# MIS 5903 – Cyber Security Capstone
# Summer 2018

## About the Instructor

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Office hours:   By appointment

## Class Location and Time

Classroom: Alter 231
Time: Thursday 5:30 pm – 8:00 pm
Class blog: http://community.mis.temple.edu/mis5903sec011s18/

## Course Description

In this course you will learn how to prepare for the Certified Information Systems Security Professional (CISSP) exam. In addition, you will complete a Capstone Project where you evaluate an organization's Information Security Program.

## Course Objectives

1. Prepare for national CISSP examination by reviewing key points in areas of:
    a. Security and Risk Management
    b. Asset Security
    c. Security Engineering
    d. Communication and Network Security
    e. Identity and Access Management
    f. Security Assessment and Testing
    g. Security Operations
    h. Software Development Security
2. Apply the (ISC)2 CBK towards a real-world case study.
3. Gain experience working as part of a team.

## Required Textbook and Readings

| Textbook | CISSP All-in-One Exam Guide, Seventh Edition 7th Edition (Authors: Shon Harris & Fernando Maymi) ISBN: 978-0071849272 *Includes practice questions on electronic media* |
|---|---|

## Assignments

The readings, weekly discussion questions, and News of the Week assignments have been carefully chosen to bring the real world into class discussion while also illustrating fundamental concepts.  Your participation in the online and class discussions is critical. Evaluation is based on you consistently demonstrating your engagement with the material. Assessment is based on what you contribute.  The **frequency** and **quality** of your contributions are equally important.

1.  **Readings:** Below is the reading schedule you are responsible for completing. You are responsible for completing each of the readings (prior to answering the Weekly Reading Discussion Questions posted each Friday) before the Class Date:

| Class # | Readings | Class Date |
|---------|----------|------------|
| 2 | • CISSP Study Guide, Chapter 1 | 5/24 |
| 3 | • CISSP Study Guide, Chapter 2 | 5/31 |
| 4 | • CISSP Study Guide, Chapter 3 | 6/7 |
| 5 | • CISSP Study Guide, Chapter 4 | 6/14 |
| 6 | • CISSP Study Guide, Chapter 5 | 6/21 |
| 7 | • CISSP Study Guide, Chapter 6 | 6/28 |
| 8 | • CISSP Study Guide, Chapter 7 | 7/5 |
| 9 | • CISSP Study Guide, Chapter 8 | 7/12 |

('*' indicates a change in class date due to holiday)

2.  **Practice Quizzes:** Below is the schedule of Practice Exams schedule you are responsible for completing. You are responsible for completing each of the practice quizzes by Friday during the week:

| Class # | Quiz Based On | Complete By Date |
|---------|---------------|------------------|
| 2 | • CISSP Study Guide, Chapter 1 | 5/27 |
| 3 | • CISSP Study Guide, Chapter 2 | 6/3 |
| 4 | • CISSP Study Guide, Chapter 3 | 6/10 |
| 5 | • CISSP Study Guide, Chapter 4 | 6/17 |
| 6 | • CISSP Study Guide, Chapter 5 | 6/24 |
| 7 | • CISSP Study Guide, Chapter 6 | 7/1 |
| 8 | • CISSP Study Guide, Chapter 7 | 7/8 |
| 9 | • CISSP Study Guide, Chapter 8 | 7/15 |

('*' indicates a change in class date due to holiday)

3. **Answers to Weekly Reading Discussion Questions:** Each Friday morning, you will find a post that includes several discussion questions about the coming week's readings. You will be expected to post your answer to one of the discussion questions on the week's readings by **Monday @11:59 PM.** A paragraph or two of thoughtful analysis is expected for your initial answer to the question. Post your answer to the weekly class assignment blog. You must come to class prepared to discuss all of these questions in detail when we meet.

