



TAC 370: Cyber Security Management and Operations

Units: 4

Term: Fall 25

T TH 12-13:50

Location: See Schedule of classes

Instructor: Gregg Ibbotson

Office: RRB 221

Office Hours: email ibbotson@usc.edu for your preferred time and day

Contact Info:

ibbotson@usc.edu

Teaching Assistant: TBD

Office: zoom

Office Hours:

TBD

Contact Info:

TBD

Live interview Participation

IT Help: Viterbi IT

Hours of Service:

Monday – Friday, 8:30 a.m. – 5:00 p.m.

Contact Info:

DRB 205

(213) 740-0517

engrhelp@usc.edu

Course Description

To develop your understanding and awareness of industry-focused processes and implementation techniques for cyber security. The course covers flexible, scalable methodologies and frameworks that you can use to tailor solutions to a given business. The course begins with how to understand the needs of a business, perform a gap analysis and develop a series of cyber security recommendations, from a procedural standpoint. These recommendations are to be based on a fictional case study organization.

These methods and flexible approaches will enable you to provide a critical link between the requirements and operational business needs of an organization, and the cyber security systems needed to protect them. This course covers a range of key topics to prepare you for a future career, such as compliance, GDPR, Cyber Risk Management, Cyber incident response, and communication skills.

Catalogue Description

Cybersecurity project design. Incident response. Teambuilding, management and communications for cybersecurity. Scalable approaches for implementation of Information Security Management Systems.

Learning Objectives

Upon completing this course, students will:

- Utilize a mixture of cyber frameworks and in-class practical sessions to implement standard-based information security management systems to meet the requirements of large organizations
- Produce a series of information security policies and procedures to satisfy the requirements of the assignment case study
- Create custom asset and risk registers to practice security control selection, bolstering the maturity level of the case study organization
- Apply the fundamentals of information security management and frameworks to reduce the likelihood of future cyber attacks
- Carry out cyber control benchmarking activities to evaluate their own cyber control recommendations, against that of the current state of the assignment case study.
- Develop competent knowledge of Cyber Risk Management and Incident Response procedures
- Develop communication and presentation skills

Prerequisite(s): TAC 125 / 124

Co-Requisite(s): none

Concurrent Enrollment: none

Recommended Preparation: none required

Course Notes

Lecture slides and course content, including homework, will be posted to the course Brightspace page. Course announcements will be posted as an announcement to Brightspace or emailed directly to your USC emails

USC Technology Support Links

<https://keepsteaching.usc.edu/start-learning/>

<https://studentBrightspacehelp.usc.edu/>

<https://software.usc.edu/>

Technological Proficiency and Hardware/Software Required

It is assumed that the student has baseline technical knowledge (basic computer usage, basic internet usage)

Required Readings and Supplementary Materials

No textbook for the course is required.

Optional Readings and Supplementary Materials

<https://csrc.nist.gov/pubs/sp/800/12/r1/final>

<https://www.nist.gov/cyberframework>

<https://csrc.nist.gov/pubs/sp/800/37/r2/final>

Risk Assessment steps <https://csrc.nist.gov/pubs/sp/800/30/r1/final> NIST 800-37 Risk management

<https://csrc.nist.gov/pubs/sp/800/37/r2/final>

IoT Labels <https://www.fcc.gov/CyberTrustMark>

Description and Assessment of Assignments. Note: The assignments will be based on a fictional case study

This will be based on a fictional I.T services company. Students will be given a 12-month incident report detailing past incidents, along with financials and organizational structure.

There will also be key staff listed in which the students will be able to interview via role-playing activities during the course.

1. Homework: Developing an Information Security Management System (ISMS) for the course case study (55%)

This will involve performing extensive research into the practices necessary to mitigate the risks associated with the case study. The output from this should take the form of a plan for the creation of an Information Security Management System (ISMS). The key areas and their associated percentages are given below.

