

HYT 311 – Security+

FALL 2014 SYLLABUS

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| <p>Instructor Contact Information</p> <p>Instructor Name: Telephone: Email: Office Hours:</p> | <p>Course Information</p> <p>Start Date: TBD Completion Date: TBD Schedule: M-F (8 hours daily) Location: Largo Campus</p> <p>Course Contact Hours: 72 Course Length: 9 days</p> |
| <p>Lecture:</p> <p>Laboratory:</p> <p>E-Module:</p> | |
| <p>Prerequisites: None</p> | |

PART 1: COURSE INFORMATION

Course Description

In this course students will understand the security requirements for protecting the confidentiality, integrity and availability of information and information systems. They will learn how to select the appropriate technical, management and operational controls to mitigate risk within information technology environment.

Required Textbook

CompTIA Security+ SYO-401

ISBN: 978-0-7897-4829-4

Publisher: Pearson

Author: Kirk Hausman, Martin Weiss, Diane Barrett

Other Required Course Materials

An introductory course in a Windows operating system, or equivalent skills and knowledge, is required. Such as: Windows 7 or Windows 8.1 CompTIA A+ certification, or the equivalent skills and knowledge, is helpful but not required.

Network Tool Kit
Box Cat5e Cable
Router
Switch
Wireless Access point

Required Technology Accounts

To be successful in this course, students must have access to the following technology accounts:

- PGCC Owl Mail Email Account
- PGCC Blackboard Account
- Testout Account
- PGCC NetLab Account
- Broadblast Account
- Mobileblast Account

Details on how to setup and access the technology accounts for this course can be found in the Student Handbook for this course.



Instructor Contact

Name:

Email:

Phone:

Location:

Date(s) / Time(s):

Course Structure

This course is designed to provide a hybrid experience, including a blend of face-to-face and online activities.

Face-to-face sessions will be held on the Largo campus location TBD (will be published in PGCC Workforce Development and Continuing Education catalog). The course will meet on TBD (will be published in PGCC Workforce Development and Continuing Education catalog). Face-to-face activities will consist of classroom lecture, group activities, and physical labs.

Online sessions will be a blend of self-pace, group, and instructor guided activities using interactive Blackboard modules, Testout.com, NetLab, Broadblast, and online a Mobile Application. Activities will consist of self-paced and guided videos, text, presentations, interactive exercises and scenario, e-mail, and mobile applications.

Technology Requirements

Computer/internet access and mastery of basic computer skills are considered to be the student's responsibility. To be successful in this course, students must have access to:

- A Pentium-class or Mac computer with at least 256 MB RAM
- Broadband (DSL, Cable, FIOS) is highly recommended
- An Internet Service Provider (ISP)
- Your PGCC Owl Mail student email address
- Firefox version 22 (or higher), Chrome version 30 (or higher), or Internet Explorer 8 (or higher)
- Microsoft Word (word processing software)
- Video player and speakers for multimedia content

Technical Support

For technical support in this course, contact the Help Desk at 301-546-0637, Bladen Hall, Room106

Assignment Submission

Assignments for this course will be submitted online with Blackboard, Testout.com, Netlab, the online Mobile application. Assignments must be submitted by the stated deadline or special permission must be requested from instructor before the due date. Extensions will not be given beyond the next assignment except under extreme circumstances.

Disability Support Services

Students requesting academic accommodations are required to contact the college's Disability Support Services Office (B-124) or call (301) 546-0838 (voice) or (301) 546-0122 (TTY) to establish eligibility for services and accommodations. Students with documented disabilities should discuss the matter privately with their instructors at the beginning of the semester and provide a copy of the completed Student/Faculty Accommodation Form.

