Computer and Network Security

CSIS - 2320 501

Course Description

This course covers network security and maps to the CompTIA Security+ exam. It is recommended students complete CSIS 1200 prior to taking this course.

Semester: Fall & Spring

Course Student Learning Outcomes

- Develop system administration skills.

College Wide Student Learning Outcomes

- 7 - Develop computer & information literacy

- 1 - Acquire substantive knowledge

- 6 - Work in professional & constructive manner

Course Prerequisites

CSIS 1200 recommended

Engagement Plan

Example language:

- I will respond to email within 48 hours. I will offer feedback on major assignments within 48 hours. The best way to contact me is via the Canvas Inbox, as I will prioritize this email over other modes of communication.
- In this course I will be posting interactive announcements which will offer specific opportunities for class questions and extra credit every other week.
- Additionally, I will be participating in the discussion forums with you to share my perspective within the discipline and to offer some nuances of interpretation that may not be present in your textbook.
- Lastly, we'll be holding small group Q & A sessions, where we can learn from our peers (and faculty) on some of the more difficult units within the course.

Keys for Success (how to succeed in the course)

You can work at your own pace in this course and get full credit as long as you turn in the work before the end of the semester. Make your own schedule, and pace your self so you do not have to cram at the end.

Required Text or Materials

Title: TestOut Security Pro 8.0 online course
ISBN: ISBN: 978-1-935080-44-2
Publisher: CompTIA
Edition: 8

For more information on textbook accessibility, contact Accessibility & Disability Services at ads@slcc.edu.

Brief Description of Assignments/Exams

Course description

TestOut Security Pro is a comprehensive online training course designed to prepare students for an entry-level cybersecurity career and the CompTIA Security+ (SY0-701) certification exam.

The curriculum uses a combination of interactive video lessons, hands-on lab simulations, and practice exams to build practical skills. The online platform is designed to replicate real-world IT scenarios, allowing students to train using current cybersecurity tools.

The course covers a wide range of topics that align with the CompTIA Security+ certification, including:

- Threats, attacks, and vulnerabilities: Identifying malware, social engineering, and other common threats.
- Security technologies and tools: Implementing security measures like firewalls and intrusion detection systems.
- Risk management: Analyzing and mitigating risks to maintain the confidentiality, integrity, and availability of data.
- Incident response and forensics: Responding to breaches and conducting forensic analysis.
- Physical security and infrastructure: Securing hardware, networks, and mobile devices.
- Identity and access management: Controlling user access through authentication and authorization.
- Cloud, mobile, and wireless security: Addressing security challenges in various environments.
- Cryptography: Securing data with encryption and digital signatures.

Assignment Schedule

Due Date	Assignment Name	Assignment Type	Points
	[1.1.1 - The Security Landscape](#)	Assignment	1

Due Date	Assignment Name	Assignment Type	Points
	1.1.2 - Security Concepts	Assignment	1
	1.1.3 - Security Introduction Facts	Assignment	1
	1.1.4 - Security Job Roles	Assignment	1
	1.1.5 - Practice Questions	Assignment	10
	1.2.1 - Control Categories and Types	Assignment	1
	1.2.2 - Control Categories and Types Facts	Assignment	1
	1.2.3 - Security Control and Framework Types	Assignment	9
	1.2.4 - Practice Questions	Assignment	10
	1.3.1 - Use the Simulator	Assignment	1
	1.3.2 - Labsim Features	Assignment	1
	12.1.6 - Business Continuity Planning Facts	Assignment	1
	12.1.7 - Practice Questions	Assignment	10
	12.2.1 - Managing Third Parties	Assignment	1

Due Date	Assignment Name	Assignment Type	Points
	[12.2.2 - Managing Third Parties Facts](#)	Assignment	1
	[12.2.3 - Practice Questions](#)	Assignment	10
	[12.3.1 - Audits](#)	Assignment	1
	[12.3.2 - Audit Facts](#)	Assignment	1
	[12.3.3 - Auditing the Windows Security Log](#)	Assignment	1
	[12.3.4 - Configure Advanced Audit Policy](#)	Assignment	9
	[12.3.5 - Auditing Device Logs on a Switch](#)	Assignment	1
	[12.3.6 - Enable Device Logs](#)	Assignment	3
	[12.3.7 - Practice Questions](#)	Assignment	10
	[13.1.1 - Consequences of Breaches](#)	Assignment	1
	[13.1.10 - Practice Questions](#)	Assignment	10
	[13.1.2 - Consequences of Breaches Facts](#)	Assignment	1
	[13.1.3 - Information Classification](#)	Assignment	1