Objectives	Delivery	% Grading	Due Date
Graded Homework			
Obligation, Scope and Legal requirements	Individual	5%	End of Week 3
Business Impact Analysis (BIA)	Group	5%	End of week 5
Asset Management	Group	15%	End of Week 6
Risk Assessment	Group	20%	End of Week 9
Incident Management	Group	10%	End of Week 13
		55%	
Contribution		15%	
Interview Sessions	Group	5%	In class week 5
Consulting Interview session	Individual	5%	In class week 10
End of class Presentation	New Group	5%	In class week 15
Final Project	Individual	30%	Exam week
Total		100%	
Extra Credit (optional)			
Gantt Chart	Individual	5%	End of Week 14

2. Interview sessions (5%) Due before the class of week 5

To produce a list of open-style questions for key staff in the case study, to perform a gap analysis

3. Consulting 1 to 1 interview (5%)

In interactive mock interview training session to prepare you for work in one of the big consulting firms.

4. End of course Presentation (5%)

- **Week 15:** You'll receive a new mini case study.
- **Groups of 4:** Work together to create and deliver a PowerPoint presentation.
- **Audience:** CEO and CISO of the company.
Presentation Details
- **Duration:** 9-minute presentation (30 second introduction, then 2 mins each person, 30 second wrapup) + 5-minute Q&A.
- **Content:** Proposed security upgrades with justifications.
- **Requirements:**
 - Include real products with real prices (at least 2 options per category).
 - Focus on recommendations, including policy suggestions when appropriate.
 - Ensure a fair contribution from all group members.

5. Final Project (30%) Due: During the finals exam period

Executive Summary- Aim this at the management and director level of Shameless.

Cover the purpose of the ISMS, key areas of concern (especially your risk register), and legal requirements.

Limit to 1 page.

Policy Design and Implementation: Explain the differences between policies, standards, processes, and procedures. Provide examples of each.

List and justify 3 policies based on the case study. Provide brief justifications for each.

Create 2 policies, Create 1 procedure to match one of your policies

Focus on managerial tone for policy discussions and ensure each incident in the case study is addressed within your policy/procedure justification.

Grading Scale

Course final grades will be determined using the following scale

A	93-100
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	59 and below

Assignment Submission Policy

The Assignments will be posted on Brightspace under the “Assignments” section. Each Assignment will include instructions, a due date, and a link for electronic submission. Assignments must be submitted using this link. Do not email your assignments to the instructor, Learning Assistants, or graders. Turnitin may be utilized for some assignments.

Unless otherwise noted, all Assignment assignments are due the following Friday after they are released, by 11:59:59 PM. The Final will be during the USC Finals period on the day and time specified by the university.

Course-Specific Policies

It is your responsibility to submit your assignments on or before the due date and verify that they have been successfully submitted. Assignments turned in up to 24 hours late will have 25% of the total points deducted from the graded score. Assignments turned in between 24 and 48 hours late will have 50% of the total points deducted from the graded score. After two days, submissions will not be accepted and you will receive no credit for the assignment.

The Learning Assistants and graders are not authorized to grant an extension on any assignment. Any extensions must be requested of the instructor in writing and confirmed in writing.

Attendance

You are expected to be in class, on time, and distraction free.

Academic Integrity

Unless otherwise noted, this course will follow the expectations for academic integrity as stated in the [USC Student Handbook](#). The general USC guidelines on Academic Integrity and Course Content Distribution are provided in the subsequent “Statement on Academic Conduct and Support Systems” section.

For this class, you are expected to submit work that demonstrates your individual mastery of the course concepts. Assignment 7 will require group work and you will be expected to work cooperatively on your presentation delivery.

If found responsible for an academic violation, students may be assigned university outcomes, such as suspension or expulsion from the university, and grade penalties, such as an “F” grade on the assignment, exam, and/or in the course.

Please ask the instructor if you are unsure about what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

You may not record this class without the express permission of the instructor and all other students in the class. Distribution of any notes, recordings, exams, or other materials from a university class or lectures — other than for individual or class group study — is prohibited without the express permission of the instructor.

Use of Generative AI in this Course

Generative AI is not permitted: Since creative, analytical, and critical thinking skills are part of the learning outcomes of this course, all assignments should be prepared by the student working individually or in groups as described on each assignment. Students may not have another person or entity complete any portion of the assignment. Developing strong competencies in these areas will prepare you for a competitive workplace. Therefore, using AI-generated tools is prohibited in this course, will be identified as plagiarism, and will be reported to the Office of Academic Integrity.

