



CSCI 434.61W Computer Networks

COURSE SYLLABUS: Fall 2023

INSTRUCTOR INFORMATION

Instructor:	Amy Hays M.S., Computer Science
Office Location:	RELLIS TBA
	https://tamuc.zoom.us/j/92711096337?pwd=cS9UZlIXb2xlc2V1dGtoNnArcDZ5UT09
Office Hours:	TBA
	Other times by appointment only via email
University Email Address:	amy.hays@tamuc.edu
Preferred Form of Communication:	For all emails, make sure the email the subject line reads: "COSC 434.01W~~".
Communication Response Time:	48 hours

TEACHING ASSISTANT

Teaching Assistant:	TBA
TA Email:	TBA

COMPUTER LAB

Locations:
Hours:

COURSE INFORMATION

Lecture: Online web based through D2L.

Class Textbook:

- Computer Networking: A Top-Down Approach, 8th edition, James Kurose and Keith Ross, ISBN: 9780136681557 or eBook ISBN: 9780135928615, Pearson, 2021 (required).

Recommended Textbook(s), References, & Resources:

The syllabus/schedule are subject to change.

- An Introduction to Computer Networks.
<https://open.umn.edu/opentextbooks/textbooks/353>
- Cisco network academy: <https://www.netacad.com/>

The professor will make other supplementary information for the course available online. These include class notes, assignments, PowerPoint slides, class announcements, the course syllabus, test dates, etc. The professor will announce in class when such information becomes available electronically. It is the student's responsibility to follow these announcements.

Course Description

This course covers the basic principles and operations of modern computer networks. Topics include basic data communications, the layered architecture and reference model, protocols and topologies, and network service models and applications. TCP/IP networking and protocols are covered to understand the Internet core functions.

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

Student Learning Outcomes

Upon completion of this course, students will be able to:

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

COURSE REQUIREMENTS

Instructional Methods

D2L and lecture will be the method of presentation for the entire course. Please go to myLeo and find D2L in Apps. All course materials will be found in D2L.

Student Responsibilities

The syllabus/schedule are subject to change.

It is the students' responsibility to keep up with the schedule. Makeup work (exams, quizzes, discussions, or assignments) will only be permitted in cases of emergency with proper documentation, or prior rescheduling. To reschedule contact me before the due date with a valid reason and suggested make-up dates will be given.

Please feel free to contact me and come to office hours to ask questions and get clarifications or assistance.

GRADING

Final grades in this course will be based on the following scale:

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 59% or Below

Assessments

Basis for Evaluation:

Assignments	30%
Quizzes	20%
Midterms	25%
Final Exam	25%

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are the technical requirements.

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

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Note: Personal computer and internet connection problems do not excuse late work. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

You should do your own work on exams and assignments. Copying another student's work is not acceptable. Any indication of cheating or plagiarism on an exam/assignment will result in an automatic 0 (zero) for the exam/assignment for all students involved. Yet, based on cheating and plagiarism activity in any section of the class, the instructor holds the right to give the grade of F to the identified student(s) for the section. Regarding codes in assignments, you may be required to explain the code you submitted. In case of discursive explanation, the instructor holds the right to lower your grade. No makeup exams or assignments unless documents explaining the emergency are provided.

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

Late Policies

The syllabus/schedule are subject to change.

Credit will be given for ONLY those exams, quizzes, and assignments turned in no later than the deadline as announced by the instructor of this class unless prior arrangement has been made with the instructor.

Late assignments can gain partial credit upon the following policy. As per University requirements, assignments submitted within 7 days after the deadline can receive up to 20% deduction, assignments submitted between 8-14 days after the deadline can receive up to 50% deduction.

- **No assignments will be accepted two weeks after the assigned due date.**
- **No assignment will be accepted after the term end day.**
- Exceptions to this policy will only be made in extraordinary circumstances. Please let me know your circumstances.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](#).

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum:

<https://www.britannica.com/topic/netiquette>

TAMUC Attendance

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

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[Graduate Student Academic Dishonesty 13.99.99.R0.10](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

AI use in Course

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.

13.99.99.R0.03 Undergraduate Academic Dishonesty
13.99.99.R0.10 Graduate Student Academic Dishonesty

AI use is NOT allowed in this course.

Students with Disabilities-- ADA Statement

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:

Student Disability Services

Texas A&M University-Commerce

Waters Library - Room 162

Phone (903) 886-5150

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: <https://www.tamuc.edu/student-disability-services>

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Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

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COURSE OUTLINE / CALENDAR

WEEK OF	CONTENT	READING
Aug 21	Course Introduction, Network performance, protocols, and security	Ch 1
Aug 28	Application layer and protocols: HTTP, SMTP	Ch 2.1-2.3
Sep 4	DNS, Peer to peer, streaming, socket programming	Ch 2.4-2.8 (Quiz 1)
Sep 11	Transport layer services, UDP, reliable data transfer	Ch 3.1-3.4
Sep 18	Exam 1	--
Sep 25	Reliable data transfer, TCP, congestion control	Ch 3.5-3.9
Oct 2	Network layer: Data Plane	Ch 4
Oct 9	Network layer: Data Plane (continued)	Ch 4
Oct 16	Network layer: Control Plane	Ch 5
Oct 23	Link layer, error detection and correction	Ch 6 (Quiz 2)
Oct 30	Exam 2	--
Nov 6	Wireless and Mobile Networks	Ch 7
Nov 13	Thanksgiving Break	--
Nov 20	Network security, cryptography, TLS, IPsec, VPNs, intrusion detection	Ch 8 (Quiz 3)
Nov 27	Course review	--
Final		--

Tentative Due Dates:	Assignment Topics (30% of Final Grade)
Sep 3	Packet Switching, Caravan Analogy, HTTP Connections, Traceroute, Wireshark
Sep 10	Source & Destination Ports, Checksum
Sep 17	UDP Checksum, RTT Estimation, Wireshark
Oct 22	IP Subnetting, Link State Routing, Distance Vector Routing
Nov 19	Parity Bits, CSMA/CD, CRC Calculation, Switch, Lan Addressing, Wireshark

Note: The right to modify the presentation order of materials is reserved. Course progress will be based on feedback and suggestions from students. We would cover the course materials, so if we slow in some topics, we must accelerate elsewhere.

HAVE A HAPPY AND SUCCESSFUL SESSION

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