Due Date	Assignment Name	Assignment Type	Points
	13.1.4 - Information Classification Facts	Assignment	1
	13.1.5 - Privacy and Responsibility of Data	Assignment	1
	13.1.6 - Privacy and Responsibility of Data	Assignment	1
	13.1.7 - Data Destruction	Assignment	1
	13.1.8 - Data Destruction Facts	Assignment	1
	13.1.9 - Privacy and Data Sensitivity Concepts	Assignment	16
	13.2.1 - Personnel Policies	Assignment	1
	13.2.2 - Personnel Policy Facts	Assignment	1
	13.2.3 - Data Protection and Policies	Assignment	1
	13.2.4 - Data Protection and Policies Facts	Assignment	1
	13.2.5 - Practice Questions	Assignment	10
	2.1.1 - Threat Actor Types	Assignment	1
	2.1.2 - Threat Actor Types Facts	Assignment	1

Due Date	Assignment Name	Assignment Type	Points
	2.1.3 - General Attack Strategy	Assignment	1
	2.1.4 - General Defense Strategy	Assignment	1
	2.1.5 - Attack and Defense Strategy Overview	Assignment	1
	2.1.6 - Attack Surfaces	Assignment	1
	2.1.7 - Attack Surfaces Facts	Assignment	1
	2.1.8 - Practice Questions	Assignment	10
	2.2.1 - Social Engineering Overview	Assignment	1
	2.2.2 - Social Engineering Overview Facts	Assignment	1
	2.2.3 - Social Engineering Techniques	Assignment	1
	2.2.4 - Social Engineering Techniques Facts	Assignment	1
	2.2.5 - Use the Social Engineer Toolkit	Assignment	1
	2.2.6 - Investigating a Social Engineering Attack	Assignment	1

Due Date	Assignment Name	Assignment Type	Points
	[2.2.7 - Identify Social Engineering](#)	Assignment	9
	[2.2.8 - Social Engineering Techniques](#)	Assignment	9
	[2.2.9 - Practice Questions](#)	Assignment	10
	[2.3.1 - Malware](#)	Assignment	1
	[2.3.2 - Malware Facts](#)	Assignment	1
	[2.3.3 - Malware Protection Facts](#)	Assignment	1
	[2.3.4 - Implementing Malware Protections](#)	Assignment	1
	[2.3.5 - Use Windows Security](#)	Assignment	1
	[2.3.6 - Configure Microsoft Defender](#)	Assignment	6
	[2.3.7 - Analyze Indicators of Malware-Based Attacks](#)	Assignment	8
	[2.3.8 - Practice Questions](#)	Assignment	10
	[3.1.1 - Cryptography Concepts](#)	Assignment	1
	[3.1.10 - Use Steganography to Hide a File](#)	Assignment	1

Due Date	Assignment Name	Assignment Type	Points
	[3.1.11 - Hide Files with OpenStego](#)	Assignment	3
	[3.1.12 - Cryptographic Attacks](#)	Assignment	1
	[3.1.13 - Cryptographic Attack Facts](#)	Assignment	1
	[3.1.14 - Practice Questions](#)	Assignment	10
	[3.1.2 - Cryptography Facts](#)	Assignment	1
	[3.1.3 - Symmetric vs Asymmetric Encryption](#)	Assignment	1
	[3.1.4 - Symmetric and Asymmetric Encryption Facts](#)	Assignment	1
	[3.1.5 - Cryptography Algorithm](#)	Assignment	1
	[3.1.6 - Cryptography Algorithms Facts](#)	Assignment	1
	[3.1.7 - Identify Cryptographic Modes of Operation](#)	Assignment	6
	[3.1.8 - Blockchain](#)	Assignment	1
	[3.1.9 - Blockchain Facts](#)	Assignment	1
	[3.2.1 - Combining Cryptographic Methods](#)	Assignment	1

