

Windows Server Systems NET-250-81 (2008FA)

Course Syllabus

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READ THIS ENTIRE SYLLABUS - you are responsible for understanding all course policies outlined in this syllabus.

Contact Information

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Instructor Link N/A
Office hours As needed. Will most likely be a phone call.
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Course Information

Course Title Windows Server Systems Administration I
Course Number NET250
Course Description This lab-based course will cover the fundamentals of current Windows server systems and network administration. Topics to be covered include: domain administration; file system management; networked printers; user management; and workstation configuration.
Course Date September 2- December 18, 2008
Prerequisite(s) NET 102 - Batch File Programming
 NET 130 - Introduction to Data Communications
 NET 140 - Operating Systems

Co-Requisite(s)

Student Objective & Outcomes

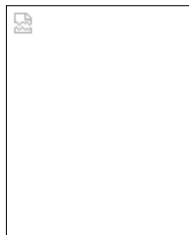
The objective of this course is to provide students with an understanding and appreciation of how the Windows Server operating system works and how it can be managed effectively. A student of this course should be fully comfortable installing and configuring a Windows Server and Active Directory structure upon completion of this class. Some specific outcomes that relate to this objective are as follows:

Outcomes

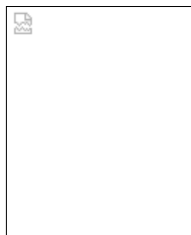
- Perform various Windows Server installation types such as attended, unattended, and upgrades.
- Configure and maintain the operating system environment and server hardware.
- Outline Active Directory and its key features and benefits.
- Configure and manage users and groups (with both GUI and command-line tools).
- Configure secure access to network resources (shared files and printers).
- Install and configure key services and applications such as DNS, WINS, and IIS.
- Use Group Policy to effectively manage an Active Directory domain.
- Maintain and secure Windows through diligent patching and solid security policies.
- Maintain a Windows server and ensure its availability.

Required Textbooks & Materials

Two books are required for this course. One you will read for general knowledge and theory, the other is a lab book which you will use each week to master your hands on skills.



THOMSON COURSE TECHNOLOGY: MCSE Guide to Managing a Microsoft Windows Server 2003 Environment, Enhanced, Brian McCann, Dan DiNicolò, ISBN: 0-619-21752-9



THOMSON COURSE TECHNOLOGY: Lab Manual for MSCE Guide to Managing a Microsoft Windows Server 2003 Environment, Dan DiNicolo, Guttormson, Reid, ISBN: 0-619-12034-7

Other Materials

Windows 2003 Server

You have access to a full working copy of the latest release of the Windows server operating system through Champlain MSDN Academic Alliance. Most Microsoft products (operating systems and applications) are available for academic use through this program. See your instructor for more information.

VMWare Workstation 5

Purchasing and installing VMWare Workstation is highly recommended for all students in this major. VMWare is a requirement for the online version of this course, and a strong recommendation for on-campus students. Using VMWare Workstation, you can run multiple operating systems on your home PC without partitioning or multi-booting - this will allow you to work on labs using your home computer. VMWare can also be used to run Linux for future Linux Administration classes.

I don't want to buy VMWare, what can I do?

- Online students much purchase/obtain VMWare or otherwise have access to a machine running Windows Server 2003.
- A free version of VMWare Server is available (however, you must be using a Windows server OS or Linux as the base operating system on your machine). For more information about VMWare visit the company's site at <http://www.vmware.com>.
- Students are free to use the classroom lab in MIC-G08 during public CIS-PAL hours.

WebCT

All materials, assignments and quizzes for this course are available via WebCT. If you are a student enrolled in NET-250 you can access this course by logging onto <http://my.champlain.edu>.

Module Specific Outcomes

The course is split into 7 major sections. You should be able to complete each of the following upon completion of each section.

