CIS 3003 – Fundamentals of Information Technology
Course Syllabus <mark>(Revised 11/18/2008)</mark>

Course Prerequisites: CGS 2545 and COP 3223

Course Outline:

This course presents a comprehensive overview of information technologies, identifies and discusses the fundamental principles underlying these technologies, and investigates how these technologies are applied to government, industry, and society in general. Real-world examples and state-of-the-art technologies are to be used to cover issues faced by today's IT professionals including, software/hardware integration, system administration and maintenance, multimedia, database and networking, and information security and privacy.

Objectives

To understand the pervasive themes in IT; to appreciate the value of organizational issues; to gain insights on the history of IT, and the IT and its related and informing disciplines; to acquire the technical skills needed for the different application domains; and to gain knowledge on applications of math and statistics to IT. <mark>The course also includes a team project investigating applications of database, networking, and system integration technologies. Details of the project will be announced in class..</mark>

Text: The following text will be used in this course:
(Required) *Information Technology in Theory*, by Pelin Aksoy, Laura DeNardis, Course Technology (2007), ISBN 10: 1-4239-0140-1, ISBN 13: 978-1-4239-0140-2

Course Website: http://www.cs.ucf.edu/courses/cis3003/fall2008 (mainly for posting announcements)

Grading:

Three exams will be given, two regular exams and a final exam (comprehensive).
There will be four or five assignments, a project, and an oral presentation of an independent research report. Assignments are to be individual efforts but the project is a team work.

Class Attendance	5%
Homework Assignments	25%
<mark>Team Project</mark>	10%
<mark>Project Report and Presentation</mark>	10%
2 Regular Exams (15% each)	30%
Final Exam	20%

Grades are based on the straight-percentage scale, i.e., A (90% or up), B (80 – 89.99%), C (70 – 79.99%), D (60 – 69.99%), and F (below 60%); plus/minus grades will be used sparsely (if at all)

Topics and Class Schedules:

1. History of Computing and Information Technology (weeks 1 - 3, 9 hours)
   Shannon's Information Theory
   Mathematics, statistics, and Turing Machines
   History of computing
   Internet and the Web
2. Pervasive Themes in IT (Weeks, 4 - 10, 21 hours)
   Data versus information

Information assurance and security
IT system model
Human-computer interaction
Information and database management
Computer programming
Networking
Web technologies
Security and privacy
Ethics and professionalism
Interpersonal skills
3. IT Organizational Issues (weeks 11 - 13, 9 hours)
How to introduce IT applications
Dissemination of innovation and change
Integration of processes
Cost benefit analysis
Project Management
4. IT Related Disciplines and Applications (weeks 14 - 15, 6 hours)
Computer Science and Engineering
Software Engineering
Information Systems
Cognitive Science
Bio-informatics & medical applications
Business applications
Law enforcement
Political processes
E-commerce
Manufacturing
Education

Course Outcomes:
- appreciate how the subject matter of the course can be used in everyday life
- understand professional, ethical, legal, security, and social issues and responsibilities
- develop ability to analyze the local and global impact of computing on individuals, organizations and society, including ethical, legal, security and global policy issues
- Effectively apply scientific and mathematical principles, methods and techniques
- Develop computer-based applications using the information technology body of knowledge.
- Use technical writing effectively and professionally for varied audiences.
- Convey technical material through oral presentations of information technology related topics.

Academic Integrity and Student Conduct: Please read and understand student rights and responsibilities including conduct rules clearly stated in UCF's **golden rules**, available at
http://www.goldenrule.sdes.ucf.edu/2e_Rules.html