



COMPUTER INFORMATION SYSTEMS

**CODE:** CIS 157

**TITLE:** Cisco WAN Technologies

**DIVISION:** Science Math and Technology

**COURSE DESCRIPTION:** The course focuses on advanced IP addressing techniques (Network Address Translation [NAT], Port Address Translation [PAT], and DHCP), WAN technology and terminology, PPP, ISDN, DDR, Frame Relay, network management, and introduction to optical networking. It emphasizes students demonstrating the ability to apply knowledge from CIS 150, CIS 151 and CIS 152 to a network and explaining how and why a particular strategy is employed. Students prepare to take the CCNA Exam.

**PREREQUISITES:** CIS 152 or permission

**CREDITS:** 4

**REQUIRED MATERIALS (CHECK WITH BOOKSTORE ON LATEST EDITION):**

Click on the bookstore for the campus you are attending for each class.

[Pemberton Bookstore](#)

[Mount Laurel Bookstore](#)

**INTENDED COURSE LEARNING OUTCOMES/COURSE GOALS/CORE COMPETENCIES/:**

- 1.Improve network performance and security.
- 2.Perform tasks related to: Network Address Translation (NAT) and Port Address Translation (PAT), Dynamic Host Configuration Protocol (DHCP), WAN Technologies, Point-to-Point Protocol (PPP), Integrated Services Digital Network (ISDN), Dial-on-Demand Routing (DDR), Frame Relay, Network Management and Optical Networking.

**GENERAL EDUCATION GOALS INTRODUCED/REINFORCED IN THIS COURSE:**

(The outcomes below reflect the BCC General Education Goals and Objectives for this course.)

Students will demonstrate competency in office productivity tools appropriate to continuing their education. (6.a.i.)

Students will use critical thinking skills for computer-based access, analysis, and presentation of information.(6.a.ii.)

**TOPICAL OUTLINE FOR THE COURSE:**

1. Module 1 - Scaling IP Addresses
2. Module 2 - WAN Technologies
3. Module 3 PPP
4. Module 4 - ISDN and DDR
5. Module 5 - Frame Relay
6. Module 6 - Introduction to Network Administration
7. Module 7 - Emerging Technologies
8. Case Study: WANs
9. Preparation for Certification Exam

**Course Activities:**

- ▶ Course activities vary from course to course and instructor to instructor. Below is a listing of some of the activities students can anticipate in this course:
- ▶ Writing assignments: students will analyze current issues in the field using current articles from the popular press as well as library research including electronic resources databases.
- ▶ Speaking assignments: students will present research individually or in groups using current technology to support the presentation (e.g., PowerPoint presentation); students will participate in discussions and debates related to the topics in the lessons. Discussions may also focus on cross-cultural and legal-ethical dilemmas as they relate to the course content.
- ▶ Simulation activities: Trends and issues will be analyzed for their ethical as well as social or legal significance. Students might role-play common situations for classmates to analyze. Current news articles may be used to generate discussion.
- ▶ Case Studies: Complex situations and scenarios will be analyzed in cooperative group settings or as homework assignments.
- ▶ Lectures: This format will include question and answer sessions to provide interactivity between students and instructor.
- ▶ Speakers: Representatives from various related fields may be invited to speak.
- ▶ Videos: Related topics will provide impetus for discussion.

### **Student Evaluation:**

The student will be evaluated on the degree to which student learning outcomes are achieved. A variety of methods may be used such as tests, quizzes, class participation, projects, homework assignments, presentations, etc.

See individual instructor's course handouts for grading system and criteria (point value for each assessment component in course, e.g. tests, papers, presentations, attendance etc.), number of papers and examinations required in the course, and testing policy including make ups and/or retests.

### **GRADING STANDARD:**

- A Mastery of essential elements and related concepts, plus demonstrated excellence or originality.
- B+ Mastery of essential elements and related concepts, showing higher level understanding.
- B Mastery of essential elements and related concepts.
- C+ Above average knowledge of essential elements and related concepts.
- C Acceptable knowledge of essential elements and related concepts.
- D Minimal knowledge of related concepts.
- F Unsatisfactory progress. This grade may also be assigned in cases of academic misconduct, such as cheating or plagiarism, and/or excessive absences.

For other grades, see the current BCC catalog.

### **COLLEGE POLICIES:**

The current college catalog and student handbook are important documents for understanding your rights and responsibilities as a student in the BCC classroom. Please read your catalog and handbook as they supplement this syllabus, particularly for information regarding:

- ▶ Academic Integrity Code
- ▶ Student Conduct Code
- ▶ Student Grade Appeal Process

### **NOTIFICATION FOR STUDENTS WITH DISABILITIES:**

Burlington County College offers reasonable accommodations and/or services to persons with disabilities. The Special Populations Department offers comprehensive services to all students with any form of disability (with appropriate documentation) which hinders their academic success. Contact Barbara Ericson on Extension 1208 at (609) 894-9311 or (856) 222-9311 or visit the website at:

<http://www.bcc.edu/pages/182.asp>.

**ADDITIONAL SUPPORT/LABS:**

BCC provides confidential advising and counseling services free to all students through the Department of Academic Advisement and Transfer. For more information about advising and counseling services, visit at the Parker Center or the Mt. Laurel Center at Laurel Hall, or call extension 7337 at (609) 894-9311 or (856) 222-9311 or visit the website at:

Advising Website <http://staff.bcc.edu/advising/>

Counseling Website <http://staff.bcc.edu/counseling/>

BCC offers a free tutoring for all currently enrolled students. For more information regarding The Tutoring Center call Extension 1495 at (609) 894-9311 or (856) 222-9311 or visit the Tutoring Center Website at <http://staff.bcc.edu/tutoring/>

Annual Review 2006-2007

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7/11/08

10/22/08