

Networking Systems Administration Department
Business/Public Service Division
GREENVILLE TECHNICAL COLLEGE

COURSE SYLLABUS

Course Title: LAN Network Technologies

Course Number: IST 257

Lecture hours per week: 3.0

Lab/Clinic Hours:

Semester credit hours: 3.0

Prerequisite: IST 256

Catalog course description: A study of network operating system technologies including network operating system architecture, the installation, configuration, monitoring, and troubleshooting of network resources, and network administration functions such as user/group maintenance, network security, print services, remote access, fault tolerance, backup, and recovery. *Note: Course correlates with Microsoft Windows2008 Server.*

Purpose of the course: Provide students with the knowledge and skills necessary to understand, install, configure, and administer the Windows 2008 Server network operating system.

Required text(s) or other materials:

1. Hands-On Microsoft Windows Server 2008; Michael Palmer;
Course Technology/Thomson Learning; ISBN 13:978-1-423-90234-8; ISBN 10:-1-423-90234-3
2. **NOTE:** Students in traditional classes must access Blackboard for course-related information. Students in hybrid and online classes will access their online content through Blackboard.

COLLEGE-WIDE STUDENT LEARNING OUTCOMES

1. **Communication** – Students will demonstrate the ability to use active reading and listening skills and to produce effective written and oral communication for varying audiences.
2. **Information Technology and Technological Literacy** – Students will demonstrate competency in using computer technology within a field of study.
3. **Critical Thinking/Reasoning** – Students will demonstrate the ability to apply the scientific method, mathematical processes, and research skills to analyze and solve problems/issues by using reflection and reasoning to justify conclusions.
4. **Professional and Personal Responsibility** – Students will demonstrate the ability to exhibit conduct, attitudes, and etiquette appropriate to the student's community and chosen career. Students will demonstrate the ability to manage time, to use effective interpersonal skills, and to display responsible behavior.

5. Diversity – Students will demonstrate the ability to recognize diversity and to demonstrate respectful conduct and attitudes toward all. Students will demonstrate the ability to explain how global issues impact life, work, and opportunities.

Approved March 26, 2009

NETWORKING SYSTEMS ADMINISTRATION PROGRAM STUDENT LEARNING OUTCOMES
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Upon successful completion of the Network Administration program, the graduate will be able to:

1. Set up, maintain, and troubleshoot computer and network hardware.
2. Install, maintain, and troubleshoot operating system and application software.
3. Construct and configure local area networks according to specification.
4. Administer and troubleshoot network operating systems.
5. Design and develop programming solutions to prescribed problems

Approved August 2009

IST 257 COURSE OUTCOMES

Students who successfully complete this course will have demonstrated a level of correct answers on the course assessment(s) that will be at least 80 percent for 80 percent of the course outcomes

1. The student will be able to identify Windows Server 2008 Editions, assess hardware requirements, configure the Server 2008 environment and troubleshoot performance issues.
2. The student will be able to implement and administer Active Directory, user accounts, groups, printers, shared folders and file permissions.
3. The student will be able to configure data storage, DNS, WINS, DHCP, RAS and Group Policy
4. The student will be able to install the Windows Server 2008 operating system, create a domain controller and configure related objects in a domain environment including user accounts, groups, printers, network drives, shared folders and file permissions.

The objectives of the IST 257 course are intended to meet the Network Systems Administration program outcomes numbered 1, 2, 3, and 4 above.

Main Topics

Tutoring is now available in the Business Division Student Lab located on the Barton Campus in the Engineering Building (#103), Room 115. The hours for tutoring are posted in the lab (ET 115); no appointment is necessary. There are no fees required for this service.

Introductions

Chapter 1 – Introduction to Windows Server 2008

1. Windows Server 2008 Platforms
2. Windows Networking Models
3. Implementing TCP/IP in Windows Server 2008

Chapter 2 – Installing Windows Server 2008

1. Preparing for Installation
2. Windows Server 2008 Installation Methods
3. Uninstalling Windows Server 2008

Chapter 3 – Configuring the Windows Server 2008 Environment

1. Using Server Manager
2. Configuring Server Hardware Devices
3. Configuring the Operating System
4. Understanding the Windows Server 2008 Registry

Test #1 – Chapters 1, 2, and 3

Chapter 4 – Introduction to Active Directory and Account Management

1. Active Directory Basics
2. Containers in Active Directory
3. User Account Management
4. Security Group Management
5. Implementing User Profiles

