Course	**CS 4390 Computer Networks**
Professor	Yi Ding
Term	**Spring 2024**
Meetings	11:30 am - 12:45 pm, Tuesday/Thursday

Professor's Contact Information

Office Phone	(972) 883-4212
Office Location	ECSS 4.703
Email Address	yi.ding@utdallas.edu
Office Hours	TBD
Other Information	Course materials available on elearning.utdallas.edu

TA's Contact Information

Name	TBD
Office Location	TBD
Email Address	TBD
Office Hours	TBD

General Course Information

Pre-requisites, Co-requisites, & other restrictions	CE 3345 or CS 3345 or SE 3345 or equivalent.
Course Description	This is a basic course in computer networks, which covers the classical/fundamental topics of the networking field. The goal of the course is to familiarize the students with the basic elements and the design philosophies of modern telecommunications and computer networks. The emphasis of the course is on the protocol design methodologies and on the performance of the networking protocols. The presentation of the material follows the OSI Model and focuses on the TCP/IP protocol suite. Both wired and wireless networks are discussed. Additional topics that are generally covered include multimedia communication, network security, and network management.
Learning Outcomes	- Ability to understand the need for and structure of the OSI, TCP/IP network models. - Ability to design and evaluate methods for the framing messages in transmission media. - Ability to analyze and evaluate different error detection schemes. - Ability to understand and evaluate stop-and-wait, sliding window protocols. - Ability to understand and evaluate multiple-access protocols. - Ability to design and evaluate routing protocols. - Ability to design and evaluate flow control and congestion control protocols. - Ability to understand the issues in internetwork design. - Ability to understand the various Internet protocols (TCP/IP). - Ability to understand how to write networking protocols
Required Texts & Materials	Title: "Computer Networks" Global Edition., 6th Edition, 2021 Author: Tanenbaum, Feamster, and Wetherall ISBN: 978-1292374062
Suggested Texts, Readings, & Materials	TBD

Course Modality and Expectations

Instructional Mode	In classroom
Course Platform	Announcements, assignments, and class recordings will be posted on elearning.
Recordings	Class recordings (if any) will be posted on elearning. Lecture slides, assignment announcements and uploading will also be done via elearning.

Assignments & Academic Calendar

Topic	Reference
Introduction	Chapter 1
The Physical Layer	Chapter 2
The Data Link Layer	Chapter 3
The Medium Access Control (MAC) Sublayer	Chapter 4
The Network Layer	Chapter 5
The Transport Layer	Chapter 6
The Application Layer	Chapter 7
Network Security	Chapter 8
Additional (advanced) Topics, time permitting	

(reference refer to the course textbook)

Course Policies

Grading (credit) Criteria	Midterm 1: 20% Midterm 2: 20% Final Exam: 25% Homework Sets: 20% (total) Programming Project: 15% • **Individual work** is assumed in all grading components. In solving the homeworks, use of any means other than the course material is strictly prohibited. • Use of any AI tools in this class, including Generative AI, is prohibited at any time. • Note that academic honesty and integrity is expected in all the graded elements of the course and will be strictly enforced.
Make-up Exams	No one is exempt from the exams. If you have a **legitimate** reason for missing an exam, you must provide verifiable documentation at least **24 hours before** the exam's day. If you contact me **AFTER** the exam, it is considered missing the exam. It is the instructor's discretion to cap the exam score (usually 70%) if the exam is taken outside of the designated time, irrespective of the reasons.
Extra Credit	Small extra credit may be awarded for active students
Late Work	No late homework or programming projects will be accepted.
Special Assignments	None.
Class Attendance	Regular lecture attendance is mandatory. Attendance will be taken randomly at some lectures. Students who fail to follow the class material regularly are inviting scholastic difficulty. The course's material gets much more complex as the course progresses, and it is typically very difficult to catch up with missed classes.
Classroom Citizenship	Please participate and ask questions during class. It tends to slow down the pace and make the lectures more enjoyable.
Misc. but important	• **Please bring your photo ID to each exam** • No restroom breaks during exams.

	• Please in all your answers in your exams at least give a brief one or two sentence explanation of your answer. A "yes" or "no" answer is not allowed. • The final exam is given during the 3-hour slot indicated in the final exam schedule of the university. Please do not make travel reservations to leave town on a date earlier than this date
Student Conduct and Discipline	The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, *A to Z Guide*, which is provided to all registered students each academic year. The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3*, and in Title V, Rules on Student Services and Activities of the university's *Handbook of Operating Procedures*. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391). A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.
Academic Integrity	The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work. Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings. Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.
Email Use	The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

Withdrawal from Class	The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.
Student Grievance Procedures	Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures*. In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the deal will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.
Incomplete Grades	As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of **F**.
Disability Services	The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m. The contact information for the Office of Disability Services is: The University of Texas at Dallas, SU 22 PO Box 830688 Richardson, Texas 75083-0688 (972) 883-2098 (voice or TTY) Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance.

	It is the student's responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.
Religious Holy Days	The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated. The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment. If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.
Off-Campus Instruction and Course Activities	Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm. Additional information is available from the office of the school dean.

These descriptions and timelines are subject to change at the discretion of the Professor.