

**OAKTON COMMUNITY COLLEGE  
GENERIC COURSE SYLLABUS**

<b>I.</b>	<b><u>COURSE PREFIX</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>COURSE NAME</u></b>	<b><u>CREDIT</u></b>	<b><u>LECTURE</u></b>	<b><u>LAB</u></b>
	CNS (Formerly LAN 117)	117	Microsoft Planning and Optimizing Windows Network Infrastructure	3	3	1

**II. PREREQUISITE:**

CNS 116 (Formerly LAN 116) or LAN 172 or consent of instructor, coordinator or program chair

**III. COURSE (CATALOG) DESCRIPTION:**

This course provides students with the knowledge and skills to plan and maintain a Microsoft Windows Server network infrastructure. This course covers the most recent release of Windows. The course is intended for students who are candidates pursuing the systems administrator and systems engineer track, or who are currently supporting a competitive platform who want to enhance their job skills on Microsoft Windows Server networking technologies. This is the fifth course in the Microsoft Certified Systems Engineer (MCSE), Windows Server curriculum.

**IV. LEARNING OBJECTIVES:**

1. Plan a TCP/IP physical and logical network.
2. Plan and troubleshoot a routing strategy.
3. Plan a Dynamic Host Configuration Protocol (DHCP) strategy.
4. Optimize and troubleshoot DHCP.
5. Plan a Domain Name System (DNS) strategy.
6. Optimize and troubleshoot DNS.
7. Plan and optimize Windows Internet Naming Service (WINS).
8. Plan, optimize, and troubleshoot IPsec network access.
9. Troubleshoot network access.

**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:**

- A. Introducing Windows Server Network Infrastructure Planning, Tools, and Documentation
- B. Planning and Optimizing a TCP/IP Physical and Logical Network
- C. Planning and Troubleshooting Routing and Switching
- D. Planning, Optimizing, and Troubleshooting DHCP
- E. Planning a DNS Strategy
- F. Optimizing and Troubleshooting DNS
- G. Planning and Optimizing WINS
- H. Planning and Troubleshooting IPsec
- I. Planning Network Access
- J. Troubleshooting Network Access
- K. Planning a Windows Server Network Infrastructure

## **VII. METHODS OF INSTRUCTION:**

Methods include lectures, class exercises and class discussion, hands-on lab exercises.

## **VIII. COURSE PRACTICES REQUIRED:**

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

## **IX. INSTRUCTIONAL MATERIALS:**

- Textbook and Lab book: Microsoft Official Curriculum for Windows
- Current Self-Test Software
- Software manuals

## **X. METHODS OF EVALUATING STUDENT PROGRESS:**

Quizzes, examinations, completion of lab assignments, exercises; and several Local Area Networks (LAN) projects.

## **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.