UNIVERSITY of BRADFORD

Module Descriptor

Module Details	
Module Title	Computer Systems
Module Code	BIC4011-B
Academic Year	2022/3
Credits	20
School	UoB International College
FHEQ Level	FHEQ Level 4

Contact Hours	
Type	Hours
Directed Study	140
Lectures	60

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 2
BDA	University of Bradford / Semester 3

Module Aims

This module provides students with a broad introduction to, and overview of, the discipline of computing. It then focuses study on the structure and components of a computer system and the key components and responsibilities of an operating system. By providing students with an understanding of how their computer and its operating systems work it will provide them with a good grounding for the further years of their degree studies.

Outline Syllabus
The content of the module includes: History and development of computing and related industries. Central Processing Unit (CPU) - the von Neumann (Princeton) and Harvard models. Definitions and uses of memory and the bus (communications) system. Different technologies used to connect peripherals. Binary data representation. Role of an operating system from a programmer's perspective. Introduction to Linux system (overview of shell commands). Introduction to good editors for programmers. Introduction to visualization tools like VirtualBox, enabling students to run different operating systems for different purposes on their hardware. Legal, ethical, safety and quality issues - managing risk and responsibility in computer and information systems.

Learning Outcomes	
Outcome Number	Description
01	Explain in general terms the components of a computer system and its usefulness to a programmer.
02	Provide definitions and describe uses of a CPU, memory and the bus system.
03	Demonstrate an understanding of the Linux system.
04	Describe the different technologies available to connect peripherals.
05	Demonstrate an understanding of visualization tools and of how they may benefit the user.
06	Describe potential legal, ethical, quality and/or safety issues around designing and implementing a computer system.

Learning, Teaching and Assessment Strategy

Teaching and learning on the module can be divided up in the following ways:
60 hours in small classes using an interactive learning and teaching approach; tutor-led sessions are followed by whole class or group discussions.

140 hours of directed learning - responding to ideas and information received and discussed in classes; further practical sessions; assignments, preparation for classes and assessments; independent learning.

Formative assessment takes place through the regular setting of assignments during the course, encouraging students to respond to and develop ideas and information conveyed in the classes and practical sessions. Tutors provide detailed and supportive feedback, encouraging students to reflect on their performance, their progress on the course to date and their strengths and weaknesses. The feedback and reflection are used to help students devise clearly expressed steps towards improvement.

Summative assessment consists of an interim test, sat about half-way through the module, and which covers basic problem-solving techniques. Towards the end of the module a programming exercise, using Java, is set as a final task.

Mode of Assessment

Type	Method	Description	Weighting
Summative	Classroom test	Interim Test (1 Hr)	30%
Summative	Coursework - Written	Report on a real life scenario, indicating how to achieve maximum benefit from a computer system	70%

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.

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