency	Average Weekly Learner Workload
Laboratory	12 Weeks per Stage	4.00
Independent Learning Time	15 Weeks per Stage	5.13
	Total Hours	125.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_KCIAD_B	Bachelor of Science (Honours) in Computing in Interactive Digital Art and Design	8	Mandatory

Discussion Note:	TEST

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Discussion Note:	TEST