

Module: Network Development 251

Module name:	Network Development 251
Code:	NWD251
NQF level:	6
Type:	Fundamental – Diploma in Information Technology (Infrastructure stream)
Contact Time:	78 hours
Structured Time	12 hours
Self-directed time	90 hours
Notional hours:	180 hours
Credits:	18
Prerequisites:	NWD151

Purpose

The course is designed to give a solid foundation in server administration using the latest server operating systems. It equips students with hands-on experience to power next generation cloud optimised networks, applications, virtualisation, network management and storage capabilities, information access and protection. Students will also gain in-depth knowledge of latest management tools available for performing post deployment tasks on a server environment.

Outcomes

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

- Demonstrate a detailed understanding of the role of IT control and service management frameworks in managing a large-scale organisational IT server infrastructure.
- Evaluate select and apply different sources of information and management in respect of making appropriate decisions on which server role to implement.
- Identify, analyse and solve problems related to installation and configuration of the server enterprise environment.
- Assess the ethical implications of security and privacy issues in managing various objects within an enterprise network.
- Use appropriate and emerging technologies to improve performance of server operating systems and discover the cause of performance problems in a system.

Assessment

- Continuous evaluation of theoretical work through two written assignments, one project, two 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 a written examination.

Teaching and Learning

Learning materials

Lecturer hand-outs, samples and lab exercises.

Prescribed Book

- Windows Server (2014). IT without frontiers series.

Additional Material

 Savill, J., 2016. *Mastering Windows Server 2016 Hyper-V*. John Wiley & Sons.

Learning activities

Learning will be facilitated by the lecturer with student centred activities that involve problem based learning where students are presented with challenges that replicate the situation in the real world environment. This will be achieved through a combination of the presentation of theoretical concepts, guided exercises, group work and discussions together with two mandatory assignments and one mandatory projects to be completed during the module.

Notional learning hours

Activity	Units	Contact Time	Structured Time	Self-Directed Time
Lecture		57.0		28.0
Formative feedback		14.0		
Project	2	7.0		21.0
Assignment	2			6.0
Test	5		10.0	17.0
Exam	1		2.0	18.0
		78	12.0	90.0

Syllabus

- Introduction to Managing the latest Microsoft Windows Server Environment.
- Installing Windows Server
- Installing Active Directory Domain Services
- Configuring DNS for Active Directory Services
- Creating Active Directory Domain Services User and Computer Objects
- Creating Groups and Organizational Units
- Managing Access to Resources in Active Directory Domain Services
- Configuring Active Directory Objects and Trusts
- Printing on the network
- Managing Users with Active Directory Users and Computers
- Configuring and Troubleshooting DHCP