University of the West of Scotland

Module Descriptor

Session: 2022/23

Last modified: 21/07/2022 15:30:16

Title of Module: CCNA2 Switching Routing & Wireless Essentials

Code: COMP08097	**SCQF Level: 8** (Scottish Credit and Qualifications Framework)	**Credit Points: 20**	**ECTS: 10** (European Credit Transfer Scheme)
School:	School of Computing, Engineering and Physical Sciences		
Module Co-ordinator:	Duncan Thomson		

Summary of Module
This module covers part 2 of the CCNAv7 curriculum, including: Basic Device Configuration; Switching Concepts; VLANs; Inter-VLAN Routing; STP; Etherchannel DHCPv4; SLAAC and DHCPv6 Concepts; FHRP Concepts; LAN Security Concepts; Switch Security Concepts; WLAN Concepts; WLAN Configuration; Routing Concepts; IP Static Routing; Troubleshoot Static and Default Routes.

Module Delivery Method					
Face-To-Face	**Blended**	**Fully Online**	**HybridC**	**HybridO**	**Work-based Learning**
✓	✓				

Face-To-Face
Term used to describe the traditional classroom environment where the students and the lecturer meet synchronously in the same room for the whole provision.

Blended
A mode of delivery of a module or a programme that involves online and face-to-face delivery of learning, teaching and assessment activities, student support and feedback. A programme may be considered "blended" if it includes a combination of face-to-face, online and blended modules. If an online programme has any compulsory face-to-face and campus elements it must be described as blended with clearly articulated delivery information to manage student expectations

Fully Online
Instruction that is solely delivered by web-based or internet-based technologies. This term is used to describe the previously used terms distance learning and e learning.

HybridC
Online with mandatory face-to-face learning on Campus

HybridO
Online with optional face-to-face learning on Campus

Work-based Learning
Learning activities where the main location for the learning experience is in the workplace.

Campus(es) for Module Delivery						
The module will **normally** be offered on the following campuses / or by Distance/Online Learning: (Provided viable student numbers permit)						
Paisley:	Ayr:	Dumfries:	Lanarkshire:	London:	Distance/Online Learning:	Other:

✓						

Term(s) for Module Delivery					
(Provided viable student numbers permit).					
Term 1	✓	Term 2		Term 3	

Learning Outcomes: (maximum of 5 statements)
On successful completion of this module the student will be able to: L1. Demonstrate an understanding of the core concepts, principles, terminology and operation of basic routed, switched and wireless networks L2. Configure and secure a basic network of routers and switches with VLANs, DHCP and static routing

Employability Skills and Personal Development Planning (PDP) Skills	
SCQF Headings	During completion of this module, there will be an opportunity to achieve core skills in:
Knowledge and Understanding (K and U)	SCQF Level 8. Understanding redundancy features in switched networks Understanding static and default routing Understanding wireless networks and their protocols Understanding Virtual LANs
Practice: Applied Knowledge and Understanding	SCQF Level 8. Configuring IOS on Cisco routers and switches Configuring a wireless LAN (WLAN)
Generic Cognitive skills	SCQF Level 8. Troubleshooting basic switched and wireless networks
Communication, ICT and Numeracy Skills	SCQF Level 8. Working with a Command Line Interface Managing configuration files

Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code: COMP07012	**Module Title:** CCNA1: Introduction to Networks
	Other:	
Co-requisites	**Module Code:**	**Module Title:**

* Indicates that module descriptor is not published.

Learning and Teaching
Lectures are used to put across the most important points of the theory and concepts of computer networking. Practical laboratory sessions allow students to practice design, implementation and testing of networks. Cisco Networking Academy materials provide an online resource, including formative assessments and simulations, which can be used both during and outside classroom hours

Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	**Student Learning Hours** (Normally totalling 200 hours): (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture/Core Content Delivery	20
Laboratory/Practical Demonstration/Workshop	28
Independent Study	152
	200 Hours Total

****Indicative Resources: (eg. Core text, journals, internet access)**

The following materials form essential underpinning for the module content and ultimately for the learning outcomes:

Cisco's online curriculum at https://www.netacad.com/

Access to a networking lab with equipment supporting the latest version of the CCNA curriculum

Software: Packet tracer, VirtualBox, Wireshark, Putty

(**N.B. Although reading lists should include current publications, students are advised (particularly for material marked with an asterisk*) to wait until the start of session for confirmation of the most up-to-date material)

Engagement Requirements

In line with the Academic Engagement Procedure, Students are defined as academically engaged if they are regularly engaged with timetabled teaching sessions, course-related learning resources including those in the Library and on the relevant learning platform, and complete assessments and submit these on time. Please refer to the Academic Engagement Procedure at the following link: Academic engagement procedure

Where a module has Professional, Statutory or Regulatory Body requirements these will be listed here:
Attendance and participation in at least 75% of classes
Completion of online formative assessments (Chapter Tests) in Cisco's Netacad VLE

Supplemental Information

Programme Board	Computing
Assessment Results (Pass/Fail)	No
Subject Panel	Business & Applied Computing
Moderator	Steve Eager
External Examiner	R Khusainov
Accreditation Details	
Version Number	1.04

Assessment: (also refer to Assessment Outcomes Grids below)

A timed computer-based online test (worth 50% of the module marks) will test student knowledge of the concepts and knowledge. This will normally be that provided through the Cisco Networking Academy. A number of formative chapter-focussed online tests will prepare the student for this assessment

A timed lab-based skills assessment (worth 50% of the module marks) will test student skills and applied knowledge of networks.

(N.B. (i) **Assessment Outcomes Grids** for the module (one for each component) can be found below which clearly demonstrate how the learning outcomes of the module will be assessed.
(ii) An **indicative schedule** listing approximate times within the academic calendar when assessment is likely to feature will be provided within the Student Handbook.)

Assessment Outcome Grids (Footnote A.)

Component 1

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Class test (written)	✓		50	1

Component 2

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Class test (practical)		✓	50	2
Combined Total For All Components			100%	3 hours

Footnotes
A. Referred to within Assessment Section above
B. Identified in the Learning Outcome Section above

Note(s):
1. More than one assessment method can be used to assess individual learning outcomes.
2. Schools are responsible for determining student contact hours. Please refer to University Policy on contact hours (extract contained within section 10 of the Module Descriptor guidance note). This will normally be variable across Schools, dependent on Programmes &/or Professional requirements.

Equality and Diversity

The University policies on equality and diversity will apply to this module. In order for the student to complete this module the student will be required to take part in laboratory and computer-based exercises, including both computer-based and laboratory-based assessments. Students with substantial physical impairments or visual or auditory handicaps should be assessed and counseled prior to selecting courses requiring this module. When a student discloses a disability a special needs advisor will - after consulting with the module coordinator - agree the appropriate adjustments to be made.

UWS Equality and Diversity Policy

(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)