Principles of Information System Security

Overview

This course examines enterprise information systems security principles. These principles are examined within operational, technical, and administrative contexts. Specific operational issues include disaster recovery, physical security, and operations management. Specific technical issues include networking, cryptography, and trusted computing. Specific administrative issues include risk assessment, evaluation, and management. Security policies, procedures, and guidelines as well as business continuity planning are all examined here. Related issues include enterprise security's legal and regulatory context.

Class activities are augmented with laboratory activities. Lab activities make use of Open Source Tools and LiveCD based security toolkits. 'Hands on' activities provide students with the opportunity to apply security principles. Laboratory activities focus on four areas: trusted systems, network and system maintenance/monitoring, applied cryptography, and security assessment and evaluation.

Learning Objectives

At the end of this course, students will be able to:

- Draw and explain major enterprise security models
- Define relevant terms including vulnerability, threat, and risk.
- Explain how security relates to the mission of an organization
- Define three access control models.
- Describe security policy and related issues including guidelines, procedures, and standards.
- Explain how risk analysis and risk management relate to Information Assurance.
- Articulate possible risk responses.
- Define telecommunication/LAN vulnerabilities, threats, risks, and controls.
- Define, compare and contrast Disaster Recovery and Business Continuity Planning
- Identify security issues related to personnel decisions, and qualifications of security personnel.
- List and explain ISC^2's ten security domains.
- Articulate and explain basic enterprise security assessment and evaluation methodologies.
- Within a security context, define and explain ethics.

Textbooks

Required

Whitman and Shackleford; Hands-On Information Security Lab Manual; Thomson Learning: Custom Publishing. 4 March 05 ISBN: 0-619-21631-X

Recommended *(Not required)*

Bishop, Computer Security: Art and Science, Addison-Wesley, 2002. ISBN: 0201440997

Krutz and Vines, The CISSP Prep Guide, Wiley, 2001. ISBN: 0-471-41356-9

Rankin, K, Knoppix Hacks, O'Reilly, 2005. ISBN: 0-596-00787-6

Note *Recommended texts don't need to be purchased. Required text will be supplemented with instructor notes and outside readings.*

Online Resources

csrc.nist.gov/publications/nistpubs/800-30/sp800-30.pdf
http://www-130.ibm.com/developerworks/linux/

Grading

Final grades determined through a weighted average that is projected to include examinations, projects, and activities.

Exam(s)	45%
Project	15%
Lab Narratives	15%
Online Journal	10%
Quizzes/Class/Activities	15%

Projects/Activities/Journals

Class participation, that is, the active engagement in questions and answers, taking part in analyses, and contribution of comments in class sessions, is expected from all students. This term, there will be one major project. There will be the frequent class discussions. There will also be frequent Labs or other "Hands On" activities. Students that cannot be present for these discussions and activities should drop the class.

Class Meetings

Attendance is expected at all class meetings. Class activities are participatory activities. That is, students in class participate in these activities. Students not in class do not participate and cannot make up these activities.

Exams

Arrangements for missing an exam must be made prior to the day of the exam.

Note Makeup exams are **not** an option.

Class Interruptions

During class, mobile phones and pagers must have their audible alarms turned off. Failure to observe this rule can have a negative impact.

Class	Intro to Information Systems Security
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Instructor	**Office**
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