



CISA 2306:600, **Computer Networks**, Spring 2025, CRN: 22755
Department of Computer and Information Systems (CISA), College of Business

Course Syllabus

Class Modality:	Online- Synchronous
Class Meeting Time and Place:	Wednesday, 7:00 PM- 9:45 PM
Class Meeting Zoom Link:	<i>https://tamusa.zoom.us/my/sahan.tamusa</i>
Class Duration:	Jan 21, 2025 – May 13, 2025
Instructor:	Sahan Ahmad, Ph.D . Office: 441 G (BLH) Tel: 337-255-0075 E-Mail: sahmad@tamusa.edu
Course Website:	https://tamusa.blackboard.com/
Office Hours:	<i>In person: Wednesday 3:00 PM- 4:00 PM</i> <i>https://tamusa.zoom.us/my/sahan.tamusa</i> sahmad@tamusa.edu Email the professor for communication to zoom meeting (Mon – Fri)

Catalog Course Description: This course covers subjects related to computer networks, including TCP/IC and OSI models, network applications, distributed systems, and an introduction to network security. The course focuses on concepts, principles, and technologies that enable the integration of information and telecommunications systems to support internal and external business activities. This course will also cover Network system design for large corporations.

Course Objectives:

- To learn basic knowledge of networking technologies and network management concepts
- To understand the layering concepts in computer networks (OSI).
- To analyze the functions of each layer (OSI) and gain knowledge in different applications that use computer networks.
- To emphasize the hand-on experience of network topology, analysis in a laboratory environment
- To be familiar with contemporary issues in networking technologies

- To learn how design network system for large corporations

Specific topic coverage includes:

- Introduction to Networking
- How Computers Find Each Other on Networks
- How Data Is Transported Over Networks
- Structured Cabling and Networking Elements
- Network Cabling
- Wireless Networking
- Network Routing Path Calculation
- Cloud Computing and Remote Access
- Network Risk Management
- Unified Communications and Network Performance Management
- Network Segmentation and Virtualization
- Wide Area Networks
- Industrial and Enterprise Networking
- System Design

Student Learning Outcomes:

After successful completion of this course, students will be able to:

1. To understand the organization of computer networks, factors influencing computer network development, and the reasons for having various types of networks.
2. To contrast the protocol architectures such as OSI and TCP/IP
3. To explain how switches and router's function.
4. To demonstrate the proper placement of different layers of the ISO model and illuminate its function.
5. To be familiar with several network tools and network programming.
6. To determine proper usage of the IP address, subnet mask, and default gateway in a routed network.
7. To understand the internals of main protocols such as HTTP, FTP, SMTP, TCP, UDP, IP, etc.
8. To impart basic concepts and basic skills for setting up routers
9. To understand network system design for large corporations

AACSB Assessment:

The College of Business is in the process of applying for AACSB accreditation. As part of that process, students will be assessed on program-level outcomes based on course outcomes from various courses. The materials from this course may be used for assessing such program-level outcomes. Hence, students must follow the necessary rigor to ensure mastery and retention of the above course outcomes.

Required Materials:

Textbook: Jill West, Jean Andrews (Ph.D.), Tamara Dean, Network+ Guide to Networks , 8th Edition. Cengage Learning, 2021, ISBN: 978-1-3375-6933-0.

Additional Textbooks:

- System Design Interview , an insider guide by Alex Xu 2nd edition
- **Blackboard:** Connect to <http://tamusa.blackboard.com>. You will have lecture notes, solutions to problems, multimedia materials, and other supplementary materials in Blackboard. All class communications will be through Blackboard, and students should monitor this several times a day.
- **Time Expectation for coursework:** You are expected to spend 4-8 hours per week for the course. Based on the background, some student may require more time. Time spent may be longer when assignment/exams are due.

Other Recommended / Reading Materials: Additional reading materials are available on the course website as the instructor recommends.

Course Requirements every student must fulfill to succeed in the course:

1. Students should regularly check the Course Calendar, Announcements, and Messages (e-mail) systems in Blackboard.
2. Students should keep current with all course assignments, quizzes, and examinations.
3. Students should ask questions and communicate with the instructor in class, online, offline, or during office hours.
4. For all classwork, exams, quizzes, etc., if a student is completing it off-campus, they are responsible for the availability of internet connectivity. Extensions will **not** be granted for lack of availability of internet connections.

