



# BROWARD COLLEGE COURSE OUTLINE

**LAST REVIEW: 2009-2010**

*(i.e. 2003-2004)*

**NEXT REVIEW: 2014-2015**

*(i.e. 2008-2009)*

**STATUS: A**

*(A, I, D)*

**COURSE TITLE: Local Area Networking**

**COMMON COURSE NUMBER: CNT2001**

**CREDIT HOURS: 3**

**CONTACT HOUR BREAKDOWN**

*(per 16 week term)*

**CLOCK HOURS:**

*(Voc. Course ONLY)*

Lecture: **48**

Lab:

Clinic:

Other:

**PREREQUISITE(S): None**

**COREQUISITE(S): None**

**PRE/COREQUISITE(S): None**

**COURSE DESCRIPTION** *(750 characters, maximum):*

This course is designed as a comprehensive study of microcomputer networking. Topics include the selection, installation, maintenance, and management of network software and hardware.

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

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

## **UNIT TITLES**

1. Vocabulary, Concepts and Components of a Network
2. Types of Networks and Network Topologies
3. Network Operating Systems
4. Operating, Administering and Maintaining Network System Software
5. Installing and Maintaining Network Hardware
6. Optimizing a Network
7. Network Security

**EVALUATION:**

Students will be assessed through a variety of means. Evaluation may include, but is not limited to, the following: exams, quizzes, presentations, portfolios, discussions, class participation, attendance, projects, networking diagnosis, co-ops, practical, internships, externships, and research reports.

Common Course Number: CNT 2001

**UNITS**

**Unit 1 Vocabulary, Concepts and Components of a Network**

**General Outcome:**

- 1.0 The student shall be able to use the vocabulary and describe the concepts of a computer network.**

**Specific Measurable Learning Outcomes:**

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

- 1.1 Give a brief history of distributed data processing.**
- 1.2 Describe trends and movements in data communication**
- 1.3 Describe elements of a data communication network**
- 1.4 Describe element and concepts of the interface**
- 1.5 Define a network**
- 1.6 Describe common carriers**
- 1.7 Describe value-added processors**
- 1.8 Describe a dedicated and non-dedicated server**

**Common Course Number: CNT 2001**

**Unit 2 Types of Networks and Network Topologies**

**General Outcome:**

- 2.0 The student shall be able to describe different types of network and network topologies.**

**Specific Measurable Learning Outcomes:**

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

- 2.1 Describe an Arcnet configuration**
- 2.2 Describe a token Ring configuration**
- 2.3 Describe the various types of Ethernet configurations**
- 2.4 Describe bus topology, ring topology, star topology and tree topology**

Common Course Number: CNT 2001

**Unit 3 Network Operating Systems**

**General Outcome:**

- 3.0 The student shall be able to describe a network operating system and use a network to access the system locally, as well as save and retrieve files from remote locations.**

**Specific Measurable Learning Outcomes:**

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

- 3.1 Log on to a network**
- 3.2 Change passwords**
- 3.3 Create directories**
- 3.4 Store and retrieve files locally**
- 3.5 Store and retrieve files remotely**
- 3.6 Write a login script file**
- 3.7 Delete files from the network**
- 3.8 Perform command line tasks**
- 3.9 Perform the log off procedure**
- 3.10 Use commercially available editors to create text files**

**Common Course Number: CNT 2001**

**Unit 4 Operating, Administering and Maintaining Network System Software**

**General Outcome:**

**4.0 The student shall be able operate , administer , and maintain network system software**

**Specific Measurable Learning Outcomes:**

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

- 4.1 Install the operating system software**
- 4.2 Maintain user accounts**
- 4.3 Maintain system security**
- 4.4 Perform software maintenance**
- 4.5 Perform network backup**
- 4.6 Use system utilities for monitoring and maintaining system integrity**
- 4.7 Install and remove system programs**
- 4.8 Install and remove databases in the network**
- 4.9 Monitor and maintain system logs**
- 4.10 Perform removal and installation of network connections**

**Common Course Number: CNT 2001**

**Unit 5 Installing and Maintaining Network Hardware**

**General Outcome:**

**5.0 The student shall be able to install and maintain network hardware with a hands on approach**

**Specific Measurable Learning Outcomes:**

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

- 5.1 Select and Install network cards**
- 5.2 Select and install a network server**
- 5.3 Install, remove and replace network cabling**
- 5.4 Use electronic devices to check cable integrity**
- 5.5 Maintain server hard disks**

**Common Course Number: CNT 2001**

**Unit 6 Optimizing a Network**

**General Outcome:**

**6.0 The student shall be able to optimize a network, diagnose hardware and software problems related to the network, and customize a network.**

**Specific Measurable Learning Outcomes:**

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

- 6.1 Describe critical network operating system memory management issues**
- 6.2 Improve the performance of a network by normalizing traffic on the LAN channel**
- 6.3 Optimize configuration for good network performance**
- 6.4 Describe common problems with multiple printers attached to the file server**
- 6.5 Customize hardware and software configurations**
- 6.6 Diagnose and solve problems related to the user environment**
- 6.7 Install and configure dedicated and non-dedicated printer servers**

**Common Course Number: CNT 2001**

**Unit 7 Network Security**

**General Outcome:**

**7.0 The student shall be able to describe the factors affecting network security**

**Specific Measurable Learning Outcomes:**

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

- 7.1 Describe password security issues**
- 7.2 Describe user I.D. strategies**
- 7.3 Secure critical data**
- 7.4 Prevent access to the network by unauthorized persons**