

# Information Technology

## INFORMATION TECHNOLOGY OPERATIONS

### Purpose:

The IT Operations course uses the Cisco Networking Academy® IT Essentials curriculum. This covers the fundamentals of computer hardware and software and advanced concepts such as security, networking, and the responsibilities of an IT professional.

Students who complete this course will be able to describe the internal components of a computer, assemble a computer system, install an operating system, and troubleshoot using system tools and diagnostic software. Students will also be able to connect to the Internet and share resources in a networked environment. Topics include mobile devices such as tablets and smartphones and client side virtualization. This course will also help students prepare for the industry recognized CompTIA A+ Certification.

### Learning outcomes:

On successful completion of this course you will have the following knowledge and skills in:

NO	LEARNING OUTCOME
1	Install and configure systems and application software, including hardware resources and network connectivity to meet end user requirements.
2	Demonstrate an understanding of application types, such as stand-alone, client server, peer to peer, web service and mobile, and security concepts, tools and techniques.
3	Undertake hardware and software diagnostic testing, maintenance, technical and customer support across a range of devices to meet end user requirements.
4	Analyse organisational requirements, including performance, capacity, and business continuity.
5	Demonstrate professional practice as part of a team or when working independently.

### Assessment requirements:

LEARNING OUTCOME	TITLE	ASSESSMENT TASKS					
		Weightings	Assignment	Completed Workbook	Test	Practical	Other Specify
5	Lab Work	10%		1			
1-4	Chapter tests	30%					Multiple progressive tests
1-5	Practical Skills Test	30%			1		
1-4	Cisco Final Test – Online	30%			1		



# OPERATING SYSTEMS AND SYSTEMS SUPPORT

## Purpose:

The aim of the course is to enable students to select, install, and configure IT hardware and systems software and use graphical (GUI) and command line interfaces (CLI) to meet organisational requirements.

## Learning outcomes:

On successful completion of this course you will have the following knowledge and skills in:

NO	LEARNING OUTCOME
1	Recognise common computer architecture from personal to enterprise
2	Use graphical (GUI) and command line interfaces (CLI)
3	Demonstrate an understanding of operating system internals, and the relationship between hardware and operating system
4	Select, install and configure general purpose and specialist operating systems in current use, both proprietary and open source

## Assessment requirements:

LEARNING OUTCOME	TITLE	ASSESSMENT TASKS					
		Weightings	Assignment	Completed Workbook	Test	Practical	Other Specify
2,4	Assessment 1	60%				1	
1,3	Theory Test	40%			1		



# IT TECHNICAL SUPPORT

**Purpose:**

The aim of the course is to enable students to demonstrate an operational knowledge and understanding of IT service management, identify common issues related to IT security, and troubleshoot and resolve a range of common system problems.

**Learning outcomes:**

On successful completion of this course you will have the following knowledge and skills in:

NO	LEARNING OUTCOME
1	Demonstrate an understanding of the principles of service management frameworks and professional practice.
2	Follow standard procedures when providing IT services and focus on the delivery of best services to end user.
3	Protect against unauthorised access, and identify human behaviour that affects security.
4	Apply auditing, logging, authentication, and authorisation.
5	Troubleshoot and resolve a range of common system and user problems using appropriate tools and procedures.

**Assessment requirements:**

LEARNING OUTCOME	TITLE	ASSESSMENT TASKS					
		Weightings	Assignment	Completed Workbook	Test	Practical	Other Specify
2,3,4,5	Practical Lab Book	50%		1			
1,3	Theory Test	25%			1		
2.3	Presentation	25%					1 Presentation

# DATABASE PRINCIPLES

## Purpose:

The aim of the course is enable the student to apply a broad operational knowledge of database administration to meet typical organisational data storage and retrieval requirements, and apply conceptual knowledge of cloud services and virtualisation.

## Learning outcomes:

On successful completion of this course you will have the following knowledge and skills in:

NO	LEARNING OUTCOME
1	Apply the use of Query languages
2	Utilise database management systems (DBMS) optimisation, security and backups
3	Apply data modelling techniques and conceptual knowledge of cloud services and virtualisation.

## Assessment requirements:

LEARNING OUTCOME	TITLE	ASSESSMENT TASKS					
		Weightings	Assignment	Completed Workbook	Test	Practical	Other Specify
3	Data Modelling Test	30%			1		
2,3	Database concepts test	10%			1		
1	SQL practical	35%				1	
2,3	Project 1	10%	1				
1	Project 2	10%	1				
1	Lab Practicals	5%		1			