

Module Details	
Module Title:	Fundamentals of Programming
Module Code:	COS4016-B
Academic Year:	2019-20
Credit Rating:	20
School:	Department of Computer Science
Subject Area:	Computer Science
FHEQ Level:	FHEQ Level 4
Pre-requisites:	
Co-requisites:	

Contact Hours	
Type	Hours
Lectures	16
Laboratory	48
Directed Study	136

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 1 (Sep - Jan)

Module Aims
To introduce fundamental principles of computer programming and software construction. To develop skills in problem solving applied to computer programming.

Outline Syllabus
Introduction to problem solving techniques and their part in the software development process). Basic software tools for software development. The concepts of object, class and interface. Program constructs: sequence, selection and iteration. Testing and debugging programs.

Learning Outcomes

1	apply the basics of software construction and the tools required to support it in programs; describe and use the terminology of object orientation;
2	apply basic principles of computer programming to common problems; analyse and run computer program code; test and evaluate programs against basic requirements.
3	apply algorithmic problem solving approaches.

Learning, Teaching and Assessment Strategy

Learning outcomes are developed through lecture classes that introduce concepts and connective material and present and review exercises, supplemented by laboratory-based exercises and coursework that provide practical experience and develop skills and techniques and address learning outcomes and complemented by weekly supervised laboratory classes (to provide some individual tuition and resolve problems) and provide students with the opportunity to receive continuous feedback on programming and development skills and address learning outcomes. Directed study includes reading activities, individual exercises and revision of concepts taught in the teaching sessions, and individual reading and application of documentation and programming examples from technical reports and book sections as well as the majority of practical work necessary to complete the coursework.

Mode of Assessment

Type	Method	Description	Length	Weighting
Summative	Coursework	An exercise in problem solving involving the development of computer software and an accompanying written report		50%
Summative	Classroom test	Computer -based lab test	2 hours	50%

Reading List

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

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.