

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

COURSE SYLLABUS

Course Number: IST 260

Course Title: Network Design

Lecture hours per week: 3.0 **Semester credit hours:** 3.0

Prerequisites: IST 202, IST 258, IST 191 and SPC 205

Catalog course description: This course is a study of the processes and techniques required to identify the most attractive design solution of a telecommunications network-combining creativity, rigorous discipline, analysis, and synthesis – while emphasizing the solution in terms of cost and performance.

Purpose of the course:

Provide students in the Networking program with a capstone course that is designed to reinforce their skills in implementing, configuring, and maintaining a local area network to include physical configuration, logical configuration, security configuration, and wide area network connectivity.

Required text(s) or other materials:

1. Traditional and online students will use text books from previous courses.
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

NETWORK SYSTEMS ADMINISTRATION PROGRAM LEVEL STUDENT LEARNING OUTCOMES

Upon successful completion of the Network Systems Administration program, the student 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.
4. Administer and troubleshoot network operating systems.
5. Analyze and implement security measures for information technology.

IST 260 COURSE OUTCOMES

Upon completion of the course, the student will be able to successfully complete 70% of the following tasks:

1. Create a network solution proposal based on predefined customer requirements.
2. Evaluate the customer requirements to identify and determine computer hardware and software requirements.
3. Design and implement a Windows 2003 network.
4. Design a network solution that includes a network domain structure, network security, and network connectivity.

The outcomes of the IST 260 course are intended to meet the Network Systems Administration program level student learning outcomes numbered 1, 2, 3, and 4.

Revised 1/2009

IST 260 – Main Topics

This course features two main parts: **Guest Speakers and Field Trips with IT Leaders in the Upstate** and the **Network Department Performance Exam**.

The exact list of speakers and field trips will not be available until just before the semester starts. Based on previous semesters, topics covered by guest speakers and field trips to their businesses included:

- How to Start Your Own Computer Consulting Business
- Tour of a manufacturing plant to see how IT is implemented
- Tour of the Greenville County Schools System IT Department
- Resume Writing and Successful Interviewing Techniques
- Tour of the Greenville County Library System's IT Department
- Tour of Concentrix Cisco Support Center
- Tour of IBM facilities in Greenville
- Computer and Network Security

IST 260 – Course Specific Requirements

The Network Department Performance Exam is a three to four hours long and requires participants to fully install, configure, secure, and troubleshoot a computer network with three servers, three different operating systems, two switches, two routers, a domain controller, and five firewalls.

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 five to eight class 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 260 – EVALUATION AND GRADING INFORMATION

Grades will be calculated as follows:

- 1) Reports on Field Trips and Guest Speakers = 30% of Overall Grade
- 2) Network Department Performance Exam = 70% of Overall Grade

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

Final letter grades will be issued as follows:

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

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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27 Jul 11
Date

This syllabus will remain in effect until revised or reviewed no later than August 2012.