

IT:104 ITE II Network Operating Systems
Spring 2006

Sec. 07159 Mondays and Wednesdays 2:00 pm to 4:00 pm
Rm. KEC624

INSTRUCTOR: Rick Ahlgren Office Kahl 624 ext. 5264 (336-5264)

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Prerequisites: None

Textbooks, Materials and Supplies:

Content is delivered by Online Multimedia available in the classroom (Kahl 624) or on the Web.

An optional textbook is available in the bookstore

- CISCO NETWORKING ACADEMY PROGRAM IT Essentials II: Networking Operating Systems Companion Guide

Course Objectives:

IT Essentials: Network Operating Systems, sponsored by Hewlett-Packard Company, is an intensive introduction to multiuser, multitasking network operating systems. Characteristics of the Linux, Windows 2000, NT, and XP network operating systems will be discussed. Students will explore a variety of topics including installation procedures, security issues, back up procedures and remote access. In addition, this course will help prepare students for CompTIA's Server + certification exam. This course (along with IT210 UNIX) also helps prepare students for CompTIA's Linux+ certification exam.

Course Schedule:

WEEK	TOPICS	ASSIGNMENTS
1 Feb. 1 & 6	Module 1 Operating System Fundamentals	Read Module 1 Worksheets: 1.1.6 Operating System Basics 1.2.8 Microsoft Windows Basics 1.3.5 UNIX and Linux on the Desktop
1	Module 2 Introduction to Networking	Read Module 2 Worksheets: 2.2.5 Types of Networks 2.3.3 Proprietary and Open Standards Comparison 2.4.3 Network Protocols
2 Feb. 8 & 13	Module 3 Physical Components of a Network	Read Module 3 Worksheets: 3.2.3 Network Topologies 3.3.2 Twisted Pair Cabling 3.3.4 Physical Media Types 3.4.3 Network Devices
2	Module 4 TCP/IP Networking	Read Module 4 Worksheets: 4.1.2 The TCP/IP Network Model 4.2.2 IPv4 Addressing Overview** 4.2.8 Subnetting
3 Feb. 15 & 20	Module 5 Overview of Network Services	Read Module 5 Worksheets: 5.1.1 Network/NOS Services 5.3.3 Windows 2000 Active Directory Labs 5.3.4 Configuring Linux as a NIS Client
3	Module 6 Introduction to Network Operating Systems	Read Module 6 Worksheets: 6.1.6 Characteristics of a Network Operating System 6.2.3 Windows NT/2000 6.3.3 Linux Distribution Comparison 6.3.4 Linux
4 Feb. 22 & 27	Module 7 Installation and Boot Process Overview	Read Module 7 Worksheets: 7.1.3 Planning the Installation 7.1.4 Server Components

		<p>7.1.5 Hardware Requirements 7.3.5.1 The Boot Process 7.3.5.2 Linux Boot Process Labs: 7.1.8 Using the HCL 7.2.6 Adding Swap File Space in a Linux System</p>
5 Mar. 1 & 6	Module 8 Windows 2000 Professional	<p>Read Module 8 Worksheets: 8.1.1 Installing the Operating System 8.3.2 User Accounts Labs: 8.1.1 Installation Demonstration of Windows 2000 8.1.2 Configuring an IP Address and Default Gateway in Windows 2000 8.2.1 Logging on to Windows 2000 8.2.2 Using the Windows 2000 GUI 8.2.3 Using the Windows 2000 CLI 8.2.4 Navigate the Windows 2000 File System with "Windows Explorer" and "My Computer" 8.3.1 Adding Users in Windows 2000</p>
6 Mar. 8 & 13		<p>Labs: 8.3.2 Managing User Accounts in Windows 2000 8.4.1 Creating Files and Directories Using Windows 2000 8.4.2 Creating Groups in Windows 2000 8.4.3 Assigning Permissions in Windows 2000 8.5.1 Configuring HTTP Services on Windows 2000 8.5.2 Configuring FTP Services on Windows 2000 8.5.3 Configuring Telnet on Windows 2000 8.5.7 Writing a Script in Windows 2000</p>
7 Mar. 15 & 27	Module 9 Linux Installation Procedures	<p>Read Module 9 Labs: 9.2.1 Installation of Linux 9.2.4 Configuring Network Settings 9.3.3 Configuring X Server 9.4.4 Linux Kernel Management</p>
8 Mar. 29 & Apr. 3	Module 10 Linux Administration	<p>Read Module 10 Worksheets: 10.1.4 The Linux Shells 10.1.5 The vi Editor Labs: 10.1.1 Logging into Linux 10.1.2 Using the Linux GUI (X Window) 10.1.3 The CLI Interface 10.1.4 The Linux bash and C Shells 10.1.5 Using the Linux vi Editor 10.1.6 Using the Awk Command 10.2.2 Adding Users in Linux 10.2.3 Managing User Account and Passwords 10.2.4 Creating Groups in Linux 10.3.1 Creating Directories in Linux</p>
9 Apr. 5 & 10		<p>10.3.6 Managing Runlevels 10.4.3 HTTP Apache Web Server 10.4.4 Configuring FTP Services in Linux 10.4.5 Configuring Telnet in Linux 10.4.6 Creating a Samba Server 10.4.10 Writing a Script File in Linux</p>

