Syllabus

Course

Title: CS 6250 Computer Networks
Associated Term: Spring 2026
CRN: 35435
Credits: 3

Scheduled Meeting Times

Modality: In-person
Meeting pattern: Tuesday & Thursday, 02:00–3:15 PM (local Metz time)
Location: Georgia Tech-Europe, 2 Rue Marconi, 57070 Metz, France

Instructor

Instructor: Michael D Bailey
Email: mbailey@gatech.edu
Office: Room 214 (Georgia Tech-Europe)
Office hours: By appointment
Contact & response time: Email is preferred; replies typically within 24–48 hours on business days.

Platforms & Communication

Canvas is the official source of materials, announcements, discussions, schedules, submissions, grades, etc. Materials on Canvas always reflect the most accurate state of the course and supersede anything in this syllabus.

Materials & Tech

Textbook/supplies: None required.
Readings: Links to required readings will be posted in Canvas.
Additional Resources:

- J. Kurose and K. Ross, *Computer Networking: A Top Down Approach Featuring the Internet*
- Larry Peterson and Bruce Davie, *Computer Networks: A Systems Approach*

Course Description

This is a second, advanced course in networking, covering a broad spectrum of topics building on prior networking knowledge.

Do not take this class if you have never had a networking class before.

This is not a “research topics” class.

Planned units:

1. Logical, physical, and economic dimensions of Internet connectivity; BGP and policy enforcement
2. Advanced routing topics (BGP communities, RPKI, hijacking, blackholing, etc.)
3. Hypergiants and datacenters driving evolution in Internet interconnection and transport
4. Programmable network control and data planes (e.g., SDN, P4)

Learning Objectives

By the end of the class, students will be able to:

- Describe how physical and economic aspects shape Internet connectivity
- Identify scale and coordination challenges in Internet connectivity and security
- Reflect on Internet evolution and current trends
- Explain programmable networking and its impact on traditional networking

Prerequisites / Who Should Take This Course

Graduate standing, or

- A first networking course such as CS3251 is an essential pre-requisite.
- Undergraduates must have taken CS3251 to enroll in CS4251/6250.

Assessment & Grading

Your overall grade is composed of:

- Self-Diagnostic Test (completion grade): 2%
- Collaborative Learning Support (contract + peer evaluations): 4%
- Homework Assignments: 54%
- Quizzes 1, 2, and 3: 10% each
- Class Participation: 10%

Grading scale: A 90–100, B 80–89, C 70–79, D 60–69, F <60. Final scores are rounded up to the nearest whole percent.

Important Notes About Grading

- Pass/Fail students must earn a B or better and submit all work.
- No “extra work” will be given to raise grades.
- An “I” (Incomplete) is given only for non-academic reasons.

Homework and Quizzes

- Homework is spaced throughout the semester and may include:
  - 5 x mini-Internet assignments
  - 1 x routing data & incidents assignment
  - 2 x P4 assignments

- Peer evaluation forms required at least 3 times.
- Team members may receive different grades based on participation.
- Three 40-minute in-class quizzes (paper-based, no electronics).
- Quiz dates announced at least one week in advance.
- Quiz 3 may be during finals week if needed.

Submission, Regrades, Late Work

- Where to submit: All work is submitted electronically on Gradescope
- Late work: Not accepted. (Exceptions only for institute-approved/documented reasons with advance notice when possible.)
- Regrades: Regrade requests are submitted on Gradescope and may trigger full regrading.

Attendance, Excused Absences, and Accommodations

Attendance: Required and part of your grade via Participation.

Excused absences & documentation:

As per Georgia Tech policy, you are permitted to be absent from class to participate in athletic events, official field trips, and religious observances. For planning purposes, please provide me with written notice of your upcoming absence at least two weeks before the event, and ideally within the first two weeks of class. When I receive this notice, you and I will discuss opportunities to make up work you will miss in your absence.

Please see for more information about receiving official notice from the Registrar about the nature and timing of your upcoming Institute-approved absence.