- | | |
|----------|---|
| Module 1 | <ul style="list-style-type: none"> • Differentiate between the various Windows Server operating systems versions • Differentiate between the various network modes and server roles of Windows Server • Outline basic Active Directory concepts • Demonstrate an understanding of basic TCP/IP concepts • Explain DNS and how it relates to Active Directory • Employ various types of Windows installations (upgrades, CD-based, network-based and unattended) • Install a Windows 2003 domain controller • Utilize basic Windows management utilities to configure the operating system |
| Module 2 | <ul style="list-style-type: none"> • Create and manage user accounts using ADUC • Differentiate between interactive and network authentication • Identify major authentication protocols • Use local, roaming and mandatory profiles • Review the command line utilities CSVDE, LDIFDE and DS tools • Create users using Windows scripting and ADSI • Create and use groups effectively to simplify administration • Identify and describe Windows built-in groups • Identify and differentiate Windows group types • Identify and differentiate Window group scopes • Create and manage computer accounts |
| Module 3 | <ul style="list-style-type: none"> • Compare and contrast Windows file systems (FAT, FAT32, NTFS) • Create shared folders and set share-level permissions • Use NTFS permissions to secure resources • Calculate effective permissions • Relate best practices for using group scope • Compare and contrast various network printing options • Learn how to create and manage Windows shared printers |
| Module 4 | <ul style="list-style-type: none"> • Differentiate between basic and dynamic disks • Compare and contrast common RAID levels • Use the Disk Management tool to manage volumes and partitions • Use other disk management tools (CONVERT, Disk Cleanup, Defrag etc.) • Examine file and folder attributes |

- Encrypt files using EFS (Encrypting File System)
 - Use quotas to manage disk utilization
 - Describe DFS (Distributed File System)
- Module 5
- Use Group Policy to manage Windows XP desktops
 - Implement security and account policies
 - Create and implement effective logon scripts
 - Explore the GPMC (Group Policy Management Console)
- Module 6
- Configure and manage web resources using IIS (Internet Information Services)
 - Differentiate between sites, virtual servers, and virtual directories
 - Configure website authentication and security
 - Describe the IIS architecture
 - Summarize other web services such as FTP, SMTP and Internet Printing
- Module 7
- Effectively use the tools necessary for server administration and monitoring
 - Manage remote servers
 - Describe the value of WSUS (Windows Software Update Services)
 - Backup and restore Windows servers
 - Implement VSS (Volume Shadow Copy Service)
 - Review the Disaster Recovery planning process
 - Review basic Windows troubleshooting and repair
 - Describe best practice approaches to countering security risks with Windows servers
 - Implement security policies to secure a Windows server

Course Calendar

The following is a rough timeline of this course. As we progress, we may find we need either more or less time to finish the learning outcomes of each module. As such, this schedule is subject to change.

Dates	Chapter Readings
Module 1: 9/2 - 9/14	Chapter 1 - Introduction to Windows Server 2003 Chapter 2 - Managing Hardware Devices
Module 2: 9/15 - 9/28	Chapter 3 - Creating and Managing User Accounts Chapter 4 - Implementing and Managing Groups and Computer Accounts
Module 3: 9/29 - 10/12	Chapter 5 - Managing File Access Chapter 8 - Implementing and Managing Printing
10/13 - 10/19	Midterm Practical
Module 4: 10/20 - 10/26	Chapter 6 - Advanced File System Management Chapter 7 - Managing Disks and Data Storage
Module 5: 10/27 - 11/9	Chapter 9 - Implementing and Using Group Policy
Module 6: 11/17 - 11/23	Chapter 13 - Administering Web Resource
11/24 - 11/30	Thanksgiving Recess
Module 7: 12/1 - 12/7	Chapter 12- Managing and Implementing Backups and Disaster Recovery Chapter 14 - Windows Server 2003 Security Features
Module 7: 12/8 - 12/12	Current events in server management
12/13 - 12/18	Final Practical

Instructional Approach

Lectures/Reading

Half of your responsibility for this course is learning Windows server operating system theory and concepts. To accomplish this goal, you should carefully read and listen to a good deal of material. Various materials are provided for each module including chapter readings, online lectures, video and audio podcasts.

