

ISCI 340 Cyber Security and Information Science

Online Course
3 Credit Hours
Fall 2024

Instructor: Jeff Salter
Phone: 803 777 3185
E-mail: jcsalter@mailbox.sc.edu

Academic Bulletin Description

Essential skills and training in information and cyber security leading to the option to complete the CSSA certification process through Check Point Software Technologies.

Full Course Description

This course provides students with essential skills and training in information and cyber security leading to the option to complete the CSSA certification process through Check Point Software Technologies. Students will collaborate with current cyber security experts from industry leaders such as Check Point Software Technologies, architects, and instructors to learn how to manage modern day cyber security risks. Learning experiences will include Network Security, Cloud Security, End Point, and Mobile Security.

Learning Outcomes

Upon successful completion of this course, the student will be able to:

1. Explain and demonstrate how Check Point R81 Security Management products work and how they protect networks.
2. Produce the essential elements of a security policy (informed by the elements and capabilities of Check Point R81 Security Management).
3. Implement information skills gained through collaboration with industry leaders, architects, and instructors.
4. Enable application control and URL filtering software.
5. Apply tools designed to monitor data, determine threats, and recognize opportunities for performance improvements across Cloud Security, Mobile Security, and End Point Security.
6. Upon application, students will articulate how this Intrusion Prevention System is configured, maintained, and tuned.
7. Administer an Infinity Threat Prevention System across networks.

All learning outcomes in this Distributed Learning course are equivalent to face-to-face (F2F) version of this course.

Course Materials

Required Textbook

This manual is provided to students on the first day of class. It is proprietary so only currently enrolled students can access:

Check Point Software Technologies. (2022). Check Point Certified: Security Administrator R81.10.
Check Point Mind.

Additional required readings and other course materials will be provided by the instructor through the Blackboard course site and include readings such as:

All course materials comply with copyright/fair use policies.

Course Requirements

This course is designed expecting that students will be putting approximately nine (9) hours per week toward mastery of the content, with additional hours in the weeks up until assignment submission. In this course there is an expectation that you will be engaged in reading/viewing/listening to course materials, reading/participating in online activities (e.g., forums, online meetings), planning, researching and completing assignments, and reflecting on your own learning.

As an individual learner, the balance of time spent on these activities will be your choice. On average, it is expected that students will spend about 80 hours reading, viewing, listening to, and reflecting on subject materials, 30 hours reading/participating in forums, 40 hours preparing for and completing assignments. The latter assumes that you have already completed the reading of subject materials and forums leading up to the assignment.

This is only a guide. Students learn in different ways and at different rates and possess varied learning histories that influence the time required to engage with the learning and assessment activities associated with a subject.

Course Format

This is a fully online course. Online classes are not easier than face-to-face lecture classes. To succeed in an online class, you must be extremely motivated and well organized. You will need to purchase the required textbook listed above by the first day of the course. Other course materials are available via Blackboard ("Bb"). Regular Internet access is essential for successful completion of the course.

The typical class structure will consist of learning modules, which include:

- Short Video/PowerPoint Lectures
- Readings
- Exams/Quizzes
- Lab Exercises

This is an entirely Web-based course. We have no face-to-face class meetings, and you will complete your work asynchronously - which simply means that you will be working on it at different times than your colleagues. You can log into the class to do your work at whatever time is convenient for you if you are meeting class deadlines.

It is important to understand that this is not a self-paced class or an independent study. You will have assigned deadlines, and work must be submitted on time. You may not save up your assignments to complete in the last weeks or days of the semester. One critical part of this class is regular interaction with other students and with me, your instructor. Each assignment sequence must be completed on schedule – you can't work ahead or get behind and be successful.

Course Communication and Feedback

I will be communicating with you regarding grades and assignments. If you need to get in touch with me, the best method is via email. Generally, I will reply to emails within 24 hours on weekdays (and excluding holidays) and will provide feedback on assignments within 72 hours. You may also post questions pertaining to the course on the Blackboard Discussion Board. These questions will be answered within 24 hours.

If you are having trouble with this course or its material, please contact me via email to discuss the issues. Announcements will be posted to this course whenever necessary. If there is any other information which I think is important, I will send it to your email address you have in Blackboard. It is your responsibility to ensure that your email account works properly in order to receive email.

Below is how you check your email address in Blackboard:

- Access blackboard.sc.edu
- Click your name on the main Blackboard navigation panel on the left
- Review your email address. By default, Blackboard uses your university-issued email address.

Technology Requirements

Online lectures will be provided through Blackboard Collaborate Ultra. Therefore, you must have access to the Internet to view/hear lectures. No special software is required.

The PowerPoint lecture presentations, links to articles, assignments, quizzes, and rubrics are located on the Blackboard site for the course. To participate in learning activities and complete assignments, you will need:

- Access to a working computer that has a current operating system with updates installed, plus speakers or headphones to hear lecture presentations (transcripts provided);
- Reliable Internet access and a USC email account;
- A current Internet browser that is compatible with Blackboard (Google Chrome is the recommended browser for Blackboard);

- Microsoft Word as your word processing program; and
- Reliable data storage for your work, such as a USB drive or Office365 OneDrive cloud storage.

