

ECE6607 Syllabus

Computer Communication Networks, Sections Q, Credits 3

Instructor Information

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General Course Information

Description

ECE6607 is to study fundamental principles and advanced methodology of computer networks: Architecture, protocols, control, and performance. To introduce emerging networking problems and applications if time permits.

Course Learning Outcomes:

- Understanding fundamental principles of computer communication networks,
- Obtaining knowledge of advanced network architecture and protocols,
- learning advanced methods on network control and design,
- Learning analytical methods on network performance.

Required Course Materials

(Recommended but not required) Kurose and Ross, Computer Networking, 9th edition, Addison Wesley, 2025

Additional materials:

- Bruce Hajek, Communication Network Analysis:
<http://www.ifp.uiuc.edu/~hajek/Papers/networkanalysis.html>
- Pamela Zave and Jennifer Rexford, *The Real Internet Architecture: Past, Present, and Future Evolution 2024*
- Additional notes and papers on recent topics will be posted at canvas.

Grading Policy:

Two exams 30% each. Homework 25%. Project 15%

Description of Graded Components

Example grading on homework assignments: 10 points for each homework problem, and four to five problems for each homework.

Example grading on exams: about four to five problems will be given for each exam. Each problem will have subproblems. Partial credits will be given if students show work which are partially correct.

Project grading: 80% of the credits will be given if a project satisfies a basic requirement. Additional 10% will be given to innovation, and the remaining is for project presentation.

Letter grades will be given by aggregating all exams, homework assignments and project.

Course Policies

Attendance and/or Participation

Class attendance will not be checked. However, students are encouraged to attend lectures and participate actively in discussions.

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. Review [Georgia Tech's Honor Code](#) and the student [Code of Conduct](#).

Any student suspected of cheating or plagiarism 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.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, [contact the Office of Disability Services](#) (404-894-2563) 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.

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.

Pre- &/or Co-Requisites

Elementary calculus, probability, circuits

Extra Credit Opportunities

Optional problems will be given, and credits gained will be added to the homework total.

Collaboration, Group Work, and Use of Generative AI

Collaboration is encouraged for homework and labs. Each student is expected to write one's own solutions.

Extensions, Late Assignments, & Re-Scheduled/Missed Exams

Late homework -50% / day.

Official notes are needed for rescheduling an exam.

Inclement Weather and Digital Learning Days

Will follow university policies.

Student Use of Mobile Devices in the Classroom

Mobile devices are allowed. Devices need to be disconnected from the network during an exam.

Additional Course Policies

- Students are encouraged to actively participating in class discussions.

Campus Resources for Students

Graduate Student Academic and Professional Success Resources:

A list of resources for graduate students is given on the [Office of Graduate and Postdoctoral Education](#) website. Specific information for [current graduate students](#) includes

- [Academic Resources](#) such as the Communications Center, Language Institute, Library, Catalog, Registrar, resources for conducting research, Advocacy and Conflict Resolution resources, and how to manage unexpected situations that may impact your academic performance;
- [Student Resources](#) such as Campus Services, Child Care/Family programs, Health & Wellness, Career Services, and the Student Resource Guide; and
- [Professional Development](#) such as the programming from the Career Center and other professional development resources and events”

Student Well-Being:

At Georgia Tech, we are concerned about your overall physical, social, and mental well-being. A [comprehensive list](#) of wellness related resources has been compiled and maintained by the Office of the Vice President for Student Engagement and Well-being ([student-resource-guide \(gatech.edu\)](#))