

ITT Technical Institute

EC324

Managing and Maintaining a Network

Onsite Course

SYLLABUS

Credit hours: 4

Contact/Instructional hours: 40 (40 Theory Hours)

Prerequisite(s) and/or Corequisite(s):

Prerequisites: GE127 College Mathematics I or equivalent, TB143 Introduction to Personal Computers or TB145 Introduction to Computing

Course Description:

Students will be introduced to network-related areas of project management, vendor management, network inventory management, security management, etc., that are related to the day-to-day job of network administration.

I. MAJOR INSTRUCTIONAL AREAS

Network Components, Configuration, and Strategy
Services: E-mail and Print
Managing the Network and System Environment
Management, Monitoring, and Maintenance
Updating Services and Equipment
Helpdesk and Troubleshooting
Relating to the Customer

COURSE OBJECTIVES

Describe network client platforms.

Examine advantages and disadvantages of manual platform configuration and automating setup.

Contrast advantages of different network topologies.

Categorize different types of network hardware.

Compare arguments for and against centralization of network services.

Describe a process for building services.

Defend reasons for open architecture as opposed to proprietary architectures.

Explain the network concepts of capacity planning, redundancy, bandwidth, and latency.

Describe potential policies for setting up and administering E-mail use.

Compare technologies for delivering Remote Access Service.

Identify the components of a robust security policy.

Explain the procedures that should be enacted upon employee separation from corporation.

Describe the differences between risk, mitigation, and control.

Identify critical business unit components and fit them into a disaster recovery strategy.

Plan for backup and recovery needs.

Explain the differences between Return on Investment and Total Cost of Ownership.

- Create reasonable transition plan from old to new service applications.
- List the steps in a testing process.
- Describe appropriate components of a communication plan.
- Describe appropriate attendees, purpose, and expected outcomes of a post-implementation review.
- Describe the difference between historical data and real-time monitoring.
- Identify some types of monitoring tools.
- Justify allotment of time for proper debugging of network problems.
- Plan for and properly staff a Help Desk for customer use.
- Create an escalation policy.
- Identify the important features of a Problem Ticket Tracking system.
- List and describe the important parts of a proper change management process.

TEACHING STRATEGIES

Curriculum is designed to promote a variety of teaching strategies that support the outcomes described in the course objectives and that foster higher cognitive skills. Delivery makes use of various media and delivery tools in the classrooms.

TEXT

Limoncelli, T. A., & Hogan, C. (2002). *The practice of system and network Administration*, (1st ed.). Boston, MA: Addison-Wesley Professional.

EVALUATION

A. COURSE REQUIREMENTS

1. Attendance and Participation

Regular attendance and participation are essential for satisfactory progress in this course.

2. Completed Assignments

Each student is responsible for completing all assignments on time.

3. Team Participation

Each student is responsible for participating in team assignments and for completing the delegated task. Each team member must honestly evaluate the contributions by all members of their respective teams.

B. WEIGHTED VALUES

The final grade will be based on the following weighted values:

Grade Categories	Percentage of Final Grade
Assignment	40%
Discussion	10%
Project	40%
Quiz	5%
Final	5%
Total	100%

Final grades will be calculated from the percentages earned in class as follows:

A	90 - 100%	4.0
B+	85 - 89%	3.5
B	80 - 84%	3.0
C+	75 - 79%	2.5
C	70 - 74%	2.0
D+	65 - 69%	1.5
D	60 - 64%	1.0
F	<59%	0.0

*Class/Group Participation: Includes class and group participation and cooperation as well as participation in discussion items. This grade will reflect student attendance. Required activities are detailed in this syllabus. The instructor will give additional individual and group assignments to promote and evaluate objectives

REFERENCES

A. ITT TECH VIRTUAL LIBRARY

Login to the ITT Tech Virtual Library to access online books, journals, and other reference resources selected to support ITT Tech curricula.

<http://library.itt-tech.edu/>

B. OTHER

Applegate Lynda M., Lynda M., Robert D. Austin and F. Warren McFarlan. CORPORATE INFORMATION STRATEGY AND MANAGEMENT: Text and Cases, 6th ed. NY: McGraw Hill, 2003.

Collings, Terry and Kurt Wall. Red Hat Linux Networking and System Administration (With CD-ROM). John Wiley & Sons, 2002.

Cousin, Don, Bill Hybels, Bruce L. Bugbee and Wendy Seidman (Contributor). Network's Participant's Guide. Zondervan Publishing House, 1994.

Eck, Thomas. Windows NT/2000 ADSI Scripting for System Administration. New Riders Publishing: 2000.

Fleury, Marc and Scott Stark. JBoss Administration and Development. SAMS, 2002.

Hunt, Craig. TCP/IP Network Administration, 3rd ed. O'Reilly & Associates, 2002.

Keogh, Jim. Essential Guide to Networking. Upper Saddle River, NJ: 2001.

Mann, Scott. Linux TCP/IP Network Administration. Upper Saddle River, NJ: Prentice Hall, 2002.

Microsoft Corporation. MCSE Training Kit--Premium Edition: Microsoft Windows 2000 Network Infrastructure Administration (Exam 70-216) (With CD-ROM). Microsoft Press, 2001.

Roth, Dave. Win32 Perl Programming: The Standard Extensions, 2nd ed. Upper Saddle River, NJ: Prentice Hall, 2002.

Sloan, Joseph D. Network Troubleshooting Tools. O'Reilly & Associates, 2001.

Syngress Media, Inc. MCSE WINDOWS 2000 NETWORK ADMINISTRATION STUDY GUIDE (EXAM 70-216) (BOOK/CD-ROM). NY: McGraw Hill, 2000.

Torre, Jose de la, Yves L. Doz and Timothy Devinney.. MANAGING THE GLOBAL CORPORATION: Case Studies in Strategy and Management, 2nd ed. NY: McGraw Hill, 2000.

Wilde, Ethan. AppleScript for Applications: Visual QuickStart Guide. Upper Saddle River, NJ: Prentice Hall, 2002.

Wisniewski, Steve J. Institute of Electrical Electronic Engineers, Advanced Network Administration, 1st ed. Upper Saddle River, NJ: Prentice Hall, 2003.

ELECTRONIC RESOURCES

ITT Technical Institute Virtual Library

<http://library.itt-tech.edu/>