

University of the West of Scotland

Module Descriptor

Session: 2024/25

Title of Module: Unix System Administration			
Code: COMP09024	SCQF Level: 9 (Scottish Credit and Qualifications Framework)	Credit Points: 20	ECTS: 10 (European Credit Transfer Scheme)
School:	School of Computing, Engineering & Physical Sciences		
Module Co-ordinator:	Duncan Thomson		
Summary of Module			
<p>Unix-like operating systems are ubiquitous and underpin a wide variety of systems, from embedded devices through commodity operating systems such as Android and MacOS, network and Internet servers and supercomputers. Some of their core concepts differ substantially from comparable Windows-based systems. This module aims to provide a foundational understanding and the skills required to administer a Unix-like operating system within a networked environment.</p> <p>The module begins by introducing some of the basic concepts such as the the Unix filesystem, users, groups, permissions, processes, jobs and the shell, as well as installation of a basic Linux system. The module then introduces a range of basic system administration tasks such as writing shell scripts, scheduling, installation and configuration of software, basics networking configuration and the provision of basic network services including DNS, DHCP, SSH and web serving.</p> <p>This module is aligned with the UWS graduate attributes:</p> <ul style="list-style-type: none"> • Universal (Knowledge of Discipline, Critical Thinker, Confidence) • Work-Ready (Problem solver, Teamworker, Effective communicator) • Successful (Adaptability, Autonomy, Subject Specialist) 			

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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> New College Lanarkshire

Term(s) for Module Delivery					
(Provided viable student numbers permit).					
Term 1	<input checked="" type="checkbox"/>	Term 2	<input type="checkbox"/>	Term 3	<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 broad and integrated understanding of Unix concepts and terminology
L2	Demonstrate a detailed knowledge of areas of Unix system administration
L3	Use a range of Unix system administration skills to configure a system to specified requirements
L4	Use a number of tools to configure, update, monitor and troubleshoot a Unix-like system
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 - Understand and apply the concepts and terminology used in Unix-like operating systems (users, files, processes, filesystems, devices, sockets, etc) - Understand core systems such as init, cron and networking
Practice: Applied Knowledge and Understanding	SCQF Level 9 - Use a range of tools, including the command line and configuration files, to control core Unix functionality and the services of a Unix-like system - Monitor the operation of a Unix-like operating system
Generic Cognitive skills	SCQF Level 9

	- Consult appropriate documentation when required	
Communication, ICT and Numeracy Skills	SCQF Level 9 - Work effectively on the command line - Edit and document configuration files in a professional manner	
Autonomy, Accountability and Working with others	SCQF Level 9 - Know when to ask for support or advice when faced with technical problems	
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	10
Laboratory/Practical Demonstration/Workshop	30
Independent Study	160
	Hours Total 200
**Indicative Resources: (eg. Core text, journals, internet access)	

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

Access to a working Unix or Unix-like system with administrative privileges (for example Debian Linux running on VirtualBox hypervisor, or a hypervisor with permissions to install a new VM)

Laboratory worksheets and lecture notes from the university's VLE

Access to a suitable VLE for online assessment in groups

Please ensure the list is kept short and current. Essential resources should be included, broader resources should be kept for module handbooks / Aula VLE.

Resources should be listed in Right Harvard referencing style or agreed professional body deviation and in alphabetical order.

(**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.

For the purposes of this module, academic engagement equates to the following: attendance at 80% of classes, and regular participation in any formative assessments (quizzes) on the VLE.

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](#).

In order for the student to complete this module the student will be required to take part in laboratory exercises, including a laboratory-based assessment. Students with substantial physical impairments should be assessed and counselled prior to selecting courses requiring this module. When a student discloses a disability a special needs advisor will agree the appropriate adjustments to be made, consulting with the module coordinator if necessary.

(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	Henry Hunter
External Examiner	R Khusainov
Accreditation Details	n/a
Changes/Version Number	3.0

Assessment: (also refer to Assessment Outcomes Grids below)

Assessment 1: An online multichoice class test, worth 40 marks, and weighted at 40%

Assessment 2: Two practical assessments, weighted at 60%, consisting of:

- a log book of notes based on questions embedded in the lab sheets (30 marks, weighted at 30%)
- a timed in-class demo showing a range of skills from across the module (30 marks, weighted at 30%)

(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)	Learning Outcome (4)	Learning Outcome (5)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Online class test	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		40%	

Component 2							
Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Learning Outcome (4)	Learning Outcome (5)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Log book	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		30%	
Lab Demo	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		30%	0.2

Combined Total for All Components						100%	0.2
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