Computer Systems

Module Information

2022.01, Approved

Summary Information

Module Code	4501CSQR
Formal Module Title	Computer Systems
Owning School	Computer Science and Mathematics
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 4
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Oryx Universal College WLL

Learning Methods

Learning Method Type	Hours
Lecture	22
Practical	33

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-PAR	PAR	September	12 Weeks

Aims and Outcomes

Aims	To provide an understanding of the underlying computing platform (hardware, OS, network) upon which applications are developed and hosted

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Explain the fundamental principles underlying the operation of modern computer systems
MLO2	2	Demonstrate a knowledge of the structure and organization of computer systems
MLO3	3	Demonstrate a knowledge of the interaction between software and hardware, demonstrating how programs are executed
MLO4	4	Explain the fundamental concepts and issues involved in computer networking

Module Content

Outline Syllabus	Data Representation: Numbers, Text, Images, Binary/HexComputer Arithmetic: Addition, Subtraction, Signed/Unsigned NumbersComputer Architecture: Stored Program (von Neumann) Computer Organization, Instruction Sets, The Processor Cycle (fetch-decode execute), Measuring and improving performanceLogic circuits: Digital Logic, Boolean Algebra, Implementing Hardware with Digital LogicMemory: Types of memory, Memory Hierarchy, Memory MapI/O and Peripheral Control: Device Management, Interrupts, Direct Memory AccessHardware/Software Interface: Machine Code and Assembly Language, Compiling and Interpreting, Script languagesOperating Systems: Resource Management, Processes and Threads, Process SchedulingNetworks: Principles of Data Communication, Network Topologies, Network Protocols, Wireless Networks
Module Overview	
Additional Information	This module is intended to provide basic knowledge in relation to the computing platform (hardware, OS, network), which students will need as support knowledge for subsequent modules at FHEQ 5 and 6.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Technology	Digital System Design	50	0	MLO1, MLO2
Exam	Examination	50	2	MLO1, MLO3, MLO4

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Syed Naqvi	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings