

CSC 4220/6220: Computer Networks Fall 2026

About This Course

Logistics

Instructor: [Dr. Huadi Zhu](#)

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Class Home Page: iCollege

Office Hours: Tue Thu 12:00 – 1:00 pm

GTA: Shuaikang Hou

GTA Office Hours: Mon Wed 12:00 – 1:00 pm

Class Time: Tue Thu 10:00 – 11:45 am

Location: Classroom South 101

Catalog Description

CSC 4220/6220

Concepts and implementation of networking: physical, link, network, transport, and application layer protocols. Wireless networking and security basics.

Course Learning Outcomes

By taking this course, the student will be able to

- [CLO 1] understand the architectural principles of computer networking and compare different approaches to organizing networks
- [CLO 2] understand good network design: simplicity, scalability, performance, and the end-to-end principle
- [CLO 3] understand how the Internet works today
- [CLO 4] judge the effectiveness of existing or similar network protocols

- [CLO 5] be conversant with primitives of network application programming

Student Outcomes

The computer science program will enable students, by the time of graduation, to be able to:

- **Student Outcome 1.** Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
- **Student Outcome 2.** Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- **Student Outcome 3.** Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
- **Student Outcome 4.** Apply computer science theory and software development fundamentals to produce computing-based solutions.

Course Essentials

Course Format

iCollege

The class will be hosted and managed on iCollege.

Required Textbook

- Computer Networking: A Top-Down Approach, by Jim Kurose and Keith Ross (8th edition).

Note that if you choose to use an earlier edition, it's your responsibility to identify any differences in the editions.

Topics and Tentative Schedule

- *Chapter 1. Course Overview and Introduction* (1 week)
- *Chapter 2. Application Layer* (2.5 weeks)
- *Chapter 3. Transport Layer* (2 weeks)
- *Chapter 4. Network Layer I* (1.5 weeks)
- *Chapter 5. Network Layer II* (1.5 weeks)
- *Midterm I* (.5 week)

- *AI-assisted Self Learning Session* (.5 week)
- *Chapter 6. Link Layer* (2 weeks)
- *Chapter 7. Wireless Networks* (1 week)
- *Chapter 8. Network Security* (.5 week)
- *In-person Lab Session* (.5 week)
- *Midterm II* (.5 week)
- *Final Project Report* (1.5 weeks)

Technology Essentials

Technology Requirements

This course has the following software and hardware requirements:

- A modern desktop/laptop running MS Windows, OS X, or Linux

Students can use the lab computers if they don't have a working system but they will find it much more convenient to do the work on their own systems.

Digital Skills

- Be familiar and comfortable using iCollege, Linux and either Microsoft Windows or OS X.
- Be familiar with or able to learn Wireshark.
- Be familiar with basic programming in Python, Java, C, C++, etc.
- Be familiar with programming software development IDEs such as Eclipse, IntelliJ, or VS Code. Be comfortable with using objects, generics, and inheritance.
- Be familiar with working with code repositories on *GitHub*. Students can create a *GitHub* account for free, if they don't already have one.

Data and Privacy Policy

Please see university policy on data and privacy: <https://www.gsu.edu/privacy-notice/>

Technical Support

- Specific support for software tools, libraries and languages used in the class can be obtained from teaching assistants and instructors.
- Support for CS department computing resources can be obtained by emailing tran4@gsu.edu
- For other IT support, contact help desk: 404-413-HELP or help@gsu.edu

Accessibility

Github: <https://government.github.com/accessibility>

Wireshark: <https://www.wireshark.org/>

VSCode: <https://code.visualstudio.com/docs/editor/accessibility>

IntelliJ: <https://www.jetbrains.com/help/idea/accessibility.html>

Eclipse: <https://wiki.eclipse.org/Accessibility>

Coursework and Grading

Assessments

The assessments add up to 100 points for 100% credit.

Assignments [35 points]

- **Homework assignments:** Answer questions based on the textbook and lectures. [1.5 weeks each] [4 x 100 points x 5% = 20 points] [CLO1, CLO2, CLO4]
- **Lab assignments:** Run Wireshark and submit a technical report for result analysis. [1.5 weeks each] [3 x 100 x 5% = 15 points] [CLO1, CLO2, CLO4]

Exams [40 points]

- **Midterm exams:** In-person midterm exams [2 x 100 x 20% = 50 points] [CLO1-4]

Project [20 points]

- **Final project:** A collaborative coding project to implement a designed protocol. [4 weeks] [100 points x 15% = 15 points] [CLO1-5]

Class Participation and Proactiveness [5 points]

- **Attending classes regularly, participating actively in the classroom, taking in-class pop-up quizzes** [5 points] [CLO1-5]

Grade Distribution

Grades for this class are calculated by dividing the number of points earned over the semester by the total number of points available. Final letter grades will be assigned according to the table below. The instructor may lower the cutoffs but will not increase the cutoffs.

95% and more	A+	75% and less than 78%	C+
90% and less than 95%	A	72% and less than 75%	C
87% and less than 90%	A-	69% and less than 72%	C-
84% and less than 87%	B+	60% and less than 69%	D
81% and less than 84%	B	Below 60%	F
78% and less than 81%	B-	Withdrawal	W

Late Work Policy

For the assignments (homework or projects), you have a **budget of 6 late days** to use throughout the semester, at your discretion. Think of these as a resource to help you with unexpected things during the semester.

- Each late day extends an assignment deadline by 24 hours with no penalty.
- Late days are indivisible, so submitting an assignment 12 hours late requires an entire late day.
- You may use up to 3 late days on a single assignment.
- Applying late passes on the group project requires a sufficient remaining budget of late days from EACH group member.

When submitting an assignment using a late day, state with your submission the number of days you are using. The simplest way is to include a note in your README.md file or via a note on the iCollege submission page.

This policy is designed to accommodate most ordinary needs for extensions or late submissions. Therefore, exceptions beyond this policy will not generally be granted; any requests for individual exceptions must be submitted in writing in advance so that I have a record of the request and my response.

Exams will be at the published times. It will be up to the discretion of the instructor to provide a makeup exam.

Tentative Course Schedule

This will be provided on iCollege.

AI Use Permission

Full AI: You may use AI extensively throughout your work either as you wish, or as specifically directed in your assessment. Focus on directing AI to achieve your goals while demonstrating your critical thinking.

However, AI is NOT allowed for in-person exams and in-class quizzes, unless otherwise stated.

Support Resources For You

Student Well-being

If you are struggling for any reason (COVID, relationship, family, or life's stresses) and believe these may impact your performance in the course, I encourage you to contact the Dean of Students at [404-413-1515](tel:404-413-1515) or email deanofstudents@gsu.edu for support. Additionally, if you are comfortable doing so, please reach out to me and I will provide any resources or accommodations that I can. If you notice a significant change in your mood, sleep, feelings of hopelessness or a lack of self-worth, consider connecting immediately with the Counseling Center (75 Piedmont Ave. NE, Counseling Center, Suite 200A, Atlanta, GA 30303) at [404-413-1640](tel:404-413-1640).

ACCESS AND ACCOMMODATIONS POLICY

Students who wish to request accommodation for a disability may do so by registering with the Access and Accommodation Center. Students may only be accommodated upon issuance by the Access and Accommodation Center of a signed Accommodation Plan and are responsible for providing a copy of that plan to instructors of all classes in which accommodations are sought. The Access and Accommodations Center may be contacted at 404-413-1560 or by email at access@gsu.edu. Any student who may require special accommodations is requested to make an appointment with the instructor at the beginning of the semester. Students must self-identify so that arrangements can be made according to university policy.