

College of Business Administration

CIS 4346-110, CRN 80155, Applied Security

Tuesday 6:00 pm -9:00 pm

Fall 2019

Texas A&M University-Central Texas

INSTRUCTOR AND CONTACT INFORMATION

Instructor: Abhijit K Nag, Ph.D.

Office: FH 323I

Phone: (254) 519- 5437 (COBA office)

Email: Canvas **Inbox**. If Canvas is not available, email: aknag@tamuct.edu

Office Hours:

Tuesday: 2:00 pm –4:00 pm (On campus). I am also available for students on an appointment basis. Send me an email (aknag@tamuct.edu) to schedule an appointment to meet.

Mode of instruction and course access:

This course meets face-to-face, with some supplemental readings made available online using the TAMUCT Canvas Learning Management System: [<https://tamuct.instructure.com>]. All announcement regarding homework assignments, class tests, midterm/final exams will be posted in Canvas. Students are expected to access Canvas course page regularly to get any update regarding this course.

Student-instructor interaction:

Students are encouraged to send all course-related correspondence to Canvas email message. Students can meet me at regular office hour (mentioned above) or by appointment to discuss any course related issues

Warrior Shield:

Emergency Warning System for Texas A&M University-Central Texas

Warrior Shield is an emergency notification service that gives Texas A&M University-Central Texas the ability to communicate health and safety emergency information quickly via email, text message, and social media. All students are automatically enrolled in Warrior Shield through their myCT email account.

Connect to Warrior Shield by [911Cellular](https://portal.publicsafetycloud.net/Account/Login) [<https://portal.publicsafetycloud.net/Account/Login>] to change where you receive your alerts or to opt out. By staying enrolled in Warrior Shield, university officials can quickly pass on safety-related information, regardless of your location.

COURSE INFORMATION

Course Overview and description:

This course will validate and develop in-depth hands on knowledge about the operation and defense from malicious attacks. It builds on previous course work to understand rapid recovery and defense of systems from attack. Students develop knowledge about system vulnerabilities and the process of penetration of systems as a way to evaluate the security of systems. Specific topics include social engineering, malware and malicious software usage and identification, network security tool familiarization and system hardening. Prerequisite(s): CIS 4341, or CIS 4342 or approval of department chair.

Course Objective:

Student Learning Outcomes:

- Demonstrate knowledge about how to define fundamental systems and network security issues with related terminology and concepts.
- Present security breach and countermeasure technology overviews to an audience of technologists.
- Analyze legal and ethical issues involved with implementing particular security solutions.
- Identify different methods of social engineering.
- Plan design and carry out penetrations.
- Protect and defend the host systems they operate on.

Competency Goals Statements (certification or standards): None

Required Reading and Textbook(s):

Computer Security: A Hands-on Approach Edition: 2nd Edition.

Author: Wenliang Du. **ISBN:** 978-1733003933.

Note: A student of this institution is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Supplemental Material: The course textbook will be supplemented with other materials including handouts, oral presentations, software demonstration, PowerPoint presentations, etc.

COURSE REQUIREMENTS

Course Requirements:

Students are required to complete one midterm exam, one final exam/class project, eight homework assignments/lab assignments. The topic of all exams and final exam will be declared in the class. Class attendance is mandatory for this course.

In this course, we will be using Virtual Box to launch **Ubuntu Desktop** on Windows/Linux machine. The Instructor will provide the image of Linux machine. Students are required to have a **portable hard drive (with USB 3.0 port) (at least 500 GB free space available)** to store a customized Ubuntu image (multiple image files are required for this course). You are required to bring the image for lab assignments during class meeting times.

Exams

There will be one midterm and one final exam. The midterm exam will contain 200 points, and the final exam will contain 200 points. The final exam will **NOT** be comprehensive for this course. Both exams will be conducted **in class**.

