

## **CIS 5388-110, CRN 10621, WEB APPLICATIONS SECURITY**

Spring 2019

Texas A&M University-Central Texas

**Instructor:** Dr. Anitha Chennamaneni

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**Phone:** (254) 519-5463

**TAMUCT Email:** [anitha.chennamaneni@tamuct.edu](mailto:anitha.chennamaneni@tamuct.edu)

**Preferred Email:** Course Canvas Site, Inbox tool.

Alternate (if Canvas is down): [anitha.chennamaneni@tamuct.edu](mailto:anitha.chennamaneni@tamuct.edu)

**Office Hours:** **Monday** 11 am – 3 pm (Room FH 323I)

**Thursday** 11 am – 3 pm (Room FH 323I)

Other days and times by appointment only

### **Mode of instruction and course access:**

This is an independent study course that will be completed through face to face, email and phone interactions. Assignment submissions can be emailed to the professor or uploaded in canvas

**Student-instructor interaction:** Please send all course related email correspondence through Canvas Inbox Tool. Please use TAMUCT email only when Canvas is not available. I check email several times a day during the week and at least once during the weekends. I will respond within 24 hours and within 48 hours on Saturday through Sunday. Please do not hesitate to stop by my office during the scheduled office hours or contact me via phone / Canvas Conversations Tool or *TAMUCT email*, if there are any personal problems or challenges that are hindering your regular progress in the course.

### **911 Cellular:**

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

911Cellular 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 911 Cellular through their myCT email account.

Connect at [911Cellular](https://portal.publicsafetycloud.net/Texas-AM-Central/alert-management) [https://portal.publicsafetycloud.net/Texas-AM-Central/alert-management] to change where you receive your alerts or to opt out. By staying enrolled in 911Cellular, university officials can quickly pass on safety-related information, regardless of your location.

## **COURSE INFORMATION**

### **Course Overview and description:**

Study selected topics (Web Applications Security) in CIS and perform research within the

student's area of interest as directed by the responsible professor. May be repeated as topics vary for a maximum of 6 semester hours. Prerequisite(s): Varies with topic.

### **Course Level Objectives:**

- Analyze common personal online security threats and risks.
- Compare and contrast Web-based risks.
- Demonstrate an understanding of how to secure systems against the risks, threats, and vulnerabilities associated with web applications
- Describe the attributes and qualities of the software development life cycle (SDLC) and secure coding practices.
- Analyze the role and importance of audit and compliance to Web application security.
- Analyze the role and importance of quality assurance (QA) testing for Web applications.
- Explain the value and importance of vulnerability and security assessments for Web applications.
- Describe popular mobile devices and communications technologies, and their security risks.
- Identify store-and-forward and real-time communications, and the threats against them.
- Describe common areas of the IT industry and the roles each plays in creating secure environments.

### **Required Reading and Textbook(s):**

Textbook: Internet Security: How to Defend Against Attackers on the Web, Second Edition by Harwood, ISBN: 9781284090550

Note: An electronic version of the books may be available.

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.

### **Optional / Reference Texts:**

- American Psychological Association. (2009). Publication Manual of American Psychological Association (6th ed.). Washington, D.C

Purdue Online Writing Lab for APA: <https://owl.english.purdue.edu/owl/section/2/10/>

- **Supplementary Material:** The course textbook will be supplemented with other materials including handouts, oral presentations, industry articles, videos, research paper readings, case studies, power point presentations etc.

- **On-Line References TBA**
- Students preferring to use their own computers are required to have products, data encodings, file names, system structure, and products equal to those provided in the computer lab and the server used in class.
- Current publications - The campus library contains numerous books and periodicals relating to Computer Science. The student should take advantage of this resource by visiting the library.

