CIS 468 – Cybersecurity Project

Grand Valley State University – School of Computing – Winter 2024

Instructor	Contact Info	Office Location	Office Hours
Dimitrios Melissourgos	melissod@gvsu.edu 352 278 6777	MAK D-2-232	Monday 2:15pm-3:15pm Tuesday 2:15pm-3:15pm Wednesday 2:15pm-3:15pm Friday 2:15pm-3:15pm

Course Description

General Information

As a Capstone course of the cybersecurity major, a group of students will work collaboratively on a project to demonstrate the skills and techniques learned in the program of study such as problem solving, critical thinking, research techniques, and technical writing.

Credits: 3

Grading scheme: Letter grade

Prerequisites: CIS 418 – Secure Software Engineering

CIS 430 – Computer and Cyber Forensics

CIS 458 – System Security

Day: Tuesday

Time: 1:00pm-2:15pm

Location: MAK B1124

Course Objectives

- Build a secure solution to solve a large, complex technical problem.
- Analyze security vulnerabilities in current solutions including software and networking technologies.
- Apply knowledge and critical thinking skills from prior courses to solve cybersecurity problems in an organization.
- Practice effective teamwork skills.
- Evaluate professional ethical choices made throughout the project.
- Produce and present a professional project prospectus and final results.

Detailed Description

In this course you will be tasked with completing a semester-long project. The project descriptions have been proposed by (cybersecurity) companies. Therefore, you will be working with them to produce some cybersecurity related software/tools/research. The goal of this class is to give you an idea of how companies structure and execute team projects. The team leader will be a senior cybersecurity expert who works at that company.

You will be required to meet with the team leader 1-2 times a week to discuss the project's details and progress. You will also be supervised by me on the academic side. We will meet every Tuesday at 1:00 pm at MAK B1124.

The companies have been asked to clearly specify a deliverable for each project, which will be due at the end of the semester. You will be asked to present your final result at the "Culminating Experience" event, which is held towards the end of exam week April 20-27. You are also encouraged to present your work at the "PCEC Project Day" event, which will be held on April 18th.

Exams

There are no exams. This is a project-based course. However, you will be graded on several items throughout the semester (see the "Evaluation" section below).

Course Schedule

During the first week, you will be asked to fill out a form about your skillset, your topics of interest, and classmates you want to work with. Then, the instructor will form groups of 2-4 students with similar interests/skills. Finally, the teams will be paired with companies, depending on the project requirements and your interests/skills.

In most class meetings you will be expected to present your project progress to the class. Progress is not always something tangible, especially at the beginning. However, you still need to make a short presentation (about 10 minutes) every week to tell us what you have been working on.

There will be some days that we will dedicate to lectures/discussions, mostly on the topics of professional development, general project design, cybersecurity case studies, teamwork, ethics, and others if time permits.

Grading Policy

Grading Scale

A	≥93%
A-	≥90%
B+	≥87%
B	≥83%
B-	≥80%
C+	≥77%
C	≥73%
C-	≥70%
D+	≥67%
D	≥63%
F	<63%

Evaluation	Percentage of Final Grade
Attendance	10%
Progress presentations	30%
Project documentation	10%
Final presentation	50%

Attendance Policy

Students are required to attend the class. Sign on sheets will be handed out at 11 randomly selected class meetings. You will receive the full 10% attendance grade if you sign on for 10 out of the 11. You can miss a sign on without penalty. Each additional missing class costs 1%. If you cannot attend a class meeting, you need to notify the instructor **before** the beginning of the class. If you have a serious reason for missing the class (e.g. illness, injury, family emergency, etc.), then you will be excused and you will not lose 1% of the attendance grade. If you notify the instructor of your absence **after** the class has begun, you will be required to provide a doctor's note or similar proof of absence in order to avoid the 1% penalty.

Progress Presentations

In most class meetings you will be expected to present your project progress to the class. You will be graded both on your progress and your presentation skills. All group members must present something (although not everyone must on the same day).

Project Documentation

The companies that we are collaborating with have a large, complex problem to solve. That will probably require you to write some code. The code needs to be clearly commented on and there also needs to be clear documentation on what you are doing, why you are doing it, what steps you are taking in your approach, what does each piece of code do in your software, what difficulties did you face, etc. Your project will be delivered to the instructor and to the company at the end of the semester. The company needs to be able to pick up where you left off to both use and expand your project.

Final Presentation

There are two events at which you will have the opportunity to present your project. The first one is called "PCEC Project Day" and it's optional, but you are strongly encouraged to participate. The second event is called "Culminating Experience" and your presentation to that is mandatory. It will take place at the Grand River Room inside the Kirkhof Center the Thursday of finals week (tentative). We will have a rehearsal in class before your presentation at the event.

Additional Information and Resources

Important Dates

Drop Deadline - Grade "W": March 22nd by 5:00pm

Other important dates: Winter 2024 Academic Calendar

Classroom Protocol

Treat faculty, staff, your fellow students, and university property with respect. Do not use your phone during class. Do not make distractions and be on time for the class meetings. Any regrading requests must be made within a week of the students receiving their grade.

Teamwork

The semester project in this class is a group project, therefore, you will need to work together. However, each student will be graded separately, depending on their participation in the group and their presentations. All group members are expected to contribute to all portions of the project and all group members must take part in the presentations, either on the same day or on different days. If a group member does not put the same amount of effort into the project as the other members, this needs to be reported to the instructor immediately.

Integrity and Honesty

All students are expected to adhere to the academic honesty standards set forth by Grand Valley State University. In addition, students in this course are expected to adhere to the academic honesty guidelines as set forth by the School of Computing and Information Systems.

Course Evaluation

The end-of-semester course evaluation sites are set up in LIFT and maintained by the Academic Department Coordinator. Course evaluation sites become available to students during the last two weeks of the semester (not exam week), unless specified otherwise.

Disabilities and Special Accommodations

Grand Valley State University strives to provide an inclusive environment across campus that is accessible to all individuals with a diverse range of abilities. As your instructor, it is my objective to facilitate opportunities within all class activities and programs because your success is important to me. If you are encountering difficulties that are interrupting your learning experience, please feel free to make those known to me as soon as possible, as early planning is essential. If you feel that you need accommodations in this course, you must present a memo to me from Disability Support Resources (DSR), indicating the existence of a disability and the approved accommodations. If the class meets in person, you should schedule a meeting with me during office hours to discuss your accommodations. If your class is online or hybrid, please forward your memo to me in an email and schedule a virtual or phone appointment with me to discuss your accommodations. Accommodations are not retroactive. If you have not already done so, please contact the Disability Support Resources office (215 CON) by calling (616) 331-2490 or by email to dsrgvsu@gvsu.edu. You can also visit the DSR website here Disability Support Resources. Please note that I cannot provide accommodations based upon disability, until I have received a copy of the DSR issued memo. Furthermore, if you have a disability and think you will need assistance evacuating this classroom and/or building in an emergency, please make me

aware so that the university and I can develop a plan to assist you. All discussions will remain confidential.

GVSU Course Policies

This course is subject to the GVSU policies.

Discrimination or Sexual Misconduct

Grand Valley State University is committed to creating and advancing a campus community where individuals feel empowered to raise concerns, ask for help, and be informed about options before making any decisions. If you become aware of any discrimination or sexual misconduct incident, please report it at the Title IX office.

In Case of Emergency

In Case of Fire: Immediately proceed to the nearest exit during a fire alarm. Do not use elevators.

More information is available on the University's Emergency website.