

Module code: MOD003215	Version: 1 Date Amended: 02/May/2012
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1. Module Title
Introduction to Game Engine Technology

2a. Module Leader
Ian Brown

2b. Department
Department of Computing and Technology

2c. Faculty
Faculty of Science and Technology

3a. Level
4

3b. Module Type
Standard (fine graded)

4a. Credits
15

4b. Study Hours
150

5. Restrictions			
Type	Module Code	Module Name	Condition
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:			

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

Across the worldwide games industry, there are many development environments within which games and interactive experiences can be developed. These environments, or 'engines' can be complex environments, and act as the core stage in a long and potentially, complex production pipeline. A working knowledge of a game engine is vital in order to be able to implement even the most simple digital video game. Every game engine has its strengths and weaknesses. Some game engines are particularly strong at displaying large continuous open worlds, others may be optimised for the current generation of games consoles, while others are of particular interest when creating multi-platform games at minimal cost. This module seeks to provide students with an understanding of the common and transferable concepts within game engines and how such engines integrate into the production pipeline within a commercial games studio. Students will be able to develop this understanding to a level where they will be able to understand the features of a commercial game engine and match these to the requirements of a specific project, and in the process, select the most appropriate engine. Students will also gain a working knowledge of a commercial game engine and learn through firsthand experience, the typical tools and techniques for working effectively within a commercial game engine. These core skills will be transferable across a range of technologies and will serve as a strong foundation for future technical studies on the course. Students taking this module will also be required to attend a one hour class per week to study personal development planning (PDP) during which they will be required to create a PDP portfolio which must be handed in at the end of the module. Failure to do so will result in failing the module.

6b. Outline Content

- History of game engines and game development technology
- Comparison of current generation game engines and features
- Understanding the place which a game engine occupies in a typical game production workflow
- Operating the main functionality of a commercial game engine
- Developing transferable skills to enable students to use future, currently undeveloped game engines
- Planning and developing a brief within a commercial game engine

6c. Key Texts/Literature

The reading list to support this module is available at: <http://readinglists.anglia.ac.uk/modules/mod003215>

6d. Specialist Learning Resources

Students will have access to a specialist game development lab, with the latest industry standard game development tools such as the Unreal Engine, Cry Engine, Unity 3D, 3D Studio Max, 3D monitors and glasses. Students will also have access to a motion capture suit, video and audio recording facilities and a range of electronic interface devices for use with the game engines.

Access to the internet and Anglia Ruskin University VLE.

7. Learning Outcomes (threshold standards)		
No.	Type	On successful completion of this module the student will be expected to be able to:
1	Knowledge and Understanding	Identify and understand the core features and technical architecture of commercial game engines and evaluate the importance of those features against specified requirements.
2	Intellectual, practical, affective and transferrable skills	Understand how to access and operate a range of key features within commercial game engines.
3	Intellectual, practical, affective and transferrable skills	Analyse and implement a specified design within a commercial games engine.
4	Intellectual, practical, affective and transferrable skills	Evidence engagement in Personal Development Planning and appropriate skills needed for HE and employment.

8a. Module Occurrence to which this MDF Refers				
Year	Occurrence	Period	Location	Mode of Delivery
2017/8	ZZF	Template For Face To Face Learning Delivery		Face to Face

8b. Learning Activities for the above Module Occurrence			
Learning Activities	Hours	Learning Outcomes	Details of Duration, frequency and other comments
Lectures	24	1, 4	1 hour Lecture for weeks 1 – 12 1 hour PDP class for weeks 1 - 12
Other teacher managed learning	24	2, 3	2 hour Practical weeks 1 – 12
Student managed learning	102	1 - 4	Further reading and practice with commercial game engines
TOTAL:	150		

9. Assessment for the above Module Occurrence

Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
010	Coursework	1, 2, 3	100 (%)	Fine Grade	30 (%)

Implementation of a specified design within commercial game engine.

Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
011	Coursework	4	0 (%)	Pass/Fail	100 (%)

Reflective report: 600 words equivalence Contributes to PDP and is supported by handing in their PDP portfolio

In order to pass this module, students are required to achieve an overall mark of 40%.

In addition, students are required to:

(a) achieve the qualifying mark for each element of fine graded assessment of as specified above

(b) pass any pass/fail elements