Projected Grades Distribution (Subjected to possible slight changes, without notice)

Grading Policy: The final course grade will be based on your performance on exams and class participation using the following weights:

Assignments	30%
Exam 1	15%
Exam 2	15%
Research Project and Presentation	20%
Final Exam (as per University Schedule)	20%
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Total	100%

The final letter grades will be assigned as follows: Above 90% □ A; 80 – 89% □ B; 70 – 79% □ C; 60 – 69% □ D; Below 60% □ F.

Examinations and assignments: There will be multiple assignments and exams during the semester. The assignments and exams will consist of conceptual multiple-choice, problem-solving, and short essay questions. The assignments /exam materials will come from lecture notes, the text, and class discussions. Questions will emphasize understanding and applications of concepts and topics covered in class. Exams will be in person during class time.

Extra Credit Assignments: There will be several opportunities for extra credit assignments throughout the semester. Topics and points earned will be determined by the instructor.

Make up and Late Assignment/exam/quiz policy: As a general rule, make-ups or late submissions will NOT be offered or accepted for any missed assignments/exams/quizzes. Late submissions or makeups may be accepted/administered only in extraordinary circumstances such as an excused official university activity, a severe illness, or a dire emergency. However, you must provide comprehensive documentation either before or within a few days of the missed assignment/quiz/exam.

Class conducts and civility code: Everyone in class is expected to follow all rules in the student handbook, as well as common courtesy during classroom lectures and discussions in class and online, including the following:

1. Attendance may be taken at the beginning or the end of the class.
2. It is the students' responsibility to obtain and be able to use the required materials and software for this class.
3. Student must retain copies of all assignments and graded work for verification purposes and provide it to the instructor, if necessary. Keep own copies of all computer files and e-mails till final grade is received.
4. Talking while the instructor is lecturing is extremely disruptive and discourteous to the instructor and other students.
5. Using computers or phones (except for a valid urgent need) during class for a purpose not related to class is disruptive. All cell phones and gadgets should be turned OFF and headphones removed.
6. For any questions about the exams and assignments, a student should contact the instructor, well in advance of the day they are due, so the instructor may have enough time to provide feedback.
7. All communications will be via e-mail communications to the Texas A&M University e-mail account, and students are expected to use their school provided email account. The instructor will reply to a student e-mail messages and voice messages within 2 business days (Monday-Friday).
8. All assignment submissions must be uploaded to Blackboard by the due date and time. Submission window may close or marked late, even if late by one second.

Anyone violating these policies may be subject to disciplinary actions.

Class attendance and Participation: A vital part of every student's education is regular attendance of class meetings. Any absences tend to lower the quality of a student's work, and frequent or persistent absences may result in a failing grade. Students are responsible for the materials covered in class. The course covers a lot of material, and most students find at least some parts of it difficult. Class

participation is highly encouraged as it makes the class more interesting and enhances the learning experience. Students are strongly encouraged to ask questions, participate in class discussions and problem solving, and visit/contact the instructor during office hours in case of questions or concerns. Good attendance and participation will be rewarded when final grades are assigned.

The course is intensive and challenging and you are expected to master the materials presented in class. The structure of the class makes your individual study and preparation outside of class extremely important and may vary considerably based on student background. However, a **minimum** of two hours of work outside the class is expected for every one hour of class period per week. Reading the assigned chapter(s) and having some familiarity with them before class will be very useful for understanding lectures.

Broader Use of Generative AI Permitted Within Guidelines

Artificial intelligence (AI) tools, including ChatGPT, are permitted in this course for students who wish to use them. To adhere to our scholarly values, students must cite any AI-generated material that informed their work (this includes in-text citations and/or use of quotations and in your reference list). Using an AI tool to generate content without proper attribution qualifies as academic dishonesty and violates Texas A&M-San Antonio's standards of academic integrity.

COVID-19 protocol

Everyone is strongly encouraged to get vaccinated and get vaccine boosters! It is the best way to prevent serious illness or death. While in the classroom, everyone is strongly encouraged to wear a well-fitting mask! N95 and KN95 (NIOSH-approved) masks offer the best protection from COVID-19 but even a surgical or cloth mask of at least three layers offers some protection. Wash and sanitize your hands regularly and always before attending class.