Labs

The other half of this course is mastering hands-on Windows administration skills. The lab exercises in the books give you step-by-step instructions for performing major administration tasks. The weekly skills mastery labs challenge you to perform administration task on your own (without step-by-step instructions). In general, you will use the labs in the books as your practice and preparation for the weekly skills mastery labs. As such the labs from the books are optional – it is up to you to make that determination based on your level of need. The skills mastery labs are required.

Assignments

There are lab assignments due for each module based on your reading and skills mastery labs. All assignments should be submitted via the WebCT assignment tool. All homework is graded pass/fail. Late assignments will not be accepted and will receive a grade of zero.

Quizzes

There will be multiple-choice quizzes at the end of each module which are designed to confirm your mastery of the theory and concepts. You will need to study the readings and lectures carefully to do well on the quizzes.

Midterm and Final Practical

The Midterm and Final will consist of a cumulative hands-on component. These tests are designed to confirm your mastery of the practical skills you've learned. You will need to understand all lab work to do well on the midterm and final.

Methods of Evaluation & Course Policies

- A significant portion of your grade is based on participation in the Discussion area. Share your experience and knowledge, and how it applies to the material we are studying. Feel free to link to or describe outside sources that your classmates can benefit from.

You are expected to check in a minimum of 4 days per week. A "me-too" or "I agree" answer is not considered a beneficial posting. Postings should add on to and help the discussion move along
- The College's attendance policy states that anyone who misses 6 consecutive hours will have an Academic Referral Form filed. Any student who has never attended a class within the first 6 hours of instructional time will be withdrawn automatically from the class. If a student is unable to attend class, the student is responsible for obtaining any labs, lecture notes or other materials missed during the absence. For online students, be aware that the bulk of the responsibility for succeeding in this class is up to you. I will present the format and tools to help you learn, but you have to actively participate in the process to be successful. Students are advised to log in and post comments to the discussion forum several times per week (a minimum of three times per week). It is strongly suggested that you log in every day in order to be able to communicate and provide thoughtful feedback to your fellow students as required in this course.
- All quizzes and assignments are due expressly when stated. Late submissions will not be accepted. Failure to submit quizzes and assignments on time will result in a grade of zero.
- The goal of this class is to make you an effective and competent Windows network administrator. To help you reach that goal, you will be given weekly hands-on lab assignments from the course lab manual. ***I strongly recommend you do the labs for each module before attempting the skills mastery labs.***
- Make sure you are *learning* when you are doing the labs. Most students can easily follow step-by-step instructions from the book without actually paying attention to what they are doing! You will only do well in this course if you pay attention to the lab assignments, work hard on them, and bring any questions or need for clarifications to me for help. I am 100% committed to make sure you succeed. Never feel like you are asking too many questions. Never feel like you are asking me for too much help. That is what I am here for. I can not help you succeed if I don't know you are confused or unsure of the material.
- I will use the following weights for calculating final grades.

Graded Elements	Weights
Participation	15%
Weekly Assignments	15%
Module Quizzes	20%
Midterm Practical	20%
Final Practical	30%
Total	100%

Grade Calculation

I will use the College's standard numerical scale for calculating final grades.

Grade	Range
A	93+
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	Below 60

Satisfaction of Core Competencies

This course is structured in such a way as to provide experiences associated with the following core competencies as outlined by Champlain College. These core competencies are as follows:

- Technology Competence
- Critical & Creative Thinking
- International Awareness
- Global Studies Awareness
- Written / Oral Communication
- Quantitative Literacy
- Ethical Reasoning

The manner in which this course addresses these competencies is outlined in the sections that follow.

Technical Competence

To achieve technical competence in this course, students will work on three core technical competencies - theory, practical skills, and the ability to use available resources. Lectures and reading are designed to build a foundation of knowledge and theory; guided labs will hone the skills required for Windows server administration; and students will be exposed to the common tools, technical resources, and documentation which will assist them in their profession. When they enter the "real" world, the mastery of these three technical competencies will give them the tools to be successful in their careers.

