



CISA 4324, Penetration Testing, Fall 2025,
Department of Computing and Cyber Security, College of Business
Course Syllabus

Class Modality:	Online ASynchronous
Class Meeting Time and Place:	online
Class Duration:	08/25/25 to 12/12/25
Instructor:	Mark Munoz, Office: Online, (Teams, Zoom, or WebEx). Tel: 210-201-2300 (Please Leave Message) E-Mail: MrMunoz@tamusa.edu
Course Website:	https://tamusa.blackboard.com/
Office Hours:	M - F by appointment (Email, Telephone, Zoom, WebEx).

Catalog Course Description: This course examines concepts of penetration testing, risks in engineered systems, environmental risks, security risks, methods of risk analysis, fault trees, and event trees. Students will study risk assessment using penetration testing methods. Prerequisite: CISA 3321.

Course Objectives: Students will learn about the concept of security risk analysis, the different types of risks, and the methods to calculate risk. They will also learn penetration testing techniques for the ethical hacker and use penetration testing tools and software to demonstrate the ability to follow the penetration testing process.

Prerequisites: CISA 3321. Students who do not meet the prerequisites must contact the instructor immediately.

Student Learning Outcomes:

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

1. Explain risk analysis and risk management.
2. Understand the purpose of and the difference between a Risk Assessment, Business Impact Analysis (BIA), Disaster Recovery Plan (DRP), Incident Response Plans (IRP), and Contingency Plans.
3. Know where to locate relevant policies and procedures detailing legal and ethical requirements applicable to your industry.
4. Verify the security posture of systems and networks using penetration testing techniques.
5. Explain the legal and ethical responsibilities of penetration testers.
6. Demonstrate risk communication, control implementation, and monitoring of risk management strategies.
7. Use the tools available to conduct Penetration Testing (PENTEST).
8. Ability to gather information from multiple sources and understand what can be done with the information discovered.
9. Know how to protect yourself, your organization, and your family from cyber risks.

ABET Assessment:

The Department of Computing and Cyber Security is in the planning process of applying for ABET accreditation for its BS in computer science program for which this course is a core course. As part of that process, students will be assessed on program level outcomes based on course outcomes from this course, and hence students must follow the necessary rigor to ensure mastery of the above course outcomes. For this course the following Program outcomes will be assessed:

COVID-19: Due to the current pandemic environment, all university personnel (faculty, students and staff, etc) are required to adhere to mandated procedures and guidelines as communicated through university communications.

Required Materials:

- **Textbook:** Wilson, Rob. CompTIA PenTest+ Guide To Penetration Testing. Available from: VitalSource Bookshelf, Cengage Learning US, 2023.
<https://www.vitalsource.com/products/comptia-pentest-guide-to-penetration-testing-rob-s-wilson-v9798214340333>
- **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.
- **Computer Hardware:** In order to participate in online sessions you will need a computer with an internet connection, a microphone and speakers/headphones. To complete the class work, you will need appropriate software installed on the computer.
- **Time Expectation for coursework:** You are expected to spend 8-10 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 recommended by the instructor.

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

1. Students should check the Course Calendar, Announcements, and Messages (e-mail) systems in Blackboard on a regular basis.
2. Students should keep current with all course assignments, quizzes, and examinations.
3. Students should ask questions and communicate with the instructor either in class, online, off-line or during office hours.
4. For all classwork, exams, quizzes etc., if a student is completing it off-campus, then they are responsible for availability of internet connectivity. Extensions will **not** be granted for lack of availability of internet connections.
5. Students should remember that online courses assume greater responsibility and independent learning skills by the student for their own learning outcomes.
6. For online asynchronous courses, there will be no online class sessions. All materials will be made available through Blackboard or through online links.
7. Students **may not copy, utilize, or post material from an external source without properly (APA) citing**

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

GRADES	Weight
DISCUSSIONS	30%
ASSIGNMENTS	20%
Exams	50%
TOTAL	100

Grades will be based on the following ranges:

A = 90 – 100

B = 80 - 89

C = 70 – 79

D = 60 – 69

This course has a requirement of a grade of C as a minimal grade for satisfactory completion of this course.

Examinations: There will be five mandatory exams (as per the university schedule). Being absent / non-submission of an exam will result in a grade of zero for that exam and may result in a fail grade in the course. The exams will consist of briefing your subject matter using slides, presenting a case study, and keeping under a time limit. Last, only one make-up per exam is allowed with 40% taken off, or else ZERO.

Discussions and Participation: This course requires you to participate in weekly module discussions. The purpose of this community space is to interact with your peers and your instructor. The purpose of the discussion questions is to explore the content in the module as a class, present new questions to expand the discussions, and to make comments elaborating on the topic relating to computer science. NO MAKE UP and time sensitive for that week.

Research papers: There will be several assignments during the course. Individual assignment statements and due dates will be posted through Blackboard. In all cases, assignments and exams must be completed NLT the Sunday before Central Standard Time's new week. If missed due date, 40% taken off grade after 1st week and if not turned by 2nd, not accepting and is ZERO.

Online individual / Group Activities: None

Make up and Late Assignment/exam/quiz policy:

Late submissions or make-ups 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 24Hrs of the missed assignment/quiz/exam.

Class conduct 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. It is the students' responsibility to obtain and be able to use the required materials and software for this class.

