Module Title **Cisco CCNA Stage 3** **Keywords** Networks, Cisco, CCNA	Reference EN3532 SCQF Level SCQF 8 SCQF Points 15 ECTS Points 7.5 Created August 2002 Approved March 2004 Amended August 2011 Version No. 2

This Version is No Longer Current

The latest version of this module is available here

Prerequisites for Module

EN2533 Cisco CCNA Stage 2

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To provide the student with the ability to design and manage LANs and WANs using switches and routers.

Learning Outcomes for Module

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

Mode of Delivery

The module is taught using a structured programme of online learning, mini-seminars, tutorials, practical exercises and student-centred learning.

Assessment Plan

	Learning Outcomes Assessed
Component 1	3
Component 2	1,2,4

Component 2 is a closed book on-line examination. (50% weighting).

Component 1 is coursework which consits of practical laboratory exercises associated

1. Describe the purpose of LAN switching, including the implementation and benefits of VLANs.
2. Use the correct methodology to design networks at OSI Layers 1, 2 and 3.
3. Configure and verify the operation of routed and routing protocols on Cisco routers.
4. Discuss and implement network management techniques.

Indicative Module Content

Routing: VLSM, RIPv2, OSPF, EIGRP, troubleshooting. Switching: Concepts, switch operation, configuration, spanning tree, Virtual LANs/Trunks (VLANs), LAN Design.

Scaling networks with NAT/PAT. DHCP operation and configuration. WAN technologies and design, Point-to-point Protocal (PPP), Integrated Services Digital Network (ISDN), Frame Relay, Network Administration.

Indicative Student Workload

Contact Hours	Full Time
Lectures	12
Tutorials/Seminars	24

Directed Study	
Practical exercises	36
Directed Study	24

with the Cisco Semester 3 material. (50% weighting).

Indicative Bibliography

1. This module represents Course 3 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., 2010. Data and Computer Communications, 9th Ed, New Jersey:Prentice Hall.