Creative and Critical Thinking

To be at the top of the Information Technology field, students must not only have "skills", they must also learn how to examine problems and find innovative solutions. These *creative and critical thinking* skills are part of the day-to-day work of the network administrator. The ability to think critically comes after the mastery of the three technical competencies mentioned above. Throughout his course, as students learn specific skills, they will also be exposed to challenges designed to help them troubleshoot, analyze, evaluate and implement innovative solutions.

International Awareness

Though global awareness is not a major focus of this course, there still exists the need to understand where the operating system fits as it pertains to the global enterprise. This topic will be touched on lightly as we examine the international functionality of the Windows operating system.

Oral / Written Communications

In order for students to be successful in the business world, their ability to communicate in both oral and written form is of primary importance. A successful technician should be able to communicate effectively with people at all levels of the organizational structure - from fellow technicians, to end users, to managers. To be literate in the field you must understand and speak freely using the terminology of the industry. On the other hand, to be effective with non-technical people you must understand how to break down the jargon into something the "non-technician" can understand. To meet these goals students must study the readings and lectures. They are also introduced to external resources such as technical magazines, journals, and web resources will keep them apprised of the industry. To meet these goals, students are encouraged to participate in class discussions, initiate discussion of relevant current topics, or elaborate on topics being covered in the lecture.

Quantitative Literacy

There is not a great mathematical element to this class; however students must apply some basic quantitative skills in the technical world, including decimal, octal, binary, and hexadecimal numbering systems. Students must also be able to demonstrate the ability to make conversions between these systems as it is an integral part of the technology.

Ethical Reasoning

Ethical reasoning is one of the most important skills students of network administration need to perfect. By nature of their job, network administrators have access to sensitive data and information. The standards that an administrator must adhere to must be clarified to all students. To examine ethical reasoning in class, topics such as unauthorized use of computers and networks; software theft (piracy); information accuracy; intellectual property rights; codes of conduct; and information privacy will be discussed as time permits.

Students With Disabilities

If you believe that you have a disability requiring accommodations in this class, please contact Janine Allo in the Counseling Department, Office of Disability Services, as soon as possible. After you receive your accommodation form, please contact the instructor ASAP to insure all accommodations are implemented in a timely fashion. It is the student's responsibility to seek and secure accommodations prior to the start of a test or project. Accommodations cannot be provided until you supply the instructor with a form from Janine

Contact: Janine Allo
Counseling Department, Office of Disability Services
Office: Hauke 007
Phone: 802-865-5484
Email: jallo@champlain.edu

Academic Honesty

The Champlain College Student Handbook (*The Rudder*) describes the College's Academic Honesty policy. Basically, I expect all written work to be your own work - written in your own words. Any and all written assignments will be checked for plagiarism from the web - you are not allowed to cut and paste information from the internet and pretend it is your own writing. This policy will be **strictly** enforced. With that said, using the Internet, consulting with co-workers or friends, or collaborating with classmates is completely acceptable in this course. However, when it comes time to submit the work, make sure it is in your own words, or clearly documented if taken from other resources.

"In the preparation and presentation of any assigned work-including examinations, tests, quizzes, term papers, reports, themes and other written or oral exercises-every student shall conform to a strict standard of academic honesty. Any attempt to deceive a faculty member or to help another student to do so will be considered a violation of this standard. In all assignments, students must acknowledge the words and/or ideas of others taken from print or electronic media, whether a direct quotation or a paraphrase; any omission of this is dishonest. Cheating on examinations or tests consists of knowingly giving, receiving or using-or attempting to give, receive or use-unauthorized assistance during an examination or test. A faculty member may record a grade of "zero" for any assignment on which a student has plagiarized or cheated. For repeat offenses within a single course, the faculty member may record a grade of "F" for the course. Violations of this policy in multiple courses may result in dismissal from the College. A student may appeal these decisions according to the Academic Grievance Procedure."

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