

I. COURSE DESCRIPTION:

Students will be introduced to Network Operating Systems including current implementations and future trends in the workplace. Developing practical skills in LAN installation, administration, and troubleshooting are important objectives of this course. Microsoft Windows NT 4 Server and Microsoft Windows 2000 Server will be used as the primary learning tools.

Students will perform a Windows NT Server install. System administration will then be explored by adding groups and users. Implementing Shares and Permissions will also be covered. The course will shift to Windows 2000 server where user and group administration will take place. In addition, policies and profiles will be implemented using Windows 2000 Server.

DNCP, WINS, DNS, Backup Strategies, and Printing services will be the final part of this course.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

1. Introduction To Network Operating Systems**Potential Elements of the Performance:**

This learning outcome will constitute approximately 5% of the course.

Reference: Text ch1,4

- Learn the structure of a Network Operating System environment
- Identify the major Network Operating Systems in the workplace
- Learn the history of each Network Operating System
- Compare certifications of each Network Operating System
- Compare pricing, support, and past / current / future market share
- Contrast the difference between a Peer-Lan and Client / Server
- Learn Domain modeling with introduction to PDC, BDC, Stand-Alone, Active Directory, and NDS
- Configure a Peer-LAN environment using Windows 2000 Professional.

2. Install and configure Windows NT Server**Potential Elements of the Performance:**

This learning outcome will constitute approximately 5% of the course.

Reference: Instructor Notes

- Identify the startup location and executable file for the NT Server install
- Install Windows NT Server on a FAT partition
- Login to Windows NT Server
- Configure TCP/IP to access the network and Internet
- Explore the NT boot process
- Create an emergency repair disk (ERD)
- Identify and install service packs
- Install NT Server Anti-Virus software

3. Administer Windows NT Server Users / Groups**Potential Elements of the Performance:**

This learning outcome will constitute approximately 10% of the course.

Reference: Instructor Notes

- Explore User Manager for Domains
- Create miscellaneous user accounts including a backup admin account
- Set security for user accounts
- Create Local and Global Groups
- Login to NT Server using Windows 2000 Professional as a client

4. Administer Windows NT Server Files / Directories (NTFS Mode)**Potential Elements of the Performance:**

This learning outcome will constitute approximately 15% of the course.

Reference: Text ch9

- Implement and set Shares for NT Server
- Explore and compare File / Directory permissions of NTFS
- Identify and implement Directory Permissions
- Identify and implement File Permissions
- Apply and test File Permissions over Directory Permissions in conjunction with Shares

5. Install and Configure Windows 2000 Server**Potential Elements of the Performance:**

This learning outcome will constitute approximately 5% of the course.

Reference: Text ch5

- Identify the startup location and executable file for the 2000 Server install
- Install Windows 2000 Server on FAT partition
- Differentiate between Standalone, Member Server or Domain Controller
- Login to 2000 Server
- Configure TCP/IP to access the network and Internet
- Create an emergency repair disk (ERD)
- Explore Share Level Permissions
- Convert FAT to NTFS
- Identify and install the latest service pack
- Install 2000 Server Anti-Virus software

6. Administer Windows 2000 Server Permissions**Potential Elements of the Performance:**

This learning outcome will constitute approximately 15% of the course.

Reference: Text ch9

- Explore and contrast the difference between NT Server and Windows 2000 Server permissions
- Implement and set Shares
- Implement Directory / File Permissions

7. Implement Policies and Profiles for Windows 2000 Server**Potential Elements of the Performance:**

This learning outcome will constitute approximately 15% of the course.

Reference: Text ch 8

- Compare Policies VS Profiles
- Install Local and Group policies
- Work with the Window 2000 Server Registry
- Create Local and Roaming profiles
- Differentiate between Local and Roaming profiles
- Understand the flow of Roaming profiles

8. Manage Printing Services in a Network Environment**Potential Elements of the Performance:**

This learning outcome will constitute approximately 5% of the course.

