



## **CSCI 458, 61E, Network Security & Management**

### **COURSE SYLLABUS: Spring 2025**

#### **INSTRUCTOR INFORMATION**

Instructor:	Dr. Ahmet Kurt, Assistant Professor
Office Location:	ACB2 #234
Office Hours:	Tue/Thurs 2:40-3:40pm
Office Phone:	903-896-5474
Office Fax:	N/A
University Email Address:	ahmet.kurt@tamuc.edu
Preferred Form of Communication:	Email
Communication Response Time:	Same or next day

#### **COURSE INFORMATION**

Materials – Textbooks, Readings, Supplementary Readings

Lectures (Time/Location): Meets 1/13/2025 through 5/9/2025  
Tue, Thurs 1:25pm-2:40pm *Campus:* Rellis Campus *Building:* ACB1 *Room:* 314

Course Textbook(s): “Network Security Essentials: Applications and Standards” 6th Edition by William Stallings (subject to change)

#### **Course Description**

Network access control, intrusion detection and prevention, network and communication protection, network segmentation and flow control/monitoring. Network deep packet inspection and anomaly detection. Prerequisites: CSCI 310, CSCI 434.

#### **Student Learning Outcomes**

1. Compare and contrast physical security and hardware security.
2. Identify the security principles and techniques required to secure a network infrastructure.
3. Describe and illustrate denial of service and DNS attacks; define firewalls and VPNs.

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4. Explain attacks targeting networks including malware, denial of service, man in the middle, DNS poisoning, etc.
5. Describe web application attacks, Internet browsers and wireless security attacks; illustrate vulnerabilities and solutions.
6. Illustrate network security defenses, redundancy, back-up, and restoration and file encryption.
7. Illustrate different network security monitoring, assessment, and audit techniques; explain penetration testing, protocol analysis and log management.
8. Apply skills learned in previous courses and in this course to configure a network and implement security measures and policies; communicate the results digitally.

## **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 classes and check LMS frequently.
2. Start your work tasks/assignments early.
3. Communicate with the instructor when you are confused or having course-related difficulties.

## **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

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## Assessments

Your Final Grade Distribution is as follows (subject to change):

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

## COURSE OUTLINE / CALENDAR

Week 1	Overview and Introduction
Week 2	Network Threat Landscape
Week 3	Cryptography
Week 4	Integrity, Authentication and Access Control
Week 5	Physical-Layer Security
Week 6	Transport-Layer Security
Week 7	IP Security, Wireless Networks Security
Week 8	Midterm Exam
Week 9	Spring Break
Week 10	Web/DNS/Email Security
Week 11	Network Security Defenses and Controls
Week 12	Resilient Network Topologies
Week 13	Network Security Testing
Week 14	Cloud Security
Week 15	IoT and Vehicular Networks Security
Week 16	Final Exam

## 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.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

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[https://documentation.brightspace.com/EN/brightspace/requirements/all/browser\\_support.htm](https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm)

Zoom Virtual Classroom Requirements:

<https://support.zoom.us/hc/en-us/articles/201362023-Zoom-system-requirements-Windows-macOS-Linux>

## **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](mailto: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 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>

### **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.

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## **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://inside.tamuc.edu/admissions/registrar/documents/studentGuidebook.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](#)

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

[Undergraduate Student Academic Dishonesty Form](#)

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<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](#)

<http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.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@tamuc.edu](mailto:StudentDisabilityServices@tamuc.edu)

**Website:** <https://www.tamuc.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 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.

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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 [www.tamuc.edu/counsel](http://www.tamuc.edu/counsel)

## **Department or Accrediting Agency Required Content**

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