

CIS 4360: INTRODUCTION TO COMPUTER SECURITY

Florida A&M University
Computer and Information Sciences
College of Arts & Sciences

Course Prerequisite: Computer Science major or permission of the instructor

Required Textbook: M. Whitman and H. Mattord. *Principles of Information Security, 4th Edition* (Course Technology, 2012). [ISBN: 1-111-13821-4]

Course Websites: <http://famu.blackboard.com> (Course Material & practice exercises)

Course Description: An introduction to the various technical and administrative aspects of information security and assurance. This course provides the foundation for understanding the key issues associated with protecting information assets, determining the levels of protection and response to security incidents, and designing a consistent, reasonable information security system, with appropriate intrusion detection and reporting features.

The purpose of the course is to provide the student with an overview of the field of information security and assurance. Students will be exposed to the spectrum of security activities, methods, methodologies, and procedures. Coverage will include inspection and protection of information assets, detection of and reaction to threats to information assets, and examination of pre- and post-incident procedures, technical and managerial responses, and an overview of the information security planning and staffing functions.

Course Objectives: After completing the course, students will be able to:

- Identify and prioritize information assets
- Identify and prioritize threats to information assets
- Define an information security strategy and architecture
- Plan for and respond to intruders in an information system
- Describe legal and public relations implications of security and privacy issues
- Present a disaster recovery plan for recovery of information assets after an incident

POLICIES:

Attendance:

The instructor expects your attendance at each and every class. Attendance will be checked on a daily basis. In accordance with the University's policy, **more than one unexcused class absence per credit hour of a course can result in your dismissal from the course with a grade of F.** Grade performance is a demonstrated function of attendance, preparation, and participation. You can get behind very easily by skipping classes, resulting in a poor understanding of the material, which will show up as a poor grade for the class. Any class sessions missed by the student are the student's responsibility to make up, not the instructor's. Late arrival that causes disruption, early departure that causes disruption, excessive conversation among students (a disruption in its own right), inappropriate use of electronic devices that cause disruptions and other actions that disrupt the classroom are unacceptable.

Assessment:

Quizzes	10%
Exam 1	15%
Exam 2	15%
Exam 3	15%
Final Exam	10%
Assignments	15%
Projects/Presentations	20%
	100%

Grade Evaluation:

A	90% - 100%
B	89% - 80%
C	79% - 70%
D	69% - 60%
F	59% or below

Evaluation criteria explained:

- Students are expected to be active participants in each class meeting. Students are expected to regularly ask questions, share observations, and contribute relevant personal experiences.
- The exams will consist of objective questions and will require a technological comprehension that covers the lecture material and assigned readings.
- The assignments will consist of a number of individual in-class and homework tasks. Students will be given specific guidance on the amount of collaboration permitted for each assignment. Unless otherwise specified, all assignments are individual assignments, and thus must be completely the original work of the student submitting them and include proper citations to the published work of others. (Refer to the *Academic Integrity Statement* section of the syllabus for additional guidance.)

Quizzes:

Quizzes will be given throughout the semester. Quizzes will always cover the material covered since the last quiz or exam and any material the student is responsible for. The quizzes will be combinations of objective and short-answer questions. Makeup quizzes will not be given. Any class material missed by the student is the student's responsibility to acquire.

Exams:

There will be three (3) noncumulative examinations. The content will come from the text and other material presented in lecture sessions as well as labs. Note that material presented in class and in lab will supplement the assigned reading. Therefore, class attendance and good note taking are essential tactics for success.

There will be no make-up examinations. It is the student's responsibility to arrange for an excused absence **before** the exam. A grade of zero will be assigned for all exams missed without an excused absence. If an emergency arises on the day of the exam, and the instructor deems that the absence is excused, then the weight of the final exam may be increased to replace the exam.

Enrollment Policy:

Only those students who are enrolled in the class may attend lectures, receive assignments, take quizzes and exams, and receive a grade in the class. If a student is administratively withdrawn from this course, he or she will not be permitted to attend class, nor will they receive any grade for the class.

E-mail Messages:

Remember to put the course name and section number in the subject field of every e-mail message that you send the instructor.

Lab Assignments:

Numerous Lab sessions and accompanying assignments are due throughout the term. Details and due dates are available on the course website (<http://famu.blackboard.com>). Each lab assignment is weighted equally.

No lab make-up sessions are available, and late assignments **will not be accepted!** If you are unable to arrive at the lab on time on the day of the lab session and must then perform the lab work on your own, you are responsible for turning in the lab assignment on time. You may turn the assignment in early. Please adhere to lab submission requirements for each lab.

General Assignments:

General assignments are due throughout the term. Details and due dates for these assignments are available on the course website (<http://famu.blackboard.com>). Each of the assignments are weighted equally. Late assignments **will not be accepted!** You may turn the assignment in early.

White Hat Agreement and Code of Ethics

This document provides further guidelines for the course exercises. If you have questions about any of these guidelines, please contact the course instructor. When in doubt, the default action should be to ask the instructor.

