

# Microsoft Windows NT Administration

## Course Design

1999-2000

### Course Information

**Organization:** EASTERN ARIZONA COLLEGE

**Division:** Business

**Course Number:** CMP 143

**Title:** Microsoft Windows NT Administration

**Credits:** 3

**Developed by:** Mike Moore

**Lecture/Lab Ratio:** Three (3) lecture hours per week

**Transfer Status:** Non-transferable

#### Extended Registration

**Class:** No

**CIP Code:** 52-1204

**Assessment Mode:** Pre/Post Test 50 QUESTIONS/50 pts

**Awareness Course:** No

#### Intensive Writing

**Course:** No

**Prerequisites:** I. None

**Educational Value:** The major purpose of this course is to prepare students to pass the Microsoft exam 70-067 Implementing and Supporting Microsoft Windows NT Server 4.0 and exam 70-73, Implementing and Supporting Microsoft Windows Windows NT Workstation 4.0. This course should be taken in conjunction with Supporting Windows NT Core Technologies for complete coverage of topics contained in both exams.

**Goals:**

1. Students should gain the knowledge and skills necessary to install, configure, customize, optimize, maintain, network, and troubleshoot Microsoft Windows NT

**Description:** Knowledge and skills necessary to perform day-to-day administration tasks in a Microsoft Windows-based network. Preparation for Microsoft certification examination.

**Textbooks:** Microsoft Press. *Microsoft Windows NT Network Administration*. 1st. Microsoft Press, 1998.  
This textbook is required. Source: Microsoft Press.

**Supplies:** Access to a computer which meets the minimum requirements for Windows NT.

## Competencies and Performance Standards

<b>1. Install Windows NT</b>			
<i>Domain--Psychomotor</i>	<i>Level--Practice</i>	<i>Importance--Essential</i>	<i>Difficulty--Medium</i>
<b>Criteria--</b> Performance will be satisfactory when: <ul style="list-style-type: none"> <li>• learner participates in general class discussions and activities.</li> <li>• learner learner participates in correctly installing Windows NT.</li> <li>• learner makes configuration changes to Windows NT so labs can be completed successfully.</li> <li>• learner removes any unneeded users, groups and extra files.</li> </ul>	<b>Conditions--</b> Competence will be demonstrated: <ul style="list-style-type: none"> <li>• when learner demonstrates that they can correctly install Windows NT.</li> <li>• when the learner demonstrates the can make the basic configuration changes.</li> <li>• when learner demonstrates they can delete un-needed users, groups, and files.</li> </ul>	<b>Learning Objectives:</b> <ol style="list-style-type: none"> <li>Discuss the appropriate hardware, software and information needed for a successful Windows NT installation.</li> <li>Install Windows NT.</li> <li>Make configuration changes required to successfully complete labs.</li> <li>Remove unneeded users.</li> <li>Remove unneeded groups.</li> <li>Remove unneeded files.</li> </ol>	
<b>2. Examine the main administrative tasks and tools of Windows NT</b>			
<i>Domain--Cognitive</i>	<i>Level--Analysis</i>	<i>Importance--Important</i>	<i>Difficulty--Medium</i>
<b>Criteria--</b> Performance will be satisfactory when: <ul style="list-style-type: none"> <li>• learner participates in general class discussions and activities.</li> <li>• learner participates in correctly planning and creating user accounts (lab 1).</li> <li>• learner participates in correctly configuring user policies (lab 2).</li> </ul>	<b>Conditions--</b> Competence will be demonstrated: <ul style="list-style-type: none"> <li>• when learner demonstrates they can correctly plan and create a user account (lab1).</li> <li>• when learner demonstrates they can correctly configure user policies (lab 2).</li> </ul>	<b>Learning Objectives:</b> <ol style="list-style-type: none"> <li>Plan how to implement new user accounts.</li> <li>Create user accounts and home folders for those same accounts.</li> <li>Set logon hours, workstation and account restrictions.</li> <li>Define and test a local user profile.</li> <li>Define and test a roaming user profile.</li> </ol>	
<b>3. Create and configure user accounts in Windows NT</b>			
<i>Domain--Cognitive</i>	<i>Level--Application</i>	<i>Importance--Essential</i>	<i>Difficulty--Medium</i>
<b>Criteria--</b> Performance will be satisfactory when: <ul style="list-style-type: none"> <li>• learner participates in general class discussions and activities.</li> <li>• learner participates in correctly planning local and global groups (lab 3).</li> <li>• learner participates in correctly implementing built-in groups (lab 4).</li> </ul>	<b>Conditions--</b> Competence will be demonstrated: <ul style="list-style-type: none"> <li>• When learner demonstrates they can correctly implement and plan local and global groups (lab3).</li> <li>• When learner demonstrates they can correctly implement built-in groups (lab 4).</li> </ul>	<b>Learning Objectives:</b> <ol style="list-style-type: none"> <li>Plan local and global groups.</li> <li>Create global and local groups and add accounts to them.</li> <li>View built-in groups on domain controllers to determine the default members.</li> <li>Determine the inherent rights of built-in groups.</li> <li>Use the built-in Administrators and Domain Admins groups to administer user accounts in the domain.</li> <li>Use the built-in Administrators and Domain groups to provide centralized administration of user accounts in a remote domain.</li> </ol>	