Course Schedule: A Weekly Breakdown

Purple: Graded homework Green: Participation Black: non-graded in-class activities

Week	Topics/Daily Activities	Readings and Homework	Deliverable/Due Dates
1	Introduction to Information Security Management (ISM) and Security Development Life Cycle (SDLC) Governance	Review the Shameless consulting case study	-
2	Introduction to Frameworks and Compliance	Obligation and scope https://www.forbes.com/advisor/business/mission-statement-examples/	Due end of week 3
3	Contingency Planning	Prepare interview questions Create a Business Impact Analysis (BIA) table	Questions due end of week 4 BIA Table due end of week 5
4	Cyber Asset Management	Homework 1. Asset Management https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.1800-5.pdf	Due end of week 6
5	Interview sessions	-	-
6	Performance Metrics and Benchmarking	Create a performance measurement document for your chosen security program	In clas
7	Introduction to Cyber Risk Management -Vendor Management -Accountability	Homework 2. Design a Risk Management Procedure for the case study https://www.nist.gov/cyberframework/quick-start-guides	Due end of week 9
8	Cyber risk evaluation and treatment	As above	as above
9	Project Management	Produce Gantt Chart	Due end of week 15
10	Consulting 1 to 1 Activity		
11	Intro to Cyber Incident Response p1	Homework 4. Produce an Incident Management Procedure	Due end of week 13
12	Intro to Cyber Incident Response p2. Log Management	Final Project released.	

13	Introduction to Security Policies and User training Consultancy Presentation Preparation	-	-
14	End of Semester presentation Prep Thursday - Thanksgiving	-	-
15	Presentations Consulting Careers discussion IoT Labeling Data Mystery		
Finals	Final project submission		USC finals exam period

Statement on Academic Conduct and Support Systems

Academic Integrity:

The University of Southern California is a learning community committed to developing successful scholars and researchers dedicated to the pursuit of knowledge and the dissemination of ideas. Academic misconduct, which includes any act of dishonesty in the production or submission of academic work, comprises the integrity of the person who commits the act and can impugn the perceived integrity of the entire university community. It stands in opposition to the university's mission to research, educate, and contribute productively to our community and the world.

All students are expected to submit assignments that represent their own original work, and that have been prepared specifically for the course or section for which they have been submitted. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s).

Other violations of academic integrity include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), collusion, knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university. All incidences of academic misconduct will be reported to the Office of Academic Integrity and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see [the student handbook](#) or the [Office of Academic Integrity's website](#), and university policies on [Research and Scholarship Misconduct](#).

Please ask your instructor if you are unsure what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

Course Content Distribution and Synchronous Session Recordings Policies

USC has policies that prohibit recording and distribution of any synchronous and asynchronous course content outside of the learning environment.

Recording a university class without the express permission of the instructor and announcement to the class, or unless conducted pursuant to an Office of Student Accessibility Services (OSAS) accommodation. Recording can inhibit free discussion in the future, and thus infringe on the academic freedom of other students as well as the instructor. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

Distribution or use of notes, recordings, exams, or other intellectual property, based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study. This includes but is not limited to providing materials for distribution by services publishing course materials. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relationship to the class, whether obtained in class, via email, on the internet, or via any other media. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

Students and Disability Accommodations:

USC welcomes students with disabilities into all of the University's educational programs. [The Office of Student Accessibility Services](#) (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given

to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at osas.usc.edu. You may contact OSAS at (213) 740-0776 or via email at osasfrontdesk@usc.edu.

Support Systems:

Counseling and Mental Health - (213) 740-9355 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

988 Suicide and Crisis Lifeline - 988 for both calls and text messages – 24/7 on call

The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-9355(WELL) – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

Office for Equity, Equal Opportunity, and Title IX (EEO-TIX) - (213) 740-5086

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

The Office of Student Accessibility Services (OSAS) - (213) 740-0776

OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

USC Campus Support and Intervention - (213) 740-0411

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity, Equity and Inclusion - (213) 740-2101

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-1200 – 24/7 on call

Non-emergency assistance or information.

Office of the Ombuds - (213) 821-9556 (UPC) / (323-442-0382 (HSC)

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

[Occupational Therapy Faculty Practice](#) - (323) 442-2850 or otfp@med.usc.edu

Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.