Schedule for submitting answers to **Weekly Reading Discussion Questions**:

| Class # | Assignment/Discussion Topics | Due |
|---|---|---|
| 2 | Cybercrime | 5/21 |
| 3 | Protecting Privacy | 5/28 |
| 4 | Security Engineering | 6/4 |
| 5 | Network Security | 6/11 |
| 6 | Identity & Access Management | 6/18 |
| 7 | Security Assessments | 6/25 |
| 8 | Business Continuity and Disaster Recovery Planning | 7/2 |
| 9 | Application Development Security | 7/9 |
| 10 | New Trends in Information Security | 7/16 |
| 11 | Incident Response | 7/23 |
| 12 | Review: Security Threat and Mitigations | 7/30 |

## Participation

Much of your learning will occur as you prepare for and participate in discussion about the course material. The assignments, cases, and readings have been carefully chosen to bring the real work into class discussion while also illustrating fundamental concepts. Your participation in the online and class discussions is critical. Evaluation is based on you consistently demonstrating your engagement with the material. Assessment is based on what you contribute. The frequency and quality of your contributions are equally important.

Therefore, in addition to fulfilling your weekly assignment by actively participating in class and posting your answer to one of the reading discussion questions, each week you are also expected to participate in two other activities: 1) Comments on Weekly Reading Discussion Questions and Other Students Answers and 2) In the News articles:

1. **Comments on other student's answers and comments to weekly reading discussion questions:** Read the responses of others to the discussion questions and contribute at least four (4) substantive posts that include your thoughtful comments as you participate in the discussion of the questions. The posting of these additional four comments for most weeks is **Friday @ 11:59pm**. (see exception noted '*')

   Below is the schedule for your submittals of **Comments on Weekly Reading Discussion Questions**:

| Class # | Weekly Discussion Topics - Comments | Due |
|---|---|---|
| 2 | Cybercrime | 5/25 |
| 3 | Protecting Privacy | 6/1 |
| 4 | Security Engineering | 6/8 |
| 5 | Network Security | 6/15 |
| 6 | Identity & Access Management | 6/22 |
| 7 | Security Assessments | 6/29 |
| 8 | Business Continuity and Disaster Recovery Planning | 7/6 |
| 9 | Application Development Security | 7/13 |
| 10 | New Trends in Information Security | 7/20 |
| 11 | Incident Response | 7/27 |
| 12 | Review: Security Threat and Mitigations | 8/3 |

2. **"In the News" Article:** Research, identify, write a summary, post a link to your summary, and be prepared to discuss in class an article you found about a current event in the Information Security arena.  An ideal article would be tied thematically to the topic of the week.  However, any article you find interesting and would like to share is welcome. The deadline for posting for most weeks is **Thursday @ 11:59am**. (see exception noted '*')  Below is the schedule for your "*In the News*" submittals:

| Class # | Topic of the Week | Due |
|---------|-------------------|-----|
| 2 | Cybercrime | 5/24 |
| 3 | Protecting Privacy | 5/31 |
| 4 | Security Engineering | 6/7 |
| 5 | Network Security | 6/14 |
| 6 | Identity & Access Management | 6/21 |
| 7 | Security Assessments | 6/28 |
| 8 | Business Continuity and Disaster Recovery Planning | 7/5 |
| 9 | Application Development Security | 7/12 |
| 10 | New Trends in Information Security | 7/19 |
| 11 | Incident Response | 7/26 |
| 12 | Review: Security Threat and Mitigations | 8/2 |

## Team Presentation

During Class #3, the students will be organized into a series of presentation development and delivery teams. Students will be assigned to team(s) to each perform their own risk assessment of a specified real (or fictitious) organization. During the risk assessment, students should be aware of and address the eight domains of the (ISC)2 Common Body of Knowledge (CBK), linking the assessment findings to the CBK.
The presentation will be designed/planned so that is completed in no less than 30 minutes and no more than 45 minutes. Each member of the team will present for no less than 5 minutes. Following the group presentation, the group will address Q&A from the class for a period of up to 15 minutes.