Students should use the Jaguar App Self Wellness Screen to conduct a self-assessment each day before coming to campus to determine if they are exhibiting any signs or symptoms of COVID-19 or have been exposed to COVID-19. Information on times and location of testing can be found here: <https://www.tamusa.edu/community-safety-together/testing-contacttracing.html>

Do not come to class if you are having symptoms of COVID-19! Go get tested! Students should visit the on-campus testing facility to receive a COVID-19 test if they are exhibiting symptoms or have been exposed. If you have a positive COVID-19 test, symptoms, or a known exposure report it through the COVID-19 reporting portal (<https://www.tamusa.edu/community-safety-together/>).

After reporting through the portal, the Dean of Students will contact your instructor and inform them that you will not be attending class. Your instructor may provide you with an accommodation (For example: prerecorded lecture, synchronous online link, extension of deadlines, or make up exams).

Accommodations are available for students with a documented illness or those with symptoms awaiting test results. Do not return to class until cleared by the Dean of Students

Financial Aid and Verification of Attendance

According to the following federal regulation, 34 CFR 668.21: U.S. Department of Education (DoE) Title IV regulation, a student can only receive Title IV funds based on Title IV eligibility criteria which include class attendance. If Title IV funds are disbursed to ineligible students (including students who fail to begin attendance), the institution must return these funds to the U.S. DoE within 30 days of becoming aware that the student will not or has not begun attendance. Faculty will provide the Office of Financial Aid with an electronic notification if a student has not attended the first week of class. Any student receiving federal financial aid who does not attend the first week of class will have their aid terminated and returned to the DoE. Please note that any student who stops attending at any time during the semester may also need to return a portion of their federal aid.

Counseling Resources

As a college student, there may be times when personal stressors interfere with your academic performance and/or negatively impact your daily functioning. If you or someone you know is experiencing life stressors, emotional difficulties, or mental health concerns at Texas A&M University – San Antonio, please contact the Student Counseling Center (SCC) located in Modular C, Room 166 (Rear entrance) or call [210-784-1331](tel:210-784-1331) between the hours of 8:00AM and 5:00PM, Monday – Friday. All mental health services provided by the SCC are free, confidential (as the law allows), and are not part of a student’s academic or university record. SCC provides brief individual and group therapy, crisis intervention, consultation, case management, and prevention services. For more information, please visit www.tamusa.edu/studentcounseling

In a crisis situation, please walk in to the Student Counseling Center (SCC) any time between the hours of 8:00AM and 5:00 PM, Monday – Friday, to be seen by a clinician. For after-hours support, please call 210-784-1331. Please get in touch with UPD at 911 if harm to self or harm to others is imminent.

Jaguar Writing Center

The Jaguar Writing Center provides writing support to graduate and undergraduate students in all three colleges. Writing tutors work with students to develop reading skills, prepare oral presentations, and plan, draft, and revise their written assignments. Students can schedule appointments with the Writing Center in JagWire under the student services tab. More information about our services, how to make an appointment, and how to access your appointment can be found on our website at www.tamusa.edu/Writing-Center. The Writing Center can also be reached by emailing writingcenter@tamusa.edu.

Academic Learning Center

All currently enrolled Texas A&M University-San Antonio students can utilize the Academic Learning Center for subject-area tutoring. The Academic Learning Center is an appointment-based center where appointments are made through the Navigate platform. Students access Navigate through Jagwire in the Student Services tab. The Center is active on campus, reaching to students to highlight services offered.

You can contact the Academic Learning Center by emailing tutoring@tamusa.edu or calling (210)-784-1332. Appointments can also be made through JagWire under the services tab.

University Email Policy and Course Communications

All correspondence between professors and students must occur via university email accounts. You must have a Jaguar email account ready and working. If it is not working, contact the help desk at 210784-4357.

Meeting Basic Needs

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live and believes this may affect their performance in the course, is urged to contact the Dean of Students (DOS@tamusa.edu) for support. In addition, you may notify the instructor if you are comfortable doing so.

Military Affairs

Veterans and active-duty military personnel are welcomed and encouraged to communicate, in advance, if possible, about special circumstances (e.g., upcoming deployment, drill requirements, disability accommodations). You are also encouraged to visit the Patriots' Casa in-person, Room 202, or to contact the Office of Military Affairs with any questions at military@tamusa.edu or (210)784-1397.

Religious Observances

Texas A&M University-San Antonio recognizes the diversity of faiths in the campus community. He protects the rights of students, faculty, and staff to observe religious holidays according to their traditions. Under A&M System policy, students are allowed to make up any examination, study, or work requirements that may be missed due to a religious observance, provided they notify their instructors before the end of the second week of classes for regular session classes.

