

# GREENVILLE TECHNICAL COLLEGE

## School of Business and Computer Technology Computer Technology Course Syllabus Penetration Testing IST-267 Spring 2021

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**Credit/Contact Hours:**

3.0

**Prerequisite:**

CPT 266 - Computer Technology students must obtain a minimum grade of "C" in all CPT and IST courses.

**Co-requisite:**

None

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### **Course Description:**

This course is an introduction to penetration testing which is the process of having authorized parties test the cyber security of an organization. Penetration testers will be given permission by an organization to attempt to hack into, or penetrate, the organization's computer defenses which will allow the testers to identify security weaknesses the organization needs to address in order to eliminate the associated cyber risks.

### **Purpose of Course:**

This course will provide students with a solid foundation in conducting effective penetration tests, with an emphasis on understanding the various tactics used by attackers targeting computer systems today and how to help organizations defend against such attacks.

### **Course Content:**

Please refer to Syllabus Addendum 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.

### **CHAPTER    MAJOR TOPICS**

Chapter 1	Penetration Testing
Chapter 2	Planning and Scoping Penetration Tests
Chapter 3	Information Gathering
Chapter 4	Vulnerability Scanning
Chapter 5	Analyzing Vulnerability Scans
Chapter 6	Exploit and Pivot
Chapter 7	Exploiting Network Vulnerabilities
Chapter 8	Exploiting Physical and Social Vulnerabilities
Chapter 9	Exploiting Application Vulnerabilities
Chapter 10	Exploiting Host Vulnerabilities
Chapter 11	Scripting for Penetration Testing
Chapter 12	Reporting and Communications

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

The final examination for traditional, online, hybrid, and blended class students will be administered on campus. The final examination will be scheduled at a time determined by the administration.

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### Required Texts:

1. CompTIA PenTest+ Study Guide: Exam PT0-001, First Edition; Mike Chapple and David Seidl; Sybex, ISBN-13: 978-1119504221.

### Additional Materials, Supplies, Equipment, and Technology (i.e. Webcams):

1. One (1) 8GB USB drive
2. One student subscription to TryHackMe (tryhackme.com)

Blackboard portal website via gvltec.edu:

- Students in traditional classes must access Blackboard for course-related information.
- Students in blended classes will access their online content through Blackboard.

### 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 Resources area of Blackboard.

### Grading Scale:

**Grades for this course will be calculated as follows:**

Major Tests	50%
Attendance/Homework/Labs	25%
Final Exam	25%
	(50% Written Test/50% 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

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### **Pass/Non-Pass Course Grade Option:**

This course may be eligible for the Pass/Non-Pass Course Grade Option. A student must request this option prior to the withdrawal date of this course. If approved for this option, a grade of P will be assigned if the student earns a grade of C or higher. A grade of NP will be assigned for earning a D or F. Students are encouraged to talk with their instructor and meet with an advisor prior to requesting this option. Additional information may be found in the college catalog. Click on this link or additional information:

[Pass/Non-Pass](#)

### **Instructional Continuity:**

In the event of a disruption to the normal class schedule or planned activities for this course, alternate learning activities that may include other methods of instruction or locations may be implemented. If disruption occurs, your instructor will communicate through your GTC email (Gmail) account. Additionally, please make sure your contact information is accurate in GTC's emergency alert system (accessible in GTC4Me/Quick Access/GTC2me – Emergency Messaging).

### **Verification of Student in Online Classes:**

Greenville Technical College is committed to student learning and the academic integrity of all courses. All GTC online courses are required to have at least one proctored learning activity that constitutes a significant percentage of the course grade, which may include a test, midterm, final exam, presentation or other assignment. Proctored is defined as an experience where an approved person ensures the identity of the student and monitors the learning activity. The proctored learning activity will be determined by the course instructor. The method of proctoring and any additional requirements, such as costs for students and/or trips to campus or approved testing center, will be explained in the course schedule/plan of instruction.

### **Honorlock:**

Honorlock will proctor your exams this semester. Honorlock is an online proctoring service that allows you to take your exam from the comfort of your home. You **DO NOT** need to create an account, download software or schedule an appointment in advance. Honorlock is available 24/7 and all that is needed is a computer, a working webcam, and a stable Internet connection. For additional information on using Honorlock, click [here](#).

### **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%.

1. Understand the different phases of the Attacker Methodology to know how to conduct and defend against related cyber attacks.

