Module Specification

Advanced Networking Administration

Version: 2026-27, v1.0, 19 Sep 2023

Contents

Part 1: Information

Module title: Advanced Networking Administration

Module code: UFCE5B-30-3

Level: Level 6

For implementation from: 2026-27

UWE credit rating: 30

ECTS credit rating: 15

College: College of Arts, Technology and Environment

School: CATE School of Computing and Creative Technologies

Partner institutions: None

Field:

Module type: Module

Pre-requisites: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: This module will equip students with the understanding of and technical skills in networked systems to ensure compliancy, security, access control and user permissions are managed effectively across larger networked systems.

Features: Not applicable

Educational aims: This module will cover key technologies, trends and security considerations for managing large cooperate networks, focusing on configuration of

Domain controllers, Active Directory, and Group Policy Objects. An understanding of key auditing and compliancy requirements will also be developed and explored through a range of practical workshops.

Outline syllabus: This module will cover the theoretical understanding and practical application/administration of:

Domain controllers, Active Directory, Group Policy Objects, sites and services for multi site domains.

DHCP and DNS requirements.

Automated software deployment and management tools.

Multi-level user account control and permissions.

Device management and software restriction policy.

Security considerations (MFA, biometrics, authorised devices, geofencing, SSO & Identity Providers).

Zero trust networks.

Internet access and application access control

Logging and auditing

Diagnosing common conflicts and faults

Change control and best practices.

Regulatory requirements and compliance certification, eg:
-Information Security (eg ISO/IEC 27001, 27017 and 27018)
-CSA STAR

-Data security eg GDPR and ISO/IEC 27701
-Cyber Essentials/Plus, NSC guidance

On premise, cloud and hybrid solutions.

Part 3: Teaching and learning methods

Teaching and learning methods: This module will the delivered through introductory lectures covering the fundamentals and technical underpinning of the module before progressing onto practical delivery through a series of lessons, workshops and practical tasks in a Network Lab to develop the tools and techniques required to complete the assessment for this module.

Module Learning outcomes: On successful completion of this module students will achieve the following learning outcomes.

MO1 Understand and apply Domain Management policies to manage user and device access controls and information assurance

MO2 Implement and configure a range of network controls, networking and logging to diagnose common faults and conflicts.

MO3 Evaluate emerging networking network administration practices

MO4 Analyse the impact that key regulatory requirements and compliance certification have on network control

Hours to be allocated: 300

Contact hours:

Independent study/self-guided study = 228 hours

Face-to-face learning = 72 hours

Total = 300

Reading list: The reading list for this module can be accessed at readinglists.uwe.ac.uk via the following link

Part 4: Assessment

Assessment strategy: This module is supported through two assessments - an online exam and a portfolio.

ONLINE EXAM
The first assessment is a 1-hour online examination consisting of multiple choice questions based upon scenarios provided to assess understanding of core technologies.

PORTFOLIO
The second and final assessment is a practical portfolio which will be conducted in a network laboratory environment. Students will be required to deploy and configure a complete domain solution, roles and features and implement a range of access and security controls. This is followed by a 1500 word lab report evaluating the completed project.

It is highly recommended that a Virtulisation environment is used to support this assessment.

The resit strategy should follow the same format as the first assessment. A re-work is considered for the lab element due to the size of the project and lab time/access required.

Assessment tasks:

Examination (Online) (First Sit)
Description: Online Multiple Choice Exam (Scenario focused) (1 hour)
Weighting: 25 %
Final assessment: No
Group work: No
Learning outcomes tested: MO4

Portfolio (First Sit)

Description: Networking portfolio and 1500 word lab report.
Weighting: 75 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3

Examination (Online) (Resit)
Description: Online Multiple Choice Exam (Scenario focused) (1 hour)
Weighting: 25 %
Final assessment: No
Group work: No
Learning outcomes tested: MO4

Portfolio (Resit)
Description: Networking portfolio and 1500 word lab report.
Weighting: 75 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Digital and Technology Solutions (Network Engineer) {Apprenticeship-UCW} [UCW] BSc (Hons) 2023-24