*Tentative Course Syllabus
(The most updated version of this syllabus will be maintained on the BrightSpace course shell; students, please refer to that version for most up-to-date information).

EAST TEXAS A&M CYBERSECURITY: ETHICAL HACKING
CSCI 497 SPRING 2025

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CLASS MEETINGS: Time & Location: Web-based, http://online.tamuc.org	Instructor Office Hours: If you email me, put "CSCI 497 " in the subject line of your email.

INSTRUCTOR:
Ismail Guneydas
Adjunct Faculty, Department of Computer Science
East Texas A&M University
e-mail: ismail.guneydas@etamu.edu

TEXTBOOK:

No mandatory textbook.

COURSE DESCRIPTION:

This course provides an in-depth understanding of ethical hacking principles and practices, focusing on offensive security techniques. Students will learn to think like attackers to understand and defend against potential threats effectively. The course covers penetration testing, vulnerability scanning, social engineering, and other hacking techniques within legal and ethical boundaries.

STUDENT LEARNING OUTCOMES:
Upon successful completion of this course, students will be able to:
1. Define ethical hacking and its role in cybersecurity.
2. Demonstrate knowledge of offensive security tools and techniques.
3. Perform basic vulnerability assessments and penetration tests.
4. Identify and mitigate system vulnerabilities.
5. Understand legal and ethical implications of hacking practices.
6. Develop strategies to defend against attacks based on hacker methodologies.

COURSE OUTLINE/CONTENT:

Unit	Chapter Topics	Readings & Assessments *

1	Introduction to Ethical Hacking	• Introductions • Slides
2	NIST Cybersecurity Framework updates, MITRE ATT&CK framework.	• Slides • Homework #1 (due following week Sunday 11:59 PM)
3	Footprinting and Reconnaissance	• Slides
4	Scanning and Enumeration	• Homework #2(due following Sunday 11:59 PM)
5	System Hacking Techniques	• Slides
6	AI Ethical Hacking	• Homework #3 (due following Sunday 11:59 PM)
7	Mid-term	
8	Penetration testing in AWS, Azure, and Google Cloud environments	• Slides
9	Kubernetes Ethical Hacking	• Slides
10	Social Engineering	• Slides
11	Web Application Attacks	• Slides
12	Wireless Network Attacks	• Slides

13	Exploitation and Post-Exploitation	• Slides • Homework #4 (due following Sunday 11:59 PM) •
14	Report Writing for Penetration Testing via ChatGBT	• Slides
15	Final	

EXAMS & GRADING:
Homework   28%
Midterm Exam   32%
Final Exam (Comprehensive of all the material covered) 40%

COURSE REQUIREMENTS:

Study: To plan a minimum of three hours of outside preparation for each hour of class is a safe time allocation for successfully completing the course.

Students are expected to go through the slides and any other uploaded material every week in BrighSpace course shell.

BrightSpace: You will need to activate and access your BrightSpace course shell account. Visit http://online.tamuc.org for details:

"If at any time you experience technical problems (e.g., you can't log in to the course, you can't see certain material, etc.) please contact the BrightSpace HelpDesk, available 24 hours a day, seven days a week. The HelpDesk can be reached by sending an email to helpdesk@online.tamuc.org or by calling 1-866-656-5511".

Assignments: Assignments will be given and returned via the online Brightspace system. It is very important that students follow the instructions carefully on the assignments. The assignments will be uploaded by the instructor to Brightspace course shell. The student may have to upload it to the course shell's Dropbox by following the instructions on the assignment; or the assignments may be entirely online tests. It is the student's responsibility to return or solve all assignments ready on time by the given due date. Late assignment may not be accepted or may be penalized and assignment may not be accepted beyond a certain time.

Exams: Two exams will be given, one midterm exam and one final exam. The instructor may add other necessary exams if he sees necessary. The exams will be delivered online on the dates indicated above.

Students will be able to view their graded lab, quiz and exam scores on BrightSpace. The students have one week to inquire about their grade after the lab/quiz/exam is done. Grades accumulated so far in the class by the students may be provided on BrightSpace to the students as a courtesy by the instructor so that the students can see where they stand gradewise; however, those grades might not be very accurate. The overall course grades are finalized after all the exams, assignments, quizzes and attendances are complete and then they are put in a spreadsheet, weighed and evaluated at the end of the semester by the instructor.

Web-based / online class: This is a web-based / online class. Assignments will be uploaded to BrightSpace course shell. Students are responsible for obtaining and setting up their BrightSpace account using their TAMUC student login. They need to follow the BrightSpace course shell daily for the course announcements, downloading and uploading the assignments, and other course activities. Students also need to check their leomails daily.

The instructor maintains the right to modify the course syllabus & policies within the semester if need arises.

ETHICS
Integrity is the hallmark of the accounting profession and will be stressed throughout the course. Any type of student breach of ethics, including, but not limited to: illegal activity, dishonest conduct, cheating, plagiarism, or collusion will result in failure on the assignment and/or further academic sanctions (i.e. failure of the course, dismissal from class and/or referral to the Dean of the College of Business).

"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 Procedures, Conduct). Ethics include the issue of plagiarism, and copying parts or whole of assignments, quizzes and exams is just as serious as any other type of plagiarism. If you are caught sharing or using other people's work, you will receive a 0 grade and a warning on the first instance. A subsequent instance will result in receiving an F grade for the course, and possible disciplinary proceedings. The student who shares as well as the one who copies will both receive a 0.

ATTENDANCE POLICY :
Student participation will be graded by the level of class participation and attendance. Since this is a web-based / online class, the students are expected to participate in the required activities as described in the Brightspace course shell for each and every week's lecture. At the beginning of every week, reading material / lecture slides will be uploaded to course shell and the students are required to go through the assigned reading material and/or lecture slides.

Any student wishing to withdraw from the course must do so officially as outlined in the class schedule. THE INSTRUCTOR CANNOT DROP OR WITHDRAW ANY STUDENT.

COURSE REQUIREMENT DEADLINES:

Credit will be given for ONLY those exam(s), program(s), and/or project(s) turned in no later than the deadline(s) as announced by the instructor of this class unless prior arrangement has been made with the instructor. Late assignments will be penalized, and the instructor may not accept late assignments after a specified period.

METHOD OF EVALUATION (Tentative):
Final average Letter grade
90 – 100   A
80 – 89.99   B
70 – 79.99   C
60 – 69.99   D
Below 60   F

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 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

YouSeeU Virtual Classroom Requirements:

https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements

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**.**

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. 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

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.

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 East Texas A&M University 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

Undergraduate Student Academic Dishonesty Form

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf

Graduate Student Academic Dishonesty Form

http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.pdf

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

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:

Office of Student Disability Resources and Services

East Texas A&M University

Velma K. Waters Library Rm 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: Office of Student Disability Resources and Services
http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/

Nondiscrimination Notice

East Texas A&M University 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 East Texas A&M University 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 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 East A&M campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.