PART 2: COURSE OBJECTIVES

Network Security

- Implement security configuration parameters on network devices and other technologies
- Given a scenario, use secure network administration principles
- Explain network design elements and components
- Given a scenario, implement common protocols and services
- Given a scenario, troubleshoot security issues related to wireless networking

Compliance and Operational Security

- Explain the importance of risk related concepts
- Summarize the security implications of integrating systems and data with third parties
- Given a scenario, implement appropriate risk mitigation strategies
- Given a scenario, implement basic forensic procedures
- Summarize common incident response procedures
- Explain the importance of security related awareness and training
- Compare and contrast physical security and environmental controls
- Summarize risk management best practices
- Given a scenario, select the appropriate control to meet the goals of security

Threats and Vulnerabilities

- Explain types of malware
- Summarize various types of attacks
- Summarize social engineering attacks and the associated effectiveness with each attack
- Explain types of wireless attacks
- Explain types of application attacks
- Analyze a scenario and select the appropriate type of mitigation and deterrent techniques
- Given a scenario, use appropriate tools and techniques to discover security threats and vulnerabilities.
- Explain the proper use of penetration testing versus vulnerability scanning

Application, Data and Host Security

- Explain the importance of application security controls and techniques
- Summarize mobile security concepts and technologies

- Given a scenario, select the appropriate solution to establish host security
- Implement the appropriate controls to ensure data security
- Compare and contrast alternative methods to mitigate security risks in static environments

Access Control and Identity Management

- Compare and contrast the function and purpose of authentication services
- Given a scenario, select the appropriate authentication, authorization or access control
- Install and configure security controls when performing account management, based on best practices

Cryptography

- Given a scenario, utilize general cryptography concepts
- Given a scenario, use appropriate cryptographic methods

Given a scenario, use appropriate PKI, certificate management and associated components

Part 3: Grading Policy

Teaching Strategies

- o Lecture/Presentation/Discussion/Demonstration/ Q & A's
- o TestOut Security Pro and CompTIA SY0-401
- o PGCC Hardware Lab Activities
- o PGCC Netlab Activities
- o Blackboard E-Module Activities

Homework/Out of Class Time Summary

Reading: **10** Hours per week
E-Modules: **5** Hours per week
Test Preparation: **4** Hours per week

| Graded Course Activities | |
|--------------------------------------|------|
| Attendance | 10% |
| PGCC Blackboard Module Tests | 10% |
| NetLab Completion | 10% |
| TestOut Completion | 15% |
| TestOut Section Exams | 10% |
| TestOut Security+ Practice Exams | 25% |
| Class and Hardware Lab Participation | 20% |
| TOTAL | 100% |

| Graded Point Value | | |
|---------------------------|-------------------|-----------------------|
| Grade | Percentage | Quality Points |
| A | 95 to 100 | 4.0 |
| A- | 90 to 94 | 3.7 |
| B+ | 87 to 89 | 3.3 |
| B | 83 to 86 | 3.0 |
| B- | 80 to 82 | 2.7 |
| C+ | 78 to 79 | 2.5 |
| C | 73 to 77 | 2.3 |
| C- | 70 to 72 | 2.0 |
| Fail | 69 or below | 0.0 |
| Total | | 100% |

Description of Graded Course Activities

Class Examinations

There will be a short examination every day of class. This grade will be 20% of the student grade.

Class Examinations PGCC NetLab Completion

The completion all assigned Netlab will be 10% of the Grade. Each student will submit a screenshot showing the completion of each assigned Netlab Exercise.

PGCC Blackboard Module Test

At the end of each Blackboard Module there will be a module test. The average of the individual module test score will be 10% of the grade.

Testout Section Examinations

The average score of all the Testout Section examinations will be 10% of the study Grade.

Attendance

Daily in class attendance will be recorded on a signing sheet and will account for 10% of the Grade.

Practice Exams

The practice examination at the end of Testout Modules will be 25% of the Grade

Part 4: Course Policies

Classroom Policy

Our goal is to build a respectful learning and work environment that allows for positive communication and teamwork. To promote this all students must abide by academic policies related to attendance, behavior and professional conduct as published in the current institutional catalog.

