



Passaic County Community College  
Academic Year: 2023-2024  
Standard Syllabus

Department Chair: Merille Siegel  
Program Coordinator: Adeleye Bamkole

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**Course Code:** CIS 283

**Course Title:** Networking Infrastructure

**Department:** CIS/Engineering

**Semesters Offered:** Fall Evening, Spring Evening

**Course Description:**

This course provides students with the knowledge and skills needed to configure TCP/IP network infrastructures and their related services. Students learn how to implement, administer, and troubleshoot Dynamic Host Configuration Protocol, Name Resolution Services, Remote Access, Distributed Files System, Windows Deployment Services, Windows Server Update Services, Group Policies and Network Policy. Students learn how to use network monitoring tools in an enterprise operating system (Windows Server 2012/R2). Successful completion of this course prepares students to take the appropriate industry certification exam.

**Prerequisites:** CIS 282

**Credits:** 3

**Lecture Hours:** 3

**Lab/Studio Hours:** 0

**Clinical/Fieldwork Hours:** 0

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**REQUIRED TEXTBOOK/MATERIALS:** Microsoft Windows Server 2016, Michael Palmer ISB# 13: 978-1-30507862-8 and MCSA Guide to Networking with Windows Server 2016, Greg Tomsho ISB# 13:978-1-337-40078-7

**Additional Time and Supplemental Requirements:**

Based on a 15 week semester, students are expected to complete approximately 6 hours per week of assigned work outside of class.

**Course Learning Outcomes:**

Upon completion of this course, students will be able to:

- Deploy Windows Server
- Configure Update Services
- Configure Server Monitoring and Auditing
- Manage Group Policies
- Configure Remote Access
- Configure Network Policies
- Manage windows server Virtualization

**General Education Outcomes:** This is not a general education course.

**Grading Standards:**

Students will be graded on the basis of testing and an evaluation of projects assigned by the instructor. The grade will be determined by the following: 30% written tests, 30% Lab Projects / Assignments, 30% Final Exam / group project and 10% attendance

**Course Content:**

(Schedule and suggested topics, readings, and assignments subject to change based on instructor and instructional resource)

**Topics****Chapter****Deploying Windows Server****1**

- Windows Deployment Services situations
- Installing and Configuring the WDS Role
- Working with WDS Images

***Case and Hands-on Project 1*****Windows Server Update Services****2**

- Installing the WSUS Role
- Configuring WSUS
- WSUS Synchronization and approval Rules

***Case and Hands-on Project 2*****Advanced File Services Configuration****3**

- An Overview of Distributed File System
- An Overview of File Resource Manager
- Configuring File and Disk Encryption

***Case and Hands-on Project 3******Test 1 Ch. (1, 2, and 3) (make-up by Professor Prior Approval)*****Server Monitoring and Auditing & Remote Access Configuration 4&5**

- Monitoring a Windows Server
- Network Monitoring
- Using Auditing to Improve Network Security
- Installing and Configuring the Remote Access Role
- The DirectAccess Role Service

***Case and Hands-on Project 4*****Network Policy Configuration****6**

- Network Policy Server Overview
- Configuring Network Access Protection

## ***Case and Hands-on Project 5***

### **Domain Controller and Active Directory Management 7**

- Active Directory Review
- Configuring Read Only Domain Controllers
- Maintaining Active Directory

## ***Case and Hands-on Project 6***

### ***Test 2 Ch. (4,5, 6, and 7) (make-up by Professor Prior Approval)***

### **User and Service Account Configuration 8**

- Overview of User Accounts and Group Policies
- Configuring Account Policies

## ***Case and Hands-on Project 7***

### **Group Policy Settings and Preferences & 9 & 10**

#### **Managing Group Policies**

- Group Policy Settings
- Working with Administrative Templates
- Working with Security Templates
- Configuring Group Policy Processing
- Configuring Group Policy Client Processing

## ***Case and Hands-on Project 8 & 9***

### **Managing and Configuring DNS 11**

- Configuring DNS Zones
- Configuring DNS Resource Records
- Managing Zones

#### **Case and Hands-on Project 10**

### ***Test 3 Ch. (8,9, 10, and 11) (make-up by Professor Prior Approval)***

## **Configuring Virtualization with Hyper-V**

### **Case and Hands-on Project 11**

### **Review and Final Exam (Comprehensive all chapters)**

#### **College Policies:**

For Information regarding:

- PCCC's Academic Integrity Code

- Student Conduct Code
- Student Grade Appeal Process

Please refer to the PCCC Student Handbook and PCCC Catalog

**Panther Alert:**

The College will announce delayed openings, closings, and other emergency situations through the Panther Alert System. Students are encouraged to sign up for Panther Alert Notifications by logging into their student accounts through the PCCC website at [www.pccc.edu](http://www.pccc.edu) and following Panther Alert System instructions.

**Notification for Students with Learnings Disabilities:**

If you have a disability, and believe you need accommodations in this class, please contact the Office of Accessibility Services at 973-684-6395, or email [ods@pccc.edu](mailto:ods@pccc.edu). You should do so as soon as possible at the start of each semester. If you require testing accommodations, you must remind me (the instructor) one week in advance of each test.