

I. COURSE DESCRIPTION:

This course continues the preparation for certification in a networking area of specialisation. At the present time the courses and exams identified as the Microsoft™ Certified Systems Engineer (MCSE) requirements will be the basis for this course. The student will use available resources, MCSE exam preparation guides, sample tests and hands-on lab activities to prepare for the specific objectives as published by Microsoft™. The chosen track will be Microsoft Windows NT 4.0 curriculum. The two exams covered by this course are Exam 70-068: Implementing and Supporting Microsoft Windows NT Server 4.0 in the Enterprise and Exam 70-073: Implementing and Supporting Microsoft Windows NT Workstation 4.0

Rationale:

The MCSE curriculum is extensive and beyond the domain of a single course. Two additional Network Certification courses, CSN303 and CSN306 in 5th and 6th semesters complete the students progress towards full certification.

Since many of the fundamentals in the MCSE curriculum have been previously taught in prerequisite second year courses, this course will primarily be based on self-study with self-directed lab activities geared towards an in-depth understanding of Microsoft™ networking. It is assumed that many more hours outside the assigned lab hours will be required by the student to reach the level of proficiency required.

This course in itself does not result in MCSE certification; formal exams must subsequently be taken at a Sylvan Prometric™ Testing Centre at the student's own expense.

MCSE Requirements:

Candidates must pass 4 operating systems exams and two elective exams. The operating systems exams require candidates to prove their expertise with desktop, server and networking components. The elective exams require proof of expertise with Microsoft™ BackOffice products. The complete requirements are published at <http://www.microsoft.com/mcp/certstep/mcse.htm>.

These specific requirements are subject to change; the four core operating systems exams are presently as follows:

Exam 70-058 Networking Essentials

Exam 70-067 Implementing and Supporting Microsoft Windows NT Server 4.0

Exam 70-068 Implementing and Supporting Microsoft Windows NT Server 4.0 in the Enterprise

Exam 70-073 Microsoft Windows NT Workstation 4.0 or
Exam 70-064 Implementing and Supporting Microsoft™ Windows 95.

The two exams prepared for in this course are as follows:

**Exam 70-073: Implementing and Supporting Microsoft Windows
NT Workstation 4.0**

Skills Being Measured:

This certification exam measures your ability to implement, administer, and troubleshoot information systems that incorporate Windows NT Workstation version 4.0.

**Exam 70-068: Implementing and Supporting Microsoft Windows
NT Server 4.0 in the Enterprise**

Skills Being Measured:

This certification exam measures your ability to implement, administer, and troubleshoot information systems that incorporate Windows NT Server version 4.0 in an enterprise computing environment. An enterprise computing environment is typically a heterogeneous WAN. It might include multiple servers and multiple domains, and it might run sophisticated server applications.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:
(Generic Skills Learning Outcomes placement on the course outline will be determined and communicated at a later date.)

A. Learning Outcomes:

1. Implement, administer, and troubleshoot information systems that incorporate Windows NT Workstation version 4.0.
2. Implement, administer, and troubleshoot information systems that incorporate Windows NT Server version 4.0 in an enterprise computing environment

B. Learning Outcomes and Elements of the Performance:

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

1. ***Implement, administer, and troubleshoot information systems that incorporate Windows NT Workstation version 4.0.***

Elements of the Performance:

- Plan NT Workstation file system and resource requirements.
- Install, upgrade, configure and remove NT Workstation in a variety of environments.
- Manage resources in an NT Workstation environment.
- Add and configure network components for NT Workstation and use various methods to access network resources.
- Configure NT Workstation as a client in a variety of situations including Netware, TCP/IP networks and a Dial-up environment.
- Start applications on Intel and RISC platforms in various operating system environments.
- Monitor and optimise system performance using a variety of tools.
- Troubleshoot a wide range of problems in an NT Workstation environment.

This learning outcome will constitute approximately 50% of the course.

Reference: "MCSE Windows NT Workstation 4.0 Study Guide"
Syngress/Osborne 1998

2. ***Implement, administer, and troubleshoot information systems that incorporate Windows NT Server version 4.0 in an enterprise computing environment***

Elements of the Performance:

- Plan the implementation of an NT Server 4.0 directory services architecture including the appropriate domain model and disk drive configuration.
- Choose an appropriate protocol for various situations.
- Install and configure NT server 4.0 to perform various roles.
- Configure NT Server protocols, core services, hard disks, printers, and clients to meet a variety of requirements.
- Manage NT Server resources including users and groups, policies and profiles, and disk resources.

- Configure NT Server for interoperability with Netware Servers, for multiprotocol routing, for IIS and other Internet services and for RAS, Remote Access Services.
- Monitor and optimise NT Server performance.
- Choose the appropriate course of action to take to resolve a wide variety of NT Server-related problems.

This learning outcome will constitute approximately 50% of the course.

Reference: "MCSE Windows NT Server 4.0 in the Enterprise"
Syngress/Osborne 1998

III. TOPICS TO BE COVERED:

1. Topics required to pass MCSE Exam 70-073: Implementing and Supporting Microsoft Windows NT Workstation 4.0. This certification exam measures the ability to implement, administer, and troubleshoot information systems that incorporate Windows NT Workstation version 4.0.
2. Topics required to pass MCSE Exam 70-068: Implementing and Supporting Microsoft Windows NT Server 4.0 in the Enterprise. This certification exam measures the ability to implement, administer, and troubleshoot information systems that incorporate Windows NT Server version 4.0 in an enterprise computing environment.

IV. REQUIRED STUDENT RESOURCES/TEXTS:

TEXT BOOK:

- "MCSE Windows NT Workstation 4.0 Study Guide" Syngress/Osborne 1998
- "MCSE Windows NT Server 4.0 in the Enterprise" Syngress/Osborne 1998

V. EVALUATION PROCESS/GRADING SYSTEM:

Students will be given on-line simulated tests similar to the MCSE exams.
Passing Grades in both major topics is required to pass the course.

On-line Tests **100%**

GRADING SYSTEM

A+	90	-	100%
A	80	-	89%
B	70	-	79%
C	60	-	69%
R	Repeat		Less than 60%

X Incomplete

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.

The nature of the upgrading requirements will be determined by the instructor and may involve re-testing on individual parts of the course or a comprehensive test on the entire course.

ATTENDANCE:

Absenteeism will affect a student's ability to succeed in this course. Absences due to medical or other unavoidable circumstances should be discussed with the instructor.

VI. SPECIAL NOTES:

- **Special Needs**
Students with special needs (e.g. physical limitations, visual or hearing impairments, or learning disabilities) are encouraged to discuss any required accommodations confidentially with the instructor and/or contact the Special Needs Office so that support services can be arranged.
- **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 post-secondary institutions.
- **Course Modifications**
Your instructor reserves the right to make reasonable modifications to the course as deemed necessary to meet the needs of students or take advantage of new or different learning opportunities.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced standing in the course should consult the instructor. This course is eligible for challenge when individuals have previously passed the MCSE exams identified herein.