Assignments

Six assignments (homework and lab assignments in total) will be given to the students. The due dates of these assignments will be posted in canvas. Each assignment will be worth **100** points.

Class Participation

Attending the class lectures is mandatory for this course. Class attendance will be counted toward class participation marks. As this course focuses on hands-on exercises in various security concepts, it is required to attend all the classes during this semester. Total class participation is worth **60** points.

Grading Criteria Rubric and Conversion

The distribution of points for various student activities and the grading scheme are mentioned below:

Student Activity	Quantity	Points	Total
Assignments	6	90	540
Midterm Exam	1	200	200
Final Exam/ Project	1	200	200
Class Participation		60	60
Total			1000

Point Range	Letter Grade
1000-900	A
899-800	B
799-700	C
699-600	D
599-0	F

Posting of Grades

All students' grade will be posted on the Canvas Grade book, and students can monitor their progress in this course using Canvas Portal. Students can expect to see their grades within two weeks of the closing of class tests, exams, and assignments. Students are expected to visit Canvas course webpage regularly to get any update regarding this course.

COURSE OUTLINE AND CALENDAR

Complete Course Calendar

The Tentative course outline is mentioned below. All assignments, class tests, midterm and final

exam due dates will be announced in the class.

Week	Date	Topic	Due
1	8-27	Introduction to Course/ Syllabus and course overview	
2	9-03	Security Lab assignments setup and Lab Environment.	
3	9-10	Cross-site scripting Attacks (Web Security)	
4	9-17		
5	9-24	SQL Injection Attacks (Database Security)	
6	10-01		
7	10-08	Packet Sniffing and Spoofing Attacks (Network Security)	
8	10-15		Midterm Exam in class
9	10-22	Local DNS Attack	
10	10-29		
11	11-05	TCP attack	
12	11-12		
13	11-19	Firewall Lab (Software Security)	
14	11-26		
15	12-03	Overview of the Security Labs	
16	12-10	Final Exam in Class	

INSTRUCTOR POLICIES

Policies related to grading

- All the assignments must be submitted before the posted deadline in Canvas Course Website unless arrangements are made beforehand.
- Assignments more than **48** hours late are subject to **20%** late penalty.
- Requests for Incomplete grades:
 - Incompletes will only be given in emergency or other extreme circumstances. Any request for an incomplete grade in this course must be approved by the course professor before **December 01, 2019**. Where possible, requests should be submitted in written form with reasons and must include an address and/or telephone number where you may be contacted throughout the following semester.
 - For a request of an incomplete grade to be considered, at least **70%** of the total coursework (**700 points**) have to be completed.
 - Finally, approval of an incomplete grade (*I*) is up to the **department chair** and college Dean.

Instructor's Personal Statement

- The instructor reserves the right to modify the course syllabus during the semester for the benefit of the students.
- The instructor reserves the right to supplement materials presented in the text with

additional course material that may help the students to understand the topic better.

- The instructor reserves the right to modify grading policy rubrics. Any Change to grading rubrics will be applied to current and possible future assignments.
- The instructor will not accept any submission of pending assignments after **December 09, 2019** for Fall 2019.

Important University Dates:

