Information Assurance

Course Description

An introduction to the various technical and administrative aspects of Information Security and Assurance. This course covers the basic notions of confidentiality, integrity, availability, authentication models, protection models, secure programming, audit, intrusion detection and response, operational security issues, physical security issues, personnel security, policy formation and enforcement, access controls, information flow, legal and social issues, classification, trust modeling, and risk assessment. Fall.

Learning Objectives

Upon successful completion of this course, the student will be able to:

- Identify and prioritize information security issues.
- Identify and prioritize threats to information security.
- Define and analyze information security models and strategies.
- Structure intrusion detection systems
- Analyze and describe general cryptographic techniques.
- Describe legal and public relations implications of security and privacy issues.
- Present a security management plan for information assets of a large enterprise

Major Course Requirements

Grading Policy

- Mid-term exam 40%
- Assignments 20%
- Final Exam 40%

Required or Recommended Readings


Course Policies
**Incompletes:** An incomplete will **only** be granted in the case of serious illness. Written proof of the illness and a recommendation for an incomplete will be required from both the Dean of Students office as well as from a doctor. A grade of incomplete is never issued to give a student more time to complete assignments or improve a grade. The final determination as to whether or not an incomplete should be issued rests solely with the professor.

**Policies**

**Attendance and Preparation Expectations and Policies**

1. Class attendance is essential to success in this course.
2. Materials will only be handed out in class.
3. A minimum of 2 hours of preparation for each hour of lecture should be the norm.
4. Assigned readings should be completed before class. Questions from readings should be brought up in class.
5. If you don't attend class regularly, please don't expect individual help.
6. Quality note taking is essential to success in this course.
7. Seek help early. Don't wait until poor performance on exams.
8. Assigned readings are assumed to be completed as scheduled. Expect a quiz every class period on assigned readings and you will never be surprised.
9. Lab and class attendance is mandatory. There are NO excused absences.

**Courtesy Expectations**

1. Please be in class on time. Late students disrupt class. If you arrive late to class please enter from the rear of the classroom.
2. Talking or passing notes to other students in the classroom distracts both the instructor and your fellow students.
3. Finally, if you prefer to sleep or read newspapers, do not come to class.

**Quiz and Exam Policies**

1. Quizzes may be either take-home or in-class. Take home quizzes will only be available in class. If you don't get a take home quiz, your grade is 0. In-Class quizzes are usually short and given during the first 3 to 5 minutes of class. If you're late to class, your grade is 0.
2. There are no make-up quizzes under any circumstances for any reason.

**Homework Policies and Quality Expectations**

1. All assignments or take home quizzes are due by e-mail at the beginning of the class period.
2. Late assignments will be penalized as follows: 2 points per hour late.

**Re-Grading Policies**

1. Any student wishing to appeal a score should return his/her assignment or exam with a written statement explaining his/her appeal. An appeal must be submitted no later than one week after the student received the original score (scores posted).
2. Any work submitted for grade appeal may be **totally** re-graded, not merely those portions which the student wishes to be re-graded.
3. Discussion of corrected exams or quizzes may be done during any office hour or by appointment.

Cell Phone/Electronic Device Usage – Must turn them off

Academic Integrity/Plagiarism.

University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.)

1. Students are encouraged to discuss their assignments with others. However, the assignment which is turned in must have been produced by the student him/herself and cannot be a collaborative effort unless specifically assigned as such by the instructor. Any deviation from the preceding may result in a grade of F for the course and possibly additional severe disciplinary actions. (See your student handbook for more information)

2. Possession of cheat sheets or crib notes of any type in examinations shall constitute academic dishonesty and will be dealt with in a similar manner.

3. During examinations, all personal possessions other than pencils and erasers are to be left at the front of the room.

Dropping a Class

I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class.

Preferred methods of scholarly citations

Classroom/professional behavior

Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

GRADE APPEALS

A student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is on the student to demonstrate the appropriateness of the appeal. A
Student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details on the process, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, consult Texas A&M University-Corpus Christi University Procedure 13.02.99.C2.01 Student Grade Appeal Procedures (http://www.tamucc.edu/provost/university_rules/index.html), and the College of Science and Engineering Grade Appeals webpage (http://sci.tamucc.edu/students/GradeAppeal.html). For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school or the College of Science and Engineering Dean’s Office.

Disabilities Accommodations*

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 believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Driftwood 101.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

*Required by SACS

Syllabus
(course outline)

Week 1  Role and types of security
Week 2  Basic definitions: Decidability of safety and security
Week 3  Protection models
Week 4  Security policy formulation
Week 5  Bell-LaPadula model and other formal policy models
Week 6  Information flow
Week 7  Authentication and identity
Week 8  Midterm Exam
Week 9  Secure design principles
Week 10  Least-privilege
Week 11  Risk analysis and system verification
Week 12  Certification issues
Week 13  Trusted computing systems
Week 14  Basic network security issues and techniques
Week 15  Fundamentals of software mechanisms for security
Week 16  Final Exam