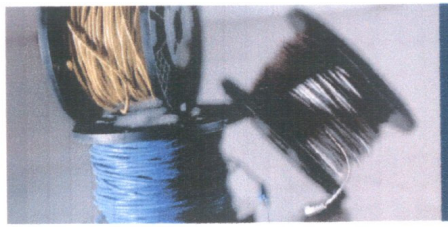
Cisco Systems

Certificate of Course Completion



CCNA 1—Networking Basics

During the Cisco® Networking Academy® CCNA 1 course administered by the undersigned instructor, the student was able to proficiently:

- Define and install the hardware and software required to be able to communicate across a network
- Demonstrate the mathematical skills required to work effortlessly with integer decimal, binary, and hexadecimal numbers and simple binary logic
- Define and describe the structure and technologies of computer networks
- Describe the meaning and application of the term "bandwidth" when used in networking
- Describe, compare, and contrast network communications using two examples of layered models
- Describe the physical, electrical, and mechanical properties and the standards associated with copper and optical media used in networks
- Describe what is required to install a simple WLAN
- Explain the issues associated with the transmission of signals on networking media
- Describe the topologies and physical issues associated with cabling common LANs
- Describe the physical issues associated with cabling networking equipment to work over a WAN link
- Explain the fundamental concepts associated with the Ethernet media access technique
- Explain how collisions are detected and the concepts associated with autonegotiation on an Ethernet system
- Define and describe the structure and technologies of computer networking systems
- Describe networking topologies and physical issues associated with cabling common LANs
- Describe the principles and practice of switching on an Ethernet network
- Describe how the protocols associated with TCP/IP allow host communication to occur
- Explain and demonstrate the mechanics associated with IP addressing
- Describe how an IP address is associated with a device interface and the association between physical and logical addressing
- Describe the principles and practice of packet switching using the Internet Protocol (IP)
- Describe the concepts associated with routing and the different methods and protocols used to achieve it
- Describe the fundamental concepts associated with transport layer protocols and compare the connectionless approach to transport with the connection-oriented one
- List the major TCP/IP application protocols and briefly define their features and operation

Michal Kowalski

Student's Name

December 4, 2006

Date

Sulikowski Bartlomiej

Instructor

Instytut Sterowania i Systemów Informatycznych przy UZ w Zielonej Górze

Academy Name

Zielona Góra

Location

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Instructor's Signature

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