# Module: Operating Systems 263

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| **Module name:** | Operating Systems 263 |
| **Code:** | OPS263 |
| **NQF level:** | 6 |
| **Type:** | Fundamental – Diploma in Information Technology (Infrastructure stream) |
| **Contact time:** | 48 hours |
| **Structured time:** | 8 hours |
| **Self-directed time:** | 24 hours |
| **Notional hours:** | 80 hours |
| **Credits:** | 8 |
| **Prerequisites:** | OPS262 |

## 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 assignments, formative tests, and a summative test.
- Continuous evaluation through tracking of progress, offering support, guidance and provision of constant stream of opportunities to prove mastery of subject material and pursuing more challenging work as they master the basics.
- Final assessment through an examination.

# 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.

## Notional learning hours

| Contact | Distance | Other | Type of learning activities | % Learning |
|---|---|---|---|---|
| y | y | n | Lectures (face-to-face, limited interaction or technologically mediated) | 40% |
| y | y | n | Tutorials: individual groups | 20% |
| n | y | n | Syndicate groups | 10% |
| n | y | n | Independent self-study of standard texts and references (study guides, books, journal articles) | 10% |
| n | y | n | Independent self-study of specially prepared materials (case studies, multi-media, etc. | 20% |

## 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.