10 Apr. 12 & 17	Module 11 Advanced NOS Administration	Read Module 11 Worksheet: 11.5.2 Bottlenecks 11.5.3 Baseline Labs: 11.1.1a Backing up With Windows 2000 11.1.1b Backing up with Linux 11.4.4 Syslog 11.4.5 Checking Resource Usage on Windows 2000 11.4.6 Checking Resource Usage on Linux 11.5.5 Network Monitor
11 Apr. 19 & 24	Module 12 Installing and Maintaining Hardware in Linux	Read Module 12 This module has no labs or worksheets.
12 Apr. 26 & May 1	Module 13 Troubleshooting the Operating System	Read Module 13 Worksheets: 13.4.3 Using TCP/IP Utilities 13.4.5 Windows 2000 Diagnostic Tools
13 May 3 & 8	Module 14 Network Security	Read Module 14 Worksheets: 14.2.7 Threats to Network Security 14.3.6 Implementing Security Measures 14.5.2 DHCP and Firewalls Labs: 14.4.3 Windows Update To update service packages in Windows 2000.***
14 May 10, 15 & 17	Open Lab and Final Exam Preparation	Complete all labs and worksheets. Course Survey Final Exam Skills-based Exam

Student Objectives:

- Attend all classes in the training
- Read and comprehend all modules of the curriculum
- Complete all labs, lab reports and worksheets
- Complete all exams in the Curriculum (on the CISCO assessment server)
- Pass the Final Exam with a score of 70% or better
- Complete successfully the lab skills final exam within the time allocated.
- Complete the Course Evaluation Form

EVALUATION:	14 module exams	28pts
	Labs, Lab reports, & worksheets	56pts
	Lab skills exam	6pts
	Final exam	<u>10pts</u>
	Total	100pts

Standards: A=90%-100% B=80%-89% C=70%-79% D=60%-69% F< 60%

LATE WORK:

- Exams: Exams are late if your first attempt is not completed on the scheduled week and the score will be reduced 10% for every class date it is late. You may retake any module exam. Both grades will count. (Note: exam late deductions will not be reflected in the online grade book.)
- Labs: Lab reports and worksheets are due the next class after they are scheduled and are late after that class. The score on the report or worksheet will be reduced 10% for every class date it is late.

ATTENDANCE:

- Attendance is required.
- Attendance will not DIRECTLY affect your grade.
- Attendance will be reported to the financial aids office and may affect your loan and or scholarship status
- You are not in attendance if you are more than 15 minutes late or leave more than 15 minutes before the end of class.

CELL PHONES and PAGERS:

- Before class starts, turn off or activate silent mode on cell phones and pagers. Please leave the room before answering a silent mode call.

TESTS:

- When taking tests on the assessment server, the only window that should be open is the browser window to the assessment server.

CISCO COPYRIGHT RULES:

- It is a violation of our agreement with Cisco for you to electronically copy or print or have in your possession copied or printed Cisco copyrighted material. This includes, but is not limited to, curriculum content and test material. You are allowed to print or copy lab procedures. For more information check your student guide for the Student Code of Conduct. You may also want to check the Student User Agreement at students.netacad.net and the Internet User Agreement at www.eicc.edu.

FOOD and DRINK:

- Because of the potential damage to equipment, food and drinks are absolutely not allowed in the classroom. There is a break area just outside of the classroom.

Disclaimer:

- This course outline is believed to be accurate, however it may contain errors, inaccuracies and/or omissions. The instructor reserves the right to correct discovered errors, inaccuracies and/or omissions at any time during the duration of the class.