Chapter 5 – Configuring, Managing and Troubleshooting Resource Access

1. Managing File and Folder Security
2. Configuring Shared Folders and Shared Folder Permissions
3. Implementing DFS

Chapter 6 – Configuring Windows Server 2008 Printing

1. Installing and Local and Shared Printers
2. Configure Printer Properties
3. Managing Print Jobs

Test #2 – Chapters 4, 5, and 6

Chapter 7 – Configuring and Managing Data Storage

1. Disk Management
2. Introduction to Fault Tolerance
3. Disk Backup

Chapter 8 – Managing Windows Server 2008 Network Services

1. Installing DNS Services
2. Implementing WINS
3. Implementing DHCP

Chapter 9 – Configuring Remote Access

1. Introduction to Remote Access
2. Configuring a VPN Server
3. Configuring a Dial-Up RAS Server

Chapter 10 – Securing Windows Server 2008

1. Introduction to Group Policy
2. Securing Windows Server 2008 Using Security Policies
3. Configuring NAT and IPSEC

Test #3 – Chapters 7, 8, 9, and 10

Chapter 11 – Server and Network Monitoring

1. Monitoring Server Services
2. Using the Task Manager
3. Using the Performance Monitor
4. Using Data Collector Sets

Chapter 12 – Managing System Reliability

1. General Problem Solving
2. Resolving Boot Problems
3. Using and Configuring the Event Viewer
4. Troubleshooting Connectivity

Prepare for Final Exam

Final Exam – Chapters 1-12 and Cumulative Hands-On Portion

IST 257 – Course Specific Requirements

SPECIAL NOTE TO ONLINE STUDENTS: Online students will be REQUIRED to come to the Barton Campus to complete hands-on labs. The number of required on-campus meetings will vary from class to class. Students should plan on at least 3 to 4 meetings. Online students will be required to complete the labs to satisfactorily complete the course. Also, the final examination for online students will be administered on the Barton Campus. The final examination will be scheduled at a time determined by the administration.

IST 257 – EVALUATION AND GRADING INFORMATION

GRADING POLICY

Major Tests	60 percent
Attendance, Homework, and Labs	15 percent
Final Exam	25 percent

NOTE: ALL TESTS AND EXAMS ARE RETAINED BY THE INSTRUCTOR.

- All assignments (i.e., labs, projects, research papers, etc.) for this course must be completed and submitted to the instructor by the due date established in order to receive full credit for the assignment.
- Assignments not submitted by the due date can receive up to a maximum of 80 percent credit if it is submitted within one week of the due date.
- Assignments submitted after one week of the due date will have a zero (0) grade recorded for the assignment.
- In the event that an assignment is made less than one week prior to the end of the course, the assignment must be submitted by the last day of class prior to the beginning of the final exam period and will not be accepted late.

Final letter grades will be issued as follows:

A	=	90 - 100	points
B	=	80 - 89	points
C	=	70 - 79	points
D	=	60 - 69	points
F	=	0 - 59	points

READ THIS SYLLABUS CAREFULLY

You should read this syllabus carefully and ask your instructor about *any* aspects that you do not understand. The syllabus is an agreement between you and your instructor concerning course objectives, course content, grading, and other policies and procedures particular to this course. The above information is specific to the course. Three additional documents are provided as attachments and *are considered a part of this syllabus*:

Attachment 1:

Each instructor will provide a supplement to this syllabus. The supplement will include: a week-by-week plan of instruction based on the section in which you are enrolled; your instructor's name, office hours and/or office location; and your instructor's contact information and recommended best methods to contact your instructor.

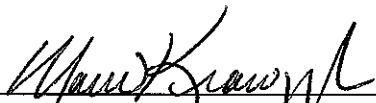
Attachment 2:

The Department responsible for developing and teaching has policies and procedures in place to assure quality instruction for all students. These are attached as "Departmental Policies and Procedures."

Attachment 3:

Please note that it is your responsibility to read the current Student Handbook included in Greenville Technical College's Catalog. (See website.) The Student Handbook addresses specific academic and student conduct policies and procedures. Excerpts from the Student Handbook representing the policies and procedures most often referred to in working with students are provided for your convenience as "Attachment 3."

Approved by:



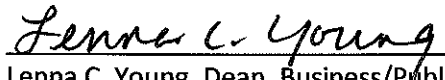
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13 Aug 10
Date

This syllabus will remain in effect until revised or reviewed no later than August 2011.