University of South Carolina – Aiken Department of Mathematical Sciences
CSCI A255 Introduction to Information Security – SRESFS Summer 2024 (4.10.24)

Instructor: Barry Hudson	**Classroom**: Online / Remote
Office: ADM	**Class Time**: TThSa 10AM – 1PM … Plus afternoon labs
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Textbook: Whitman, M.E. & H. J. Mattord. (2022). *Principles of Information Security* (7th ed.). Cengage Learning. Supplemental text: Official ISC2 Guide to the CISSP CBK Fourth Edition (2015) (PDF file provided)
Catalog Description: 3 Credit hours, Pre-req: *CSCI A125 - Intro. to CompSci*, or Approval from Instructor. Comprehensive introduction to basic security concepts and principles of information security. Topics will include history of information security; overview of system security, software security, and network security; security management. Special focus for DOE interns will include NIST Risk Management, ISC2 Common Body of Knowledge (CBK), and discussion of case studies in commercial and government systems.

Goals and Objectives: Each student who successfully completes this course should be able to:
1. Obtain a firm grasp on the concepts of information security.
2. Become a confident contributor to the information security community.
3. Understand the NIST Framework for Federal CyberSecurity
4. Be able to diagram a complex IT operating environment and identify the various controls and their purpose.
5. Get you started on a career path in CyberSecurity through ISC2 candidate enrollment and completion of ISC2 Certified in Cybersecurity.
6. (Time permitting) Learn how to use PowerShell for small security-based programs for Windows systems.
7. Develop critical thinking and research skills, and a collaborative mindset.
8. Expand overall thought process - thinking outside the box!!

Note: In addition to scheduled class meeting, there will be some required scheduled activities, field trips and assignments outside of classroom hours and an expectation of about 2-3 hours of daily homework and class prep.

Date	Topic	ISC2
May 28	Module 1. Introduction to Information Security. (Cliff Stoll Lab) ISC2 Enrollment	ISC2 Intro
May 30	Module 2. The need for Information Security.	ISC2 Pretest
June 1	Module 2. The need for Information Security.	ISC2 1.1-1.3
June 4	Module 3. Information Security Management.	Finish ISC2 1.x
June 6	Module 4. Risk Management. (SP 800-53 Lab1)	ISC2 2.1-2.2
June 8	Module 5. Incident Response & Contingency Planning.	Finish ISC2 2.x
June 11	Module 6. Legal, Ethical, & Professional Issues in Information Security. (Brief overview)	
June 11	Module 7. Security & Personnel. (Identity protection project) (NICE AD Demo)	Do all ISC2 3.x
June 13 **June 15**	Module 8. Security Technology: Access Controls, Firewalls, & VPNs. (Binary Lab if needed)	ISC2 4.1 ISC2 4.2
June 18	Module 9. Security Technology: Intrusion Detection & Prevention Systems & Other Security Tools. (Case Study analysis project) (NESSUS lab)	Finish ISC2 4.x
June 20	Module 10. Cryptography. (Brief overview due to coverage in other classes)	
June 20	Module 11. Implementing Info Security. (Software Install, GPO, STIG Configuration Labs)	ISC2 5.1-5.2
	Insurance company Audit	
June 22	Module 12. Information Security Maintenance. (NIST 800-53B Lab2)	Finish ISC2 5.x
June 25	Module 12. Information Security Maintenance. (Work on Rotary Club Presentation)	Practice tests
June 25	Review, Interviews, Final Assessments, Poster Presentations	

Course Assignments & Grading:
- Because each 3 hour lecture/discussion session is the equivalent of a week in a normal semester, we will only have time for a few in-class graded exercises. Similarly, attendance is mandatory, as missing one class results in missing 10% of the course. Remember, you are on a working/paid internship. **Please consider this to be your job.** Absences could reduce your grade even if test and homework scores are good.

- I will emphasize the most important concepts in each chapter and we will discuss their application in real-world scenarios through brief case studies and labs. I will also cover topics that are not in the book (primarily the Federal standards), and there will be LENGTHY outside reading assignments and projects as well. Currently plan on 2-3 hours per class in homework assignments.

- I hate classes that require memorization of acronyms, what they mean, and who invented them. I will focus on practical aspects and application of good judgement based on standards-based frameworks. At least 50% of the grade will come from homework assignments and projects. I will also conduct a 30-40 minute face to face interview with each student that will factor in my decision of final grades. My goal is to help you improve your communication skills along with your technical knowledge.

- Because of the rapid pace of the course, you should read the whole chapter before coming to class. It is OK if you only understand about 50% of the content. That is a good thing, because I will expect you to ask questions about what you didn't grasp so we can all learn together.

Grading Policies:
- *Late Work:* All assignments must be submitted by the due time (typically before the next class), no later than Friday 11PM EST of the week. Late assignments (on projects only) will only be accepted with 24 hour advance permission, if granted.
- *Make-Ups:* My goal is for you to learn, so we will work together to allow you to submit any incomplete work for consideration on your final grade.
- *Contesting:* Because I believe there is always more than one "right" answer, I encourage you to challenge my assessment if you disagree. But come prepared with facts, a quick wit, and collaborative attitude.

Grading scale: I believe all of you are A and B students and will satisfactorily complete all the assignments and quizzes. However, you can affect your grades by exhibiting the following behaviors.

F < 60%	D 60-70	C 71-80	B 81-90	A > 90
Bad attitude, slack attendance	Frequent absence, missing assignments	Attending and listening, but not contributing	Attending, listening, and contributing	Attending, listening, and contributing and proposing alternative ideas. Completion of ISC2 Certified in Cybersecurity and passing the practice exam.

Students with Disabilities: Any student who desires accommodations for special needs should discuss this with the course instructor by the second class.

Academic Misconduct: We really do not expect it, so please do not disappoint us! However, any form of cheating will be penalized and may result in failing the course or eviction from the university. Lets talks about ChatGPT.

Face-covering and Hygiene Requirements: Any student who has health and safety of our students should immediately notify the instructor or Internship coordinator.
- If a student becomes sick or feels he or she is becoming ill, that student should not come to campus. The student should immediately notify the course instructor and seek medical assistance/advice from the USC Aiken Student Health Center by calling 803-641-2840.

Computer and Communication Requirements:
• Each student must have regular access to a computer with a video camera and microphone; these may be required daily or only on occasion depending on the mode of instruction or the health status of the student or faculty. All students must be able to access and use Blackboard.
• Students must check their university email and Blackboard announcements each day. • Each student must have internet access to receive notifications about the class and to complete assignments, if required by the instructor.