Accessibility & accommodations:

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services at (404)894-2563 or http://disabilityservices.gatech.edu/, as soon as possible, to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Device Policy

Laptops/tablets are welcome for course work. Be considerate and please avoid side-tasking and distractions to yourself or others.

Recording Policy

I may record class sessions or segments for instructional purposes. Students may not record without prior permission from the instructor. Any shared recordings and materials are for class use only; you do not have permission to post or share these materials.

Digital Learning Day / Disruptions

If campus calls a Digital Learning Day or we must pivot, we will meet on Zoom at the normal class time; slides/materials and any updates will be posted on Canvas. No remote proctoring will be used.

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. For information on Georgia Tech's Academic Honor Code, please visit:

https://www.policylibrary.gatech.edu/student-life/student-conduct

Any student suspected of cheating or plagiarizing on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

All students must follow the academic integrity and Georgia Tech Honor Code.

Generative AI and Large Language Models (LLMs)

We treat AI-based assistance (e.g., OpenAI ChatGPT, Google Gemini, Microsoft Copilot, and Anthropic's Claude) the same way we treat collaboration with other people (e.g., a classmate, mentor). As a rule, these interactions serve as a potentially useful way to learn. However, we all know our submitted work must be our own and that we must follow course guidelines on acceptable collaboration. Submitting wording, structure, or code you did not write yourself is plagiarism (D.3). If an assignment forbids outside help, then using AI is unauthorized collaboration (D.2) even if you cite the source.

When collaborating with AI is explicitly allowed you must, of course, still cite your sources (D.3). When you reproduce AI wording or a close paraphrase, add a footnote or endnote at the end of the sentence/paragraph such as:

> *1. ChatGPT, response to "Explain Fitts's law with everyday examples," OpenAI, August 19, 2025. (If you edited the AI text, indicate this in the note: "…edited for clarity.")*

When AI only informed or inspired your ideas Include a brief acknowledgment, as footnote, such as:

> Acknowledgment: I consulted ChatGPT (OpenAI) on August 19, 2025, to brainstorm usability test scenarios; the writing and analysis are my own.

Be careful what you share with AI systems. You do not know what an AI service will do with uploaded content. Uploading class documents constitutes an intellectual-property violation (D.9). Further, you may also facilitate cheating for others if the system retains or learns from restricted material; do not upload, request, or regenerate improperly acquired or restricted

content (D.1) such as assignments, answer keys, prior exams, slides, or classmates' work. Share only your own materials or those you are explicitly given permission to share.

Do not request fabricated data, citations, results, screenshots, or logs as such fabrication and misrepresentation are serious violations (D.4/D.6). Remember that AI can, and often does, hallucinate data, facts, and references, but you are ultimately responsible for everything you submit.

Course-specific collaboration policy

- Assignments are done in groups of 3.
- All members expected to contribute equally.
- A team contract is required.
- Peer evaluations submitted after first assignment, mid-semester, and end.
- Instructional team may assign different grades based on contribution.

Student–Faculty Expectations Agreement

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. The student-faculty expectations articulate some basic expectations that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

Campus Resources

A list of resources for graduate students is provided by the Office of Graduate and Postdoctoral Education. Information for current graduate students includes Academic Resources (Communication Center, Language Institute, Library, Catalog, Registrar, research support, Advocacy & Conflict Resolution, and guidance for unexpected situations affecting academic performance), Student Resources (Campus Services, Child Care/Family programs, Health & Wellness, Career Services, Student Resource Guide), and Professional Development (Career Center programming and other professional development resources and events).

https://grad.gatech.edu/student-resources
https://grad.gatech.edu/academic-resources

Student Well-Being: Georgia Tech is concerned about your overall physical, social, and mental well-being. A comprehensive list of wellness-related resources is maintained by the Office of the Vice President for Student Engagement & Well-being (see the Student Resource Guide).

https://students.gatech.edu/

Subject to Change

The syllabus/schedule may evolve; I will post changes via Canvas Announcements with at least 48 hours' notice when feasible.