# CIS 337 (2) - NETWORK SYSTEMS MANAGEMENT

**Grand Valley State University - College of Computing - Winter 2025**


| Instructor | Contact Info | Office Location | Office Hours |
|---|---|---|---|
| Dimitrios Melissourgos | melissod@gvsu.edu<br>352 278 6777<br>CIS 337 Discord | MAK D-2-232 | Monday 9am-10am<br>Wednesday 9am-10am<br>Friday 11am-noon |


## Course Description

### General Information

This course provides information systems students with the knowledge and skills necessary to manage the sophisticated Local Area Networks available today. It approaches the subjects of network design, installation, and management from the corporate view of networking.

Credits: 3

Grading scheme: Letter grade

Prerequisite: CIS 162 – Computer Science I

Lecture time: Tuesday and Thursday 9:00am-9:50am

Lecture location: MAK B-1-118

Lab time: Thursday 10:00am-11:50am

Lab location: MAK A-1-167

### Course Objectives

At the end of the course, students will be able to:

- Explain how networks such as the Internet move messages from one computer to another using different hardware and software components.
- Design networks using a variety of network technologies and components in various network types such as LAN, MAN and WAN.
- Build and manage commonly used network hardware and software components such as servers and routers.
- Apply various security measures and techniques in network applications.

### Required Course Material

Business Data Communications and Networking, by Jerry FitzGerald, Alan Dennis, Alexandra Durcikova.

## Exams (Tentative)

| Exam | Date | Time | Location |
|---|---|---|---|
| Midterm 1 | Thursday, February 13 | 10:00am-11:50am | MAK A-1-167 |
| Midterm 2 | Thursday, March 13 | 10:00am-11:50am | MAK A-1-167 |
| Final Exam | Tuesday, April 22 | 8:00am-9:50am | MAK B-1-118 |

## Course Schedule

| Week | Topic |
|---|---|
| Week 1 | Introduction to Data Communications (Chapter 1) |
| Week 2 | Introduction to Data Communications (Chapter 1) |
| Week 3 | Application Layer (Chapter 2) |
| Week 4 | Binary, Hex, IP, MAC |
| Week 5 | Physical Layer (Chapter 3) |
| Week 6 | Network and Transport Layers (Chapter 5) |
| Week 7 | Data Link Layer (Chapter 4) |
| Week 8 | ARP |
| Week 9 | *Spring Break* |
| Week 10 | NAT |
| Week 11 | Subnets |
| Week 12 | Wired and Wireless Local Area Networks (Chapter 7) |
| Week 13 | Backbone Networks (Chapter 8) |
| Week 14 | Network Design |
| Week 15 | Network Security (Chapter 11) |

## 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% |

| Assignment / Test | Percentage of Final Grade |
|---|---|
| Attendance | 10% |
| Quizzes | 10% |
| Homework and Labs | 30% |
| Project | 15% |
| Midterm 1 | 10% |
| Midterm 2 | 10% |
| Final | 15% |

## Attendance Policy

Students are required to attend the class. Sign on sheets will be handed out at 11 randomly selected class meetings (lecture or lab). You will receive the full 10% attendance grade if you sign on for 10 out of the 11. 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.

## Quizzes

There will be a short quiz at the beginning of each lab meeting (excluding the first week and midterms), with a total of 10 quizzes. Each quiz will account for 1% of your grade. The questions in the quizzes will be based on recent material discussed in class and labs. These will be closed-book quizzes.

## Homework and Labs

The lab work aims to provide practical experience in inspecting, configuring, and managing computer network systems. Lab time is used to get you started on your homework and lab assignments, but it will not be enough to complete them. You have to submit a report for each lab assignment.

There will be 10 homework and lab assignments over the duration of the semester. The due day for your report will be one week after the assignment has been given out, unless stated otherwise. Assignments turned in after the due date will receive a 20% late submission penalty per day, including weekends and holidays, with a max of 4 days.

Homework and lab assignments are open book; you are allowed to use books, notes, slides, search the internet, and discuss with the instructor while completing the work. However, you are not allowed to discuss your assignments with other students or engage in practices that would be considered plagiarism, copying, or cheating. Each student is required to complete homework and lab assignments by themselves. The use of ChatGPT and other LLM software is prohibited.

## Project

There is a semester-long project that students need to complete by Sunday, April 13$^{th}$. It can be done in groups of 2 or 3 people. If you do not form a team on your own, one will be assigned to you. Exceptions for individual projects or larger teams can be made upon request.

The goal of the project is to teach you the fundamentals of socket programming. You can use any programming language you want, but it has to include sockets. More information about the project can be found here.

## Additional Information and Resources

### Important Dates

Drop Deadline - Grade "W": March 21st by 5:00pm

Other important dates: Winter 2025 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.

### 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 College of Computing.

### 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.

### Accessibility 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. If you feel that you need accommodations in this course, you must present a memo to me from Student Accessibility Resources (SAR), indicating 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 Student Accessibility Resources office (215 CON) by calling (616) 331-2490 or by email to access@gvsu.edu. You can also visit the SAR website here. Please note that I cannot provide accommodations, until I have received a copy of the SAR issued memo. Furthermore, if you 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.