



Syllabus for CYB 790 Cybersecurity Capstone

Course Description

Students present the project identified in the Cybersecurity Pre-Capstone course and submit a written report plus an oral presentation to both faculty and the host organization. Students will be assessed on the clarity and content of the written report and presentation. Host evaluation will account for a significant percentage of students' final grades.

Prerequisite(s)

CYB 789: Cybersecurity Pre-Capstone

Program Outcomes

This course addresses the following competencies and program outcomes of the Master of Science in Cybersecurity:

- Competency D: Evaluate and communicate the human role in security systems with an emphasis on ethics, social engineering vulnerabilities, and training
 - Program Outcome 13: Engage in professional collaboration and communication with technical and nontechnical stakeholders on issues related to security

Course Outcomes

Upon completing this course, you will be able to do the following:

1. Practice communication skills working in security environments
2. Apply research in the context of the project plan
3. Assess the effectiveness of the project implementation process
4. Demonstrate mastery of skills associated with track coursework
5. Regularly communicate with key stakeholders to refine project goals, discuss progress, and discuss obstacles

Course Components

In addition to demonstrating competence within your track area, one of the major outcomes of the capstone is for you to demonstrate your ability to communicate to technical and nontechnical audiences. To that end, the capstone has been broken into the following components.

Technical Communication

It's important that before a project starts, you and your stakeholders are clear about its objectives and metrics for success. The technical communication elements consist of an outline of your project plan, a technical specification document where you delve into the detailed elements of the project, and a technical slideshow where you communicate the essential details of the project.

Nontechnical Communication

Most projects do not exist in a vacuum involving only technical people. For example, implementing multi-factor authentication requires notifying the people that will be impacted. Cyber response personnel may need to communicate to corporate clients how their system was infiltrated. Working in forensics might mean communicating to law enforcement why evidence couldn't be recovered or teaching them the "chain of custody" protocols so that evidence is admissible in court. Regardless of the project, nontechnical communication will most likely be a component. To address that element in the capstone, you will develop an executive summary of the specifications document, communication



tools for individuals impacted by your project, an FAQ, and high-level training relevant to your project/track.

Status Reports

To ensure the project stays on target, you will provide status reports. You can think of these reports as a set of structured journals or “diaries” that record the project implementation progress as it is carried out in real-time. Lastly, you’ll be summarizing to what extent the original project plan was executed successfully and what was learned from the project implementation through the “retrospective evaluation.”

Grading

The following grading scale will be used to evaluate all course requirements and to determine your final grade:

| Grade | Percentage Range |
|-------|------------------|
| A | 90% or greater |
| A- | 87% - < 90% |
| B+ | 83% - < 87% |
| B | 80% - < 83% |
| B- | 77% - < 80% |
| C+ | 73% - < 77% |
| C | 70% - < 73% |
| C- | 65% - < 70% |
| F | 0 - < 65% |

| Assignment | Percentage |
|---|-------------|
| Technical Communication: (1) Draft Outline of Project Plan (5%) (2) Project Technical Specification (20%) (3) Technical Slideshow (10%) | 35% |
| Nontechnical Communication: (1) Executive Summary (10%) (2) Project announcement (10%) (3) FAQ (10%) (4) Training Plan (10%) | 40% |
| Status Reports (1) Implementation progress report 3 @ 5% (15%) (2) Retrospective evaluation (5%) (3) Host Evaluation (5%) | 25% |
| Total Percentage | 100% |