

Module specification

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Module Code	COM558
Module Title	Real-time Environmental Art for Game Engines
Level	5
Credit value	20
Faculty	FAST
HECoS Code	101268
Cost Code	GACP

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
BSc (Hons) Computer Game Design and Enterprise	Core
BSc (Hons) Computer Game Design and Enterprise (with Industrial Placement)	Core
BA (Hons) Game Art	Core
BA (Hons) Game Art (with Industrial Placement)	Core

Pre-requisites

None

Breakdown of module hours

Learning and teaching hours	30 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	0 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total active learning and teaching hours	30 hrs
Placement / work-based learning	0 hrs
Guided independent study	170 hrs
Module duration (total hours)	200 hrs

For office use only	
Initial approval date	15/06/2023
With effect from date	September 2023
Date and details of revision	
Version number	2

Module aims

The aim of the module is to enable the analysis of contemporary game design styles and methodologies along with the planning, real world referencing and contextualisation process that informs them. In addition, broadening student knowledge of environmental design and scene production with emphasis on real time engine workflow and associated support tools in creating higher quality work form a key theme of this module.

Module Learning Outcomes - at the end of this module, students will be able to:

1	Analyse contemporary artistic design styles and methodologies in relation to game environments and asset development.
2	Utilise modern tools and technologies in the design and production of a real time game environment.
3	Demonstrate environmental work into an industry standard portfolio platform that showcases real time effects.

Assessment

Indicative Assessment Tasks:

Students will be tasked with designing, building a real time environment of their own choosing with a game engine. The scene will need to incorporate use of lighting, particle effects and use of additional procedural/automated tools in the production of terrain and scene assets.

The planning phase will require students to scout real life locations or use reference imagery in the creation of a pre-production portfolio. This portfolio will also incorporate an analysis of contemporary game scenes for further contextualisation.

The design and development phase will require students to work with industry tools and techniques to produce a real time game environment, along with relevant assets and effects. Assets produced in other modules can be incorporated within the final scene.

On completion of the above elements, the students will be required to engage in a reflective showcase of their work.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1, 2, 3	Portfolio	100%

Derogations

None

Learning and Teaching Strategies

In line with the Active Learning Framework, this module will be blended digitally with both a VLE and online community. Content will be available for students to access synchronously and asynchronously and may indicatively include first and third-party tutorials and videos, supporting files, online activities any additional content that supports their learning.

As this module progresses, the strategies will change to best support a diverse learning environment. Initially, the module will start with a heavier reliance on engaging tutor-led lectures, demonstrations, and workshops to ensure that the students get the relevant threshold concepts. As the module continues experiential and peer learning strategies will be encouraged as the students progress with their coursework. Sessions will shift to more tutorial-based sessions to focus of formative feedback for individual student achievement.

Indicative Syllabus Outline

The syllabus will reflect contemporary software and practices and may change based on relevant concepts however and indicative outline could be as follows:

- Location scouting and referencing
- Mood boarding and location conceptualisation
- White boxing and prototyping
- In-engine lighting and shading
- In-engine scene design and development
- In-engine landscaping and topography
- Procedural tools for landscaping and environment capture
- Materials and particle effects
- Reflective practice and personal development in digital design

Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update. Please *ensure correct referencing format is being followed as per University Harvard Referencing Guidance*.

Essential Reads

Kelly, H. (2021), *Environment Art in the Game Industry: A Guide to Rich and Realistic Environments Using Substance Designer*, Boca Raton: CRC Press.

Other indicative reading

Austin, T., (2021), *Narrative Environments and Experience Design: Space as a Medium of Communication*, London: Routledge Research in Design Studies.

Galauzin, A. (2016), *Preproduction Blueprint: How to Plan Game Environments and Level Designs*, Second Edition, South Carolina: CreateSpace.

Kremers, R. (2009), *Level design: Concept, Theory, and Practice*, Massachusetts: A.K. Peters.

Romero, M.F., Sewell, B., Cataldi, L. (2022), *Blueprints visual scripting for Unreal Engine 5*, Third Edition, Birmingham: Packt Publishing.

Employability skills – the Glyndŵr Graduate

Each module and programme is designed to cover core Glyndŵr Graduate Attributes with the aim that each Graduate will leave Glyndŵr having achieved key employability skills as part of their study. The following attributes will be covered within this module either through the content or as part of the assessment. The programme is designed to cover all attributes and each module may cover different areas.

Core Attributes

Engaged
Creative

Key Attitudes

Curiosity
Resilience
Confidence
Adaptability

Practical Skillsets

Digital Fluency
Organisation
Communication