GREENVILLE TECHNICAL COLLEGE

Business and Technology Division
Computer Technology
Course Syllabus
IST 220 Data Communications

Credit/Contact Hours
Prerequisite
Co-requisite
Course Description
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Credit/Contact Hours:
3.0

Prerequisite:
Placement into MAT 101 or higher

Computer Technology students must obtain a minimum grade of "C" in all CPT and IST courses.

Co-requisite:
None

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

Purpose of Course:
This course introduces students to fundamental networking concepts and technologies using a hands-on approach. In addition, the course will assist students in developing the skills necessary to plan and implement small networks across a range of applications. By the end of this course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.

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Internetworking Concepts is the first of four courses that may be used to prepare for the Cisco Certified Entry Level Technician (CCENT) or Cisco Certified Network Associate (CCNA) exam.

Additional Materials:
1. **Textbook:** West, Dean, Andrews, **CompTIA® Network+ Guide to Networks**. Cengage Learning, Inc., ISBN-13: 978-1-305-09094-1

2. **Blackboard**: Students taking traditional, online, and hybrid classes must access Blackboard for course-related information.

Course Outcomes:
Students who successfully complete this course will have demonstrated the skills required to accomplish the following objectives with a minimum competence level of 70 percent.

1. Explain the functions of the layers of the OSI reference model and the core TCP/IP protocols.
2. Explain the basic components and concepts of networking.
3. Explain the IPv4 and IPv6 addressing scheme.
4. Explain how communication occurs across a network.
5. Identify and explain common network problems.

The outcomes of the IST 220 course are intended to meet the Computer Technology program level student learning outcomes.

Revised August 2015

Program Student Learning Outcomes:
Upon successful completion of the Computer Technology degree,

1. Install computer and network hardware.
2. Install computer operating systems and application software.
3. Design, create and test computer programming solutions.

4. Demonstrate the ability to take initiative, assume responsibility, and work under pressure with minimum supervision by successfully completing "hands-on" computer assignments.
5. Analyze, troubleshoot, and correct computer related technical problems.

Revised August 2012

Greenville Technical College Core Competencies:

Communication Core Competency: Students will demonstrate effective written and oral communication skills to convey information, ideas, or opinions.

- Written Communication: Students will demonstrate effective written communication skills to convey information, ideas, or opinions.
- Oral Communication: Students will demonstrate effective oral communication skills to convey information, ideas, or opinions.

Critical Thinking Core Competency: Students will demonstrate effective reasoning, problem solving, or quantitative skills to develop an opinion or conclusion.

- Critical Reasoning: Students will employ inquiry, analysis, and synthesis of information to formulate and/or evaluate an opinion or conclusion.
- Problem Reasoning: Students will design and formulate a strategy to answer a question or achieve a desired goal.
- Quantitative Reasoning: Students will be able to analyze numerical information or observable facts resulting in informed conclusions.

Information Literacy Core Competency: Students will be able to locate, evaluate, and use information effectively from diverse sources.

Professionalism Core Competency: Students will demonstrate conduct and etiquette appropriate to the community and chosen career.

- Professionalism: Students will display professional conduct and work habits.
- Teamwork: Students will collaborate with others to accomplish a shared goal.

Instructional Agreement:
This syllabus is an agreement between the student and instructor concerning course objectives, course content, grading and other policies and procedures particular to the course as well as any posted program, departmental, and divisional policies. It is also the student's responsibility to become familiar with the Student Handbook/College Catalog found in the Student Resource area of Blackboard.

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Grading Scale:
Grades will be **calculated** as follows:

Tests	40 percent
Assignments/Labs/Quizzes	30 percent
Proctored Skills based Assessments	10 percent
Proctored Final Written Examination	20 percent

Final letter grades for the course will be issued as follows:

A = 90 - 100

B = 80 - 89

C = 70 - 79

D = 60 - 69

F = 0 - 59

Course Policies:

IST 220 – MAIN TOPICS

Please refer to the Syllabus Attachment 1 in Blackboard to review the **Tentative Course Schedule**. Your instructor will provide a detailed, week-by-week plan of instruction along with method of delivery, testing, and assignment submission.

COURSE OUTLINE:
Specific topic coverage includes:

Introduction to Networking

Remote Access

How Computers Find Each Other on Networks

How Data Is Transported Over Networks

Structured Cabling and Networking Elements

Network Cabling

Wireless Networking

Networking

Cloud Computing and

Network Risk Management

Unified Communications and Network and

Performance Management

Network Segmentation and Virtualization

Wide Area Networks

Industrial and Enterprise

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Disabilities Information

Students with disabilities, including those who were served in Special Education (resource or tutorial), should contact Student Disability Services (SDS) to discuss their need for services and accommodations. The main SDS office is located on the Barton Campus in the Student Center Building 105, office 113.

Staff can be reached by phone at 864 250-8202 or via email to DisabilityServices@gvltec.edu . Appointments are available at all satellite campus locations. Please check the GTC website for more information concerning Student Disability Services: http://gvltec.edu/disability-services/

Efforts have been made to ensure all materials presented in an electronic format are accessible for students with disabilities and the college is committed to this obligation. However, if you experience any difficulty accessing these materials please notify your instructor immediately so a solution can be provided. You may also contact Student Disability Services directly at 864-250-8202 or by email at DisabilityServices@gvltec.edu.

Students who need a PDF reader for accessibility of course documents presented in PDF format may download a free reader at https://acrobat.adobe.com/us/en/products/pdf-reader.html

Starfish

We care about your success! Greenville Technical College is proud to offer Starfish, a software tool designed to promote student success through coordination and communication between students, instructors and support staff.

When you set up your profile in Starfish, you can connect with services, faculty and staff at Greenville Technical College. The link to Starfish is

located in Blackboard. Throughout the term, you may receive emails regarding your attendance, course grades or academic performance.

To benefit from this software, it is important that you check your Greenville Technical College Gmail regularly and read the Starfish alerts. If your academic performance begins to drop, you may also be contacted directly by a Success Coach or the Student Success Center.

Start, Stay, Succeed!