<b>4. Create and configure group accounts in Windows NT</b>			
<i>Domain--Cognitive</i>	<i>Level--Application</i>	<i>Importance--Essential</i>	<i>Difficulty--Medium</i>
<b>Criteria--</b> Performance will be satisfactory when: <ul style="list-style-type: none"> <li>• learner participates in general class discussions and activities.</li> <li>• learner participates in correctly managing accounts (lab 5).</li> </ul>	<b>Conditions--</b> Competence will be demonstrated: <ul style="list-style-type: none"> <li>• when learner demonstrates they can correctly manage accounts (lab 5).</li> <li>• when the learner demonstrates they can correctly manage user policies.</li> </ul>	<b>Learning Objectives:</b> <ol style="list-style-type: none"> <li>Assign Account Operator privileges to users.</li> <li>Create user account templates.</li> <li>Use a template to create user accounts.</li> <li>Plan an account policy.</li> <li>Set an account policy.</li> <li>Unlock a user account.</li> <li>Reset a user account password.</li> </ol>	
<b>5. Maintain user and group accounts in Windows NT</b>			
<i>Domain--Affective</i>	<i>Level--Internalizing</i>	<i>Importance--Essential</i>	<i>Difficulty--Medium</i>
<b>Criteria--</b> Performance will be satisfactory when: <ul style="list-style-type: none"> <li>• learner participates in general class discussions and activities.</li> <li>• learner participates in correctly managing a domain controller (lab 6).</li> </ul>	<b>Conditions--</b> Competence will be demonstrated: <ul style="list-style-type: none"> <li>• when learner successfully completes (lab 6).</li> <li>• when learner can successfully manage primary and backup domain controllers.</li> <li>• when learner can successfully troubleshoot domain controller problems.</li> </ul>	<b>Learning Objectives:</b> <ol style="list-style-type: none"> <li>Promote a Backup Domain Controller to a Primary Domain Controller when the Primary Domain Controller is online.</li> <li>Promote a Backup Domain Controller to a Primary Domain Controller when the Primary Domain Controller is offline.</li> <li>Restore a Primary Domain Controller.</li> <li>Synchronize domain controllers.</li> <li>Troubleshoot problems related to users logging on to the network.</li> </ol>	
<b>6. Secure network resources with share permissions in Windows NT</b>			
<i>Domain--Cognitive</i>	<i>Level--Application</i>	<i>Importance--Essential</i>	<i>Difficulty--High</i>
<b>Criteria--</b> Performance will be satisfactory when: <ul style="list-style-type: none"> <li>• learner participates in general class discussions and activities.</li> <li>• learner participates in correctly planning shared folders (lab 7).</li> <li>• learner participates in correctly sharing folders (lab 8).</li> </ul>	<b>Conditions--</b> Competence will be demonstrated: <ul style="list-style-type: none"> <li>• when learner demonstrates they can correctly plan the sharing of folders (lab 7).</li> <li>• when learner demonstrates they can correctly share folders (lab 8).</li> <li>• when learner demonstrates they can correctly plan and assign permissions to folders.</li> </ul>	<b>Learning Objectives:</b> <ol style="list-style-type: none"> <li>Plan shared folders.</li> <li>Plan user and group permissions.</li> <li>Share a folder.</li> <li>Assign shared folder permissions to users and groups.</li> <li>Connect to a shared folder.</li> <li>Stop sharing a folder.</li> </ol>	

