

Module specification

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Module Code	COM655
Module Title	Advanced Asset Production and Technical Art
Level	6
Credit value	20
Faculty	FAST
HECoS Code	101019
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 Development	Core
BSc (Hons) Computer Game Development (with Industrial Placement)	Core
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	24 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	24 hrs

Placement / work based learning	0 hrs
Guided independent study	176 hrs
Module duration (total hours)	200 hrs

For office use only	
Initial approval date	10/05/2023
With effect from date	September 2023
Date and details of revision	
Version number	1

Module aims

This module aims to advance students own technical specialism within 3D production which aligns with their degree pathway. This is achieved by introducing technical art practices and integration into a game engine or appropriate industry software. Students will be tasked with assessing and evaluating differing software, tools, and practices in relation to their subject specialisms to ensure industry standard practice. Students will be required to finalise their work through a portfolio and reflective practice.

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

1	Differentiate industry standard workflow techniques in relation to own technical subject specialism.
2	Evaluate complex techniques associated with chosen technical subject specialism.
3	Assess the use of advanced industry standard techniques through the creation of 3D asset work.
4	Assemble a detailed design and workflow documentation and engage in reflective practice.

Assessment

Indicative Assessment Tasks:

Coursework will take place throughout this module as a single creative workflow. In addition, students will be required to produce a design documentation which evidences their creative process and workflow.

Throughout the module several milestones will be planned (indicatively, this could be a milestone every 3-4 weeks). Formative assessment will occur at each of these milestones to ensure that students get the relevant feedback as the module progresses. These assessments will be largely based on the relevant concepts, skills and design solutions required to meet that milestone.

The final assessment will evaluate the student's applied knowledge and skills in the final product which relates to industry standard workflow and techniques.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1, 2, 3, 4	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

- Conceptualisation
- Optimised 3D development workflow for game engines
- Advanced 3D geometry, UV mapping and Texturing
- Optimised 3D topology and edge flow techniques
- Visual & Traditional Scripting in Digital Content Creators
- Node-based workflow
- Baking and PBR Material workflow
- Procedural texture creation
- Professional portfolio presentation and showcasing
- Industry software integration
- Visual & Non-Visual Scripting Methods

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

Kumar, A. (2021), *Immersive 3D design visualization : with Autodesk Maya and Unreal Engine 4*, New York: Apress.

Other indicative reading

3dtotal Publishing, (2017), *Beginner's Guide to ZBrush*, Worcester: 3dtotal Publishing.

Li, J., Arevalo, K., Tovar, M. (2021), *Creating games with Unreal Engine, Substance Painter, & Maya: Models, Textures, Animation, & Blueprint*, Boca Raton: CRC Press.

McDermott, W. (2018), *The PBR Guide: A Handbook for Physically Based Rendering*, Clermont-Ferrand: Allegorithmic.

Murdock, K. L. (2022), *Autodesk Maya 2023 Basics Guide*, Kansas: SDC Publications.

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
Enterprising
Creative
Ethical

Key Attitudes

Commitment
Curiosity
Resilience
Confidence
Adaptability

Practical Skillsets

Digital Fluency
Organisation
Critical Thinking
Emotional Intelligence
Communication