While addressing each domain of the CISSP CBK, the team should address each area:
   1) Business/organizational context
   2) Technical environment
   3) Risk management/mitigation focus

Below is the schedule for the Team Presentations:

| Class # | Team Presentation Schedule | Due |
|---------|----------------------------|-----|
| 3 | Teams and topics assigned | |
| 9 | Draft presentation submitted | 7/19 |
| 10 | Presentations | 7/26 |
| 11 | Presentations | 8/2 |

## Exams

There will be two in-class exams given during the semester.  Together these exams are weighted 30% of your final grade.

Below is the Exam schedule:

| Class # | Exam | Date |
|---------|------|------|
| 6 | Exam 1 | 6/27 |
| 12 | Exam 2 | 8/6 |

All exams will consist of multiple-choice, fill in the blank and possible short answer questions.  You will have a fixed time (e.g. 40 minutes) to complete the exam.  Exam 1 will occur during week 6's class, and Exam 2 will occur during class of week 12.  In general, the exams will not be cumulative but focused on the course materials since the beginning of last exam.  However, some concepts highlighted in class as important or a 'Core Principle' may appear on either or both exams.

A missed exam can only be made up in the case of documented and verifiable extreme emergency situations.  No make-up is possible for Exam 2.

## Quizzes

After each domain of the CBK, there will be a quiz due during that week. We will review the quiz during the following class. The goals for these quizzes are twofold:
1.  Help you identify areas requiring additional study and attention,
2.  Help you gain skills that improve your test taking abilities.

## Weekly Cycle

As outlined above in the **Assignments and Participation** sections, much of your learning will occur as you prepare for and participate in discussions about the course content. To facilitate learning the course material, we will discuss course material on the class blog in between classes.  Each week this discussion will follow this cycle:

| When | Actor | Task | Type |
|------|-------|------|------|
| Friday | Instructor (me) | Post reading questions (Friday am) | |
| Monday 11:59pm | Student | Post answers to reading questions | Assignment |
| Thursday 11:59am(*) (**) | Student | Post "In The News" article | Participation |
| Thursday 5:30 pm-8:00pm(*) | Both of Us | Class meeting | Participation |
| Friday 11:59am(*) | Student | Post 4 substantive comments to others' answers | Participation |
| Sunday | Student | Complete Practice Exam for the week. | |
| Sunday | Instructor | Post summary notes | |

(*) July 4th is a holiday; class will be held and Discussions due Thursday July 6th.

(**) During the last week of the semester, this will be early, the preceding Friday.

## Evaluation and Grading

| Item | Weight |
|---|---|
| Assignments | 25% |
| Participation (in class and online) | 20% |
| Team Presentation | 25% |
| Exams | 30% |
| | **100%** |

| Grading Scale | | | |
|---|---|---|---|
| 94 – 100 | A | 73 – 76 | C |
| 90 – 93 | A- | 70 – 72 | C- |
| 87 – 89 | B+ | 67 – 69 | D+ |
| 83 – 86 | B | 63 – 66 | D |
| 80 – 82 | B- | 60 – 62 | D- |
| 77 – 79 | C+ | Below 60 | F |

## Grading Criteria

The following criteria are used for evaluating assignments. You can roughly translate a letter grade as the midpoint in the scale (for example, an A- equates to a 91.5).

| Criteria | Grade |
|---|---|
| The assignment consistently exceeds expectations. It demonstrates originality of thought and creativity throughout. Beyond completing all of the required elements, new concepts and ideas are detailed that transcend general discussions along similar topic areas. There are no mechanical, grammatical, or organization issues that detract from the ideas. | A- or A |
| The assignment consistently meets expectations. It contains all the information prescribed for the assignment and demonstrates a command of the subject matter. There is sufficient detail to cover the subject completely but not too much as to be distracting. There may be some procedural issues, such as grammar or organizational challenges, but these do not significantly detract from the intended assignment goals. | B-, B, B+ |
| The assignment fails to consistently meet expectations. That is, the assignment is complete but contains problems that detract from the intended goals. These issues may be relating to content detail, be grammatical, or be a general lack of clarity. Other problems might include not fully following assignment directions. | C-, C, C+ |
| The assignment constantly fails to meet expectations. It is incomplete or in some other way consistently fails to demonstrate a firm grasp of the assigned material. | Below C- |

## Late Assignment Policy

An assignment is considered late if it is turned in after the assignment deadlines stated above.  No late assignments will be accepted without penalty unless arrangements for validated unusual or unforeseen situations have been made.

