



EAST TEXAS A&M
— UNIVERSITY —

CSCI 434.01W Computer Networks Fall 2025 Syllabus

Instructor Information

Instructor: Song Huang, Ph.D.

Email: Song.Huang@tamuc.edu (always reachable via Email)

Office Location: Online, must log in myLeo Online

Office Hours: Please request meeting via Emails

Preferred Form of Communication: Email

To communicate with the instructor, please make sure you use your **University Email** to send emails, otherwise, you won't get any response.

Course Description

This course covers the basic principles and operations of computer networks. Topics include basic data communications, network architecture, design principle, the OSI model, protocols and applications. We will study the application layer, transportation layer, networking layer, and link layer. Specifically, TCP/IP networking and protocols will be covered to understand the Internet core functions including routing, subnetting, and reliable data transfer. The Internet architecture and operations will also be reviewed with core services and applications.

Textbook

- (Optional) Computer Networking: A Top-Down Approach, 8th edition. James F. Kurose and Keith W. Ross
- (Optional) Acing the CCNA Exam, Volume 1 Fundamentals and Protocols and Acing the CCNA Exam, Volume 2 Advanced Networking and Security, Jeremy McDowell, 2024.
<https://learning.oreilly.com/library/view/-/9781633437678/> and
<https://learning.oreilly.com/library/view/-/9781633435780/>

Expected Outcomes

- To define basic terms and concepts associated with data communications and computer networks.
- To understand the basic principles of network applications and protocols such as web and DNS.
- To state transport services and the underlying functions of the standard TCP/UDP protocols.
- To gain the concepts and practical experience with subnetting, the use of IP addresses, and the fundamentals of IP routing.
- To understand the principles behind link layer services and the standard local area network technologies.

Prerequisite

Prerequisites: CSCI 241 (Min Grade C) or COSC 2325 (Min Grade C) and CSCI 270 (Min Grade C) or COSC 2336 (Min Grade C)

Tentative Breakdown of Course Grade

Assignment	40%
Quiz	10%
Paper Review	10%
Exams	40%

Letter grades will be determined using a standard percentage of points scale

A	90%
B	80%
C	70%
D	60%
F	Below 60%

Reading Assignments, Homeworks and Exams

Assignments

The assignment will be handed out weekly and students are required to complete the tasks in the assignments. There are various forms of questions in the Assignments, for example, written response questions may be given, and lab exercises may be given as well. No late homework will be accepted. Homework must be completed individually and students should learn to solve problems.

Quiz

Students are given quizzes online during the semester. The quizzes usually have less than 10 multiple-choice questions.

Paper Review

Students are given some technical papers for review. Students are required to summarize the background of the articles, the novelty, technical details, experiments, and the findings.

Exams

There are 2 exams in the semester; Exam 1 covers the information given in the first half of the semester, and Exam 2 covers the lectures in the second half of the semester.

Missing Assignments

No late / missing submissions will be accepted. If students only missed one / two submissions during the semester, it will not impact the final grade. However, if some situations result in missing assignments, students should communicate with instructor beforehand.

Collaboration Policy

Students are encouraged to talk to each other, the instructor, or anyone else about any of the assignments. However, any assistance must be limited to a discussion of the problem and sketching general approaches to a solution. **Each student must write his or her own solutions to the homework.** Consulting another student's or group's solution is prohibited, and submitted solutions may not be copied from any source. These and any other form of collaboration on assignments constitute cheating. If you have any questions about whether some activity would constitute cheating, feel free to ask.

Students with Disability

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
East Texas A&M University
Gee Library, Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamuc.edu

Academic Integrity

Your commitment as a student to learning is evidenced by your enrollment at East Texas A & M University. All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.” (See Student’s Guide Handbook, Policies and Procedure, Conduct). All phones, pagers, and other communication devices are to be turned off or place on silent mode during class. Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person’s ideas without giving proper credit) will result in a failing grade and sanctions by the University. For this class, all assignments are to be completed by the individual student unless otherwise specified. **Anyone cheating will receive a zero on the work they are doing, and subsequent cheating will result in a failing grade.**

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course. Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors’ guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

<https://inside.tamuc.edu/aboutus/policiesproceduresstandardsstatements/rulesprocedures/13students/undergraduate-academic-dishonesty>

Tentative Schedule

Week	Lecture
1	Intro to computer networks
2	Network Structures/Models
3	The Application Layer
4	The Transportation Layer
5	The Network Layer
6	IP Address and Subnetting
7	Routing
8	Exam 1
9	The Data-Link Layer
10	The Physical Layer
11	VLANs
12	Open Shortest Path First (OSPF)
13	Dynamic Host Configuration Protocol (DHCP)
14	Spanning Tree Protocol (STP))
15	Access Control Lists (ACLs)
16	Exam 2