Reference: Text ch11

- Install and configure Printing Services for 2000 Server
- Test printing services for both Server and Client

9. **Perform Remote Administration from a Windows Client**
Potential Elements of the Performance:

This learning outcome will constitute approximately 5% of the course.

Reference: Instructor Notes

- Install remote client services on 2000 Professional
- Explore remote-access activities using 2000 Professional

10. **Create Backup Strategies and Disaster Recovery Plans**
Potential Elements of the Performance:

This learning outcome will constitute approximately 5% of the course.

Reference: Text ch 7

- Learn various backup methods and schedules
- Perform Volume backups
- Research the latest in Storage Area Networks
- Learn about off-site backup and restore strategies
- Research the aftermath of September 11th, 2001 Data Recovery methods.

11. **Install and Configure DHCP, WINS, and DNS Servers on a Windows 2000 Server**

Potential Elements of the Performance:

This learning outcome will constitute approximately 20% of the course.

Reference: Text ch13

- Install and configure a DHCP Server
- Create a DHCP Scope
- Test DHCP from a client
- Install and configure WINS
- Identify the WINS Database
- Perform a WINS testing activity from Windows 2000 Professional
- Install a DNS Server
- Configure a zone, then create A and Cname records for DNS
- Test DNS

III. TOPICS:

1. Installation of Network Operating Systems
2. Administration of Local Area Networks

3. Customization of Client / Server configurations
4. Installation and maintenance of Network Printing
5. Disaster Recovery Planning

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Title: Windows 2000 Server Certification Edition
 Author: Palmer / Kammerling / Marky / Stewart
 Publisher: Course Technology
 ISBN: 0-619-18683-6

V. EVALUATION PROCESS/GRADING SYSTEM:

| | |
|-------------------------------|-----|
| 3 WRITTEN TESTS (20% each) | 60% |
| TAKE-HOME AND LAB ASSIGNMENTS | 40% |

(The percentages shown above may vary slightly if circumstances warrant.)

The following semester grades will be assigned to students:

| Grade | <u>Definition</u> | <i>Grade Point Equivalent</i> |
|--------------|--|--------------------------------------|
| A+ | 90 – 100% | 4.00 |
| A | 80 – 89% | |
| B | 70 - 79% | 3.00 |
| C | 60 - 69% | 2.00 |
| D | 50 – 59% | 1.00 |
| F (Fail) | 49% and below | 0.00 |
| CR (Credit) | Credit for diploma requirements has been awarded. | |
| S | Satisfactory achievement in field /clinical placement or non-graded subject area. | |
| U | Unsatisfactory achievement in field/clinical placement or non-graded subject area. | |
| X | A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course. | |
| NR | Grade not reported to Registrar's office. | |
| W | Student has withdrawn from the course without academic penalty. | |

ELIGIBILITY FOR X GRADES / UPGRADING OF INCOMPLETES

When a student's course work is incomplete or final grade is below 60%, there is the possibility of upgrading to a pass when a student meets all of the following criteria:

1. The student's attendance has been satisfactory.
2. An overall average of at least 50% has been achieved.
3. The student has not had a failing grade in all of the theory tests taken.
4. The student has made reasonable efforts to participate in class and complete assignments.

Note: **The opportunity for an X grade is usually reserved for those with extenuating circumstances.** The nature of the upgrading requirements will be determined by the instructor and may involve one or more of the following: completion of existing labs and assignments, completion of additional assignments, re-testing on individual parts of the course or a comprehensive test on the entire course.

VI. SPECIAL NOTES:Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Special Needs office. Visit Room E1101 or call Extension 703 so that support services can be arranged for you.

Retention of Course Outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Plagiarism:

Students should refer to the definition of "academic dishonesty" in *Student Rights and Responsibilities*. Students who engage in "academic dishonesty" will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course Outline Amendments:

The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

VIII. DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.