GREENVILLE TECHNICAL COLLEGE

Business and Technology Division
Computer Technology
Course Syllabus
Internet and Firewall Security IST 266

Credit/Contact Hours:
3.0

Prerequisite:
IST 220 - Computer Technology students must obtain a minimum grade of "C" in all CPT and IST courses.

Co-requisite:
None

Course Description:
This course is an introduction to firewalls and other network security components that can work together to create an in-depth defensive perimeter around a Local Area Network (LAN).

Purpose of Course:
This course will provide students with a solid foundation in network security fundamentals with a primary emphasis on intrusion detection, security policy development, implementing Network Address Translation (NAT), packet filtering and installing firewalls, and Virtual Network (VPNs).

Required Texts:

1. *Security + Guide to Network Security Fundamentals,* Fifth Edition; Mark Ciampa; Cengage Learning, ISBN-13: 978-1-305-09391-1.
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.

Additional Materials:

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. Online students will be required to complete the labs to satisfactorily complete the course. Also, the final examination will be scheduled at a time determined by the administration.

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. The student will be able to identify general security concepts such as access controls, authentication, security attacks, malicious code, social engineering, and auditing.

2. The student will be able to identify the different methods used to provide authentication in a network environment.

3. The student will be able to identify the security devices used to secure a network.

4. The student will be able to identify the steps necessary to implement security in a network environment.

5. The student will be able to identify the components that make up a network security infrastructure.

The outcomes of the IST 266 course are intended to meet the Computer Technology program level student learning outcomes.

Program Student Learning Outcomes:

Upon successful completion of the Computer Technology Degree students will be able to:

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.

Grading Scale:
Grades for this course will be calculated as follows:

Major Tests	60 percent
Attendance/Homework/Labs	20 percent
Final Exam	20 percent (75 percent written test and 25 percent hands-on lab test)

NOTE: ALL GRADED TESTS 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

Course Policies:
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Please refer to Syllabus Attachment 1 to review the Tentative Course Schedule. The schedule outlines chapters that will be lectured, when tests will be given, and dates for assignments and laboratories.

CHAPTER	MAJOR TOPICS
Chapter 1	Introduction to Security
Chapter 2	Malware and Social Engineering Attacks
Chapter 3	Application and Network-Based Attacks
Chapter 4	Host, Application and Data Security
Chapter 5	Basic Cryptography
Chapter 6	Advanced Cryptography
Chapter 7	Network Security Fundamentals
Chapter 8	Administering a Secure Network
Chapter 9	Wireless Network Security
Chapter 10	Mobile Device Security
Chapter 11	Access Control Fundamentals
Chapter 12	Authentication and Account Management
Chapter 13	Business Continuity
Chapter 14	Risk Mitigation
Chapter 15	Vulnerability Assessment

The instructor reserves the right to modify the Plan of Instruction by changing the sequence of text material or testing content.