Course Name: PowerShell for Administration

Lab Platform: Platform for AZ-040 course will suffice with customized labs
Duration: 7 days and 8 hours per day. (Lengthy content)
Achievement URL: URL for AZ-040 course is applicable.

Module 1 Getting started with Windows PowerShell .

Windows PowerShell overview .
Understand Windows PowerShell command syntax .
Find commands and get help in Windows PowerShell .
Module 01 lab and review .

Module 2 Windows PowerShell for local systems administration .

Active Directory Domain Services administration cmdlets .
Network configuration cmdlets .
Server administration cmdlets .
Windows PowerShell in Windows 10 .
Module 02 lab and review

Module 3 Working with the Windows PowerShell pipeline .

Understand the pipeline
Select, sort, and measure objects .
Filter objects out of the pipeline .
Enumerate objects in the pipeline .
Send and pass pipeline data as output .
Module 03 lab and review

Module 4 Using PSProviders and PSDrives .

Using PSProviders .
Using PSDrives .
Module 04 lab and review .

Module 5 Querying management information by using CIM and WMI .
Understand CIM and WMI .
Query data by using CIM and WMI .
Make changes by using CIM and WMI .
Module 05 lab and review .

Module 6 Working with variables, arrays, and hash tables .
Use variables .
Manipulate variables .
Manipulate arrays and hash tables .
Module 06 lab and review.

Module 7 Windows PowerShell scripting.
Introduction to scripting with Windows PowerShell.
Script constructs.
Import data from files .
Accept user input .
Troubleshooting and error handling .
Functions and modules .
Module 07 lab and review .

Module 8 Administering remote computers with Windows PowerShell .
Use basic Windows PowerShell remoting .
Use advanced Windows PowerShell remoting techniques .
Use PSSessions.
Module 08 lab and review .

Module 9 Managing Azure resources with PowerShell .
Azure PowerShell .
Introduce Azure Cloud Shell .
Manage Azure VMs with PowerShell .
Manage storage and subscriptions .
Module 09 lab and review .

Module 10 Managing Microsoft 365 services with PowerShell .

Manage Microsoft 365 user accounts, licenses, and groups with PowerShell .
Manage Exchange Online with PowerShell .
Manage SharePoint Online with PowerShell .
Manage Microsoft Teams with PowerShell .
Module 10 lab and review .

Module 11 Using background jobs and scheduled jobs .

Use background jobs .
Use scheduled jobs .
Module 11 lab and review

Customized Content:

Module 12 PowerShell and Azure

Azure - Setting up your environment

Installing the Azure PowerShell module

Connecting to Azure

Managing Azure resources with PowerShell

Creating and updating resources

Deleting resources

Monitoring Azure resources with PowerShell

Setting up alerts and notifications

Collecting and analyzing logs

Using PowerShell with Azure Active Directory

Advanced Azure automation techniques

Using PowerShell with Azure automation accounts

Automating Azure DevOps with PowerShell

Version control and testing

Using PowerShell with Azure Functions

Module 13a Advanced Active Directory with PowerShell

Installing the Active Directory PowerShell module

Automating Active Directory user management

Managing users with PowerShell

Creating, updating, and deleting users

Modifying user properties

Managing groups with PowerShell

Module 13b Advanced Active Directory with PowerShell-cont.

Creating, updating, and deleting groups

Modifying group properties

Managing computers with PowerShell

Joining computers to the domain

Modifying computer properties

Automating Active Directory permissions management

Managing permissions with PowerShell

Assigning and removing permissions

Modifying permission properties

Advanced Active Directory automation techniques

Using PowerShell with Active Directory Web Services

Automating Active Directory Domain Services with PowerShell

Using PowerShell with Azure Active Directory

Best practices for PowerShell and Active Directory automation

Writing effective PowerShell scripts

Managing credentials securely