If your computer does not have Microsoft Word, Office 365 ProPlus package is available to you free of charge and allows you to install Word, Excel, PowerPoint, Outlook, OneNote, Publisher, and Access on up to 5 PCs or Macs and Office apps on other mobile devices including tablets. Office 365 also includes unlimited cloud storage on OneDrive. To download Office 365 ProPlus, log into your student (University) email through a web browser, choose Settings (top right corner), and select software. If you have further questions or need help with the software, please contact the Service Desk

(https://www.sc.edu/about/offices_and_divisions/university_technology_services/support/servicedesk.php).

Technical Support

If you have problems with your computer, technology, IT-related questions, support, including Blackboard, please contact the Division of Information Technology (DoIT) Service Desk at (803) 777-1800 or submit an online request through the Self-Service Portal (<https://scprod.service-now.com/sp>) or visit the Carolina Tech Zone

(https://sc.edu/about/offices_and_divisions/division_of_information_technology/end_user_services/available_technology_resources/carolina_tech_zone/). The Service Desk is open Monday – Friday from 8:00 AM – 6:00 PM (Eastern Time). If you are located in the Columbia, SC area, the Thomas Cooper Library at UofSC has computers for you to use in case you encounter computer issues/problems. If you are not located in the Columbia, SC area, most regional campuses and public libraries have computers for public use.

Course Assignments and Grading

General Assignment Information

- All coursework (assignments, exams, etc.) is secured in Blackboard with a username and password.
- All assignments and exams are due by [insert time] (Eastern Time) on the day indicated on the course schedule.
- All online quizzes and tests are secured in Blackboard with a password.

Labs Participation

Students are expected to participate in eleven (11) weekly labs. These will be based on materials and activities posted by the instructor in Bb and relate to weekly readings and other learning materials. You will utilize readings and information that you collect from various online sources to inform your participation. Respect and critical thinking will guide these activities.

Quizzes

Six (6) quizzes will be administered to assess students' mastery of key concepts and principles of information and cybersecurity and cyber intelligence. The quizzes will be administered through Blackboard.

Final Exam

The final exam is comprehensive. Exam questions/answers are randomly displayed and drawn from substantial test banks. The exam is administered through Pearson Vue and requires that you have a working camera on your computer/laptop.

Evaluation and Grading Scale

All grades will be posted on Blackboard. You are strongly encouraged to check your scores in Blackboard regularly. A final letter grade will be assigned based on percentages.

Assignments	Percent/Weights
Quiz #1	5%
Quiz #2	5%
Quiz #3	5%
Quiz #4	5%
Quiz #5	10%
Quiz #6	10%
Quiz 7	5%
Quiz 8	5%
Quiz #9	5%
Quiz # 10	5%
Quiz #11	5%
Reading Review	15%
Final Exam	20%

Grading Scale

89.5% - 100% = A
84.5% - 89.4% = B+
79.5% - 84.4% = B
74.5% - 79.4% = C+
69.5% - 74.4% = C
64.5% - 69.4% = D+
59.5% - 64.4% = D
0% - 59.4% = F

Attendance Policy

When you miss class, you miss important information. If you are absent, you are responsible for learning material covered in class. If you are absent when an assignment is due, you must have submitted the assignment prior to the due date to receive credit. If you miss more than 10% of the classes, whether excused or unexcused, your grade will be dropped one letter grade.

Course Schedule

Module	Topic	Assignment
8/24	Introduction/Course Outline	

Course Introduction		
Module 1	What is Cyber/Data Security History of Data Breaches	
Module 2	Preface Chapter 1: Intro to Check Point Quantum Security Management	Quiz 1
Module 3	Chapter 2: Check Point Gateway and Server Deployment Chapter 2 Labs	Quiz 2
Module 4	Chapter 3: Check Point Security Administration Chapter 3 Labs	Quiz 3
Module 5	Chapter 4: Check Point Licensing and Contracts Chapter 4 Labs	Quiz 4
Module 6	Chapter 5: Security Policy Management Chapter 5 Labs	Quiz 5
Module 7	Chapter 6: Policy Layers Chapter 6 Labs	Quiz 6
Module 8	Chapter 7: Check Point NAT Chapter 7 Labs	Quiz 7
Module 9	Chapter 8 Security Elevation Chapter 8 Labs	Quiz 8
Module 10	Chapter 9: Site-to-Site-VPN Chapter 9 Labs	Quiz 9
Module 11	Chapter 10: Monitoring Operations Chapter 10 Labs	Quiz 10
Module 12	Chapter 11: Security Maintenance Chapter 11 Labs	Quiz 11
Module 13	TBA	TBA
Module 14	TBA	TBA
Final Exams	Final Exam Due by 11:59 p.m.	12/16