

Module code: MOD010784	Version: 2 Date Amended: 05/Mar/2026
-------------------------------	--

1. Module Title
Software Development for Games

2a. Module Leader
Stephen Uzor

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 delves into more advanced programming concepts essential for game developers. With a primary focus on object-oriented programming, you will explore key principles such as encapsulation, inheritance, polymorphism, and interfaces. This module covers data handling and structures like arrays, records, pointers, and linked lists, emphasizing efficient and maintainable programming practices. By critically appraising core data structures and algorithms, you'll gain the advanced programming knowledge necessary for solving complex problems in commercial game development.

6b. Outline Content

- Class design, relationships, and composition
- Data structures and their application in game systems
- Design patterns and reusable code practices
- Code organisation, readability, and maintainability
- Reflection and evaluation of development approaches

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	Apply current theories and models of problem identification, analysis, and documentation to a game related brief.
2	Intellectual, practical, affective and transferrable skills	Reflect on the use of object-oriented design principles and data structures to implement elegant game artefacts.
3	Intellectual, practical, affective and transferrable skills	Assemble object-oriented game code that is maintainable, extendable, portable, and flexible.

8a. Module Occurrence to which this MDF Refers				
Year	Occurrence	Period	Location	Mode of Delivery
2026/7	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 an elegant 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]