



## **CSCI 353, 61E, Threat and Vulnerability Management**

### **COURSE SYLLABUS: Fall 2025**

#### **INSTRUCTOR INFORMATION**

Instructor:	Dr. Ahmet Kurt, Assistant Professor
Office Location:	ACB2 Room 234
Office Hours:	Thursday 10am-11pm
Office Phone:	903-896-5474
Office Fax:	N/A
University Email Address:	ahmet.kurt@etamu.edu
Preferred Form of Communication:	Email
Communication Response Time:	Same or next day

#### **COURSE INFORMATION**

Materials – Textbooks, Readings, Supplementary Readings

Lectures (Time/Location): Meets 8/25/2025 through 12/8/2025

Tue, Thurs 1:25pm-2:40pm    *Campus:* Rellis Campus    *Building:* ACB2    *Room:* 218

Course Textbook(s):

1. "CompTIA CySA+ Study Guide: Exam CS0-003, 3rd Edition" by Mike Chapple and David Seidl.

#### **Course Description**

The course will provide tools and processes to identify and analyze various vulnerabilities, needed to protect a computing system. Prerequisites: CSCI 310 with a minimum grade of C and CSCI 430 with a minimum grade of C.

*The syllabus/schedule are subject to change.*

## **Student Learning Outcomes**

1. Explain and compare major vulnerability classes across networked, OS, and application layers, articulating necessary preconditions, threat models, and invariants.
2. Model security risk quantitatively by computing and critiquing vulnerability scores (e.g., CVSS) and performing sensitivity analysis to show how asset/context assumptions affect prioritization.
3. Design and implement a reproducible assessment pipeline (discovery → enumeration → verification) using commodity tools and original scripts, with experiment configuration captured for replication.
4. Validate and evaluate findings by distinguishing true/false positives via corroborating evidence (logs, configs, protocol traces) and reporting precision/recall or similar metrics for the pipeline.
5. Trace vulnerabilities to root cause by reasoning about OS and software internals (e.g., memory safety, concurrency, access control), and propose mitigations with justification grounded in systems principles.
6. Communicate results to scholarly standards: produce a paper-style report with methodology, limitations, and ethical considerations, plus an oral defense that responds to technical critique.

## **COURSE REQUIREMENTS**

### **Minimal Technical Skills Needed**

Ability to use the Internet browser to access MyLeo Learning Management System (LMS), Zoom, Microsoft Word and PowerPoint, and PDF reader. Instructional Methods  
This is a face-to-face course with heavy use of the MyLeo (D2L) Learning Management System (LMS), and remote learning component.

### **Instructional Methods**

This is a face-to-face course with heavy use of the MyLeo (D2L) Learning Management System (LMS), and remote learning component.

## **Student Responsibilities or Tips for Success in the Course**

You own your success in this course, including ensuring you understand the expectations, timelines, policies and learning objectives.

Baseline expectations:

1. Attend weekly meetings and check LMS frequently.
2. Start your work tasks/assignments early.
3. Communicate with the other students in the project regularly and frequently.
4. Communicate with the instructor when you are confused or having course-related difficulties.

*The syllabus/schedule are subject to change.*

## 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

Your Final Grade Distribution is as follows:

Quizzes	15%
Lab Assignments	25%
Midterm Exam	30%
Final Exam	30%
TOTAL	100%

## COURSE OUTLINE / CALENDAR

Week 1 (Aug 26 & Aug 28) — Today's Cybersecurity Analyst
Week 2 (Sep 2 & Sep 4) — System and Network Architecture
Week 3 (Sep 9 & Sep 11) — Malicious Activity
Week 4 (Sep 16 & Sep 18) — Threat Intelligence
Week 5 (Sep 23 & Sep 25) — Reconnaissance and Intelligence Gathering
Week 6 (Sep 30 & Oct 2) — Designing a Vulnerability Management Program
Week 7 (Oct 7 & Oct 9) — Analyzing Vulnerability Scans
Week 8 (Oct 14 & Oct 16) — <b>Midterm Exam</b>
<ul style="list-style-type: none"><li>Oct 14 – Fall Break (No Class).</li></ul>
Week 9 (Oct 21 & Oct 23) — Responding to Vulnerabilities
Week 10 (Oct 28 & Oct 30) — Building an Incident Response Program
Week 11 (Nov 4 & Nov 6) — Incident Detection and Analysis
Week 12 (Nov 11 & Nov 13) — Containment, Eradication, and Recovery
Week 13 (Nov 18 & Nov 20) — Reporting and Communication
Week 14 (Nov 25 & Nov 27) — Performing Forensic Analysis and Techniques for Incident Response
<ul style="list-style-type: none"><li>Nov 27 – Thanksgiving Holiday (No Class).</li></ul>

*The syllabus/schedule are subject to change.*

Week 15 (Dec 2 & Dec 4) — Review
(Dec 8) — Last day of classes
(Dec 11 – Dec 16) — <b>Finals Week</b>

## TECHNOLOGY REQUIREMENTS

### LMS

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

LMS Requirements:

<https://community.d2l.com/brightspace/kb/categories/1172-platform-requirements>

LMS Browser Support:

<https://community.d2l.com/brightspace/kb/articles/5663-browser-support>

Zoom Virtual Classroom Requirements:

[https://support.zoom.com/hc/en/article?id=zm\\_kb&sysparm\\_article=KB0060748](https://support.zoom.com/hc/en/article?id=zm_kb&sysparm_article=KB0060748)

## 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@etamu.edu](mailto:helpdesk@etamu.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, an ETAMU 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>

*The syllabus/schedule are subject to change.*

## **Interaction with Instructor Statement**

Please use official email to communicate with the instructor as suggested. The instructor will make an effort to answer questions in a timely manner.

## **COURSE AND UNIVERSITY PROCEDURES/POLICIES**

### **Course Specific Procedures/Policies**

See above

### **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](#)

<https://www.etamu.edu/wp-content/uploads/2025/06/2024-2025-Student-Guidebook-1.pdf>.

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>

### **ETAMU Attendance**

For more information about the attendance policy, please visit the webpages below.

[Attendance.](#)

<https://inside.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

### **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 Students Academic Integrity Policy and Form**

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

*The syllabus/schedule are subject to change.*

<https://inside.tamuc.edu/aboutus/policiesproceduresstandardsstatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03.pdf>

[Undergraduate Student Academic Dishonesty Form](#)

<https://inside.tamuc.edu/aboutus/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf>

## **Graduate Students Academic Integrity Policy and Form**

[Graduate Student Academic Dishonesty](#)

<https://inside.tamuc.edu/aboutus/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10.pdf>

[Graduate Student Academic Dishonesty Form](#)

<https://inside.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyForm.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 Services  
Velma K. Waters Library- Room 162

**Phone (903) 886-5930**

Fax (903) 468-8148

Email: [StudentDisabilityServices@etamu.edu](mailto:StudentDisabilityServices@etamu.edu)

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

## **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

*The syllabus/schedule are subject to change.*

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

## **East Texas A&M Supports Students' Mental Health**

### **Counseling Center Services**

The Counseling Center at East Texas A&M, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit <https://www.etamu.edu/counseling-center/>