

**OAKTON COMMUNITY COLLEGE
GENERIC COURSE SYLLABUS**

I.	<u>COURSE PREFIX</u>	<u>COURSE NUMBER</u>	<u>COURSE NAME</u>	<u>CREDIT</u>	<u>LECTURE</u>	<u>LAB</u>
	CNS	105	Networking Essentials	3	3	1
	(Formerly LAN 105)					

II. PREREQUISITE:

CIS 101 or CIS 103 or consent of instructor, coordinator or program chair.

III. COURSE (CATALOG) DESCRIPTION:

This course presents the fundamentals of electronic data communications with emphasis on local area networks. Students gain the knowledge necessary to design and install a local area network. Students are introduced to the terminology and concepts of electronic communications systems including the OSI (Open Systems Interconnection) model. Topics include network hardware and software requirements, information structures, transmission protocols and network architecture.

IV. LEARNING OBJECTIVES:

Upon completion of this course the student will:

1. Understand and identify the components that make up a network.
2. Master data communications concepts as they apply to both LANs and WANs.
3. Evaluate carriers and the different types of services they provide.
4. Understand the seven OSI (Open Systems Interconnection) layers.
5. Recognize common network problems and solutions.
6. Make educated decisions about hardware and software selection and acquisition.
7. Analyze protocol alternatives.
8. Understand how network decisions are made.
9. Understand the role of the network manager.
10. Design and implement a simple LAN.
11. Perform elementary trouble shooting.
12. Understand connectivity devices.

V. ACADEMIC INTEGRITY:

Students and employees at Oakton Community College are required to demonstrate academic integrity and follow Oakton's Code of Academic Conduct. This code prohibits:

- cheating
- plagiarism (turning in work not written by you, or lacking proper citation)
- falsification and fabrication (lying or distorting the truth)
- helping others to cheat
- unauthorized changes on official documents
- pretending to be someone else or having someone else pretend to be you
- making or accepting bribes, special favors, or threats, and
- any other behavior that violates academic integrity.

There are serious consequences to violations of the academic integrity policy. Oakton's policies and procedures provide students a fair hearing if a complaint is made against you. If you are found to have violated the policy, the minimum penalty is failure on the assignment and, a disciplinary record will be established and kept on file in the office of the Vice President for Student Affairs for a period of 3 years.

Details of the Code of Academic Conduct can be found in the Student Handbook.

VI. OUTLINE OF TOPICS:

1. Introduction to Networking
2. Basic Network Media
3. Understanding Network Architecture
4. Protocols mainframe and PC related
5. Network Architecture LAN and WAN
6. Understanding Network Operating Systems
7. Introducing Network Standards
8. Defining Network Protocols
9. Elements of Network Connectivity
10. Designing and Installing a Network
11. Establishing Network Shares and Accounts
12. Ensuring Network Security
13. Printing on a Network

VII. METHODS OF INSTRUCTION:

Methods include lectures, class exercises and class discussion, perform lab exercises and projects.

VIII. COURSE PRACTICES REQUIRED:

- Read course materials - textbook and current journals
- Attend and participate in class lecture and lab
- Complete required assignments, exercises, quizzes and exams

IX. INSTRUCTIONAL MATERIALS:

TEXTBOOKS: Appropriate Textbook and Lab Manual
Appropriate Self-Testing software
Hardware and software manuals
Computer equipment for setting up a computer networking

X. METHODS OF EVALUATING STUDENT PROGRESS:

Quizzes, examinations, completion of lab assignments, exercises, and one major LAN project

XI. OTHER COURSE INFORMATION:

If you have a documented learning, psychological, or physical disability you may be entitled to reasonable academic accommodations or services. To request accommodations or services, contact the ASSIST office in the Learning Center. All students are expected to fulfill essential course requirements. The College will not waive any essential skill or requirement of a course or degree program.