



BROWARD COMMUNITY COLLEGE

COURSE OUTLINE

LAST REVIEW: 2010-2011
(i.e. 2003-2004)

NEXT REVIEW: 2015-2016
(i.e. 2008-2009)

STATUS: A
(A, I, D)

COURSE TITLE: Cisco Networking III

COMMON COURSE NUMBER: CET1615C

CREDIT HOURS: 4

CONTACT HOUR BREAKDOWN

(per 16 week term)

CLOCK HOURS: 4
(Voc. Course ONLY)

Lecture: **48** Lab: **16**

Clinic: **0** Other: **0**

PREREQUISITE(S): CET1610C (with a grade of 'C' or higher)

COREQUISITE(S): None

PRE/COREQUISITE(S): None

COURSE DESCRIPTION *(750 characters, maximum):*

LAN Switching and Wireless

This course provides a comprehensive, theoretical, and practical approach to learning the technologies and protocols needed to design and implement a converged switched network. Students learn about the hierarchical network design model and how to select devices for each layer. The course explains how to configure a switch for basic functionality and how to implement Virtual LANs, VTP, and Inter-VLAN routing in a converged network. The Different implementations of Spanning Tree Protocol in a converged network are presented, and students develop the knowledge and skills necessary to implement a WLAN in a small-to-medium network.

General Education Requirements – Associate of Arts Degree (AA), meets Area(s): Area

General Education Requirements – Associate in Science Degree (AS), meets Area(s): Area

General Education Requirements – Associate in Applied Science Degree (AAS), meets Area(s): Area

UNIT TITLES

1. LAN Design
2. Basic Switch Concepts and Configuration
3. VLANs
4. VTP
5. STP
6. Inter-VLAN Routing
7. Basic Wireless Concepts and Configuration



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EVALUATION:

Please provide a brief description (250 characters maximum) that details how students will be assessed on the course outcomes.

Evaluation instruments will include written and/or skills-based examinations and individual in-class and/or take-home assignments. Evaluation methods may also include group in-class and/or take-home assignments.



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UNITS

Unit 1

General Outcome:

- 1.0 The student shall: be able to describe switched LAN Architecture

Specific Measurable Learning Outcomes:

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

- 1.1 Chapter Introduction
- 1.2 Switched LAN Architecture
- 1.3 Matching Switches to Specific LAN Functions
- 1.4 Chapter Labs
- 1.5 Chapter Summary
- 1.6 Chapter Quiz



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Unit 2

General Outcome:

2.0 The student shall: configure basic switch functions

Specific Measurable Learning Outcomes:

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

- 2.1 Chapter Introduction
- 2.2 Introduction to Ethernet/802.3 LANs
- 2.3 Forwarding Frames Using a Switch
- 2.4 Switch Management Configuration
- 2.5 Configuration Switch Security
- 2.6 Chapter Labs
- 2.7 Chapter Summary
- 2.8 Chapter Quiz



BROWARD COMMUNITY COLLEGE

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Unit 3

General Outcome:

3.0 The student shall: be able to configure VLANs

Specific Measurable Learning Outcomes:

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

- 3.1 Chapter Introduction
- 3.2 Introducing VLAN
- 3.3 VLAN Trunking
- 3.4 Configure VLANs and Trunks
- 3.5 Troubleshooting VLANs and Trunks
- 3.6 Chapter Labs
- 3.7 Chapter Summary
- 3.8 Chapter Quiz



BROWARD COMMUNITY COLLEGE

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Unit 4

General Outcome:

4.0 The student shall: be able to configure VTP

Specific Measurable Learning Outcomes:

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

- 4.1 Chapter Introduction
- 4.2 VTP Concepts
- 4.3 VTP Operation
- 4.4 Configure VTP
- 4.5 Chapter Labs
- 4.6 Chapter Summary
- 4.7 Chapter Quiz



BROWARD COMMUNITY COLLEGE

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Unit 5

General Outcome:

5.0 The student shall: be able to configure spanning tree protocols

Specific Measurable Learning Outcomes:

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

- 5.1 Chapter Introduction
- 5.2 Redundant Layer 2 Topologies
- 5.3 Introduction to STP
- 5.4 STP Convergence
- 5.5 PVST+, RSTP and Rapid PVST+
- 5.6 Chapter Labs
- 5.7 Chapter Summary
- 5.8 Chapter Quiz



BROWARD COMMUNITY COLLEGE

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Unit 6

General Outcome:

6.0 The student shall: be able to configure inter-VLAN routing

Specific Measurable Learning Outcomes:

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

- 6.1 Chapter Introduction
- 6.2 Inter-VLAN routing
- 6.3 Configuring Inter-VLAN Routing
- 6.4 Troubleshooting Inter-VLAN Routing
- 6.5 Chapter Labs
- 6.6 Chapter Summary
- 6.7 Chapter Quiz



BROWARD COMMUNITY COLLEGE

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Unit 7

General Outcome:

7.0 The student shall: be able to configure wireless LANs

Specific Measurable Learning Outcomes:

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

- 7.1 Chapter Introduction
- 7.2 The Wireless LAN
- 7.3 Wireless LAN Security
- 7.4 Configure Wireless LAN Access
- 7.5 Troubleshooting Simple WLAN Problems
- 7.6 Chapter Labs
- 7.7 Chapter Summary
- 7.8 Chapter Quiz