

University of the West of Scotland

Module Descriptor

Session: 2024/25

Title of Module: CCNA1/2: Networks, Routing, Switching & WLANs			
Code: COMP09115	SCQF Level: 9 (Scottish Credit and Qualifications Framework)	Credit Points: 30	ECTS: 15 (European Credit Transfer Scheme)
School:	School of Computing, Engineering and Physical Sciences		
Module Co-ordinator:	Raman Singh		
Summary of Module			
<p>This module covers the first two parts of the CCNAv7 curriculum. The module makes use of Cisco Networking Academy teaching materials and is designed to allow students to progress towards CCNA certification.</p> <p>The Part 1 curriculum covers: Networking Today; Basic Switch and End Device Configuration; Protocols and Models; Physical Layer; Number Systems; Data Link Layer; Ethernet Switching; Network Layer; Address Resolution; Basic Router Configuration; IPv4 Addressing; IPv6 Addressing; ICMP; Transport Layer; Application Layer; Network Security Fundamentals; Build a Small Network.</p> <p>The Part 2 curriculum covers: Basic Device Configuration; Switching Concepts; VLANs; Inter-VLAN Routing; STP; Ether channel 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.</p> <p>This module will normally be delivered as a long, thin module across T1 and T2. This module will work to develop a number of the key 'I am UWS' Graduate Attributes to make those who complete this module:</p> <ul style="list-style-type: none"> • Universal: Critical Thinker, Ethically minded, Research-minded • Work Ready: Problem-Solver, Effective Communicator, Ambitious • Successful: Autonomous, Resilient, Driven 			

Module Delivery Method					
Face-To-Face	Blended	Fully Online	HybridC	Hybrid 0	Work-Based Learning
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

See Guidance Note for details.

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) (tick as appropriate)

Paisley:	Ayr:	Dumfries:	Lanarkshire:	London:	Distance/Online Learning:	Other:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Add name

Term(s) for Module Delivery

(Provided viable student numbers permit).

Term 1	Term 2	Term 3
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Learning Outcomes: (maximum of 5 statements)

These should take cognisance of the SCQF level descriptors and be at the appropriate level for the module.

At the end of this module the student will be able to:

L1	Demonstrate a detailed knowledge of commonly used networking protocols, including IPv4 and IPv6 addressing/routing.
L2	Demonstrate an integrated knowledge of switched networks, and how these integrate with wireless and routed networks.
L3	Use network configuration skills to build networks from routers and switches to meet specified criteria.

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 9 Understanding common networking protocol operations understanding IPv4 and IPv6 addressing, including subnetting understanding the integration of switches, routers and wireless network components.
Practice: Applied Knowledge and Understanding	SCQF Level 9 Configuring network devices based on Cisco IOS configuring routers and switches to meet given criteria.
Generic Cognitive skills	SCQF Level 9

	Troubleshooting network problems using a variety of tools.	
Communication, ICT and Numeracy Skills	SCQF Level 9 Performing subnetting calculations for IP addresses configuring devices using a CLI and/or GUI using a range of software tools to support building and maintaining a network.	
Autonomy, Accountability and Working with others	SCQF Level 9 Coordinating work on a number of network devices within a small group towards a common goal.	
Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code:	Module Title:
	Other:	
Co-requisites	Module Code:	Module Title:

*Indicates that module descriptor is not published.

Learning and Teaching	
In line with current learning and teaching principles, a 20-credit module includes 200 learning hours, normally including a minimum of 36 contact hours and maximum of 48 contact 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	52
Independent Study	228
	300 Hours Total
**Indicative Resources: (eg. Core text, journals, internet access)	

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

Cisco Networking Academy CCNA1: Introduction to Networks course materials.

Cisco Networking Academy CCNA2: Routing, Switching and Wireless Essentials course materials.

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)

Attendance and Engagement Requirements

In line with the [Student Attendance and Engagement Procedure](#): Students are academically engaged if they are regularly attending and participating in timetabled on-campus and online teaching sessions, asynchronous online learning activities, course-related learning resources, and complete assessments and submit these on time.

Equality and Diversity

The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: [UWS Equality, Diversity and Human Rights Code](#).

Please ensure any specific requirements are detailed in this section. Module Co-ordinators should consider the accessibility of their module for groups with protected characteristics..

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

Supplemental Information

Divisional Programme Board	Computing
Assessment Results (Pass/Fail)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
School Assessment Board	Business & Applied Computing
Moderator	Duncan Thomson

External Examiner	R Khusainov
Accreditation Details	e.g. ACCA Click or tap here to enter text.
Changes/Version Number	1.04

Assessment: (also refer to Assessment Outcomes Grids below)

Assessment 1 (50%): The first coursework category aligns with CCNA1: Introduction to Networks. It comprises tests (chapter tests with 10% weightage and one final test with 20% weightage) assessing mainly the theoretical outcomes (weighted as 30%) and an individual practical skills-based test assessing the practical skills gained by the students (weighted as 20%) combined in one category.

Assessment 2 (50%): The second coursework category aligns with CCNA2: Routing, Switching and Wireless Essentials. It comprises tests (chapter tests with 10% weightage and one final test with 20% weightage) assessing mainly the theoretical outcomes (weighted as 30%) and an individual practical skills-based test assessing the practical skills gained by the students (weighted as 20%) combined in one category.

(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 Module Handbook.)

Assessment Outcome Grids (See Guidance Note)

Component 1					
Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Class tests (written)	✓			30	2
Class test (practical)			✓	20	2

Component 2					
Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Class tests (written)		✓		30	2
Class test (practical)			✓	20	2
Combined Total for All Components				100%	8 hours

Change Control:

What	When	Who
Further guidance on aggregate regulation and application when completing template	16/01/2020	H McLean
Updated contact hours	14/09/21	H McLean
Updated Student Attendance and Engagement Procedure	19/10/2023	C Winter
Updated UWS Equality, Diversity and Human Rights Code	19/10/2023	C Winter
Guidance Note 23-24 provided	12/12/23	D Taylor
General housekeeping to text across sections.	12/12/23	D Taylor

Version Number: MD Template 1 (2023-24)