



BROWARD COMMUNITY COLLEGE

COURSE OUTLINE

LAST REVIEW: 2003-2004 **NEXT REVIEW:** 2008-2009 **STATUS:** A

COURSE TITLE: Designing a Microsoft Windows Server Active Directory and Network Infrastructure

COMMON COURSE NUMBER: CTS 2303C

CREDIT HOURS: 4

CONTACT HOUR BREAKDOWN: 4
(per 16 week term)

CLOCK HOURS: 0
(Voc. Course ONLY)

Lecture: 56 Lab: 8
Clinic: 0 Other: 0

PREREQUISITE(S): CEN1300C, CEN1301C, CEN1315C, CEN1321C

COREQUISITE(S): None

PRE/COREQUISITE(S): None

COURSE DESCRIPTION: *(600 characters, maximum)*

This course provides students with the knowledge and skills necessary to design a Microsoft Windows directory service and network infrastructure on an enterprise network. Strategies are presented to assist the student in identifying the information technology needs of an organization, and then designing an Active Directory structure and network infrastructure that meets those needs. The skills developed by students completing this course will help prepare them for the Microsoft Designing Directory Service and Network Infrastructure certification exam.

UNIT TITLES

1. Introduction to Designing an Active Directory and Network Infrastructure
2. Designing a Forest and Domain Infrastructure
3. Designing a Site Infrastructure
4. Designing the Administrative Structure
5. Designing for Group Policy
6. Designing the Physical Network
7. Designing for Network Connectivity
8. Designing a Name Resolution Strategy
9. Designing the Network Access Infrastructure



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UNITS

Unit 1

General Outcome:

- 1.0 The student shall:** be to explain general design principles and the process of designing a Windows Server Active Directory infrastructure.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 1.1** Explain basic design principles.
- 1.2** Describe the process of and the tasks involved in designing an Active Directory Infrastructure.



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Unit 2

General Outcome:

- 2.0 The student shall:** be able to identify the Active Directory logical structure, the design of forests and domains, and key elements of the forest and domain design, such as, naming and trusts.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 2.1** Gather and analyze the information that you need to design a forest and domain infrastructure.
- 2.2** Create a logical forest design.
- 2.3** Create a domain design.
- 2.4** Design a DNS namespace strategy for forests and domains.
- 2.5** Create a trust strategy for forest.
- 2.6** Determine a migration plan for the existing infrastructure.
- 2.7** Design a schema management policy.



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Unit 3

General Outcome:

- 3.0 The student shall:** be able to design a site topology to organize the Windows Server 2003 network in your organization and optimize the exchange of data and directory information.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 3.1** Determine the information needed to design a site infrastructure.
- 3.2** Create a site design.
- 3.3** Modify the site design for replication.
- 3.4** Determine the placement of domain controllers in the site design.
- 3.5** Determine the placement of global catalog servers in the site design.
- 3.6** Determine the placement of single operations masters in the site design.



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Unit 4

General Outcome:

- 4.0 The student shall:** be able to design your administrative structure to delegate authority and simplify administrative overhead and design an organizational unit structure in a Windows Server 2003 environment.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 4.1** Determine the information needed to design an administrative structure.
- 4.2** Design a network administration model.
- 4.3** Design an organizational unit structure.
- 4.4** Design an account strategy.



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Unit 5

General Outcome:

5.0 The student shall: be able to gather and analyze business requirements and other data and then use that data to design a Group Policy structure and integrate the structure into an organizational unit design.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 5.1** Determine the information needed to design for Group Policy.
- 5.2** Design a Group Policy structure.
- 5.3** Create an organization unit (OU) structure for Group Policy.
- 5.4** Create a Group Policy management design.



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Unit 6

General Outcome:

6.0 The student shall: be able to gather business requirements and other data and then analyze and use that data to design the physical network

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 6.1** Explain the preparation necessary to design a network infrastructure.
- 6.2** Create an IP addressing scheme.
- 6.3** Design a DHCP infrastructure.
- 6.4** Design a change management structure for networking.



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Unit 7

General Outcome:

7.0 The student shall: be able to design networking services for connectivity and protocol requirements for organizations.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 7.1** Determine the information that you need to design for network connectivity.
- 7.2** Evaluate connection types.
- 7.3** Design a connectivity infrastructure.
- 7.4** Create a design for Internet connectivity.



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Unit 8

General Outcome:

- 8.0 The student shall:** be able describes the relationship between Active Directory and DNS domain names, Windows Internet Name Service (WINS), and other name-resolution strategies.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 8.1** Determine the information needed to design a name-resolution strategy.
- 8.2** Design a strategy for interoperability with Active Directory, BIND, WINS, and DHCP.
- 8.3** Design a WINS replication strategy.
- 8.4** Design a name resolution strategy for clients.



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Unit 9

General Outcome:

- 9.0 The student shall: be able** to design a network access infrastructure by gathering relevant data, and then analyzing and using that data to design for network access security, remote access, and wireless access.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 9.1** Gather data for network access design.
- 9.2** Design network access security.
- 9.3** Choose remote access methods.
- 9.4** Design a remote access infrastructure.
- 9.5** Design a wireless access infrastructure.