Module: Operating Systems 263

Module name:	Operating Systems 263
Code:	OPS263
NQF level:	6
Type:	Fundamental – Diploma in Information Technology (Infrastructure stream)
Contact time:	34 hours
Structured time:	6 hours
Self-directed time:	40 hours
Notional hours:	80 hours
Credits:	8
Prerequisites:	OPS261

Purpose

This course is aimed at providing students with tools necessary to manage a Linux Server environment. In this course, students will focus on managing and troubleshooting various problems of a Red Hat Enterprise Linux system and the tools available to aid this task through a series of hand-on-labs and practical use case.

Outcomes

Upon successful completion of this module, the student will be able to:

- Demonstrate the ability to make decisions and act appropriately in system start-up and advanced system management.
- Demonstrate the ability to evaluate, select, and apply configurations of the Linux kernel.
- Demonstrate the ability to evaluate, select, and apply the necessary skills to perform Linux commands in the Linux command line interface.
- Demonstrate the ability to evaluate, select, and apply user management within the Linux environment.
- Demonstrate detailed knowledge on the graphical user interface of Linux.

Assessment

Assessment is performed using a variety of instruments:

- Continuous evaluation of theoretical work through written assignment, a formative, and a summative test.
- Continuous evaluation of project work, where the student must design, manage and report on the evaluation of testing methodologies and the selection of an appropriate methodology for a given scenario, justifying the choice made with well-formed arguments and evidence.
- Final assessment through a written examination.
- The assignments or projects collectively will count 30% of your class mark.
- All tests will collectively account for 70% of your class mark.
- Your class mark contributes 30% towards your final mark for the subject, while the final assessment accounts for 70% of your final mark.

Teaching and Learning

Learning materials

Prescribed books (EBSCO)

    📖 ***Linux for beginners the ultimate guide to the Linux operating system***

    📖 ***Linux Command Line, Cover all essential Linux commands. A complete introduction.***

Additional material

    📖 ***Linux: The Ultimate Step by Step Guide to Quickly and Easily Learning Linux.***

Learning activities

Learning will be facilitated by the lecturer with student centred activities that involve problem-based learning where pupils are presented with challenges that replicate the situation in the real-world environment. This will be achieved through a combination between presentation of theoretical concepts, guided exercises, group work and discussions during the module. One mandatory assignment and one project must be completed during the course.

Notional learning hours

Activity	Units	Contact Time	Structured Time	Self-Directed Time
Lecture		27.0		13.0
Formative feedback		3.5		
Project	1	3.5		9.0
Assignment	1			3.0
Test	2		4.0	8.0
Exam	1		2.0	7.0
		34.0	**6.0**	**40.0**

Syllabus

- Installation of Linux
- System Start-up & Advanced System Management
- Linux Kernel Configuration
- Philosophy and concepts
- Basic graphical user interface configurations
- Introduction to basic commands in command line.
- User management and permissions.
- User management commands.