Prerequisite: CIS 4360 – Introduction to Computer Security and COP 3530 (Must have passed with a “C” or better – No Exceptions!)

Textbook: "Guide to Network Defense and Countermeasures," 2nd EDITION by Randy Weaver (MANDATORY)

Course Websites: http://famu.blackboard.com (Course related information & resources.)

Grading: The numeric grades made on tests and the final exam will be used to compute both a straight average and a weighted average. The higher of the two averages will determine the letter grade assignment.

<table>
<thead>
<tr>
<th>EXAMS</th>
<th>60%</th>
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<tbody>
<tr>
<td>Midterm #1</td>
<td>20%</td>
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<tr>
<td>Midterm #2</td>
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<tr>
<td>Final</td>
<td>20%</td>
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<tr>
<td>ASSIGNMENTS and PROJECTS</td>
<td>40%</td>
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<tr>
<td>Assignments and quizzes</td>
<td>15%</td>
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<tr>
<td>Labs</td>
<td>10%</td>
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<tr>
<td>Workshop&amp;Projects</td>
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Grading Scale: 90-100 A  80-89 B  70-79 C  60-69 D  0-59 F

**Weights may be reassigned.**

Course Objectives: The goal is to cover the theoretical and practical aspects of network security. This course will provide students with the understanding of what is computer/ network security, the technologies involve and the current solutions to certain threats. This course will provide students up to date information on network-based and internet-based security applications. Upon completing this course, students should be able to: Understand threats and sources of attacks in network security and understand the limitation of the current security technology and able to choose proper security mechanism given types of network and threats involve. Be able to design and implementation security measures based on requirements and identify and investigate threats to network security

Evaluation criteria explained:
- Students are expected to be active participants in each class meeting. Students are expected to ask questions, share observations, and contribute relevant personal experiences.
- 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.

Tests and Exams: Tests and exams will always be announced in advance. **NO MAKEUPS WILL BE GIVEN MISSED TESTS!** However, (at the discretion of the instructor), a test in the form of a single comprehensive test of the type missed could be given at the end of the semester. (An official and acceptable excuse must be obtained
from the Dean's Office). Since tests/exams are prescheduled and reviews precede them, every attempt should be made to take them at the scheduled time. Also, **TESTS WILL SOMETIMES CONTAIN MATERIAL FROM THE LAB ASSIGNMENTS; THEREFORE, YOU MUST DO THE LAB ASSIGNMENTS YOURSELF AND DO THEM IN A TIMELY MANNER!!**

**Attendance:**

Class attendance is mandatory. Attendance will be checked on a daily basis. In accordance with the University's policy, more than three (3) unexcused absences could result in your being dropped from the course. Even with excused absences, you will be held responsible for the material covered in class during your absence and all assignments that are due. Every attempt should be made to be present to take tests when they are given. There will be **NO MAKEUPS FOR INDIVIDUAL TESTS** and (at the discretion of the instructor) **ONLY A SINGLE COMPREHENSIVE TEST/EXAM** of the type you missed will be given at the end of the semester to replace missed tests.

**Incomplete:**

An incomplete grade will be given only if you are passing the class and some unforeseen event (e.g. extended illness) hinders your completion of the course. If an incomplete is granted, a contract concerning completion of the course must be agreed to by the instructor and the student.

**Electronic Devices:**

In order to minimize the level of distraction, all watches, beepers and cellular phones must be on quiet mode during class meeting times. Students who wish to use a computer/PDA for note taking need prior approval of the instructor since key clicks and other noises can distract other students. Recording of lectures by any method requires prior approval of the instructor.

**Students with special needs:**

If you have a physical, psychological, medical or learning disability that may impact on your ability to carry out assigned course work, those students must first register with the Office of special programs (850-599-3541). This office will provide the student with the documentation that the student should provide to the instructor prior to needing accommodation.

**Assignments:**

Assignments will be of three types: **Reading, Homework and Lab**

**Reading Assignments** will come from the textbook and handouts provided by the instructor. Since this course provides extensive information on the concepts, skills and issues relevant to database technology, it is important that ALL reading assignments be read THOROUGHLY! Also, tests and exams will contain material from the readings and exercises from the textbook, handouts.

**Homework Assignments** are paper and pencil assignments which will sometimes consist of exercises at the end of a chapter in the textbook and other times be given as handouts. Most often, these assignments will be provided to re-enforce the concepts and provide application of these concept prior to a test. Sometimes, they will represent the preparation for a lab assignment.

**Laboratory Assignments** are generally provided one week before the assignments are due. Your completed laboratory report must be submitted at the beginning of class. No work will be accepted late. Lab assignments will cover topics from assigned readings.
Project:
To provide practice in the analysis, design and implementation steps of the network security development process, a project will be assigned during the semester. This is a group assignment but individual grades will be determined from the test on the project and the points each group for the final set of deliverables, will be added to the test score.

MAPPING TO DEPARTMENTAL ACADEMIC LEARNING COMPACTS:
The mission of the Computer and Information Sciences department at FAMU is to develop strong, technically equipped graduates with the following skills and abilities:

1) **Students will be able to demonstrate the acquisition of critical thinking skills by:**
   - Exhibiting expertise in the main content knowledge of computer science:
     - Fundamentals of programming
     - Discrete structures
     - Operating systems
     - Systems analysis and development
     - Database management
     - Computer Science project development
   - Designing and implementing computerized solutions by applying fundamental programming skills and knowledge of data structures and algorithms
   - Demonstrating proficiency in software lifecycle principles, using a range of problem-solving, programming, and software engineering techniques

2) **Students will be able to demonstrate strong technical communication skills by:**
   - Effectively articulating a technical strategy, both orally and in writing
   - Effectively creating and delivering effective oral and poster presentations

3) **Students will be able to demonstrate an knowledge of the social and ethical issues of the computer science field by:**
   - Recognize ethical issues in computing contexts
   - Articulate the responsibilities of a computing professional
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<tr>
<th>WEEK</th>
<th>TOPICS</th>
<th>Reading/Assignments**</th>
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<td>Course Overview</td>
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<td>Encryption</td>
<td>Handout</td>
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<td>4-5</td>
<td>Designing a network Defense</td>
<td>Chapters 2</td>
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<td>6-7</td>
<td>Choosing and Designing Firewall</td>
<td>Chapter 4</td>
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<td>8-10</td>
<td>configuring a firewall</td>
<td>Chapter 5</td>
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<td>11-13</td>
<td>Intrusion detection</td>
<td>Chapter 8, 9 and 10</td>
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<td>14</td>
<td>Students presentation their term project</td>
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<td>15</td>
<td>Final Exam –</td>
<td>Thursday, Dec. 9 7:30am—9:30am</td>
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