

## CSF 430 - Introduction to Information Assurance Fall 2015

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### **Course Description:**

This course provides an introduction to information assurance. It covers fundamental concepts necessary to understand the threats to security as well as various defenses against those threats. The material includes an understanding of existing threats, planning for security, technology used to defend a computer system and implementing security measures and technology.

### **Required Textbook:**

*Principles of Information Security, 5E* by Michael Whitman and Herbert Mattford, Course Technology, Cengage Learning, 2015.

### **Supplemental Readings:**

In order to keep current with the constantly changing field of computer security and information assurance, several supplemental readings will be assigned throughout the semester.

### **Learning Outcomes:**

Upon successful completion of this course, students should be able to:

- Define key terms and concepts of information assurance.
- Identify various threats, attacks and vulnerabilities to a computer system.
- Describe legal and ethical issues of information security.
- Identify, analyze and manage risk in a computer system and an organization.
- Develop contingency and continuity plans.
- Identify various technical approaches to access control, intrusion detection and incident response.
- Plan and implement basic security policies and technologies.

### **Assignments:**

The following are the expected assignments for the course. Detailed instructions will be made available on the course web site.

- Reading Assignments:
  - Textbook and supplemental readings are assigned weekly and students are expected to read the material prior to the class meeting in which it will be discussed.
- Quizzes:
  - Weekly quizzes to demonstrate understanding of the concepts discussed in class will be administered at the beginning of the following week.
- Homework Assignments:
  - Weekly or bi-weekly assignments to practice skills discussed in class.
- Group project:
  - A project proposed by groups of 2 or 3 students will be assigned at the beginning of the semester. It will consist of several stages, including a proposal stage, several intermediate reports, and a final report.

- Each student will be expected to participate equally based on the skillset of the individuals in the group.
- Research paper:
  - A 8-10 page paper on a relevant topic will be assigned to each student. It will be due at the end of the semester.
- Class Discussions:
  - Class discussions of timely security-related topics are an important part of the course. Each week, the instructor will provide topics to discuss in addition to the weekly readings.
- Exams:
  - A midterm exam and a final exam will be administered and will each cover approximately half of the course material.

**Topics:**

This schedule is subject to change. Any changes will be posted at least two weeks ahead of time.

Week	Topics	Readings	Assignments
1: 9/14	Overview of Information Assurance	Ch 1	
2: 9/21	The need for security: threats, attacks, and assets	Ch2	<i>Research Paper Proposal due</i>
3: 9/28	Legal and ethical issues of information security	Ch 3	<i>Group Case Study: Proposal</i>
4: 10/5	Risk management	Ch 5	
5: 10/12	Security policy, standards and practices Security plans Security education	Ch 4	<i>Group Case Study: Risk Management Report</i>
6: 10/19	Contingency plans Continuity plans	Ch 4	
7: 10/26	Midterm	Chs 1-5	
8: 11/2	Access Control	Ch 6	
9: 11/9	Intrusion detection	Ch 7	<i>Group Case Study: Security Plan</i>
10: 11/16	Cryptography	Ch 8	
11: 11/23 & 12: 11/30	Physical security Information security project management Security certification and accreditation Organizational culture and security	Ch 9 & 10	<i>Research Paper due</i>
13: 12/7	Security and personnel Security maintenance	Ch 11 & 12	<i>Group Case Study: Final Report</i>

**Grading Policy:**

Grades will be assigned based on the following weights:

Quizzes	15%
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Group project	15%
Homeworks	15%
Research paper	10%
Discussions	15%
Midterm exam	15%
Final exam	15%

### **Course Policies:**

- Class participation is required and is considered in the final grade. Participation is measured by participation in class discussions.
- Late work will not be accepted unless prior approval is granted. Make-up work for excused absences will be worked out with the instructor.
- Certain assignments in the course are meant to be done in groups, in which case collaboration is encouraged. On projects that are designed for individual assessment, students will be expected to work on their own. In all cases the University's plagiarism policy will be strictly enforced. Consult the URI Student Handbook for more information about Academic Honesty:
  - <http://www.uri.edu/judicial/Student%20Handbook/htmlStart.html>.
- Students with disabilities are encouraged to meet with the instructor to discuss any necessary accommodations.

### **Other Useful Resources:**

- For assistance with writing projects, students are encouraged to visit the Writing Center (<http://www.uri.edu/artsci/writing/center/index.shtml>).
- For more information about Information Assurance you can visit the following web sites:
  - Committee on National Security System (CNSS) <http://www.cnss.gov/>
  - United States Computer Emergency Readiness Team (US-CERT) <http://www.us-cert.gov>
  - Information Assurance Directorate of the National Security Agency (IAD) <https://www.iad.gov/iad/index.cfm>
  - National Information Assurance Partnership (NIAP) <http://www.niap-ccevs.org/>