- August 26, 2019 Classes Begin for Fall Semester
- August 26, 2019 Add, Drop, and Late Registration Begins for 16- and First 8-week Classes \$25 Fee assessed for late registrants
- August 28, 2019 Deadline for Add, Drop, and Late Registration for 16- and First 8-week
- **September 2, 2019** Labor Day (University Closed)
- September 3, 2019 Deadline to Drop First 8-week Classes with No Record
- **September 11, 2019** Deadline to drop 16-week Classes with No Record
- October 1, 2019 Deadline for Teacher Education and Professional Certification Applications
- October 4, 2019 Deadline to Drop First 8-week Classes with a Quit (Q) or Withdraw (W)
- October 15, 2019 Deadline for Clinical Teaching/Practicum Applications
- October 18, 2018 Classes End for First 8-week Session
- October 18, 2019 Deadline to Withdraw from University for First 8-Week Classes (WF)
- October 21, 2019 Add, Drop, and Late Registration Begins for Second 8-Week Classes \$25 Fee assessed for late registrants
- October 21, 2019 Classes Begin for Second 8-Week Session
- October 21, 2019 Class Schedule Published for Spring Semester
- October 22, 2019 Deadline for Faculty Submission of First 8-Week Class Final Grades (due by 3pm)
- October 23, 2019 Deadline for Add, Drop, and Late Registration for Second 8-Week Classes
- October 25, 2019 Deadline for Graduation Application for Ceremony Participation
- October 28, 2019 Deadline to Drop Second 8-Week Classes with No Record
- November 4, 2019 Registration Opens for Spring Semester
- **November 8, 2019** Deadline to Drop 16-Week Classes with a Quit (Q) or Withdraw (W)
- **November 11, 2019** Veteran's Day (University Closed)
- **November 28-29, 2019** Thanksgiving (University Closed)
- November 29, 2019 Deadline to Drop Second 8-Week Classes with a Quit (Q) or Withdraw (W)
- December 13, 2019 Deadline for Applications for Tuition Rebate for Fall Graduation (5pm)
- December 13, 2019 Deadline for Degree Conferral Applications to the Registrar's Office \$20 Late Application Fee
- December 13, 2019 Deadline to Withdraw from University for 16- and Second 8-Week Classes

- **December 13, 2019** Fall Semester Ends
- December 13, 2019 Fall Commencement Ceremony
- December 17, 2019 Deadline for Faculty Submission of 16-Week and Second 8-Week Final Class Grades (due by 3pm)

TECHNOLOGY REQUIREMENTS AND SUPPORT

Technology Requirements

This course will use the A&M-Central Texas Instructure Canvas learning management system. Logon to A&M-Central Texas Canvas [<https://tamuct.instructure.com>].

Username: Your MyCT username (xx123 or everything before the "@" in your MyCT e-mail address)

Password: Your MyCT password

Canvas Support

Use the Canvas Help link, located at the bottom of the left-hand menu, for issues with Canvas. You can select "Chat with Canvas Support," submit a support request through "Report a Problem," or call the Canvas support line: 1-844-757-0953.

For issues related to course content and requirements, contact your instructor.

Other Technology Support

For log-in problems, students should contact Help Desk Central.

24 hours a day, 7 days a week:

Email: helpdesk@tamu.edu

Phone: (254) 519-5466

[Web Chat](http://hdc.tamu.edu): [<http://hdc.tamu.edu>]

Please let the support technician know you are an A&M-Central Texas student.

UNIVERSITY RESOURCES, PROCEDURES, AND GUIDELINES

Drop Policy.

If you discover that you need to drop this class, you must complete a [Drop Request Form](https://www.tamuct.edu/registrar/docs/Drop_Request_Form.pdf) [https://www.tamuct.edu/registrar/docs/Drop_Request_Form.pdf].

Professors cannot drop students; this is always the responsibility of the student. The Registrar's Office will provide a deadline on the Academic Calendar for which the form must be completed, signed and returned. Once you return the signed form to the Registrar's Office, you must go into Warrior Web and confirm that you are no longer enrolled. If you still show as enrolled, FOLLOW-UP with the Registrar's Office immediately. You are to attend class until the procedure is complete to avoid penalty for absence. Should you miss the drop deadline or fail to follow the procedure, you will receive an F in the course, which may affect your financial aid and/or VA educational benefits.

Academic Integrity.

