

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

**COURSE SYLLABUS**

**Course Number:** IST 220

**Course Title:** Data Communications

**Lecture hours per week:** 3.0

**Lab/Clinic Hours:** 0.0

**Semester credit hours:** 3.0

**Prerequisites:** Placement into MAT 101 or successful completion of MAT 032

**Catalog Course Description:** This course is a study of the fundamentals of data communications. Basic signaling, networking and various transmission media are covered

**Purpose of the Course:** This course is a study of the fundamentals of a wide variety of topics, standards, and technologies relating to the data communications field. This course uses a SOHO network to introduce some basic networking concepts such as cabling, addressing, wireless, and security, and teaches students how to plan, deploy, and troubleshoot a small network.

**Required text(s) and other materials: Required text(s) or other materials:**

1. Networking for Home and Small Businesses: CCNA Discovery Learning Guide; Allan Reid and Jim Lorenz; Cisco Press; ISBN-10: 1-58713-209-5; ISBN-13: 978-1-58713-209-4;  
*The book is used for both online and traditional 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 GENERAL EDUCATION 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 OUTCOMES**

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.
4. Administer and troubleshoot network operating systems.
5. Analyze and implement security measures for information technology.

## **IST 220 COURSE OUTCOMES**

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

1. Explain the functions of each layer of the OSI reference model.
2. Explain the basic components and concepts of networking.
3. Explain the IPv4 addressing scheme.
4. Explain how communication occurs across an Ethernet network.
5. Identify and explain common network problems.

The outcomes of the IST 220 course are intended to meet the CPT/Networking Administration program outcomes numbered 1 and 3 above.

## **IST 220 – COURSE SPECIFIC INFORMATION**

This would be where course specific information is inserted into the syllabus. This would include assignment specific information, test specific information, log sheets, accreditation specifics for the course, etc.

USB Flash drive.

## **Tentative Schedule of Topic and Class/Lab Meetings**

Please refer the Syllabus Attachment 1 to review the Tentative Course Schedule. The schedule outlines the chapters that will be reviewed, when tests will be given and when assignment and labs will be due.

**IST 220 – Data Communications  
Planned Schedule of Topics**

**Chapter 8. Basic Security**

**Describe Migration Techniques for Security Risks**

8.0 Chapter Introduction

8.1 Networking Threats

8.2 Methods of Attack

8.3 Security Policy

8.4 Using Firewalls

8.5 Chapter Summary

Lab

Test

**Chapter 9. Troubleshooting Your Network**

**Describe the Troubleshooting Process and Troubleshoot Common Network Issues**

9.0 Chapter Introduction

9.1 Troubleshooting Process

9.2 Troubleshooting Issues

9.3 Common Issues

9.4 Troubleshooting and the Help Desk

9.5 Chapter Summary

Lab

Test

**Chapter 10. Course Summary**

10.0 Putting It All Together - Lab

**Final Exam**

***Disclaimer: The supplemental plan of instruction is provided as a guide for the course; however, it can be modified at the discretion of the instructor at any time.***

<b>IST 220 – Grading Information and Departmental Grading Scale</b>
---

Grades will be calculated as follows:

Assignments	20 percent
Tests	60 percent
Final Exam	20 percent

**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.

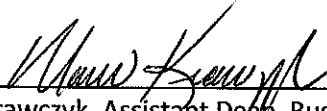
**Attachment 2:**

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:**

  
\_\_\_\_\_  
Mark Krawczyk, Assistant Dean, Business  
[Mark.Krawczyk@gvltec.edu](mailto:Mark.Krawczyk@gvltec.edu), (864) 250-8404, Barton Campus, Building 103, Room 304

**Approved by:**

  
\_\_\_\_\_  
Lenna C. Young, Dean, Business/Public Service  
[Lenna.Young@gvltec.edu](mailto:Lenna.Young@gvltec.edu), (864) 250-8204, Barton Campus, Building 103, Room 104

13 Dec '10

**Date**

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