ITCC 1401 Syllabus

REQUIRED TEXTBOOK/CLASS MATERIALS:


*Network Fundamentals, CCNA Exploration Companion Guide
By Mark Dye, Rick McDonald, Antoon Rufi.
ISBN: 1587132087
Published by Cisco Press
Available at the NVC Bookstore or from online retailers

Optional:  Network Fundamentals, CCNA Exploration Labs and Study Guide
By Antoon Rufi, Priscilla Oppenheimer, Belle Woodward, Gerlinde Brady.
ISBN: 1587132036
Published by Cisco Press
Available at the NVC Bookstore or from online retailers

COURSE DESCRIPTION:

Networking Basics is the first of the four courses leading to the Cisco Certified Network Associate (CCNA) certification. CCNA 1 introduces Cisco Networking Academy Program students to the networking field. The course focuses on network terminology and protocols, local-area networks (LANs), wide-area networks (WANs), Open System Interconnection (OSI) models, cabling, cabling tools, routers, router programming, Ethernet, Internet Protocol (IP) addressing, and network standards.

PREREQUISITES:

While no previous knowledge of Cisco is required, class participants should have a basic knowledge of computer use or an A+ certification, an Operating System and the Internet.

COURSE GOALS AND OBJECTIVES:

Upon completion of this course, participants should be able to:

- Identify the seven layers of the OSI model
- Describe the functions of each OSI layer
- Perform binary and hexadecimal conversion
- Develop IP address and subnet masking scheme
- Describe the proper selection of network cable and devices
- Describe wireless networking
- Install a local area network (LAN)
- Configure network devices and nodes
- Define the five steps of data encapsulation
- Identify the functions of the TCP/IP network-layer protocol
TCP/IP Subnetting is taught throughout the semester

*All dates, material, quizzes, etc are subject to CHANGE!

**Evaluation/Assessment:**

*Each chapter is followed with an Exam given online by the Cisco Academy System. The exams are graded by Cisco and scores are given immediately. Labs and study guides will be considered as a part of your attendance. Cheating will not be tolerated.*

**Student Evaluations:**

Participants will have the opportunity to evaluate both the course and the instructor prior to the posttest. Evaluations request participants to provide constructive comments on course content, courseware, instructor, facility and equipment.
Learning Tools:

Learning tools that assist with this course include:
- Reinforce class exercises with practice outside of class
- Use manual resources including glossary, quick reference pages, and assessments
- Review prior to class sessions
- Take notes / Engineering Journal

Learning Outcomes:

- **Student should understand and be able to analyze TCP/IP subnetting**
- **Student should understand the various conceptual networking models**
- **Student should possess the critical thinking skills necessary for network troubleshooting**
- **Student should be able to produce and read basic network drawings**
- **Student should understand the concept of network convergence**
- **Student should understand appropriate cabling for LANs**