Respect for Diversity

We understand that our students represent diverse backgrounds and perspectives. When we are equity-minded, we are aware of differences and inequalities and are willing to discuss them so we can act to resolve them. The University is committed to building cultural competencies, or the attitudes, skills, and knowledge that enable individuals and organizations to acknowledge cultural differences and incorporate these differences in working with people from diverse cultures. Respecting and accepting people different than you is vital to your success in the classroom, on campus, and as a future professional in the global community. While working together to build this community, we ask all members to:

- Share their unique experiences, values, and beliefs.
- Be open to the views of others.
- Honor the uniqueness of their colleagues.
- Value each other's opinions and communicate respectfully.
- Use this opportunity to discuss ways to create an inclusive environment in this course and across the A&M-San Antonio community.

The Six-Drop Rule

Students are subject to the requirements of Senate Bill (SB) 1231, passed by the Texas Legislature in 2007. SB 1231 limits students to a maximum of six (6) non-punitive course drops (i.e., courses a student chooses to drop) during their undergraduate careers. A non-punitive drop does not affect the student's GPA. However, course drops that exceed the maximum allowed by SB 1231 will be treated as "F" grades and will impact the student's GPA.

Drop Policy

You may drop the course with an automatic grade of W on or before the date listed in the academic calendar at www.tamusa.edu. The last date to drop a course or withdraw from the University is also indicated in the academic calendar on the university website (www.tamusa.edu). If you wish to drop the class, you must submit the necessary paperwork to the proper authority. Students dropping a course are subject to all conditions listed in the university catalog.

Academic Accommodations for Persons with Disabilities

The Americans with Disabilities Act of 1990, as amended, and the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights protection for individuals with disabilities. Title II of the ADA and Section 504 of the Rehabilitation Act require that students with disabilities be guaranteed equal access to the learning environment through the provision of reasonable and appropriate accommodations of their disability. If you have a disability that may require an accommodation, please contact Disability Support Services (DSS) for the coordination of services. The phone number for DSS is (210) 784-1335 and email is dss@tamusa.edu.

Emergency Preparedness

JagE Alert is Texas A&M University-San Antonio's mass notification system. In the event of an emergency, such as inclement weather, students, staff, and faculty who are registered in JagE Alert, will have the option to receive a text message, email, and/or phone call with instructions and updates. To register or update your information, visit: <https://tamusa.bbcportal.com/>.

More information about Emergency Preparedness and the Emergency Response Guide can be found here: <https://www.tamusa.edu/upd/index.html>.

Statement of Harassment and Discrimination

Texas A&M University-San Antonio is committed to the fundamental principles of academic freedom, equality of opportunity, and human dignity. To fulfill its multiple missions as an institution of higher learning, A&M-San Antonio encourages a climate that values and nurtures collegiality, diversity, pluralism, and the uniqueness of the individual within our state, nation, and world. All decisions and actions involving students and employees should be based on applicable law and individual merit. Texas A&M University-San Antonio, in accordance with applicable federal and state law, prohibits discrimination, including harassment, on the basis of race, color, sex, religion, national origin, age, disability, genetic information, veteran status, sexual orientation, gender identity, or gender expression. Individuals who believe they have experienced harassment or discrimination prohibited by this statement are encouraged to contact the appropriate offices within their respective units. Texas A&M University-San Antonio faculty are committed to helping create a safe learning environment for all students and for the university as a whole. If you have experienced any form of sex- or gender-based discrimination or

harassment, including sexual assault, sexual harassment, domestic or dating violence, or stalking, know that help and support are available. A&M-San Antonio has staff members trained to support survivors in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, and more. The university strongly encourages all students to report any such incidents to the university. Please be aware that all A&M-San Antonio employees (other than those designated as confidential resources such as counselors and other healthcare providers) are required to report information about such discrimination and harassment to the university. This means that if you tell a faculty member about an incident of sexual harassment or sexual violence, or other related misconduct, the faculty member must share that information with the university's Title IX Coordinator. If you wish to speak to a confidential employee who does not have this reporting responsibility, you can contact the Student Counseling Center at (210) 784-1331, Modular C.

Students' Rights and Responsibilities

The purpose of the following statement is to enumerate the essential provisions of students' freedoms and responsibilities to learn at Texas A&M University-San Antonio. All students are required to follow all policies and regulations as set forth by The Texas A&M University System, including the A&M-San Antonio Student Code of Conduct.

