

Computers and Broadband Modems

OVERVIEW

Computers and Broadband Modems introduces the fundamentals of personal computer (PC) hardware and software in connection with broadband modems, allowing students to gain a thorough understanding of how the PC and modem interface with the broadband network. Topics of study include basic troubleshooting, DOCSIS in the network, operating systems, the system board, input/output devices, disk drives and much more, making the material an excellent reference tool for PC concepts and terminology. The course requires no prior technical experience.

Delivery Options:

📖 Learning takes place using a textbook. Lessons and final exams are taken online.

📀 This course contains a CD-ROM.

Completion Time:

Varies based on a student's self-study pace, however, the maximum time allowed is six months from enrollment.

BENEFITS

Upon completion students will:

- » more effectively troubleshoot basic personal computer problems
- » have a more complete understanding of DOCSIS modems
- » understand how to complete advanced, high-speed data installations
- » use this course to help prepare for SCTE's Broadband Premises Specialist Data and Broadband Telecom Center Specialist Data endorsements
- » earn three hours of college credit
- » receive an industry-recognized Jones/NCTI™ certificate of graduation
- » gain 12 BICSI continuing education credits for RCDD, RCDD/LAN, RCDD/OSP, Residential Installer, Installer Level 2 and Technician

Ideal for:

Personnel who need to learn about installing digital video, high-speed Internet access services and telephony including:

- » installers
- » installer technicians
- » technical service representatives

COURSE OBJECTIVES

Upon completing this course students will be able to:

1. identify the four basic functions of the PC
2. explain how devices outside the computer case are connected to the PC
3. identify the three types of software used in a PC
4. compare and contrast soft and hard boots
5. identify four system resources that aid in the communication between hardware and software

(Continued)

RELATED COURSES

Students completing this course should then enroll in:

- » Troubleshooting Advanced Services
– or –
- » IP Voice
– or –
- » Telephone Home Wiring
- » Installer Technician

TRAINING FEATURES

- » Knowledge-based, broadband and job-specific content
- » Highly illustrated and easy to read course materials
- » Curriculum advising
- » 24/7 lesson feedback and progress monitoring at www.jonesncti.com
- » Online testing

Visit www.jonesncti.com/coursepolicy.htm for important information on computer hardware/software requirements and student-to-student transfer and extension limitations



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COURSE OBJECTIVES *(Continued)*

6. understand how the categories of physical memory are housed on the system board and expansion boards
7. understand how memory is used by Windows
8. how to use standard resources on a computer system when installing add-on devices
9. describe the DOCSIS standard and how it originated
10. define quality of service and its role in the continuous transmission of high-speed data

COURSE OUTLINE

1. Personal Computer Hardware

Understanding the central processing unit, explaining personal computer hardware used for input and output and personal computer hardware inside the computer case

2. Personal Computer Software

Understanding the three types of software and what they do, the operating systems, surveying operating systems and understanding applications software

3. The Boot Process

Introducing, examining and detailing the boot process and booting in a Windows environment

4. How Software Manages Hardware Resources

Defining system resources, understanding the software/hardware relationship and protecting data, software and hardware

5. The System Board

Understanding BIOS, ROM and RAM, buses and expansion slots, the CPU and system boards

6. Memory Management

Introducing memory, understanding memory and Windows, managing memory with Windows and upgrading memory

7. Floppy and Hard Drives

Introducing how data is physically stored on a disk, using Windows Explorer to manage a floppy drive, understanding hard drive technology and using Windows Explorer to manage a hard drive

8. Peripheral Devices

Understanding basic peripheral installation and using ports and expansion slots for add-on devices

9. Understanding Broadband Cable Modems

Understanding DOCSIS, discussing broadband cable modems, cable modem termination systems and understanding DOCSIS in the network

10. Broadband Cable Modem Service Provisioning

Provisioning cable modems, troubleshooting noise and ingress, customer premises equipment and understanding quality of service



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