

MODULE DESCRIPTOR

MODULE TITLE	Introduction to Network Routing		
MODULE CODE	CO2511 (L5)	CREDIT VALUE	20 credits / 10 ECTS
SCHOOL	SCHOOL OF SCIENCE		

MODULE AIMS

This module provides students with a thorough understanding of how a basic network functions. They will have the opportunity to design, build and test router based Local Area Networks. Material related to Course 1 and 2 of the Cisco CCNA Network Academy qualification is included.

1. To provide students with hands on experience in the set-up, configuration and testing of Networks.
2. To foster problem-solving skills through case studies.
3. To encourage students to become independent learners
4. To prepare students for the Cisco CCNA qualification
5. To encourage students to expand their knowledge of the computer network industry

MODULE CONTENT

Network addressing

Networking Models

Networking Media

TCP/IP and utilities

Ethernet Technologies

Switching

IP Custom Subnetting

Routing Fundamentals

Routing and Routed Protocols

Virtual Local Area Networks VLANs

The role of certification within the computer networking industry.

INTENDED LEARNING OUTCOMES

On successful completion of this module a student will be able to:

1. Explain the technologies used in Computer Networks
2. Explain routing protocols and connectivity devices for a LAN and WAN.
3. Design a network and program a Cisco router for efficient use.

TEACHING METHODS

This is a highly vocational module and the students have the opportunity to take examinations to achieve Cisco vocational qualifications.

This course will be delivered as a supported self-study module. Students will have access to the extensive high quality Cisco online teaching materials, which includes lecture material and practical work. Although

most of the practical will involve simulated environments, students will also have access to a full equipped networking laboratory.

A member of staff will be available to guide and support students.

The Cisco material includes regular on-line tests, which the students take in their own time. Student performance is recorded on line and allows staff to monitor progress.

The practical assessments allow the students to demonstrate they can apply the material in real situations. The use of a network simulator, packet tracer, allows the students to perform and comment on a variety of tasks in a time-constrained, invigilated environment. The practical assessments include configuration and trouble-shooting.

The duration of the practical assessment, a supervised coursework, has been chosen to give the students appropriate time to set up appropriate configurations and to test and trouble-shoot them.

ASSESSMENT METHODS

This module is assessed through a Practical assessment 1 to cover CCNA1 material: using network simulator (50%) and a Practical assessment 2 to cover CCNA 2 material: using network simulator (50%).