COURSE OUTLINE

Section 1:

Course Title: PowerShell and Enterprise Systems

Course Code: CNET-2050

Course Description: The use of tools and techniques to automate complex, repetitive, and time consuming network administration tasks for large Enterprise systems. Students also investigate the business-related benefits of automating Enterprise level administrative tasks.

Grade Scheme: ☐ Pass/Fail ☒ Percentage   Minimum Pass Mark: 60%

Course Value: Outcome hours   OR   3 Credit(s)   60 (15 class and 45 lab) Hours

Pre-requisites: CNET-2110 Active Directory Infrastructure
CNET-1100 Linux Administration
CNET-1010 Cisco CCNA I: Introduction to Networks
or
Approval by learning manager.

Co-requisites: NONE

Section 2:

Learning Outcomes and Competencies

1. **Create basic scripts using Windows PowerShell.**

    1.1 Describe the features and benefits of using Windows PowerShell.

    1.2 Configure the PowerShell console and development environment.

    1.3 Demonstrate the use of sequential, iterative, and conditional statements

    1.4 Demonstrate the use of objects, data types, and variables.

    1.5 Implement scripts with flow control statements.

    1.6 Implement PowerShell security.

2. **Automate administrative tasks using PowerShell scripts.**

2.1 Manage user accounts using PowerShell scripts.

2.2 Deploy software images and application using PowerShell scripts.

2.3 Deploy security updates using PowerShell scripts.

2.4 Maintain computer hardware and software inventories using PowerShell scripts.

2.5 Use PowerShell scripts to monitor computer systems.

2.6 Write PowerShell scripts to manage log files.

3. Perform Enterprise level OS, image, and software deployments.

3.1 Create and prepare workstation images for deployment.

3.2 Perform image management techniques.

3.3 Prepare software packages for remote deployment.

3.4 Prepare infrastructure for image transfers.

4. Use software for inventory tracking, monitoring, and management to meet requirements of the business.

4.1 Describe the impacts of inventory management on business operations.

4.2 Explain the importance of inventory tracking for compliance with legal and/or industry requirements.

4.3 Utilize software to collect, track, and manage IT inventory.

4.4 Produce reports containing categorized information regarding IT inventory.

5. Monitor IT infrastructure to maintain performance.

5.1 Understand the complexity in monitoring an entire IT infrastructure.

5.2 Understand how IT equipment is configured to communicate errors and issues.

5.3 Utilize software to parse log files to find infrastructure errors and issues.

5.4 Utilize software to monitor uptime, heartbeat, services, connectivity, utilization, and environmental issues.

5.5 Configure notifications to users and groups based on configured alerts and thresholds.

Section 3:

Assessment Categories: Projects and Assignments   60%
                                    Tests and exams   30%
                                    Professionalism   10%

Research Component?   ☐ Yes ☒ No

Section 4:
(For administrative use only)

Is this course new?   ☒ Yes   ☐ No

Is this course replacing an existing course(s)?   ☐ Yes   ☒ No

If this course is replacing another, please record the name and code of the old course:

Course equivalents: NONE

Note: See Quality Procedure A01 for more details.

Catalog Year of Original Course Implementation: 2015

Catalog Year of Current Version Implementation: 2015

Revision level: 3   **Version:** 2   **Date:** June/2016   **Authorized by:** MLGJ

Accreditation and or Supporting Documents:	National Technology Benchmarks: Canadian Council of Technicians & Technologists; Discipline: Information Technology; Level: Technologist
Additional Information:	None
Subject matter expert(s):	Chris Arsenault

Approved by: (Program Manager)

Paul Murnaghan   Date Approved: **2016-06-30**

Approved by: (Curriculum Consultant)

Mary Lou Griffin-Jenkins   Date Approved: **2016-06-30**