- 1) ANY data that is stored outside of the course accounts can be used only if it has been explicitly and intentionally published, (e.g., on a Web page), or if it is in a publicly available directory, (e.g., /etc, /usr).
- 2) Social engineering for information about individuals from anyone outside of the course is disallowed.
- 3) Impersonation, e.g., forgery of electronic mail, is disallowed.
- 4) If you discover a way to gain access to any account other than your own (including root), do NOT access that account, but immediately inform the course instructors of the vulnerability. If you have inadvertently already gained access to the account, IMMEDIATELY exit the account and inform the course instructors.
- 5) All explorations should be targeted specifically to the assigned course accounts. ANY tool that indiscriminately explores noncourse accounts for vulnerabilities is specifically disallowed.
- 6) Using the Web to find exploration tools and methods is allowed. In your reports, provide full attribution to the source of the tool or method.
- 7) If in doubt at all about whether a given activity falls within the letter or spirit of the course exercise, discuss the activity with the instructor BEFORE exploring the approach further.
- 8) You can participate in the course exercise only if you are registered for a grade in the class. ANY violation of the course guidelines may result in disciplinary or legal action.

White Hat Agreement
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Computer and Information Sciences
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Code of Ethics Preamble: (Source: www.isc2.org Code of ethics)

Safety of the commonwealth, duty to our principals, and to each other requires that we adhere, and be seen to adhere, to the highest ethical standards of behavior.

Therefore, strict adherence to this code is a condition of laboratory admission.

Code of Ethics Canons:

Protect society, the commonwealth, and the infrastructure.

Act honorably, honestly, justly, responsibly, and legally.

Provide diligent and competent service to principals.

Advance and protect the profession.

The following additional guidance is given in furtherance of these goals.

Protect society, the commonwealth, and the infrastructure

Promote and preserve public trust and confidence in information and systems.

Promote the understanding and acceptance of prudent information security measures.

Preserve and strengthen the integrity of the public infrastructure.

Discourage unsafe practice.

Act honorably, honestly, justly, responsibly, and legally

Tell the truth; make all stakeholders aware of your actions on a timely basis.

Observe all contracts and agreements, express or implied.

Treat all constituents fairly. In resolving conflicts, consider public safety and duties to principals, individuals, and the profession in that order.

Give prudent advice; avoid raising unnecessary alarm or giving unwarranted comfort. Take care to be truthful, objective, cautious, and within your competence.

When resolving differing laws in different jurisdictions, give preference to the laws of the jurisdiction in which you render your service.

Provide diligent and competent service to principals

Preserve the value of their systems, applications, and information.

Respect their trust and the privileges that they grant you.

Avoid conflicts of interest or the appearance thereof.

Render only those services for which you are fully competent and qualified.

Advance and protect the profession

Sponsor for professional advancement those best qualified. All other things equal, prefer those who are certified and who adhere to these canons. Avoid professional association with those whose practices or reputation might diminish the profession.

Take care not to injure the reputation of other professionals through malice or indifference.

Maintain your competence; keep your skills and knowledge current. Give generously of your time and knowledge in training others.

As part of this course, you may be exposed to systems, tools, and techniques related to information security. With proper use, these components allow a security or network administrator to better understand the vulnerabilities and security precautions in effect. Misused, intentionally or accidentally, these components can result in breaches of security, damage to data, or other undesirable results.

Since these lab experiments will be carried out in part in a public network that is used by people for real work, you must agree to the following before you can participate. If you are unwilling to sign this form, then you cannot participate in the lab exercises.

Student agreement form:

I agree to:

- only examine the laboratory resources for privacy vulnerabilities (if applicable)
- report any security vulnerabilities discovered to the course instructors immediately, and not disclose them to anyone else
- maintain the confidentiality of any private information I learn through the course exercise
- actively use the laboratory resources with the understanding that its contents and actions may be discovered by others
- hold harmless the course instructors and Florida A&M University for any consequences of this course
- abide by the computing policies of Florida A&M University and by all laws governing use of computer resources on campus

I agree to NOT:

- attempt to gain root access or any other increase in privilege on any Florida A&M University workstation
- disclose any private information that I discover as a direct or indirect result of this course exercise
- take actions that will modify or deny access to any data or service not owned by me
- attempt to perform any actions or use utilities presented in the laboratory outside the confines and structure of the labs
- utilize any security vulnerabilities beyond the target accounts in the course or beyond the duration of the course exercise
- pursue any legal action against the course instructors or Florida A&M University for consequences related to this course

Moreover, I consent for my course accounts and systems to be examined for security and privacy vulnerabilities by other students in the course, with the understanding that this may result in information about me being disclosed (if applicable).

The above agreement has been explained to me to my satisfaction. I agree to abide by the conditions of the Code of Ethics and of the White Hat Agreement.

Course & Semester

Instructor Name

Print Name

Signature

Date

Acknowledgment and Acceptance of Academic Integrity Statement:

In any academic community, certain standards and ethical behavior are required to ensure the unhindered pursuit of knowledge and the free exchange of ideas. Academic honesty means that you respect the right of other individuals to express their views and opinions, and that you, as a student, not engage in plagiarism, cheating, illegal access, misuse or destruction of college property, or falsification of college records or academic work.

As a member of the University academic community, you are expected to adhere to these ethical standards. You are expected to read, understand, and follow the code of conduct as outlined in the graduate and undergraduate catalogs. You need to be aware that if you are found guilty of violating these standards, you will be subject to certain penalties as outlined in the college judiciary procedures. These penalties include permanent expulsion.

Read the Academic Integrity Statement and then sign and date in the space below. You are required to abide by these ethical standards while you are a student. Your signature indicates that you understand the ethical standards expected of you in this academic community, and that you understand the consequences of violating these standards.

Course & Semester

Instructor Name

Print Name
Print Name

Signature

Date