ACADEMIC AFFAIRS

Course Number: ESET-353   Department: ESET.AS

Course Title: Home and Small Business Networking   Semester: Fall   Year: 2008

Objectives/Competencies

Course Objective	Competencies
1. Physical Networking	a. Identify common network wiring. b. Use a network cable tester to determine the quality of the wiring. c. Use good wiring practices.
2. IP Networking	a. Understand the fundamentals of IP networking and subnets. b. Identify the settings of an existing network. c. Design and implement a plan for a simple network. d. Understand the IP terms gateway, subnet mask, DHCP, and DNS. e. Setup and test an IP networking interface. f. Understand the well known ports. g. Understand the principles of quality of service (QOS) for priority traffic such as VOIP and video.

Course Objective	Competencies
3. Workstation and Server configurations	a. Understand how to identify, set, change, and test the network interfaces for Windows XP systems. b. Understand how to identify, set, change, and test the network interfaces for Apple Mac OS X systems. c. Understand how to identify, set, change, and test the network interfaces for a common Linux system. d. Share resources between Windows, Mac OS X, and Linux systems. e. Configure and use the native firewall software in Windows and OS X. f. Identify open and closed ports on these operating systems.
4. Router configuration	a. Understand the principles of operation of routers. b. Configure a common home or small business router. c. Understand the differences between a home/small business router and enterprise routers. d. Reset router hardware to known configuration. e. Understand and setup PPOE for DSL connections. f. Use the web based setup program to configure common routers. g. Understand the basics of router firewall configuration. h. Configure a simple VLAN settings to securely access a corporate network resource.

Course Objective	Competencies
5. Wireless Networks	a. Understand the principles of operation of wireless networks and wireless routers. b. Understand common RF interference problems. c. Understand the terminology for wireless network settings. d. Configure wireless networks and clients. e. Configure and use the WEP and WPA security settings.
6. Security	a. Understand the common security risks to networks. b. Understand and use common security protocols such as SSL, SSH, and SFTP. c. Understand the basics of encryption.