MODULE **DESCRIPTOR**

MODULE TITLE	INTRODUCTION TO NETWORK ROUTING		
MODULE CODE	CO2511 (L5)	CREDIT VALUE	20 UK CREDITS / 10 ECTS
SCHOOL	SCHOOL OF SCIENCES		

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**

Indicative syllabus 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 online 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 troubleshooting.

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 two practical assessments.