CIS 3360 Security in Computing
Syllabus for Spring 2011
Class schedule: Mon, Wed, 12:30 AM– 1:45 PM, Room 103 in HEC

Instructor: *Dr. Jaruwan Mesit*, jmesit@eecs.ucf.edu, Room 328 in HEC Office Hours: Mon, Wed 2:30 – 4:00 PM, Fri 10:30 -11:20 AM, or by appointment	**TAs:** *Daniel Mota*, motadan@gmail.com Office Hours: Mon and Tue 6:00 – 7:00 PM Room 308 in HEC *Scott Beck*, scott.beck@knights.ucf.edu Office Hours: Thu 12:00 – 2:30 PM Room 308 in HEC
Course Details: The security in computing is concerned with protecting the information, the systems and hardware that use, store and transmit that information.	**Catalog Description:** Security theory. Legal and human factors, Malware, Intrusion patterns and tools, Windows, Unix, TCP/IP, and applications vulnerabilities. Detection. Policies and enforcement, Protection and assurance.

Pre-requisites: COP 3223, or EGN 3211 or CET 2364 (C programming)

Course Objectives:
Understand the Internet, Computer Networks, Computer Architecture and Operating Systems (provide enough background so that you have an understanding about attacks and prevention against attacks)

- Learn about attacks on computer systems
- Measures adopted to prevent these attacks
- Legal and ethical issues of using and misusing computer networks, program and information

Textbooks:

- **Required Textbook:** *Security in Computing* by C. Pfleeger and S. Pfleeger, Fourth Edition, Prentice Hall, Inc., 2007, (ISBN: 0 -13-239077-9)
- **Reference Books:** *Introduction to Computer Security* by Matt Bishop, Addison Wesley, 2005, (ISBN: 0-321-24744-2); *Computer Networking* by James Kurose and Keith Ross, 5th Edition, Addison Wesley, 2010, (ISBN: 0-13-607967-9)

Tentative Topics:

Segment I

- Introduction to Computer Security (Chapter 1)
- Internet and overview of Computer Networks (Chapter 7)
- Threats and vulnerabilities (Notes & reference book)
- Number Systems and Modular Arithmetic
- Overview of Cryptography for Secure Communication (Chapters 2 & 12)

Segment II

- Introduction to Computer Architecture, Assembly language and Operating Systems (Class notes)
- Program Security, Viruses and Malicious Code (Chapter 3)
- Protection in Operating Systems (Chapter 4)

Segment III

- Legal and Ethical Issues (Chapter 11)
- Overview of Security in Database and Networks (Chapters 6 & 7)
- Administering Security (Chapter 8)

Tentative Assignments and Grading Breakdown:

- Eight homework assignments : 20%
- One programming assignment: 5%
- Exam 1 (one week before withdrawal date): 20%
- Exam 2: 25%
- Final Exam: 30%

Note: +/- grades may be given in this course if deemed appropriate

Special Notes:

- No Late programming assignment will be accepted. Students will submit assignments on WebCT.
- For making up examination, there must be valid reason and should be discussed before the exam.

Academic Dishonesty Policy:

Cheating on examinations or other serious forms of academic dishonesty will result in a grade of "F" (and a required report to University officials). Persons "borrowing" someone else's work on an assignment will receive a zero on that assignment. You are not expected to work in isolation on assignments. Significant learning frequently takes place in the interchange of ideas with one another. In the final analysis, however, your response to an assignment must be your own, not someone else's. If you have any problem, come and see the instructor or TAs and discuss your problem. Do not wait till the end of the semester.

Important Dates:

- January 10: Classes begin
- January 17 (M): No Class (MLK Jr. Day)
- February 16 (W): Lecture & Review for the Exam 1
- February 21 (M): First examination & Survey – Segment I
- March 4 (F): Withdrawal deadline
- March 7 – 12 (M – S): Spring Break
- March 23 (W): Lecture & Review for the Exam 2
- March 28 (M): Second examination & Survey – Segment II
- March 30 (W): Programming assignment
- April 25 (M): Review for the final examination
- April 25 (M): Last day of class
- April 27 (W): Final Examination (Comprehensive)