# Module: Server Automation 251

| Module name: | Server Automation 251 |
|---|---|
| Code: | SVA251 |
| NQF level: | 5 |
| Type: | Fundamental – Diploma in Information Technology (Infrastructure stream) |
| Contact Time: | 30 hours |
| Structured Time | 6 hours |
| Self-directed time | 34 hours |
| Notional hours: | 70 hours |
| Credits: | 7 |
| Prerequisites: | NWD251 |

## Purpose

This module is aimed at equipping students with the necessary skills to remotely manage single or multiple servers and automate day-to-day management and administration tasks. The module provides students with fundamental knowledge and skills to use PowerShell scripting language for administration and automating administration of Windows servers. It focus on primary windows PowerShell command-line features and techniques.

## Outcomes

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

- Demonstrate an informed understanding of basic concepts behind PowerShell scripting including key terms, concepts, facts and recent trends in scripting.
- Select and apply the appropriate tools to administer day to day administration tasks within the server environment context.
- The ability to identify, analyze and solve problems through the use of command, parameter syntax and troubleshooting techniques.
- The ability to evaluate various purposes of the PowerShell pipeline and develop processes for synthesis of information.
- Demonstrate the ability to gather information from a range of different sources and select information appropriately in relation to how PowerShell manages objects.

## Assessment

- Continuous evaluation of theoretical work through two written assignments, one formative test, 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.
- Server Automation IT without frontiers (2014).

## Additional Material

&#x1F4D6; MEYERS, M., n.d. *Server Automation Scripting tools*.

## 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 of presentation and theoretical concepts, guided exercises, group work and discussions together with two mandatory assignments to be completed during the module.

## Notional learning hours

| Activity | Units | Contact Time | Structured Time | Self-Directed Time |
|---|---|---|---|---|
| Lecture | | 27.0 | | 13.0 |
| Formative feedback | | 3.0 | | |
| Project | | | | |
| Assignment | 2 | | | 6.0 |
| Test | 2 | | 4.0 | 8.0 |
| Exam | 1 | | 2.0 | 7.0 |
| | | **30.0** | **6.0** | **34.0** |

## Syllabus

- The basics of using the shell.
- Running Commands.
- Configuring Windows PowerShell
- Finding and Running Basic Commands
- Working with Active Directory Objects in PowerShell (Delete, Move, Disable and reset users accounts)
- Automation of tasks.
- Format command output by using basic formatting commands
- Creating scripts to automate tasks