Sp25 - COMPUTER NETWORKS (51095)

utexas.instructure.com/courses/1414169

Unique number: 51085

Time: Tuesday & Thursday 9:30 AM - 10:45 AM (Starting January 14th)

Location: RLP 0.102

Website: https://utcs356.github.io/sp25 Links to an external site.

Ed: https://edstem.org/us/courses/71813

Instructor: Daehyeok Kim (daehyeok@utexas.edu)
Office hours: Wednesday 4pm - 5pm at GDC 6.824

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Office hours: Monday 4pm - 5pm at GDC 1.302 (Desk 1)

TA: Jeongyoon Moon (jeongyoonm@utexas.edu)

Office hours: Tuesday 2pm - 3pm at GDC 1.302 (Desk 5)

UGCA: Eric Xu (exu@utexas.edu)

Office hours: Thursday 1pm - 2pm at GDC 1.302 (Desk 5)

Course Overview

Welcome to CS 356, Computer Networks! This course offers an engaging introduction to the world of networks, suitable for undergraduate and beginning graduate students. We will delve into the core principles and practical aspects of computer networking, from the protocols powering the Internet to building your own networked applications.

In this course, you will:

- Learn how computer networks function and enable global communication.
- Understand the design choices behind modern networks and anticipate future trends.
- Build your own networked applications and software routers through hands-on programming assignments.

Classes will combine interactive lectures, lively discussions, and collaborative programming projects. Whether you are passionate about systems, curious about how the Internet works, or aiming to develop scalable networked software, this course will equip you with essential skills and insights.

Textbook

No required textbook, but the following resources are highly recommended for further reading:

- Computer Networks: Systems Approach → Links to an external site. (available online)
 by Larry Peterson and Bruce Davie (P&D)
- Computer Networking: A Top-Down Approach → Links to an external site. by Jim Kurose and Keith Ross (K&R)

Relevant chapters will be highlighted in the course schedule.

Prerequisites

- CS 439 (Principles of Computer Systems) or equivalent
- C and Python programming experience

Topics (Course schedule → Links to an external site.)

- Physical and data link layer protocols
- Naming and addressing
- Internet routing
- Transport layer protocols
- Network resource management
- Applications (HTTP, DNS, etc.)
- Content distribution networks
- Peer-to-peer networks
- Network security

Grading

- Quizzes (30%): There will be three in-class quizzes.
- **Programming assignments (60%)**: There will be five programming assignments.
- Class participation (10%): Students are expected to attend class, actively ask questions, and participate in discussions.

Grades will be uploaded to Canvas.

Course Policies

Academic integrity

All material you submit in this course (reading responses, project reports, and presentation materials) must be your own. If you use someone else's material, you must cite them

properly and make it very clear which parts are your own work. If you are ever in doubt about whether something you intend to submit violates this policy, please contact me before doing so.

Excused absences and late submissions

If, for any reason, you need to miss class or the assignment due dates, please contact me as soon as possible and at least one week in advance (unless it is an emergency). We will find a way to ensure your class participation and reading response grade won't be affected.

Services for students with disabilities

The university is committed to creating an accessible and inclusive learning environment consistent with university policy and federal and state law. Please let me know if you experience any barriers to learning so I can work with you to ensure you have equal opportunity to participate fully in this course. If you are a student with a disability or think you may have a disability and need accommodations, please contact Disability and Access (D&A). Please refer to D&A's website for contact and more information: http://diversity.utexas.edu/disability/\ipsi.hem.links to an external site.. If you are already registered with D&A, please deliver your Accommodation Letter to me as early as possible in the semester so we can discuss your approved accommodations and needs in this course.

Sharing of course materials is prohibited.

No materials used in this class that are produced by the instructor or by students may be shared online or with anyone outside of the class without explicit, written permission. Unauthorized sharing of materials may facilitate cheating. The University is aware of the sites used for sharing materials, and any materials found online that are associated with you or any suspected unauthorized sharing of materials will be reported to Student Conduct and Academic Integrity in the Office of the Dean of Students. These reports can result in the initiation of the student conduct process and include charge(s) for academic misconduct, potentially resulting in sanctions, including a grade impact.