Anglia Ruskin University

Module Definition Form (MDF)

Module code: MOD005436	**Version:** 1 **Date Amended:** 04/May/2016

1. Module Title
Networking Essentials

2a. Module Leader
David Cameron

2b. Department
Department of Computing and Technology

2c. Faculty
Faculty of Science and Technology

3a. Level
5

3b. Module Type
Standard (fine graded)

4a. Credits
15

4b. Study Hours
150

5. Restrictions

Type	**Module Code**	**Module Name**	**Condition**
Pre-requisite:	MOD005421	Computer Architecture and Networking	Compulsory
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:			

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

This module focuses on the key concepts of network switching and routing.

It introduces the learner to converged networks and examines some of the underpinning building blocks of this technology. The module then looks at how networking devices are configured and how the data is switched and subsequently routed between networks. Network security features are also considered.

There is a focus on how data can be handled discreetly and more securely by the implementing and configuring Virtual Local Area Networks (VLAN). This knowledge is then extended so the network can be configured to allow inter VLAN routing to take place.

The module is delivered as a mixture of theory, delivered through a series of lectures, and practical implementation, delivered through a series of guided laboratory exercises. In the lab sessions students will gain deep understanding on the routing and switching concepts and acquire hands-on-skills using advanced network simulation tools that comply with industry standard router platforms.

Students studying this module will be able to access on-line materials including the Cisco

Networking Academy online curriculum, the VLE, and access a specialist laboratory.

Assessment is by designing and implementing a small network to meet a brief with a report justifying the decisions taken and the functionality achieved.

6b. Outline Content

Introduction to Switched Networks

IP addressing and VLSM

Basic Switching Concepts and Configuration

VLANs

Routing Concepts

Inter-VLAN Routing

6c. Key Texts/Literature

The reading list to support this module is available at: http://readinglists.anglia.ac.uk/modules/mod005436

6d. Specialist Learning Resources

Packet Tracer Software

Specialist Networking Lab

7. Learning Outcomes (threshold standards)		
No.	**Type**	**On successful completion of this module the student will be expected to be able to:**
1	Knowledge and Understanding	Explain switching and routing concepts
2	Knowledge and Understanding	Apply appropriate configuration to network devices
3	Intellectual, practical, affective and transferrable skills	Design a small scale switched network comprising VLANs
4	Intellectual, practical, affective and transferrable skills	Implement Inter VLAN routing

8a. Module Occurrence to which this MDF Refers				
Year	**Occurrence**	**Period**	**Location**	**Mode of Delivery**
2017/8	F01UCP	Semester 1	University Centre, Peterborough	Face to Face

8b. Learning Activities for the above Module Occurrence			
Learning Activities	**Hours**	**Learning Outcomes**	**Details of Duration, frequency and other comments**
Lectures	12	1,2,3,4	Lecture 1 hr x 12 weeks
Other teacher managed learning	24	1,2,3,4	Practical 2 hr x 12 weeks
Student managed learning	114	1,2,3,4	reading, research, skills practice, assignment
TOTAL:	150		

9. Assessment for the above Module Occurrence					
Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
010	Coursework	2,3,4	50 (%)	Fine Grade	30 (%)
Written assessment with practical element (1,500 words equivalent)					
Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
011	Examination	1	50 (%)	Fine Grade	30 (%)
1hr 15, closed book					

In order to pass this module, students are required to achieve an overall mark of 40%.
In addition, students are required to:
(a) achieve the qualifying mark for each element of fine graded assessment of as specified above
(b) pass any pass/fail elements