Online Netiquette Rules

Rules for interacting with others online:

- Unless directed otherwise by your instructor, you should write email and discussion board postings in standard written English (the kind of language you would expect to find in a workplace). Messages should be short and to the point.
- Make sure that you use a meaningful subject line for email and discussion messages so that your readers will have a clear idea of who sent the message and what the message contains.
 - Good example - "Subject: XXX 000, J Smith, My feedback on the Taylor article."
 - Poor example - "Subject: Interesting Stuff."
- Use all capital letters sparingly. Capitalize words only to highlight an important point or to distinguish a title or heading. Capitalizing whole words that are not titles is generally seen as SHOUTING and is often offensive to the reader.
- Be courteous about what you say about others in an electronic format. Never say anything in an email or on a discussion board that you would not want to see printed in the newspaper.
- When reacting to someone else's message, address the ideas, not the person.
- Be careful when using sarcasm and humor. Without face-to-face communications your joke may be viewed as criticism.
- Be respectful of other, diverse opinions. Don't assume that everyone shares the same views or background.
- Don't share copyrighted materials. Most things on the Internet are NOT "fair use." Instead of copying a relevant article or web page, provide a link to the material along with a short description of its significance. (*Netiquette rules based on materials developed by World Campus, Penn State*)

Technology Accessibility Statements

Blackboard is fully committed to ensuring that the platform contains no barriers for users with disabilities and is both usable and accessible by everyone, regardless of age, ability, or situation. Blackboard measures and evaluates accessibility using two sets of standards: the WCAG 2.0 standards issued by the World Wide Web Consortium (W3C) and Section 508 of the Rehabilitation Act issued in the United States federal government. For full Blackboard accessibility information, visit

https://help.blackboard.com/en-us/Learn/9.1_2014_04/Administrator/030_Accessibility .

TestOut does not claim to be fully compliant for 508 and ADA guidelines. All the videos include closed captioning and video transcripts to accommodate any needs for the hearing impaired. However, TestOut has not found a feasible way to deliver our labs to work for the visually impaired. If a student needs accommodations while using the TestOut system, please contact the College's Disability Support Services office in Bladen Hall, Room 124 or via phone at 301-546-0838.

The **BroadBlast**, Inc. system is Section 508 compliant and ADA compliant ensuring equal accessibility to all. The system automatically detects TTY/TDD devices, converts the speech into a text version of the message and sends the converted message over a normal phone line to the individuals with TTY/TDD devices. Individuals with TTY/TDD devices and their numbers do not need to be pre-designated by the client. BroadBlast offers additional features that are included which makes communicating with the hearing impaired easy; which include SMS Text Messaging, Customized Caller ID, Email Messaging and MMS Messaging.

Technology Privacy Statements

This course requires students to create accounts on external websites. Below are links to the privacy policy for each external website used in this course that requires a username and password. Please read and use the privacy information to safeguard your accounts.

Blackboard is committed to protecting the privacy of its users. Because Blackboard gathers certain types of information about the users of the Services, we believe you should fully understand the terms and conditions surrounding the use of the information we collect. The following discloses our information gathering and dissemination practices for the Services:

<http://www.blackboard.com/Footer/Privacy-Policy.aspx>

TestOut will not sell, share, or otherwise distribute your personal data to third parties except as provided in this Privacy Policy. There are two instances in which data collected from you may be transferred to a third party. The first is in the event that the business of this site and the customer data connected with it is sold, assigned or transferred, in which case we would require the buyer, assignee or transferee to treat personal data in accordance with this Privacy Policy. The second instance in which personal data may be disclosed to a third party is if we are required to do so because of an applicable law, court order or governmental regulation, or if such disclosure is otherwise necessary in support of any legal or criminal investigation.

Broadblast's mission in implementing this privacy policy is to first, protect your information, and second, use it only to provide you with the highest quality, most personalized information



services available – exclusively on your behalf. The privacy and security of your information is of paramount importance to us. That is why we never sell, lease, share, rent, or barter ANY of your personal information to anyone outside of BroadBlast, Inc., EVER. We value the trust you place in BroadBlast. That’s why we’re committed to providing a website with a secure environment and unparalleled customer service.