Module Details

Module Title	Introduction to Computer Programming for Games
Module Code	GAV4005-B
Academic Year	2021/2
Credits	20
School	Department of Media Design and Technology
FHEQ Level	FHEQ Level 4

Contact Hours

Type	Hours
Lectures	24
Laboratories	24
Directed Study	152

Availability

Occurrence	Location / Period
BDA	University of Bradford / Semester 1

Module Aims

To provide an introduction to computer programming with particular emphasis on program design and implementation.

Outline Syllabus

Software and program design: algorithms, pseudo code, loops and branches, pointer and array concepts. Programming development environments: entering, editing, compiling, linking, debugging and flow control. Games programming languages and API's: for examples XNA, Unity or similar, Scripting languages, data types, expressions, operators, control structures, pointers, arrays, structures, objects, classes, stacks, queues, and Windows Forms Applications. Basic game design and development.

Learning Outcomes

Outcome Number	Description
O1	Gain the knowledge and understanding of both the theoretical and practical aspects of constructing high level computer games programs; evaluate a range of computer programming approaches to identify the most appropriate solution to a given problem.
O2	Deploy a range of Windows-based computer programming techniques using industry-standard computer languages and games API's.
O3	Demonstrate skills in systematic problem solving, data interpretation, general communication skills and the ability to use a PC software development environment. Work collaboratively.

Learning, Teaching and Assessment Strategy

Teaching and learning on this module will comprise lectures and practical lab sessions. The lectures will cover the theoretical foundations of computer programming with the specific application to the production and development of computer games; practical work will give opportunity for hands-on lab based computer exercises; lab sessions will provide opportunity for practise and further clarification of particular elements of the theoretical and practical aspects of the module.
The mid-term practical exercise will measure students' progress and allow for feedback to improve the final assessment.

Mode of Assessment

Type	Method	Description	Weighting
Summative	Coursework	Mid-term coursework comprising a programming exercise	30%
Summative	Coursework	Game programming exercise	70%

Reading List

To access the reading list for this module, please visit https://bradford.rl.talis.com/index.html