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2. Learn how to conduct efficient penetration tests in order to demonstrate to organizations their cyber weaknesses.
3. Assess systems for the presence of security vulnerabilities and be able to effectively communicate the level of associated risk for discovered issues.
4. Use a variety of manual security attack techniques to exploit security vulnerabilities in order to demonstrate weaknesses in cyber defenses.
5. Be able to align the business needs of an organization with security testing goals to ensure a productive and successful engagement.

*The outcomes of the IST 267 course are intended to meet the Computer Technology program level student learning outcomes.*

### **Assessment of Student Learning:**

Greenville Technical College is committed to continuous improvement of teaching and learning. Tests, assignments, and/or projects required in this course may be shared with college faculty and used for assessment purposes. Also, student input is necessary for improving instruction and is requested through course evaluations. Students will be notified when evaluations are available.

### **Administrative Withdrawals:**

Students may be administratively withdrawn from this course for the following reasons:

- **NIC (Never in Class)** Not attending a course during the drop/add period including failure to meet the attendance criteria in an online course. In this case, a grade of WA will be assigned. This WA will not count as an attempt and will not affect GPA.
- **14-Day Rule:** At any time during the semester and regardless of a student's use of financial aid benefits, the college will withdraw a student who is not in attendance for 14 consecutive calendar days including weekends, holidays, college breaks, and cancelled class sessions.
  - **Prior to the course withdrawal date**, the college policy is to assign a grade of W (Withdrawal). The student will earn no credits or grade points, and the W will not affect GPA. For students receiving financial aid, the course will count as an attempt and may affect future aid.
  - **After the course withdrawal date**, the college will assign a grade of WF for the course which will negatively affect GPA calculation. The student will be responsible for course payment and will not be eligible for a refund. The college will notify the student of the administrative withdrawal via official college email address. For students receiving financial aid, the course will be recorded as an attempt and may affect future financial aid awards.

Students may request a reinstatement. Reinstatements must be approved by the course instructor.

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### **Course Policies:**

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

Please refer to Departmental Policies in Blackboard to review additional course and department policies.

*Revised August 2018*

### **Students with Disabilities:**

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. ***This must be done each term.*** The main SDS office is located on the Barton Campus in the Student Center Building 105, office 113.

Students may reach staff by phone at (864) 250-8202 or via email to [DisabilityServices@gvltec.edu](mailto:DisabilityServices@gvltec.edu). Appointments are available at all satellite campus locations. Please check the GTC website for more information concerning Student Disability Services. Visit <http://gvltec.edu/disability-services> for more information.

The college is committed to providing materials that are accessible to all students. However, if you experience any difficulty accessing materials, please notify your instructor immediately so that we can provide a solution. You may also contact Student Disability Services directly at (864) 250-8202 or by email at [DisabilityServices@gvltec.edu](mailto:DisabilityServices@gvltec.edu).

Students who need a PDF reader to access course documents presented in PDF formats may download Adobe Reader from <https://get.adobe.com/reader>.

### **Blackboard Ally**

Blackboard Ally is a tool to improve students’ experiences within online courses. It enables students to convert files in a course to more accessible formats such as HTML, electronic braille, audio and more. For more information, refer to [Blackboard Ally for Students](#) located in Student Resources in the course menu.

### **Technology Statement:**

Greenville Technical College is not responsible for personal technology or internet access. Problems with computers, devices, or internet access are not acceptable for late work. When completing gradable coursework online, be sure to access a secure, reliable internet connection (preferably hardwired).

All technical questions should be directed to technical support. For details, visit [https://www.gvltec.edu/about\\_greenvilletech/tech\\_support](https://www.gvltec.edu/about_greenvilletech/tech_support).

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Students can access due dates for all assignments and quizzes/tests on the Course Schedule/Plan of Instruction. All graded work is time-stamped when submitted, so your instructor can check the time of submission. In addition, you will receive a confirmation email message when you submit assignments via Blackboard. You must provide this confirmation information in case of any dispute regarding the submission.

Computer labs are available at multiple campus locations and offer various hours as well as staff who are available for assistance. For more information, please visit [https://www.gvltec.edu/student\\_resources/computer\\_labs](https://www.gvltec.edu/student_resources/computer_labs).

Student should use Microsoft Office programs or PDF format for submitting assignments in Blackboard. Students can access <http://portal.office.com>, log in with their <username>@my.gvltec.edu email address and Blackboard/GTC4me password, then follow the prompts to install Microsoft Office free of charge.

### **FERPA Policy:**

Because Greenville Technical College abides by FERPA privacy guidelines, personal email accounts may not be used for any College-related communication. Faculty and students must use the college Gmail system only.

**Start, Stay, Succeed!**