Texas A&M University -Central Texas values the integrity of the academic enterprise and strives for the highest standards of academic conduct. A&M-Central Texas expects its students, faculty, and staff to support the adherence to high standards of personal and scholarly conduct to

preserve the honor and integrity of the creative community. Academic integrity is defined as a commitment to honesty, trust, fairness, respect, and responsibility. Any deviation by students from this expectation may result in a failing grade for the assignment and potentially a failing grade for the course. Academic misconduct is any act that improperly affects a true and honest evaluation of a student's academic performance and includes, but is not limited to, cheating on an examination or other academic work, plagiarism and improper citation of sources, using another student's work, collusion, and the abuse of resource materials. All academic misconduct concerns will be reported to the university's Office of Student Conduct. Ignorance of the university's standards and expectations is never an excuse to act with a lack of integrity. When in doubt on collaboration, citation, or any issue, please contact your instructor before taking a course of action.

For more [information regarding the Student Conduct process](https://www.tamuct.edu/student-affairs/student-conduct.html),
[https://www.tamuct.edu/student-affairs/student-conduct.html].

If you know of potential honor violations by other students, you may [submit a report](https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout_id=0),
[https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout_id=0].

Academic Accommodations.

At Texas A&M University-Central Texas, we value an inclusive learning environment where every student has an equal chance to succeed and has the right to a barrier-free education. The Office of Access and Inclusion is responsible for ensuring that students with a disability receive equal access to the university's programs, services and activities. If you believe you have a disability requiring reasonable accommodations please contact the Office of Access and Inclusion, WH-212; or call (254) 501-5836. Any information you provide is private and confidential and will be treated as such.

For more information please visit our [Access & Inclusion](https://tamuct.instructure.com/courses/717) Canvas page (log-in required)
[https://tamuct.instructure.com/courses/717].

Important information for Pregnant and/or Parenting Students.

Texas A&M University-Central Texas supports students who are pregnant and/or parenting. In accordance with requirements of Title IX and related guidance from US Department of Education's Office of Civil Rights, the Dean of Student Affairs' Office can assist students who are pregnant and/or parenting in seeking accommodations related to pregnancy and/or parenting. Students should seek out assistance as early in the pregnancy as possible. For more information, please visit [Student Affairs](https://www.tamuct.edu/student-affairs/index.html) [https://www.tamuct.edu/student-affairs/index.html]. Students may also contact the institution's Title IX Coordinator. If you would like to read more about these [requirements and guidelines](http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf) online, please visit the website [http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf].

Title IX of the Education Amendments Act of 1972 prohibits discrimination on the basis of sex and gender—including pregnancy, parenting, and all related conditions. A&M-Central Texas is able to provide flexible and individualized reasonable accommodation to pregnant and

parenting students. All pregnant and parenting students should contact the Associate Dean in the Division of Student Affairs at (254) 501-5909 to seek out assistance. Students may also contact the University's Title IX Coordinator.

Tutoring.

Tutoring is available to all A&M-Central Texas students, both on-campus and online. Subjects tutored on campus include Accounting, Advanced Math, Biology, Finance, Statistics, Mathematics, and Study Skills. Tutors are available at the Tutoring Center in Warrior Hall, Suite 111. Tutor.com tutoring **will not** offer writing support beginning August 1, 2019.

If you have a question regarding tutor schedules, need to schedule a tutoring session, are interested in becoming a tutor, or have any other question, contact Academic Support Programs at (254) 519-5796, or by emailing Dr. DeEadra Albert-Green at deeadra.albertgreen@tamuct.edu.

Chat live with a tutor 24/7 for almost any subject from on your computer! Tutor.com is an online tutoring platform that enables A&M-Central Texas students to log in and receive online tutoring support at no additional cost. This tool provides tutoring in over 40 subject areas. Access Tutor.com through Canvas.

University Writing Center.

Located in Warrior Hall 416, the University Writing Center (UWC) at Texas A&M University–Central Texas (TAMUCT) is a free workspace open to all TAMUCT students from 10:00 a.m.-5:00 p.m. Monday thru Thursday with satellite hours in the University Library Monday thru Thursday from 6:00-9:00 p.m. This semester, the UWC is also offering online only hours from 12:00-3:00 p.m. on Saturdays.

