

**PALOMAR COLLEGE**  
**COURSE OUTLINE OF RECORD FOR**  
**DEGREE CREDIT COURSE**

  X   Transfer Course     X   A.A. Degree applicable course  
(check all that apply)

**COURSE NUMBER AND TITLE:** CSIS 111 Networking Fundamentals

**UNIT VALUE:** 4

**MINIMUM NUMBER OF SEMESTER HOURS:** 80

**BASIC SKILLS REQUIREMENTS:** Appropriate language and computational skills.

**ENTRANCE REQUIREMENTS**

**PREREQUISITE:** none

**COREQUISITE:** none

**RECOMMENDED PREPARATION:** none

**SCOPE OF COURSE:** This course provides students with the knowledge and skills necessary to build a solid foundation in computer networking. It will include networking fundamentals, the OSI model, subnetting, features and functions of networking components and the skills needed to install, configure, and troubleshoot basic networking hardware peripherals and protocols.

**SPECIFIC COURSE OBJECTIVES:** The successful student will be able to:

1. Understand networking basics.
2. Identify network software, hardware and connections.
3. Understand the OSI model.
4. Become familiar with TCP/IP Fundamentals, Routing, Applications, and Configuration.
5. Plan and efficiently manage IP addressing and subnetting.
6. Explain Remote Network Access.
7. Identify network security issues.

**CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:**

1. Networking Basics
  - a. Network Communications
  - b. The OSI Reference Model
2. Network Hardware
  - a. Network Cables
  - b. Network Interface Adapters

- c. Network Hubs
3. Network Connections
  - a. Bridging
  - b. Switching
  - c. Routing
4. Network Software
  - a. Network Operating Systems
  - b. Network Clients
  - c. Directory Services
5. Data-Link Layer Protocols
  - a. Ethernet
  - b. Token Ring
6. Network Layer Protocols
  - a. IP, IPX, NetBEUI
7. Transport Layer Protocols
  - a. TCP and UDP
8. TCP/IP Fundamentals, Routing, Applications, and Configuration
  - a. TCP/Ip Protocols
  - b. IP Addressing
  - c. Routing Principles
  - d. Building Routine Tables
  - e. TCP/IP Services, Utilities
  - f. Installing Protocols
  - g. Configuring TCP/IP
9. Remote Network Access
  - a. Using Remote Connections
10. Network Security
  - a. Password Protection
  - b. Security Models
  - c. Firewalls
11. Planning the Network
  - a. Pulling Cable
  - b. Making Connections
12. Installing a Network
13. Network Maintenance
  - a. Backups
  - b. Anti-Virus Policies
  - c. Patches and Updates

**REQUIRED READING:** Microsoft Press, Network+ Certification Training Kit, 2001

**SUGGESTED READING:** None

**REQUIRED WRITING:**

Problem solving exercises and skills demonstrated in computer homework assignments. A minimum of one page per homework assignment is required.

**OUTSIDE ASSIGNMENTS:**

Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short-term classes.

**INSTRUCTIONAL METHODOLOGY:**

Check all that apply:

- lecture
- laboratory
- lecture-laboratory combination
- directed study

**DISTANCE LEARNING:**

This course may be offered as a distance learning course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.

Yes  No

If yes, check all that apply:

- Television Course (Video one-way, e.g. ITV, video cassette, etc.)
- Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)
- Two-Way Video Conferencing (Two-way interactive video and audio)
- One-Way Video Conferencing (One-way interactive video and two-way interactive audio)
- Computer Assisted Instruction (A specialized form of mediated instruction relying primarily on student access to information and prepared lessons or teaching materials through a computer terminal, but not under immediate supervision of a qualified instructor.)

**GRADING POLICY AND STANDARDS** (include methods of determining whether the stated objectives have been met by students):

Grades for courses are based upon final examinations, mid-term examinations, other tests, assignments, projects, and participation. Faculty will inform students of their grading policy at the beginning of each semester.

50-60%	Assignments
40-50%	Examinations

**IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?**

Yes  No  Number of times course may be taken for credit: 1

If yes, identify specific provision of Title 5 Division 2 section(s), 55761-55763 and 58161 which qualifies course as repeatable:

**CONTACT PERSON: Terrie Canon, x2610**

**SIGNATURES ON FILE**