Module Descriptor

Title	Unix System Administration		
Session	2025/26	**Status**	Published
Code	COMP09024	**SCQF Level**	9
Credit Points	20	**ECTS (European Credit Transfer Scheme)**	10
School	**Computing, Engineering and Physical Sciences**		
Module Co-ordinator	D Thomson		

Summary of Module

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.

The module begins by introducting 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.

This module is aligned with the UWS graduate attributes:

- Universal (Knowledge of Discipline, Critical Thinker, Confidence)
- Work-Ready (Problem solver, Teacmworker, Effective communicator)
- Successful (Adaptability, Autonomy, Subject Specialist)

Module Delivery Method	**On-Campus[1]**	**Hybrid[2]**	**Online[3]**	**Work -Based Learning[4]**
	☒	☐	☐	☐

[1] Where contact hours are synchronous/ live and take place fully on campus. Campus-based learning is focused on providing an interactive learning experience supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus contact hours will be clearly articulated to students.

[2] The module includes a combination of synchronous/ live on-campus and online learning events. These will be supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus and online contact hours will be clearly articulated to students.

[3] Where all learning is solely delivered by web-based or internet-based technologies and the participants can engage in all learning activities through these means. All required contact hours will be clearly articulated to students.

[4] Learning activities where the main location for the learning experience is in the workplace. All required contact hours, whether online or on campus, will be clearly articulated to students

Campuses for Module Delivery	☐ Ayr ☐ Dumfries		☒ Lanarkshire ☐ London ☒ Paisley		☐ Online / Distance Learning ☒ Other (specify) New College Lanarkshire	
Terms for Module Delivery	Term 1	☒	Term 2	☐	Term 3	☐
Long-thin Delivery over more than one Term	Term 1 – Term 2	☐	Term 2 – Term 3	☐	Term 3 – Term 1	☐

Learning Outcomes	
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	N/A
L5	N/A

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 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 9** - Use a range of tools, including the command line and configuration files, to control core Unix functionaility and the services of a Unix-like system - Monitor the operation of a Unix-like operating system
Generic Cognitive skills	**SCQF 9** - Consult appropriate documentation when required
Communication, ICT and Numeracy Skills	**SCQF 9** - Work effectively on the command line - Edit and document configuration files in a professional manner
Autonomy, Accountability and Working with Others	**SCQF 9** - Know when to ask for support or advice when faced with technical problems

Prerequisites	**Module Code**	**Module Title**

	Other	
Co-requisites	**Module Code**	**Module Title**

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** (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture / Core Content Delivery	12
Laboratory / Practical Demonstration / Workshop	36
Independent Study	152
Please select	
Please select	
Please select	
TOTAL	200

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

The School of Computing, Engineering and Physical Sciences considers attendance and engagement to mean a commitment to attending, and engaging in, timetabled sessions. You will scan your attendance via the scanners each time you are on-campus and you will login to the VLE several times per week. Where you are unable to attend a timetabled learning session due to illness or other circumstance, you should notify the Programme Leader that you cannot attend. Across the School an 80% attendance threshold is set. If you fall below this, you will be referred to the Student Success Team to see how we can best support your studies.

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. Aligned with the University's commitment to equality and diversity, this module supports equality of opportunity for students from all backgrounds and learning needs. Using the VLE, material will be presented electronically in formats that allow flexible access and manipulation of content. This module complies with University regulations and guidance on inclusive learning and teaching practice. This module has lab-based teaching and as such you are advised to speak to the Module Co-ordinator to ensure that specialist assistive equipment, support provision and adjustment to assessment practice can be put in place, in accordance with the University's policies and regulations.
(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**
Overall Assessment Results	☐ **Pass / Fail** ☒ **Graded**
Module Eligible for Compensation	☐ **Yes** ☒ **No** **If this module is eligible for compensation, there may be cases where compensation is not permitted due to programme accreditation requirements. Please check the associated programme specification for details.**
School Assessment Board	Business & Applied Computing
Moderator	H Hunter
External Examiner	R Khusainov
Accreditation Details	
Module Appears in CPD catalogue	☐ **Yes** ☒ **No**
Changes / Version Number	3.1

Assessment (also refer to Assessment Outcomes Grids below)
Assessment 1
An online multichoice class test, worth 40 marks, and weighted at 40%
Assessment 2

A log book based on questions embedded in the lab sheets (30 marks, weighted at 30%)
Assessment 3
A timed in-class demo testing a range of skills from 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.)

Component 1							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Online Class Test	☒	☐	☐	☐	☐	40	

Component 2							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Log Book	☐	☒	☐	☐	☐	30	

Component 3							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
	☐	☐	☒	☐	☐	30	0.2
Combined total for all components						100%	0.2 hours

Change Control

What	**When**	**Who**
Attendance and EDI Regulations	20/01/2025	L Cunningham
Duplicate LO removed; Assessments split into three, and Assessment/LO mappings changed; contact hours adjusted to total 48; typo in PDP skills corrected	19/1/25	D Thomson