Students' Rights

1. A student shall have the right to participate in a free exchange of ideas, and there shall be no university rule or procedure that in any way abridges the rights of freedom of speech, expression, petition, and peaceful assembly as set forth in the U.S. Constitution.
2. Each student shall have the right to participate in all areas and activities of the university, free from any form of discrimination, including harassment, on the basis of race, color, national or ethnic origin, religion, sex, disability, age, sexual orientation, gender identity, gender expression, genetic information, or veteran status in accordance with applicable federal and state laws.
3. A student has the right to personal privacy except as otherwise provided by law, and this will be observed by students and University authorities alike.
4. Each student subject to disciplinary action arising from violations of university student rules shall be assured a fundamentally fair process.

Students' Responsibilities

5. A student has the responsibility to respect the rights and property of others, including other students, the faculty and staff, and the administration.
6. A student has the responsibility to be fully acquainted and compliant with the University Student Rules found in the Student Handbook, Student Code of Conduct, on our website, and in the University Catalog.
7. A student has the responsibility to recognize that student actions reflect upon the individuals involved and upon the entire University community.

Violations of Academic Conduct (Section 14.5 Student Handbook)

As a member in an academic community, students at Texas A&M University-San Antonio are expected to exhibit a high level of honesty and integrity in their pursuit of higher education, be mature, be self-directed and be able to manage their own affairs. Students who are unwilling to abide by these basic expectations will find themselves facing academic and/or disciplinary sanctions. Students are expected to share in the responsibility and authority with faculty and staff to challenge and make known acts that violate the Texas A&M University-San Antonio Code of Conduct. For more information please visit the Office of Student Rights & Responsibilities website <http://bit.ly/TAMUSAStudentRR>.

Students engaging in an act that violates the standards of academic integrity will find themselves facing academic and/or disciplinary sanctions. Academic misconduct is any act, or attempt, which gives an unfair advantage to the student. Additionally, any behavior specifically prohibited by a faculty member in the course syllabus or class discussion may be considered as academic misconduct. Academic misconduct includes, but is not limited to, cheating, plagiarism, multiple submissions, collusion, lying and bribery. For more information, refer to the Student Code of Conduct, Article III: Conduct Rules and Regulations. Texas A&M University-San Antonio faculty has the discretion to impose grade penalties as deemed necessary.

Faculty members are required to report such serious breaches of academic honesty to their chair, their dean and the Office of Student Rights and Responsibilities. In cases of academic misconduct, students may be subject not only to grade sanctions in courses but to disciplinary action. Grade sanctions may be imposed only by faculty members, but suspension or expulsion may be imposed only by the Vice President for Student Affairs. If a student wishes to appeal the decision of suspension or expulsion due to violations of academic misconduct, they must initiate their appeal as outlined within the Student Code of Conduct. Extenuating circumstances may cause the University to deviate from the defined time frames.

All student term papers and other written assignments are subject to analysis by anti-plagiarism software. Posting of any class work given to student, or solutions, or discussion, on publicly accessible forums or on social media is not permissible.

Considering the potential consequences of academic misconduct, it is obviously in students' best interests to avoid even the appearance of such behavior. If a student is unclear whether a specific act might constitute academic misconduct, please she/he should contact the instructor for an assessment of the situation.

Important Dates Spring 2025:

Spring 2025 Regular 16-Week Session

October 21	Monday	Registration opens
December 23-January 1	Monday-Wednesday	Winter Break
January 14	Tuesday	Tuition & fee payment deadline
January 16	Thursday	Drop for non-payment
January 17	Friday	Last day for students withdrawing to receive 100% refund (0% responsibility) for tuition
January 20	Monday	Martin Luther King, Jr. Day - No classes
January 21	Tuesday	First class day
January 28	Tuesday	Last day to register
February 5	Wednesday	Census Date
February 6	Thursday	Drop for non-payment
February 24-March 7	Monday-Friday	Midterm grading period
March 10-March 15	Monday-Saturday	Spring Break
April 18	Friday	Study day - No classes
April 21	Monday	Last day to drop with an automatic grade of "W"
April 28	Monday	Last day to withdraw from the university
May 5	Monday	Last day of scheduled classes for weekday classes
May 6	Tuesday	Study day - No classes
May 7-May 13	Wednesday-Tuesday	Final examinations
May 13	Tuesday	End of term
May 16	Friday	All grades due by noon
May 19	Monday	Grades available in JagWire
May 20	Tuesday	Commencement