



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 282

**Course Title:** Network Administration II

**Department:** CIS/Engineering

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

**Course Description:**

This course provides students with the knowledge and skills necessary to plan, install, and configure a server operating system (Windows 2016 and 2019 Server). It enhances students' ability to implement, administer, and troubleshoot server-based networks. The server environment may include multiple servers in one or more domains, and may have file-sharing or print-sharing capabilities. Students gain knowledge to perform day-to-day administrative tasks in a server-based environment, using a server operating system. Successful completion of this course prepares students to take the appropriate industry certification exam.

**Prerequisites:** CIS 180

**Credits:** 3

**Lecture Hours:** 3

**Lab/Studio Hours:** 0

**Clinical/Fieldwork Hours:** 0

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**Required Textbook/Materials:**

**REQUIRED TEXTBOOK/MATERIALS:** Hands-On Microsoft Windows Server 2016, Michael Palmer Cengage Learning

**Reference:** MCSA Guide to Networking with Microsoft Windows Server 2016, Greg Tomsho

**Special Facilities/Equipment:**

Hardware: IBM PC based system.

Software: Microsoft® Windows 2012/R2 Server Operating System or the latest version of Windows NOS

**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 successful completion of this course, students will**

- Install Windows 2016 Server on Intel-based platforms.
- Configure protocols TCP/IP

- Configure Windows 2016 Server Services (DNS, DHCP).
- Configure Server Storage.
- Manage domains; Install and manage active directory elements
- Create user accounts, groups, and rights.
- Set up a directory share, permission security and group policies.
- Set up a sharing network Printer.
- 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: 40% written tests, 20% 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	
<b>Introduction to Windows server 2016</b>		<b>1</b>
Server Editions, 2016,		
Server Features		
Hardware requirements,		
Protocols for windows 2016 Networking Models		
<b>Case And hands-on Project 1</b>		
Installing Windows server 2012/R2		<b>2</b>
Preparing for Installations		
Using Server Manager		
Server Activation		
Installing Server Core		
Removing Windows 2016		
Troubleshooting Installation problems		
<b>Case and Hands-on Project 2</b>		
<b>Understanding Windows Server 2016 Environment</b>		<b>3</b>
Installing and Removing Server Roles		
Configuring Server Hardware		
Configuring the operating system		
Understanding Windows Registry		
Windows PowerShell		
<b>Case and Hands-on Project 3</b>		

Topics	Chapter
<b>Introduction to Active directory and Account management</b> Active Directory Basics Containers in Active directory Azure Active Directory User account Management Security Group management User Profiles <b>Case and Hands-on Project 4</b>	4
<b>Configuring, managing and Troubleshooting Resources Access</b> Managing Folder and File Security Configuring Shared folders and shared folder permissions Work folders Distributed File System (DFS) Configuring Disk Quota <b>Case and Hands-on Project 5</b> <u><i>Test 1 Ch. (1, 2, 3, 4&amp;5)</i></u>	5
<b>Configuring Windows Server 2016 Printing</b> An Overview of Windows server printing The Print and Document Service role Installing Local and Shared printers Configuring Printers Properties Troubleshooting common printer problems <b>Case and Hands-on project 6</b>	6
<b>Configuring and Managing Data storage</b> Windows server 2016 storage options Disk management Introduction to fault tolerance Storage spaces Disk backup <b>Case and Hands-on Project 7</b>	7
<b>Managing Windows Server 2016 Network Services</b> Installing DNS Services Implementing Microsoft DHCP NIC Teaming Implementing Microsoft Internet Information Services <b>Case and Hands-on Project 8</b>	8
<b>Configuring Remote Access Services</b> Introduction to Remote access Services Configuring Virtual Private network Connecting Through Remote desktop services	9

## Case and Hands-on Project 9

### Securing Windows Server 2016

10

An Overview of Security features in Windows server 2016

Introduction to Group Policy

Securing Windows Server 2016 Using Security policies

Security Templates

Using BIT Locker Drive encryption

Configuring NAT

Windows Firewall

Windows defender

### Case and Hands-on project 10

### Sever and Network Monitoring

11

Introduction to server monitoring

Monitoring Server services

Using Task Manager

Using Performance Monitor

Implementing Data collector set

### Case and Hands-on Project 11

Test 2 Ch. (6, 7, 8, 9, and 10)

## Managing System Reliability and Availability

12

General problem solving Strategies

Resolving Boot Problems

Using and Configuring Event Viewer

Remotely administering a Server

Server and Network Monitoring

notes

& Managing System Reliability and Availability

Test 3 Ch. (11, 12 and notes)

### 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.