## **COURSE REQUIREMENTS**

- **Reading Assignments:** All assigned chapters will be used as basis for class /canvas discussions. Students are expected to study the assigned readings before each class session.
- **Examinations** - There will be two exams, one midterm and one final exam. Each will be worth 200 points.
- **Homework Assignments** - There will be 3 assignments. All assignments are submitted through the Canvas course web site. All assignment submissions require a zipped copy of your assignment that allows me to unzip, open, and view the contents or other documents associated with the assignment. Please include your name and assignment identification in the zip file name (YourName\_ChX.zip). You should also note that archives such as .rar, .gz, .tar, .7z, (among others) are not zip archives. Assignment submissions failing to provide the specified naming, identification, and format will not be accepted for grading. All assignments are due on the specified due date and time. Assignments turned in after due dates are considered late. 5 points will be deducted for each day the assignment is late. Special circumstances need to be discussed with the instructor ahead of time when possible
- **Research Paper:** Each student is required to write a major paper on a topic area falling under Web Applications Security that is of interest to you. Topics must be approved by the professor by the end of fourth week. This paper must be 15 to 18 pages in length (type written and double-spaced, 12 point font with 1 inch margins) excluding bibliography, table of contents, graphics, tabular or illustrative material. References should include current sources and must conform to APA or Chicago style. The paper is expected to meet graduate-level standards and be suitable for publication in a professional journal. You should research at least 18 external references such as academic journal /conference papers, trade journals, short videos and relevant websites for your paper. At least 12 of these references must be from peer reviewed journals or conferences only. Use of Wikipedia or the class text as a reference will cause a serious loss of points. References must include the published journal name and information, NOT a URL where paper was found. Research paper is worth 300 points. A grading rubric for research paper is available in canvas and should be used as a guide when completing the paper. Late

submissions are not allowed for research paper.

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### Grading Criteria Rubric and Conversion

Assignment	Points	Percent	My Grade
Exam 1	200 points	20%	
Exam 2	200 points	20%	
Homework Assignments	300 points	30%	
Research Paper	300 points	30%	
<b>Total</b>	<b>1000 points</b>	<b>100%</b>	

89.5-100%	895-1000 points	A
79.5-89.4%	795-894 points	B
69.5-79.4%	695-794 points	C
59.5-69.4%	595-694 points	D
0-59.4%	0-594 points	F

#### Posting of Grades:

All student grades will be posted on the Canvas Grade book and students should monitor their grading status through this tool. Grades for weekly assignments, discussions, quizzes and exams will be posted within 7 days following the due date.

### COURSE OUTLINE AND CALENDAR

#### Complete Course Outline

The instructor reserves the right to make changes to this syllabus. Any changes that effect grades or grading will be made in writing.

#### Course Outline

The instructor reserves the right to make changes to this syllabus. Any changes that effect grades or grading will be made in writing.

Week	Week of:	Topic	Assignments Due
1	01/14/2019	Course Welcome, Introduction, and Expectations  Chapter 1 & Assigned Readings	Read Syllabus in-depth

2	01/21/2019	Chapter 2 & Assigned Readings	
3	01/28/2019	Chapter 3 & Assigned Readings	
4	02/04/2019	Chapter 4 & Assigned Readings	Homework Assignment 1 Due
5	02/11/2019	Chapter 5 & Assigned Readings	
6	02/18/2019	Chapter 6 & Assigned Readings	
7	02/25/2019	Chapter 7 & Assigned Readings	Homework Assignment 2 Due
8	03/04/2019	Chapter 8 & Assigned Readings	
	03/11/2019	Spring break	
9	03/18/2019	Chapter 9 & Assigned Readings	Midterm Exam Due
10	03/25/2019	Chapter 10 & Assigned Readings	
11	04/01/2019	Chapter 11 & Assigned Readings	Homework Assignment 3 Due

12	04/08/2019	Chapter 12 & Assigned Readings	
13	04/15/2019	Chapter 13 & Assigned Readings	
14	04/22/2019	Chapter 14 & Assigned Readings	Research Paper Due
15	04/29/2019	Chapter 15 & Assigned Readings	
16	05/06/2019		Final Exam Due