Tutors are prepared to help writers of all levels and abilities at any stage of the writing process. While tutors will not write, edit, or grade papers, they will assist students in developing more effective composing practices. By providing a practice audience for students' ideas and writing, our tutors highlight the ways in which they read and interpret students' texts, offering guidance and support throughout the various stages of the writing process. In addition, students may work independently in the UWC by checking out a laptop that runs the Microsoft Office suite and connects to WIFI, or by consulting our resources on writing, including all of the relevant style guides. Whether you need help brainstorming ideas, organizing an essay, proofreading, understanding proper citation practices, or just want a quiet place to work, the UWC is here to help!

Students may arrange a one-to-one session with a trained and experienced writing tutor by visiting the UWC during normal operating hours (both half-hour and hour sessions are available) or by making an appointment via [WConline](https://tamuct.mywconline.com/) [https://tamuct.mywconline.com/]. In addition, you can email Dr. Bruce Bowles Jr. at bruce.bowles@tamuct.edu if you have any

questions about the UWC and/or need any assistance with scheduling.

University Library.

The University Library provides many services in support of research across campus and at a distance. We offer over 200 electronic databases containing approximately 250,000 eBooks and 82,000 journals, in addition to the 85,000 items in our print collection, which can be mailed to students who live more than 50 miles from campus. Research guides for each subject taught at A&M-Central Texas are available through our website to help students navigate these resources. On campus, the library offers technology including cameras, laptops, microphones, webcams, and digital sound recorders.

Research assistance from a librarian is also available 24 hours a day through our online chat service, and at the reference desk when the library is open. Research sessions can be scheduled for more comprehensive assistance, and may take place on Skype or in-person at the library. Assistance may cover many topics, including how to find articles in peer-reviewed journals, how to cite resources, and how to piece together research for written assignments.

Our 27,000-square-foot facility on the A&M-Central Texas main campus includes student lounges, private study rooms, group work spaces, computer labs, family areas suitable for all ages, and many other features. Services such as interlibrary loan, TexShare, binding, and laminating are available. The library frequently offers workshops, tours, readings, and other events. For more information, please visit our [Library website](http://tamuct.libguides.com/index) [http://tamuct.libguides.com/index].

OPTIONAL POLICY STATEMENTS:

A Note about Sexual Violence at A&M-Central Texas

Sexual violence is a serious safety, social justice, and public health issue. The university offers support for anyone struggling with these issues. University faculty are mandated reporters, so if someone discloses that they were sexually assaulted (or a victim of Domestic/Dating Violence or Stalking) while a student at TAMUCT, faculty members are required to inform the Title IX Office. If you want to discuss any of these issues confidentially, you can do so through Student Counseling (254-501-5955) located on the second floor of Warrior Hall (207L).

Sexual violence can occur on our campus because predators often feel emboldened, and victims often feel silenced or shamed. It is incumbent on ALL of us to find ways to actively create environments that tell predators we don't agree with their behaviors and tell survivors we will support them. Your actions matter. Don't be a bystander; be an agent of change. For additional information on campus policy and resources visit the [Title IX webpage](https://www.tamuct.edu/departments/compliance/titleix.php) [https://www.tamuct.edu/departments/compliance/titleix.php].

Behavioral Intervention

Texas A&M University-Central Texas cares about the safety, health, and well-being of its

students, faculty, staff, and community. If you are aware of individuals for whom you have a concern, who are exhibiting behaviors that pose a threat to safety, or individuals causing a significant disruption to our community, please make a referral to the Behavioral Intervention Team. You can complete the [referral](#) online [https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout_id=2].

Anonymous referrals are accepted. Please see the [Behavioral Intervention Team](#) website for more information [<https://www.tamuct.edu/student-affairs/bat.html>]. If a person's behavior poses an imminent threat to you or another, contact 911 or A&M-Central Texas University Police at 254-501-5800.