<b>7. Secure network permissions with NTFS permissions in Windows NT</b>			
<i>Domain--Cognitive</i>	<i>Level--Application</i>	<i>Importance--Essential</i>	<i>Difficulty--High</i>
<b>Criteria--</b> Performance will be satisfactory when: <ul style="list-style-type: none"> <li>• learner participates in general class discussions and activities.</li> <li>• learner participates in correctly planning and assigning NTFS permissions (lab 9).</li> <li>• learner participates in correctly managing NTFS permissions (lab 10).</li> </ul>	<b>Conditions--</b> Competence will be demonstrated: <ul style="list-style-type: none"> <li>• when learner demonstrates they can correctly plan and assign NTFS permissions (lab 9)</li> <li>• when learner demonstrates they can correctly manage NTFS permissions (lab 10).</li> <li>• when learner demonstrates they can correctly troubleshoot NTFS permission related problems.</li> </ul>	<b>Learning Objectives:</b> <ol style="list-style-type: none"> <li>Plan NTFS file and folder permissions for a file folder hierarchy.</li> <li>Assign NTFS and shared folder permissions to a folder hierarchy.</li> <li>Take ownership of a file.</li> <li>Copy and move folders and files.</li> <li>Identify and solve permissions-related problems.</li> </ol>	
<b>8. Set up and configure a network print server using Windows NT</b>			
<i>Domain--Psychomotor</i>	<i>Level--Practice</i>	<i>Importance--Important</i>	<i>Difficulty--Medium</i>
<b>Criteria--</b> Performance will be satisfactory when: <ul style="list-style-type: none"> <li>• learner participates in general class discussions and activities.</li> <li>• learner participates in correctly setting up a network printer (lab 11).</li> </ul>	<b>Conditions--</b> Competence will be demonstrated: <ul style="list-style-type: none"> <li>• when learner demonstrates that they can correctly setup a network printer (lab 11).</li> <li>• when learner demonstrates that they can correctly share and connect to a network printer.</li> <li>• when learner demonstrates that they can successfully allocate printer resources available on the network.</li> </ul>	<b>Learning Objectives:</b> <ol style="list-style-type: none"> <li>Add and share a printer.</li> <li>Connect to a shared printer.</li> <li>Assign printer permissions to users.</li> <li>Create a printing pool.</li> <li>Schedule documents to print.</li> <li>Assign forms to paper trays.</li> <li>Set up a separator page.</li> </ol>	
<b>9. Manage a Windows NT network printer</b>			
<i>Domain--Cognitive</i>	<i>Level--Analysis</i>	<i>Importance--Important</i>	<i>Difficulty--Medium</i>
<b>Criteria--</b> Performance will be satisfactory when: <ul style="list-style-type: none"> <li>• learner participates in general class discussions and activities.</li> <li>• learner participates in correctly managing documents (lab 12).</li> <li>• learner participates in correctly managing printers (lab 12).</li> </ul>	<b>Conditions--</b> Competence will be demonstrated: <ul style="list-style-type: none"> <li>• when learner demonstrates that they can correctly manage network documents (lab 12).</li> <li>• when learner demonstrates that they can correctly manage network printers (lab 12).</li> </ul>	<b>Learning Objectives:</b> <ol style="list-style-type: none"> <li>Set a notification for a document.</li> <li>Change the priority of a document.</li> <li>Cancel a document.</li> <li>Redirect a documents to another printer.</li> <li>Purge a printer.</li> <li>Take ownership of a printer.</li> </ol>	

