

BUTTE COLLEGE

COURSE OUTLINE

I. CATALOG DESCRIPTION

CSCI 70 - Installing and Configuring Windows Server 2012

3 Unit(s)

Prerequisite(s): CSCI 49 or CompTIA A+ certification

Recommended Prep: Reading Level IV; English Level IV; Math Level III

Transfer Status: CSU

34 hours Lecture

51 hours Lab

This course is the first in a three course series in which students learn the skills and knowledge necessary to implement a Windows Server 2012R2 infrastructure. The focus of the course is on the initial implementation and configuration of core services including Active Directory Domain Services (AD DS), networking services, and Microsoft Hyper-V Server 2012R2 configuration. The course prepares students for Microsoft certification exam 70-410, Installing and Configuring Windows Server 2012R2.

II. OBJECTIVES

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

- A. Install and Configure Windows Server 2012R2.
- B. Describe AD DS, manage AD objects, and automate AD administration.
- C. Configure and implement Internet Protocol version 4 (IPv4) and Internet Protocol version 6 (IPv6).
- D. Configure and implement Dynamic Host Configuration Protocol (DHCP).
- E. Configure and implement Domain Name System (DNS).
- F. Configure and implement local storage.
- G. Share files and printers.
- H. Configure and implement Group Policy and use Group Policy Objects (GPOs) to secure Windows Servers.
- I. Configure and implement server virtualization using Hyper-V.
- J. Configure a Windows 2012R2 Server with security policies and advanced firewall settings.

III. COURSE CONTENT

A. Unit Titles/Suggested Time Schedule

Lecture	
<u>Topics</u>	<u>Hours</u>
1. Installing and Configuring Servers	3.00
2. Configuring Local Storage, File, Share Access, Print and Document Services	4.00
3. Configuring Servers for Remote Management	2.00
4. Creating and Configuring Virtual Machine Settings, Storage and Networks	6.00
5. Configuring IPv4 and IPv6 Addressing	2.00
6. Deploying and Configuring the DHCP Service, DNS, and Domain Controllers	5.00
7. Creating and Managing Active Directory Users, Computers, Groups and Organizational Units	4.00
8. Creating Group Policy Objects and Configuring Security Policies	4.00
9. Configuring Application Restriction Policies and Windows Firewall	4.00
Total Hours	34.00

Lab

<u>Topics</u>	<u>Hours</u>
1. Installing and Configuring Servers	5.00
2. Configuring Local Storage, File, Share Access, Print and Document Services	6.00
3. Configuring Servers for Remote Management	3.00
4. Creating and Configuring Virtual Machine Settings, Storage and Networks	9.00
5. Configuring IPv4 and IPv6 Addressing	3.00
6. Deploying and Configuring the DHCP Service, DNS, and Domain Controllers	8.00
7. Creating and Managing Active Directory Users, Computers, Groups and Organizational Units	6.00
8. Creating Group Policy Objects and Configuring Security Policies	6.00
9. Configuring Application Restriction Policies and Windows Firewall	5.00
Total Hours	51.00

IV. **METHODS OF INSTRUCTION**

- A. Lecture
- B. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture
- C. Demonstrations
- D. Multimedia Presentations
- E. Practical Exercises

V. **METHODS OF EVALUATION**

- A. Lab Projects
- B. Written Assignments
- C. Written Examinations
- D. Practical Evaluations

VI. **EXAMPLES OF ASSIGNMENTS**

- A. Reading Assignments
 - 1. Read the procedure for implementing your Server as a Dynamic Host Configuration Protocol (DHCP) Server Role. Using the handout provided by the instructor, make the correct configurations necessary. Be prepared to demonstrate the procedure and steps in class on your server.
 - 2. Read the chapter on Configuring IPv4 and IPv6. Compare and contrast the two types of IP addressing and prepare to define and discuss in class.
- B. Writing Assignments
 - 1. Using a hypothetical office scenario provided by your instructor, determine the business needs and provide a proposal for providing network and server services. In a 2-page report, explain in detail the services provided and the justification for your choices.
 - 2. List the steps required to install Active Directory Domain Services, and describe in detail (in 2-3 paragraphs) the role AD has on Domain Name Services (DNS).
- C. Out-of-Class Assignments
 - 1. Interview a local Information Technology (IT) professional who has experience running a Microsoft Shop. Find out the biggest challenges they have encountered and how they overcame those challenges. Be prepared to present your findings to the class.

2. Complete a practice Microsoft 70-410 certification exam. Prepare a list of the questions you answered incorrectly, and be prepared to discuss the challenges you faced on your practice exam in class.

VII. **RECOMMENDED MATERIALS OF INSTRUCTION**

Textbooks:

- A. Microsoft Official Academic Course. Exam 70-410 Installing and Configuring Windows Server 2012R2. Wiley, 2013.

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Date: 03/07/2016