

**J. Sargeant Reynolds Community College**  
**Course Content Summary**

**Course Prefix and Number:** ITN 295

**Credits:** 4

**Course Title:** Topics in Information Technology – Networking: Introduction to Windows PowerShell

**Course Description:** Provides instruction in the use of Windows PowerShell scripting to automate the Windows desktop and server operating system tasks. Prerequisites and Co-requisites: ITN 110 and ITN 111 or school approval. Lecture 4 hours per week.

**General Course Purpose:** The course material will instruct the student in the essentials of Windows PowerShell, which is a task-based, command-line shell and scripting language designed especially for system administration. Built on the .NET Framework, Windows PowerShell helps IT professionals and power users control and automate the administration of the Windows operating system and applications that run on Windows. Built-in Windows PowerShell commands, called *Cmdlets*, allow the administrator to manage the enterprise computers from the command line.

**Course Prerequisites and Co-requisites:** ITN 110 and ITN 111 or school approval

**Course Objectives:**

Upon successful completion of the course, the student will be able to:

- a. Demonstrate an understanding of the use of objects in PowerShell;
- b. Demonstrate an understanding of the use of core PowerShell Cmdlets;
- c. Create modules of administrative tasks with custom functions and scripts;
- d. Create scripts and functions with decision-making logic and looping; and
- e. Use parameters to control Cmdlets, scripts, and functions.

**Major Topics to Be Included:**

- a. Proper application of Windows PowerShell
- b. Using the Windows PowerShell Console
- c. Using the PowerShell ISE (Integrated Scripting Environment)
- d. Using the Windows PowerShell Cmdlet
- e. Creating Expressions in PowerShell
- f. Working with Collections of Objects
- g. Looping through Collections
- h. Evaluating PowerShell Output
- i. Working with Scheduled Jobs

**Effective Date of Course Content Summary:** September 23, 2014