Due Date	Assignment Name	Assignment Type	Points
	3.2.2 - Hardware-Based Encryption Devices	Assignment	1
	3.2.3 - Verify Device for TPM	Assignment	1
	3.2.4 - Cryptographic Implementation Facts	Assignment	1
	3.2.5 - Practice Questions	Assignment	10
	3.3.1 - Hashing	Assignment	1
	3.3.2 - Hashing Algorithms	Assignment	1
	3.3.3 - Hashing Facts	Assignment	1
	3.3.4 - Using Hashes	Assignment	1
	3.3.5 - Compare an MD5 Hash	Assignment	4
	3.3.6 - Practice Questions	Assignment	10
	3.4.1 - Encrypting File System	Assignment	1
	3.4.10 - Practice Questions	Assignment	10
	3.4.2 - Encrypt Files	Assignment	1
	3.4.3 - Encrypt Files with EFS	Assignment	2
	3.4.4 - PGP and GPG	Assignment	1

Due Date	Assignment Name	Assignment Type	Points
	[3.4.5 - Encrypting Files with GPG](#)	Assignment	1
	[3.4.6 - BitLocker and Database Encryption](#)	Assignment	1
	[3.4.7 - Configuring BitLocker](#)	Assignment	1
	[3.4.8 - Configure BitLocker with a TPM](#)	Assignment	6
	[3.4.9 - File Encryption Facts](#)	Assignment	1
	[3.5.1 - Public Key Infrastructure](#)	Assignment	1
	[3.5.10 - Practice Questions](#)	Assignment	10
	[3.5.2 - Public Key Infrastructure Facts](#)	Assignment	1
	[3.5.3 - Certificate Types](#)	Assignment	1
	[3.5.4 - Certificate Types Facts](#)	Assignment	1
	[3.5.5 - Manage Certificates](#)	Assignment	1
	[3.5.6 - Manage Certificates](#)	Assignment	4
	[3.5.7 - Certificate Concepts](#)	Assignment	1
	[3.5.8 - Certificate Concepts Facts](#)	Assignment	1

Due Date	Assignment Name	Assignment Type	Points
	[3.5.9 - Certificates and Certificate Authorities](#)	Assignment	9
	[4.1.1 - Fundamental Security Concepts](#)	Assignment	1
	[4.1.2 - Access Control Facts](#)	Assignment	1
	[4.1.3 - Access Control Best Practices](#)	Assignment	1
	[4.1.4 - Access Control Models](#)	Assignment	1
	[4.1.5 - Access Control Model Facts](#)	Assignment	1
	[4.1.6 - Practice Questions](#)	Assignment	10
	[4.2.1 - Authentication](#)	Assignment	1
	[4.2.2 - Authentication Factors Facts](#)	Assignment	1
	[4.2.3 - Authentication Methods](#)	Assignment	1
	[4.2.4 - Authentication Methods Facts](#)	Assignment	1
	[4.2.5 - Biometrics and Authentication Technologies](#)	Assignment	1
	[4.2.6 - Use a Biometric Scanner](#)	Assignment	1

Due Date	Assignment Name	Assignment Type	Points
	[4.2.7 - Use Single Sign-on](#)	Assignment	1
	[4.2.8 - Biometrics and Authentication Technologies Facts](#)	Assignment	1
	[4.2.9 - Practice Questions](#)	Assignment	10
	[4.3.1 - Authorization](#)	Assignment	1
	[4.3.2 - Cumulative Access](#)	Assignment	1
	[4.3.3 - Authorization Facts](#)	Assignment	1
	[4.3.4 - Examining the Access Token](#)	Assignment	1
	[4.3.5 - Implement an Access Control Model](#)	Assignment	21
	[4.3.6 - Practice Questions](#)	Assignment	10
	[4.4.1 - Active Directory Introduction](#)	Assignment	1
	[4.4.10 - Create and Link a GPO](#)	Assignment	5
	[4.4.11 - Create User Accounts](#)	Assignment	4
	[4.4.12 - Manage User Accounts](#)	Assignment	5
	[4.4.13 - Create a Group](#)	Assignment	2