2. 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.
3. 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.
4. All communications will be via the Blackboard messaging tool the instructor will reply to a student e-mail messages and voice messages within 2 business days (Monday-Friday).
5. All assignment submissions must be uploaded as instructed by the due date and time. Submission window may close or marked late, even if late by one second. If you have problems uploading an assignment you can Email the document directly.

Anyone violating these policies may be subject to disciplinary actions.

Class attendance and Participation: A vital part of every student's education is a regular review of class materials posted by the instructor for asynchronous classes. 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 required 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.

Fall 2025 CISA 4324 Class Schedule

The provisions and information set forth in the schedule below are intended to be informational and not contractual in nature. The instructor reserves the right to amend, alter, change, delete or modify the provisions of the schedule.

Week	Chapter	Mon (start)	Item due	Friday	Sun (end)
1	1	08/25/25	paper, discussion		08/31/25
2	2	09/01/25	paper, discussion		09/07/25
3	3	09/08/25	paper, discussion		09/14/25
4		09/15/25	exam		09/21/25
5	4	09/22/25	paper, discussion		09/28/25
6	5	09/29/25	paper, discussion		10/05/25
7		10/06/25	exam		10/12/25
8	6	10/13/25	paper, discussion		10/19/25

9	7	10/20/25	paper, discussion		10/26/25
10		10/27/25	exam		11/02/25
11	8	11/03/25	paper, discussion		11/09/25
12	9	11/10/25	paper, discussion		11/16/25
13		11/17/25	exam		11/23/25
14	10	11/24/25	paper, discussion		11/30/25
15		12/01/25	final exam		12/07/25
16		12/08/25	final exam (cont.)	12/12/25	

University Email Policy and Course Communications: All correspondence between professors and students must occur via TAMUSA email accounts. You must have your Jaguar email account ready and working. If it is not working, contact the help desk at 210-784-4357.

Academic Accommodations for Persons with Disabilities: The Americans with Disabilities Act Amendments Act (ADAAA) of 2008 and the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights protection for persons with disabilities. Title II of the ADAAA 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 accommodation of their disability. If you have a diagnosed disability that may require an accommodation, please contact Disability Support Services (DSS) for the coordination of services. DSS is located at the Main Campus on the 2nd floor of the Central Academic Building in suite 210. The phone number for DSS is (210) 784-1335 and email is dsupport@tamusa.edu.

Academic Learning Center : All currently enrolled students at Texas A&M University-San Antonio 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 outreaching to students to highlight services offered. You can contact the Academic Learning Center by emailing tutoring@tamusa.tamus.edu or calling (210)-784-1332. Appointments can also be made through JagWire under the services tab.

Counseling Resources: As a college student, there may be a time 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 A&M-SA, please contact the Office of Student Counseling & Wellness Services (SC & WS) located in Modular C Room 166 (Rear entrance) or call 210-784-1331 between the hours of 8:00 AM and 5:00 PM. All mental health services provided by SC & WS are free, confidential (as the law allows), and are not part of a student's academic or university record. SC&WS provides brief individual, couples, and group therapy, crisis intervention, consultation, case management, and prevention services. For more information, please visit www.tamusa.edu/studentcounseling.

In a crisis, please walk-in to the SC & WS services between 8:00 AM and 5:00 PM to be seen by a licensed clinician. After hours, please contact UPD at 911 or text "HOME" to 741-741 24/7/365 to connect with a trained crisis counselor. The National Suicide Prevention hotline also offers a 24/7/365 hotline at 1-800-273-8255.

Emergency Preparedness: Jagwire Alert is Texas A&M University-San Antonio's mass notification. In the event of an emergency, such as inclement weather, students, staff and faculty, who are registered, 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: <http://www.tamusa.edu/riskmanagement/index.html>.

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.

Jaguar Writing Center: The Jaguar Writing Center provides writing assistance 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 make individual or group appointments with a writing tutor. The Writing Center is located in the Central Academic Building, Suite 208. Appointments can also be made through JagWire under the services tab.

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. Furthermore, please notify the professor if you are comfortable in doing so. This will enable them to provide any resources they may possess.

Military Affairs: Veterans and active-duty military personnel are welcomed and encouraged to communicate, in advance if possible, and 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 represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity 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 class, 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.
- Keep confidential discussions that the community has of a personal (or professional) nature.
- Use this opportunity together to discuss ways in which we can create an inclusive environment in this course and across the A&M-San Antonio community.

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.

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.

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, national or ethnic origin, religion, sex, disability, age, sexual orientation, or veteran status. Individuals who

believe they have experienced harassment or discrimination prohibited by this statement are encouraged to contact the appropriate offices within their respective units.

Students' Rights and Responsibilities: The following statement of students' rights and responsibilities is intended to reflect the philosophical base upon which University Student Rules are built. This philosophy acknowledges the existence of both rights and responsibilities, which is inherent to an individual not only as a student at Texas A&M University-San Antonio but also as a citizen of this country.

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 administrative rule 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, 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

1. A student has the responsibility to respect the rights and property of others, including other students, the faculty and University officials.
2. A student has the responsibility to be fully acquainted with the published University Student Rules and to comply with them, as well as federal, state, and local laws.
3. A student has the responsibility to recognize that student actions reflect upon the individuals involved and upon the entire University community.
4. A student has the responsibility to maintain a level of behavior that is consistent in supporting the learning environment of the institution and to recognize the University's obligation to provide an environment for learning.

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.