Session: 2022/23

Last modified: 10/01/2023 10:41:24

Title of Module: Linux: Tools and Administration

Code: COMP08100	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:	Althaff Mohideen		

Summary of Module

The aim of the module is to provide students with an introduction to Linux operating systems. The learners are provided with the fundamental skills and understanding of the administration of Linux operating systems, Linux commands, and utilities for developing their skills in cyber operations.

This module will work to develop a number of the key **'I am UWS' Graduate Attributes** to make those who complete this module:

<u>U</u>niversal

    Critical Thinker

    Ethically-minded

    Research-minded

<u>W</u>ork Ready

    Problem-Solver

    Effective Communicator

    Ambitious

<u>S</u>uccessful

    Autonomous

    Resilient

    Driven

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 a critical understanding of the structure and administration of Linux operating systems

L2. Effectively use a variety of commands and utilities to undertake Linux administration and penetration testing

L3. Write simple scripts to deploy and automate services

L4. Use utilities to collect system information;Use utilities to collect system information

L5. Use a vulnerable system as case studies to demonstrate the skills in use of Linux tools

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. A detailed understanding of directory structure, process management, and administration utilities that are required to manage a live Linux system.
Practice: Applied Knowledge and Understanding	SCQF Level 8. Use a variety of tools to undertake Linux installation and administration.
Generic Cognitive skills	SCQF Level 8. Systematic planning and undertaking of system design and administration.
Communication, ICT and Numeracy Skills	SCQF Level 8. Effective use of a variety of tools. Analytic skills in identifying the weaknesses and vulnerability of systems. Report writing and presentation skills.
Autonomy, Accountability and Working with others	SCQF Level 8. Teamwork and communication skills.

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	
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	12
Tutorial/Synchronous Support Activity	12
Laboratory/Practical Demonstration/Workshop	24
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: Sharma, H. (2018) Kali-Linux An Ethical Hackers cookbook (2nd edition). Packt Publishing Tony, B., Terry, D., and Gregon, NP. (2006) Linux Network Administrator's Guide. John Wiley & Sons Christopher, N., (2015) Linux Bible (20th edition). John Wiley & Sons. Cannon J., (2016) Linux Administration: The Linux Operating System and Command Line Guide for Linux Administrators. CreateSpace Independent Publishing Platform
(**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

Supplemental Information

Programme Board	Computing
Assessment Results (Pass/Fail)	No
Subject Panel	Business & Applied Computing
Moderator	Sean Sturley
External Examiner	M Davis

Accreditation Details	
Version Number	2.01

Assessment: (also refer to Assessment Outcomes Grids below)
This module will be assessed by two individual pieces of coursework.
(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)	Learning Outcome (3)	Learning Outcome (4)	Learning Outcome (5)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Class test (written)	✓			✓	✓	50	2
Class test (practical)	✓	✓	✓	✓	✓	50	8
Combined Total For All Components						100%	10 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
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)