<b>10. Plan and implement a Windows NT domain audit policy</b>			
<i>Domain--Cognitive</i>	<i>Level--Synthesis</i>	<i>Importance--Useful</i>	<i>Difficulty--Medium</i>
<b>Criteria--</b> Performance will be satisfactory when: <ul style="list-style-type: none"> <li>• learner participates in general class discussions and activities.</li> <li>• learner participates in correctly auditing resources (lab 13).</li> <li>• learner participates in correctly auditing events (lab 13).</li> </ul>	<b>Conditions--</b> Competence will be demonstrated: <ul style="list-style-type: none"> <li>• when learner demonstrates they can correctly audit domain resources (lab 13).</li> <li>• when learner demonstrates they can correctly audit domain events (lab 13).</li> <li>• when learner demonstrates they can manage and important log files.</li> </ul>	<b>Learning Objectives:</b> <ol style="list-style-type: none"> <li>Plan an audit policy for the domain.</li> <li>Set up the audit policy.</li> <li>Setup auditing on a file.</li> <li>Set up auditing on a printer.</li> <li>Locate and view events in the security log.</li> <li>Archive the security log.</li> <li>Clear the security log.</li> <li>View events in the archived security log.</li> </ol>	
<b>11. Monitor Windows NT resources and diagnose any related resource problems</b>			
<i>Domain--Cognitive</i>	<i>Level--Analysis</i>	<i>Importance--Essential</i>	<i>Difficulty--High</i>
<b>Criteria--</b> Performance will be satisfactory when: <ul style="list-style-type: none"> <li>• learner participates in general class discussions and activities.</li> <li>• learner participates in correctly monitoring network resources (lab 14).</li> </ul>	<b>Conditions--</b> Competence will be demonstrated: <ul style="list-style-type: none"> <li>• when learner demonstrates that they can correctly monitor network resources (lab 14).</li> <li>• when learner demonstrates they can view various domain users and resources.</li> <li>• when learner demonstrates they can troubleshoot problems using network monitoring.</li> </ul>	<b>Learning Objectives:</b> <ol style="list-style-type: none"> <li>Add a user to the Server Operators group.</li> <li>Determine the built-in rights of the Server Operators group.</li> <li>View open files.</li> <li>View a list of all users connected to the server.</li> <li>View a list of resources shared by computers.</li> <li>View a list of open resources on the server.</li> <li>Send a message to a connected user.</li> <li>Observe the effects of disconnecting remote users.</li> </ol>	
<b>12. Develop and implement a backup and restoration policies for Windows NT</b>			
<i>Domain--Cognitive</i>	<i>Level--Synthesis</i>	<i>Importance--Essential</i>	<i>Difficulty--Medium</i>
<b>Criteria--</b> Performance will be satisfactory when: <ul style="list-style-type: none"> <li>• learner participates in general class discussions and activities.</li> <li>• learner participates in correctly backing up data to tape (lab 15).</li> <li>• learner participates in correctly restoring data from tape (lab 16).</li> </ul>	<b>Conditions--</b> Competence will be demonstrated: <ul style="list-style-type: none"> <li>• when learner demonstrates that they can correctly back up data from tape (lab 15).</li> <li>• when learner demonstrates that they can correctly restore data from tape (lab 16).</li> <li>• when learner demonstrates they can correctly plan and implement a back up and restore strategy.</li> </ul>	<b>Learning Objectives:</b> <ol style="list-style-type: none"> <li>Plan a backup schedule.</li> <li>Grant a user only the right to back up files to tape.</li> <li>Back up files to tape.</li> <li>Write a batch file to back up files and folders.</li> <li>Schedule the Backup program to start automatically.</li> <li>Implement a restore strategy.</li> <li>Grant a user only the right to restore files.</li> <li>Restore files and directories from a tape.</li> </ol>	

## Types of Instruction

Classroom Presentation

## Grading Policy

**Evaluation Methods:** Post Test is 10% of the grade  
Class/Lab assignments are 45% of the grade  
Quizzes are 45% of the grade

**Grading Scale:**

Grade	Requirement
A	90%-100%
B	80%-89%
C	70%-79%
D	60%-69%
F	Below 60%

## Learning Plans

### Learning Plan 1-- Learning Plan 1

**Overview:** Learning plan for all modules and competencies. The plan will be followed through each competency with little deviation.

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|--------------------|---|
| <b>Competency:</b> | 1. Install Windows NT   |
| <b>Competency:</b> | 2. Examine the main administrative tasks and tools of Windows NT            |
| <b>Competency:</b> | 3. Create and configure user accounts in Windows NT                         |
| <b>Competency:</b> | 4. Create and configure group accounts in Windows NT                        |
| <b>Competency:</b> | 5. Maintain user and group accounts in Windows NT                           |
| <b>Competency:</b> | 6. Secure network resources with share permissions in Windows NT            |
| <b>Competency:</b> | 7. Secure network permissions with NTFS permissions in Windows NT           |
| <b>Competency:</b> | 8. Set up and configure a network print server using Windows NT             |
| <b>Competency:</b> | 9. Manage a Windows NT network printer                                      |
| <b>Competency:</b> | 10. Plan and implement a Windows NT domain audit policy                     |
| <b>Competency:</b> | 11. Monitor Windows NT resources and diagnose any related resource problems |
| <b>Competency:</b> | 12. Develop and implement a backup and restoration policies for Windows NT  |

#### Learning Activities:

- \_\_\_\_ 1. Observe demonstration of relevance of competency and module information.
- \_\_\_\_ 2. Participate in interactive discussion of competency.
- \_\_\_\_ 3. Ask questions during demonstration of competency.
- \_\_\_\_ 4. Practice competency on available workstation.
- \_\_\_\_ 5. Apply new competency to different situations to insure complete understanding.

#### Performance Assessment Activities:

- \_\_\_\_ 1. Submit results of labs and written work to guarantee comprehension.
- \_\_\_\_ 2. Discuss in a one on one situation, competency with advantages and disadvantages.
- \_\_\_\_ 3. Complete labs.
- \_\_\_\_ 4. Complete quizzes.