- Class Blog contributions cannot be turned in late.  If you miss contributing prior to class for that week's discussion / questions you will receive no credit for it.
- The exercise assignments will be assessed **a 20% penalty** each day they are late. No credit is given for assignments turned in over five calendar days past the due date.

- You must submit all assignments, even if no credit is given. **If you skip an assignment, an additional 10 points will be subtracted from your final grade in the course.**
- Plan ahead and backup your work. *Equipment failure is not an acceptable reason for turning in an assignment late.*

## Citation Guidelines

If you use text, figures, and data in reports that were created by others you must identify the source and clearly differentiate your work from the material that you are referencing. If you fail to do so you are plagiarizing. There are many different acceptable formats that you can use to cite the work of others (see some of the resources below). The formats are not as important as the intent. You must clearly show the reader what is your work and what is a reference to someone else's work.

## Plagiarism and Academic Dishonesty

All work done for this course:  papers, examinations, homework exercises, blog posts, laboratory reports, oral presentations — is expected to be the individual effort of the student presenting the work.

Plagiarism and academic dishonesty can take many forms.  The most obvious is copying from another student's exam, but the following are also forms of this:

- Copying material directly, word-for-word, from a source (including the Internet)
- Using material from a source without a proper citation
- Turning in an assignment from a previous semester as if it were your own
- Having someone else complete your homework or project and submitting it as if it were your own
- Using material from another student's assignment in your own assignment

Plagiarism and cheating are serious offenses, and behavior like this will not be tolerated in this class. In cases of cheating, both parties will be held equally responsible, i.e. both the student who shares the work and the student who copies the work. Penalties for such actions are given at my discretion, and can range from a failing grade for the individual assignment, to a failing grade for the entire course, to expulsion from the program.

## Student and Faculty Academic Rights and Responsibilities

The University has adopted a policy on Student and Faculty Academic Rights and Responsibilities (Policy # 03.70.02) which can be accessed through the following link:
http://policies.temple.edu/getdoc.asp?policy_no=03.70.02

**Additional Information**

| | |
|---|---|
| **Availability of Instructor** | ▪ Please feel free to contact me via e-mail with any issues related to this class. I will also be available at the end of each session. Please note that these discussions are to address questions/concerns but are <u>NOT</u> for helping students catch up on content they missed because they were absent.<br>Note: I will respond promptly when contacted during the week<br>▪ I am available to meet personally with you:<br>  ✓ Immediately after class<br>  ✓ During office hours<br>  ✓ By appointment prior to class<br>  ✓ By appointment by phone |
| **Attendance Policy** | ▪ Class discussion is intended to be an integral part of the course. Therefore, full attendance is expected by every student.<br>▪ If you are absent from class, speak with your classmates to catch up on what you have missed. |
| **Class Etiquette** | ▪ Please be respectful of the class environment.<br>▪ Class starts promptly at the start time. Arrive on time and stay until the end of class.<br>▪ Turn off and put away cell phones, pagers and alarms during class.<br>▪ Limit the use of electronic devices (e.g., laptop, tablet computer) to class-related usage such as taking notes. Restrict the use of an Internet connection (e.g., checking email, Internet browsing, sending instant messages) to before class, during class breaks, or after class.<br>▪ Refrain from personal discussions during class. Please leave the room if you need to speak to another student for more than a few words. If a student cannot refrain from engaging in private conversation and this becomes a pattern, the students will be asked to leave the classroom to allow the remainder of the students to work.<br>▪ During class time speak to the entire class (or breakout group) and let each person "take their turn."<br>▪ Be fully present and remain present for the entirety of each class meeting. |