### Important University Dates:

01/11/2019	Deadline for Tuition and Fee Payments (16- & First 8-Week Classes)
01/14/2019	Add, Drop, and Late Registration Begins for 16- and First 8-Week
01/14/2019	Classes Begin for Spring Semester
01/16/2019	Deadline for Add, Drop, and Late Registration for 16- and First 8-Week Classes
01/21/2019	Martin L. King Jr. Day ( <i>University Closed</i> )
01/22/2019	Deadline to Drop First 8-Week Classes with No Record
01/30/2019	Deadline to Drop 16-Week Classes with No Record
02/22/2019	Student End of Course Survey Opens (First 8-Week Classes)
02/22/2019	Deadline to Drop First 8-Week Classes with a Quit (Q) or Withdraw (W)
03/01/2019	Deadline for Graduation Application for Spring Ceremony Participation
03/01/2019	Deadline for Teacher Education and Professional Certification Applications
03/08/2019	Classes End for First 8-Week Session
03/08/2019	Deadline for Spring Admissions Applications
03/10/2019	Student End of Course Survey Closes (First 8-Week Classes)
03/11/2019	Spring Break – No Class ( <i>University Open</i> )
03/11/2019	Deadline for Faculty Submission of First 8-Week Final Class Grades
03/13/2019	Spring Break – No Class ( <i>University Open</i> )
03/14/2019	Spring Break – No Class ( <i>University Open</i> )
03/15/2019	Deadline for Tuition and Fee Payments (Second 8-Week Classes)
03/15/2019	Deadline for Clinical Teaching Applications
03/15/2019	Spring Break – No Class ( <i>University Open</i> )
03/18/2019	Add, Drop, and Late Registration Begins for Second 8-Week Classes
03/18/2019	Classes Begin for Second 8-Week Session
03/20/2019	Deadline for Add, Drop, and Late Registration for Second 8-Week Classes
03/25/2019	Deadline to Drop Second 8-Week Classes with No Record
04/01/2019	Deadline for GRE/GMAT Scores to Office of Graduate Studies
04/05/2019	Deadline to Drop 16-Week Classes with a Quit (Q) or Withdraw (W)
04/12/2019	Deadline for Final Committee-Edited Theses with Committee Approval
04/26/2019	Student End of Course Survey Opens (16- and Second 8-Week Classes)
04/26/2019	Deadline to Drop Second 8-Week Classes with a Quit (Q) or Withdraw (W)

## **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](mailto: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.*

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## **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](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://tamuct.campuslabs.com/engage/organization/tamuct-student-conduct-panel),  
[<https://tamuct.campuslabs.com/engage/organization/tamuct-student-conduct-panel>].  
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](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 at (254) 519-5797. Any information you provide is private and confidential and will be treated as such.

For more information please visit our [Access & Inclusion](https://www.tamuct.edu/student-affairs/access-inclusion.html) web page  
[<https://www.tamuct.edu/student-affairs/access-inclusion.html>].

### **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 the [Student Affairs](https://www.tamuct.edu/student-affairs/index.html) web page  
[<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 online](http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf), 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.

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](mailto: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 FREE online tutoring and writing support. 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-on-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 [WCOonline](#). In addition, you can email Dr. Bruce Bowles Jr. at [bruce.bowles@tamuct.edu](mailto: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].

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## **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].

## **INSTRUCTOR POLICIES.**

The instructor reserves the right to make changes to this syllabus during the course of the semester for the benefit of the students. Any changes that effect grades or grading will be made in writing.

Instructor reserves the right to supplement the material presented in the text with additional material including handouts, oral presentations, industry articles, videos, research paper readings, case studies, power point presentations etc. for the benefit of the students

All work is submitted through Canvas and due on the specified due date/time. Work turned in after due date is considered *late*. 5 points will be deducted for each day the assignment is late. Special circumstances need to be discussed with me ahead of time when possible. Missed assignments, projects, and examinations will receive a grade of zero.

Any work not submitted in the proper format is rejected and receives no credit.

Incidents of violations of academic integrity, such as plagiarism or turning in the work of others as your own work, will result in a cap on the maximum number of points that can be earned in this class. The cap will be 600 points resulting in a best case grade of "D" for the class.

At all times in the class, please observe proper rules of netiquette in your oral and written communication and conduct yourself in a professional manner

**The Operation of the Online Course and Being an Online Student.** Online learning requires students to be very self-disciplined and demands regular and consistent participation in the class. Please read the document posted on Canvas on what makes a successful online student. Be sure you understand and are prepared to comply with all required class assignments and deadlines. If you are not able to comply, for any reason, you must contact me immediately.

**Copyright Notice.**

Students should assume that all course material is copyrighted by the respective author(s). Reproduction of course material is prohibited without consent by the author and/or course instructor. Violation of copyright is against the law and Texas A&M University-Central Texas' Code of Academic Honesty. All alleged violations will be reported to the Office of Student Conduct.