

## **Introduction to Computer Programming for Games**

Module Code:	GAV4005-B
Academic Year:	2018-19
Credit Rating:	20
School:	Department of Media Design and Technology
Subject Area:	Games, Animation and Visual Effects
FHEQ Level:	FHEQ Level 4

Pre-requisites:

Co-requisites:

### **Contact Hours**

Type	Hours
Lectures	24
Tutorials	24
Laboratory	24
Directed Study	128

### **Availability Periods**

Occurrence	Location/Period
BDA	University of Bradford / Academic Year (Sept - May)

### **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 and classes.

## **Module Learning Outcomes**

*On successful completion of this module, students will be able to...*

- 1 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.
- 2 deploy a range of windows based computer programming techniques using industry standard computer languages and games API's.
- 3 demonstrate skills in systematic problem solving, data interpretation, general communication skills and the ability to use a PC software development environment.

## **Learning, Teaching and Assessment Strategy**

Teaching and learning on this module will comprise lectures, practical lab sessions and problem classes. 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; problem classes 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 formative feedback. Supplementary assessment is to repair deficiencies in original submission.

## **Mode of Assessment**

Type	Method	Description	Length	Weighting	Final Assess'
Summative	Coursework	Formative coursework comprising a programming exercise	0 hours	30%	No
Summative	Coursework	Game programming exercise	0 hours	70%	Yes

## **Legacy Code (if applicable)**

EM-0150L

## **Reading List**

To view Reading List, please go to [rebus:list](#).

