

Fundamentals of Programming

Module Code:	COS4016-B
Academic Year:	2018-19
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 Periods

Occurrence	Location/Period
NLA	Namal College / Semester 1 (Sep - Jan)
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.

Module Learning Outcomes

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

- 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	Final Assess'
Summative	Coursework	An exercise in problem solving involving the development of computer software and an accompanying written report		50%	No
Summative	Classroom test	Computer -based lab test	2 hours	50%	Yes

Legacy Code (if applicable)

CM-0140D

Reading List

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