Module: Computer Architecture 171

Module name:	Computer Architecture 171
Code:	COA171
NQF level:	5
Type:	Core – Bachelor of Information Technology
Contact time:	30 hours
Structured time:	6 hours
Self-directed time:	34 hours
Notional hours:	70 hours
Credits:	7
Prerequisites:	None

Purpose

Students will gain the skills and knowledge necessary to perform various essential tasks on personal computers. Students will learn how to support PC hardware in a business setting, including the installation and configuring of various devices and peripherals.

Outcomes

Upon successful completion of this module, the student will be able to:

- Demonstrate an informed understanding of the technological components that make up a personal computer, understanding of the key terms, concepts, facts, general principles, rules and theories that is required for assembling a personal computer system.
- Select and apply standard methods, procedures or techniques regarding the installation and configuration of an operating system within the Windows environment, and to plan and manage an implementation process.
- Identify, evaluate and solve routine and new problems within a Windows environment, regarding the troubleshooting of devices and peripheral components.
- Demonstrate the ability to gather information from a range of manufacturers to convey troubleshooting techniques to users.

Assessment

Assessment is performed using a variety of instruments:

- Continuous evaluation of theoretical work through written assignments, a formative test, and a summative test.
- Final assessment through a written examination.

Teaching and Learning

Learning materials

Prescribed book

- Computer Architecture - IT without frontiers series.

Additional Material

    📖 Gookin, D. (2005). *PC's For Dummies 10th Edition.* Wiley. ISBN: 9780764589584

Learning activities

The teaching and learning activities consist of a combination of formal lectures on theoretical concepts, lab exercises, and discussions. Two mandatory assignments must be completed during the course. The progress made on these assignments will inform the class discussion.

Notional learning hours

Activity	Units	Contact Time	Structured Time	Self-Directed Time
Lecture		27.0		13.0
Formative feedback		3.0		
Project				
Assignment	2			6.0
Test	2		4.0	8.0
Exam	1		2.0	7.0
		30.0	6.0	34.0

Syllabus

- Computer terminology.

- Hardware and software overview.

- System boards and form factors.

- Central processing units and cooling.

- Types of memory.

- Types of storage devices.

- Power supplies and connectors.

- Input and output devices.

- Troubleshooting of various components.

- Installing and configuring operating systems.

- Installing and configuring a printer on a network.