

Module specification

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Module Code	GME513
Module Title	Character Production for Game Engines
Level	5
Credit value	20
Faculty	FACE
HECoS Code	101019
Cost Code	GAGM
Pre-requisite module	None

Programmes in which module to be offered

Programme title	Core/Optional/Standalone
BA (Hons) Game Art and Animation	Core

Breakdown of module hours

Learning and teaching hours	30 hrs
Placement tutor support hours	0 hrs
Supervised learning hours e.g. practical classes, workshops	0 hrs
Project supervision hours	0 hrs
Active learning and teaching hours total	30 hrs
Placement hours	0 hrs
Guided independent study hours	170 hrs
Module duration (Total hours)	200 hrs

Module aims

This module aims to do the following:

- Revisit industry standard workflow techniques for game character concepting.
- Explore key technical and creative skills that are required to create aesthetically focused characters that demonstrate viability in a game engine.
- Discuss and appraise techniques and strategies to implement custom materials, character elements and other items.
- Produce a high-quality portfolio piece that demonstrates a complete character production workflow.

Module Learning Outcomes

At the end of this module, students will be able to:

1	Analyse contemporary practice to identify efficient strategies for 3D character production.
2	Apply industry-standard tools and techniques to produce a 3D game character asset with appropriate topology and material work.
3	Implement a game-ready character within a scenario using a contemporary game engine.
4	Demonstrate a character production workflow as part of an artistic industry-facing showcase piece.

Assessment

Indicative Assessment Tasks:

This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

This assessment will represent a full game character asset workflow. Students will initially start with pre-production work before designing and producing a game ready character asset and/or character elements to an existing character. Students will specifically be required to focus on appropriate and viable topology, poly count and material work. Students will produce a final showcase piece that demonstrates broad understanding and delivery of both the technical and artistic skills required to produce an implemented character asset.

Assessment number	Learning Outcomes to be met	Type of assessment	Duration/Word Count	Weighting (%)	Alternative assessment, if applicable
1	1, 2, 3, 4	Portfolio	N/A	100%	N/A

Derogations

None

Learning and Teaching Strategies

The primary skill base of this module will be delivered through a series of lectures, demonstrations and practical work that will equip the students with the technical skills and confidence to produce well-rounded and implementable game character. 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, experiential and peer learning strategies will be encouraged as the students' progress with their coursework. Class time will shift to more student-led portfolio development time to focus of formative feedback for individual student achievement.

Welsh Elements

Students will have the right to submit assessed work in Welsh, to receive academic supervision and access learning resources and correspondence in Welsh. Students are encouraged to engage with Welsh cultural themes, creative elements and enterprising opportunities as part of student-led activities and assignments to facilitate wider contextual awareness and distinctive creative outputs.

Indicative Syllabus Outline

Indicative Syllabus includes the following topic areas:

- 3D Character Production Pipeline
- Poly Modelling & Sculpting Techniques
- UV Mapping, Painting & Texturing
- Auto Rigging & Weight Painting
- Introduction to Character Animation Techniques
- Game Engine Implementation
- Visual Scripting Techniques
- Portfolio Production

Indicative Bibliography

Please note the essential reads and other indicative reading are subject to annual review and update.

Essential Reads:

Murdock, K. (2025), *Autodesk Maya 2026 Basics Guide*, Mission: SDC Publications.

Other indicative reading:

3dtotal Publishing (2019), *Creating Characters for the Entertainment Industry: Develop Spectacular Designs from Basic Concepts*, Worcester: 3dtotal Publishing.

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

Bjellvåg, T. (2027), *3D Game Animation with Unreal Engine 5: Uncover Real-Time Animation Techniques for Modern Games and Interactive Experiences*, Birmingham: Packt Publishing.

Administrative Information

For office use only	
Initial approval date	July 2026
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