Due Date	Assignment Name	Assignment Type	Points
	[4.4.14 - Create Global Groups](#)	Assignment	6
	[4.4.15 - Practice Questions](#)	Assignment	10
	[4.4.2 - Joining a Domain](#)	Assignment	1
	[4.4.3 - Managing Active Directory Objects](#)	Assignment	1
	[4.4.4 - Active Directory Facts](#)	Assignment	1
	[4.4.5 - Create OUs](#)	Assignment	11
	[4.4.6 - Delete OUs](#)	Assignment	3
	[4.4.7 - Group Policy](#)	Assignment	1
	[4.4.8 - Use Group Policy](#)	Assignment	1
	[4.4.9 - Group Policy Facts](#)	Assignment	1
	[4.5.1 - Hardening Authentication](#)	Assignment	1
	[4.5.10 - Hardening Authentication Facts](#)	Assignment	1
	[4.5.11 - Configure Smart Card Authentication](#)	Assignment	1
	[4.5.12 - Configure Smart Card Authentication](#)	Assignment	2

Due Date	Assignment Name	Assignment Type	Points
	[4.5.13 - Smart Card Authentication Facts](#)	Assignment	1
	[4.5.14 - Practice Questions](#)	Assignment	10
	[4.5.2 - Configure User Account Restrictions](#)	Assignment	1
	[4.5.3 - Configure Account Policies and UAC Settings](#)	Assignment	1
	[4.5.4 - Use Password Managers](#)	Assignment	1
	[4.5.5 - Configure Account Password Policies](#)	Assignment	2
	[4.5.6 - Hardening User Accounts](#)	Assignment	1
	[4.5.7 - Restrict Local Accounts](#)	Assignment	5
	[4.5.8 - Secure Default Accounts](#)	Assignment	4
	[4.5.9 - Enforce User Account Control](#)	Assignment	10
	[4.6.1 - Linux User and Group Overview](#)	Assignment	1
	[4.6.10 - Linux User Security and Restrictions](#)	Assignment	1

Due Date	Assignment Name	Assignment Type	Points
	[4.6.11 - Configuring Linux User Security and Restrictions](#)	Assignment	1
	[4.6.12 - Configure SELinux](#)	Assignment	1
	[4.6.13 - Linux User Security and Restriction Facts](#)	Assignment	1
	[4.6.14 - Practice Questions](#)	Assignment	10
	[4.6.2 - Managing Linux Users](#)	Assignment	1
	[4.6.3 - Linux User Commands and Files](#)	Assignment	1
	[4.6.4 - Create a User Account](#)	Assignment	4
	[4.6.5 - Rename a User Account](#)	Assignment	4
	[4.6.6 - Delete a User](#)	Assignment	2
	[4.6.7 - Change Your Password](#)	Assignment	2
	[4.6.8 - Change a User's Password](#)	Assignment	2
	[4.6.9 - Lock and Unlock User Accounts](#)	Assignment	3
	[4.7.1 - Managing Linux Groups](#)	Assignment	1

Due Date	Assignment Name	Assignment Type	Points
	[4.7.2 - Linux Group Commands](#)	Assignment	1
	[4.7.3 - Rename and Create Groups](#)	Assignment	4
	[4.7.4 - Add Users to a Group](#)	Assignment	2
	[4.7.5 - Remove a User from a Group](#)	Assignment	3
	[4.7.6 - Practice Questions](#)	Assignment	10
	[4.8.1 - Remote Access](#)	Assignment	1
	[4.8.2 - Remote Access Facts](#)	Assignment	1
	[4.8.3 - Configuring a RADIUS Solution](#)	Assignment	1
	[4.8.4 - RADIUS and TACACS+ Facts](#)	Assignment	1
	[4.8.5 - Practice Questions](#)	Assignment	10
	[4.9.1 - Network Authentication Protocols](#)	Assignment	1
	[4.9.2 - Network Authentication Facts](#)	Assignment	1
	[4.9.3 - LDAP Authentication](#)	Assignment	1
	[B.1.1 - Pro Exam Objectives](#)	Assignment	1

