



MODULE SPECIFICATION

Part 1: Information			
Module Title	Gameplay Programming		
Module Code	UFCF7M-30-2	Level	Level 5
For implementation from	2021-22		
UWE Credit Rating	30	ECTS Credit Rating	15
Faculty	Faculty of Environment & Technology	Field	Computer Science and Creative Technologies
Department	FET Dept of Computer Sci & Creative Tech		
Module Type:	Standard		
Pre-requisites	Games in C++ 2020-21		
Excluded Combinations	None		
Co-requisites	None		
Module Entry Requirements	None		
PSRB Requirements	None		

Part 2: Description
<p>Overview: The role of a gameplay programmer is to write and control the code which directly creates the user's game experience. In this way the programmer is responsible for the actual game rather than the engine or tools. This common professional hybrid role demands significant technical, software engineering and game design skills.</p> <p>Educational Aims: This module will develop students to confidently build game features, gameplay, mechanics, entities and systems which combine to create a desired user experience in fast paced changing team working environments.</p> <p>Outline Syllabus: The aim of this module is to build on students' existing computer games design and technical programming skills by: Examining existing game features and deconstructing them into algorithms and patterns. Assessing and implementing existing gameplay patterns with particular reference to concepts such as engagement, motivation, feel, balance and polish Experiencing the activity of game programming, including game system implementation and gameplay implementation Studying existing technical approaches and solutions and current industry trends Implementing their own versions of existing game features and iteratively developing those</p>

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features further
Building a substantial portion of a game integrating multiple gameplay systems

Teaching and Learning Methods: Teaching and Learning Methods:
Lectures covering Gameplay Programming Concepts
Studio sessions for implementing gameplay features
Tutorials to support learning new technology

Part 3: Assessment

Assessment is split into two parts; Gameplay Programming Portfolio and Technical Feature Report.

Gameplay Programming Portfolio: For this portfolio, students will implement a variety of individual gameplay features using an existing engine/framework following current industry trends. Also from a brief, students will be required to create a playable level/demo integrating extended variations of the individual gameplay features. Portfolios will be assessed on quality (functionality, feel & polish) and appropriate implementation techniques, adherence to brief as well as creative innovation and their technical approach.

Technical Feature Report: Students are required to write a technical report detailing a significant gameplay feature from their Game Project. The report should be structured to be read by different (fictional) development team members e.g. tester, level designer, lead programmer, producer etc. It should contain sections such as a non-technical description of the gameplay feature as implemented, a formal diagramming technique describing the behaviour, detailed instructions for integration and tweaking the gameplay and the relationships between this feature and any others within the wider gameplay systems.

Formative feedback on the Portfolio and Report will be offered throughout the module during the practical sessions. These interactions will provide the controlled conditions for this module.

First Sit Components	Final Assessment	Element weighting	Description
Portfolio - Component A		75 %	Gameplay programming portfolio
Report - Component B		25 %	Technical feature report (indicative: 1500 words)
Resit Components	Final Assessment	Element weighting	Description
Portfolio - Component A		75 %	Gameplay programming portfolio
Report - Component B		25 %	Technical feature report (indicative: 1500 words)

Part 4: Teaching and Learning Methods

Learning Outcomes
On successful completion of this module students will achieve the following learning outcomes:

Module Learning Outcomes	Reference
Write code demonstrating an understanding of the mathematics, and data-structures underlying gameplay features	MO1
Iteratively develop a variety of gameplay features. Such as Camera, Controls, Characters, Enemies, Loops, Economics, and Motivational Techniques from historical and current games	MO2
Examine alternative techniques and assess their appropriateness for implementing given gameplay features in different contexts	MO3

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	Examine existing techniques and understand the challenges when integrating them into running games. Consider approaches to alleviate these challenges	MO4
	Use appropriate industry best practices for the programming of gameplay systems	MO5
	Understand the position gameplay programmer occupies within the wider team	MO6
Contact Hours	Independent Study Hours:	
	Independent study/self-guided study	228
	Total Independent Study Hours:	228
	Scheduled Learning and Teaching Hours:	
	Face-to-face learning	72
	Total Scheduled Learning and Teaching Hours:	72
	Hours to be allocated	300
	Allocated Hours	300
Reading List	<p>The reading list for this module can be accessed via the following link:</p> <p>https://uwe.rl.talis.com/modules/ufcf7m-30-2.html</p>	

Part 5: Contributes Towards

This module contributes towards the following programmes of study:

Games Technology [Sep][SW][Frenchay][4yrs] BSc (Hons) 2020-21

Games Technology [Sep][FT][Frenchay][3yrs] BSc (Hons) 2020-21

Games Technology {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2019-20

Games Technology {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2019-20