Module Definition Form (MDF)

Module code: MOD010783	**Version:** 2 **Date Amended:** 05/Mar/2026

1. Module Title
Introduction to Games Programming

2a. Module Leader
Ian Brown

2b. School
Cambridge School of the Creative Industries

2c. Faculty
Faculty of Arts, Humanities, Education and Social Sciences

3a. Level
4

3b. Module Type
Standard (fine graded)

4a. Credits
30

4b. Study Hours
300

5. Restrictions

Type	Module Code	Module Name	Condition
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:	BSc (Hons) Computer Games Programming		

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

This module introduces essential computer science principles as they apply to foundational game development challenges. You will gain the intellectual tools to design, implement, and test software systems, beginning with an understanding of the software development life cycle and effective programming structures. Covering variables, constants, data types, and operators, this module builds a solid grounding in program design and testing methodologies. Through learning core algorithms and structured documentation, you'll acquire a practical understanding of efficient program construction, establishing a base for more advanced topics in the following module.

6b. Outline Content

- Introduction to programming concepts and logic
- Variables, constants, data types, and operators
- Mathematical principles in games (vectors, matrices, trigonometry, algebra)
- Documentation and commenting for clarity and maintenance
- Introduction to the software development life cycle

6c. Key Texts/Literature

The reading list to support this module is available at: https://readinglists.aru.ac.uk/

6d. Specialist Learning Resources

Students will have access to specialist game development labs, with the latest industry-standard game development tools such as game engines, 3D modelling tools, graphics packages and other suitable software. The students will have access where appropriate to a variety of specialised game development hardware such as joysticks, virtual reality equipment, graphics tablets and mobile devices. Face-to-face learning activities will be held in appropriate rooms, including gaming labs and active learning rooms when designated. This is in addition to access to the internet and Anglia Ruskin University LMS.

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	Select appropriate data structures and algorithms to support the implementation of an efficient software artefact.
2	Knowledge and Understanding	Identify appropriate mathematical techniques which can be used to solve a variety of practical game development problems.
3	Intellectual, practical, affective and transferrable skills	Create programs using appropriate syntax and structures in a high-level programming language.

8a. Module Occurrence to which this MDF Refers				
Year	**Occurrence**	**Period**	**Location**	**Mode of Delivery**
2025/6	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	1-3	Two 1-hour lectures per week
Other teacher managed learning	48	1-3	Two 2-hour practical sessions per week
Student managed learning	228	1-3	Self-directed learning and development
TOTAL:	300		

9. Assessment for the above Module Occurrence					
Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
010	Practical	1-3	100 (%)	Fine Grade	30 (%)
100 hr project to develop a simple game related artefact (4,000 word equivalent)					

In order to pass this module, students are required to achieve an overall mark of 40% (for modules at levels 3, 4, 5 and 6) or 50% (for modules at level 7*).

In addition, students are required to:
(a) achieve the qualifying mark for each element of fine graded assessment as specified above
(b) pass any pass/fail elements

[* the pass mark of 50% applies for all module occurrences from the academic year 2024/25 – see Section 3a of this MDF to check the level of the module and Section 8a of this MDF to check the academic year]