Due Date	Assignment Name	Assignment Type	Points
	[B.1.2 - Pro Exam Objectives by Course Section](#)	Assignment	1
	[B.1.3 - How to take the Pro Exam](#)	Assignment	1
	[B.1.4 - Pro Exam FAQs](#)	Assignment	1
	[B.2.1 - Pro Domain 1: Identity Management and Authentication](#)	Assignment	21
	[B.2.2 - Pro Domain 2: Physical and Network Security](#)	Assignment	21
	[B.2.3 - Pro Domain 3: Host and Application Defense](#)	Assignment	13
	[B.2.4 - Pro Domain 4: Data Security](#)	Assignment	8
	[B.2.5 - Pro Domain 5: Audit and Security Assessment](#)	Assignment	15
	[B.3 - TestOut Security Pro Certification Practice Exam](#)	Assignment	15
	[Introduce Yourself](#)	Discussion	0
	[Introduce Yourself](#)	Discussion	0
	[Introduce Yourself](#)	Discussion	0
	[TestOut Security Pro Final Exam](#)	Assignment	200

Grading Scale

All courses in the Computer Science department will use the following grade scale:

A	94-100%	B+	87-89.99%	C+	77-79.99%	D+	67-69.99%	E	0-59.99%
A-	90-93.99%	B	84-86.99%	C	74-76.99%	D	64-66.99%		
		B-	80-83.99%	C-	70-73.99%	D-	60-63.99%		

Academic Integrity

Academic dishonesty

Academic dishonesty, including cheating, plagiarism, misrepresentation or collaboration, will not be tolerated in the Computer Sciences and Information Systems department. On the first offense--be it confirmed or merely suspected--the student and the Department Chair will be notified in writing by the instructor. On the second offense, the student will receive an E for the course and meet with the Department Chair about their future at SLCC.

How to Navigate to Canvas

Online Tutoring

Students at SLCC have access to online tutoring through Canvas. From your Canvas course click Online Tutoring in the course navigation and follow the steps to set up an appointment. If this is your first time using the Online Tutoring we recommend you click "Take a Tour" to familiarize yourself with the service.

Note that students only receive 480 minutes of tutoring time each semester. After that we encourage you to use the resources found through this link: https://www.slcc.edu/tutoring/index.aspx

If you have any additional questions reach out to elearningsupport@slcc.edu.

Institutional Policies

As members of our academic community, we would like to invite you to review the Institutional Syllabus which covers important policies and procedures. This document contains important links for students on the code of student rights and responsibilities, academic integrity, and grading policies, Title IX and other important acknowledgements. By familiarizing yourself with this information, you can help us create a safe and respectful environment for everyone.

For more information, navigate to the Institutional Policies tab on the [Institutional Syllabus](#) page.

Learning Support and Tutoring Services

We are pleased to offer a range of tutoring and learning support services to help you achieve your academic goals. Whether you need assistance with a specific subject or want to improve your study skills, you have many options for tutoring or other support.

To learn more about the services we offer and how to access them, visit the [Institutional Syllabus](#) page under the Tutoring and Learning Support tab. We encourage you to take advantage of these resources to help you succeed in your studies. If you have any questions or would like to schedule a tutoring session, please don't hesitate to reach out to us. We are here to support you in any way we can.

Advising and Counseling Support Services

At our institution, we are committed to supporting your academic and personal growth. That's why we offer a range of advising and counseling services to help you navigate the challenges of college life. To learn more about the resources available to you and how to access them, visit the [Institutional Syllabus](#) page under the Advising and Counseling Support Services tab. Our advising team and the support centers across campus are here to support you in achieving your goals and overcoming any obstacles you may face.

Student Academic Calendar

As students you should be aware of all important dates in the semester, such as the day that courses begin and end, as well as the drop date and the last day to withdraw. To learn more about those dates, navigate to the Student Academic Calendar below:

[SLCC Student Academic Calendar](#)