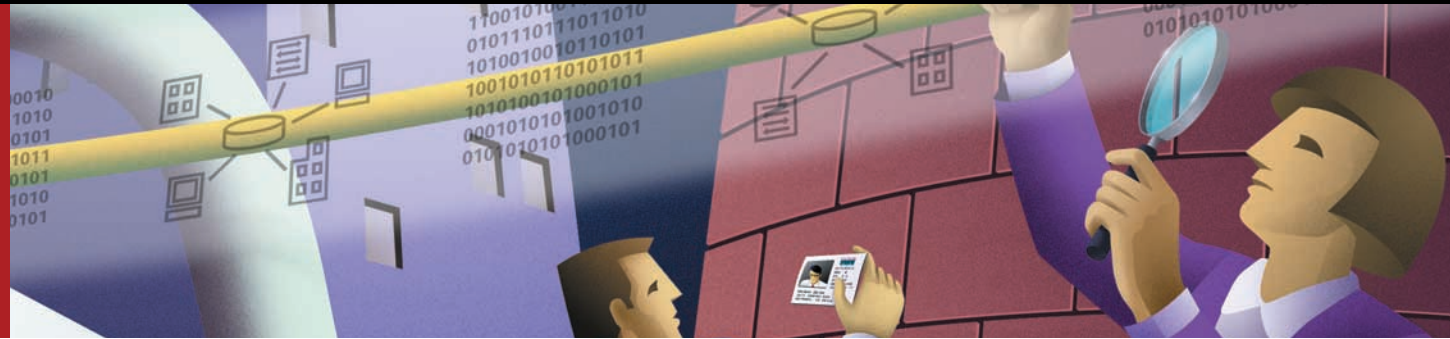


## Certificate of Course Completion

### CCNA 1 Networking Basics



Alan Kundel

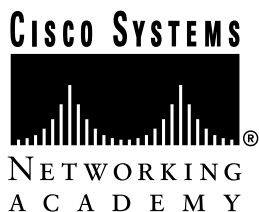
Date : November 4, 2003  
Instructor : Torpey, Robin  
Location : Alfred  
Academy Name : Alfred State College

**During the Networking Basics course, administered by the undersigned instructor, the student demonstrated the following competencies:**

- Be able to identify and describe IP Address Classes.
- Proficient in using the binary number system.
- Proficient in IP address subnetting techniques.
- Proficient in the use of the three basic Boolean functions (AND, OR, NOR).
- Be able to describe the purpose of the OSI Model and the functions of each layer.
- Be able to describe the process of data encapsulation
- Be able to make a patch cable.
- Proficient in detailing the specifications of networking media (copper, fiber, wireless).
- Be able to describe and apply CAT 5 cabling standards.
- Be proficient in the use of a cable tester.
- Proficient in planning, designing, and installing work group and peer-to-peer LANs.
- Be able to describe the purpose of the TCP/IP Protocol Stack (DoD Model) and the functions of each layer.
- Be able to identify which layer of the OSI Model specific TCP/IP protocols reside.
- Be able to compare and contrast the OSI Model and TCP/IP Protocol Stack.
- Proficient in detailing the specifications of Ethernet.
- Be able to identify and describe Ethernet families (10BaseT, Fast Ethernet).
- Be able to describe the function of MAC addresses.

---

Instructor's Signature



November 4, 2003

Dear Alan Kundel

Congratulations! You have successfully completed CCNA 1 Networking Basics of the Cisco Networking Academy Program.

During the course, you have developed a solid foundation in the basics of networking, demonstrating knowledge of important concepts and skills, including the OSI model, Ethernet networks running TCP/IP, IP addressing, and structured cabling skills.

Information technology skills are in high demand given the explosive growth of the Internet as a practical business tool. Technological literacy is more important today than ever before, and Cisco is proud to provide you with the knowledge and skills to design, build, and maintain computer networks.

Wishing you continued success in CCNA 2!

Sincerely,

A handwritten signature in black ink that reads "John Chambers". The signature is written in a cursive, flowing style.

John Chambers  
President and CEO  
Cisco Systems, Inc.