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## MODULE DESCRIPTOR

### Module Title

Cisco CCNA Course 1: Introduction to Networks

Reference	EN3539	Version	1
Created	May 2017	SCQF Level	SCQF 9
Approved	May 2017	SCQF Points	15
Amended	May 2017	ECTS Points	7.5

### Aims of Module

To introduce students to the architecture, structure, functions, components, and models of the Internet and other computer networks. To introduce students to the principles and structure of IP addressing. To introduce students to the fundamentals concepts of Ethernet, media, and operations.

### Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Select suitable equipment, and protocols for use in small network.
- 2 Diagnose problems and propose solutions to basic problems in equipment selection, protocol use and configurations in a network.
- 3 Analyse and design and IP addressing schemes for a small network.
- 4 Configure a small network.
- 5 Troubleshoot a small network.

### Indicative Module Content

Exploring the Network: Communicating in a Network-Centric World, The Network as a Platform, LANs, WANs, and the Internet, The Expanding Network. Configuring a Network Operating System: IOS Bootcamp, Getting Basic, Addressing Schemes Network Protocols and Communications: Network Protocols and Standards, Using Requests for Comments, Moving Data in the Network. Application Layer: Application Layer Protocols, Well-Known Application Layer Protocols and Services. Transport Layer: Transport Layer Protocols, TCP and UDP. Network Layer: Network Layer Protocols, Routing, Routers, Configuring a Cisco Router. IP Addressing: IPv4 Network Addresses, IPv6 Network Addresses, Connectivity Verification. Subnetting IP Networks: Subnetting an IPv4 Network, Addressing Schemes, Design Considerations for IPv6. Network Access: Data Link Layer, Media Access Control, Physical Layer, Network Media. Ethernet: Ethernet Protocol, Address Resolution Protocol, LAN Switches. Network Management and Performance: Create and Grow, Keeping the Network Safe, Basic Network Performance, Managing IOS Configuration Files.

**Module Delivery**

The module is taught using a structured programme of web based learning materials, web-based activities, practical exercises and student centred learning.

**Indicative Student Workload**

	Full Time	Part Time
Contact Hours	36	36
Non-Contact Hours	114	114
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	150
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

**ASSESSMENT PLAN**

If a major/minor model is used and box is ticked, % weightings below are indicative only.

**Component 1**

Type:	Coursework	Weighting:	50%	Outcomes Assessed:	4, 5
Description:	Coursework which consists of practical laboratory exercises associated with the Cisco Course 1 material.				

**Component 2**

Type:	Examination	Weighting:	50%	Outcomes Assessed:	1, 2, 3
Description:	A closed book on-line examination.				

**MODULE PERFORMANCE DESCRIPTOR****Explanatory Text**

To pass the module, you must achieve a 40% weighted average mark from the coursework and the exam. In addition, you need to achieve at least 35% in each Component.

Module Grade	Minimum Requirements to achieve Module Grade:
<b>A</b>	>70%
<b>B</b>	60-69%
<b>C</b>	50-59%
<b>D</b>	40-49%
<b>E</b>	35-39%
<b>F</b>	0-34%
<b>NS</b>	Non-submission of work by published deadline or non-attendance for examination

**Module Requirements**

Prerequisites for Module	Introduction to Telecommunications (EN2520) or Introduction to Data Networks (EN2521) or equivalent.
Corequisites for module	None.
Precluded Modules	None.

**INDICATIVE BIBLIOGRAPHY**

- 1 This module represents Course 1 of the four course CCNA (Cisco Certified Networking Associate) Routing and Switching Curriculum. The material for the course is provided by Cisco to the University in the form of web-based learning and assessment mechanisms as well as lab equipment in the form of routers and switches for practical training.
- 2 STALLINGS, W., 2014. Data and Computer Communications, 10th Ed, New Jersey:Prentice Hall.