University of Pittsburgh

COURSE SYLLABUS
[INFSCI 2730: E-BUSINESS]

Introduction

The World Wide Web (WWW) and more generally the Internet are providing new ways of communicating and of doing business. There are many facets to the developments and many technologies appearing and disappearing in the rush to develop this new area. E-business provides a mix of both conceptual and technological theory.

Objectives

The objectives of a student taking this course will be to:

- Understand the pressures that are moving e-business forward as a new mode of doing business
- Appreciate the impact of bit businesses versus atom business, national versus global markets, and customer driven manufacturing on the conduct of business
- Describe the various technologies that are being used to develop e-business
- Discuss the technologies that are emerging to facilitate e-business
- Analyze the trend in the application of technologies to e-business
- Design a small prototype e-business site
- Develop and defend a position on one or more factors that will guide the development of e-commerce

This course looks at E-business in a broad perspective weaving in issues of information theory (how information commodities differ from physical commodities, cryptography, authentication, etc.), business practice (just in time systems, value chain management, etc.), sociology (social capital, technology and alienation, etc.), and advanced concepts in information technology (structured documents, agents, multi-platform systems, etc.). Students will be challenged to come to grips both with the fundamental changes that have taken place historically when technological revolutions occurred and to examine whether or not the current revolution is on a par with other "wave" magnitude technological changes. In addition, the technologies and systems are of such a nature that it will be possible, maybe for just another few years, for bright and inquisitive students to come to grips with the full scope of the technology before expansion of the technology and specialization of expertise make full comprehension difficult if not impossible.

Prerequisite

This course is an advanced course in the Web and Networked Information Systems Track. Students taking this course should have already taken IS 2710 Database, IS2560 Web Technologies and Standards, and at least one analysis and design course (e.g. IS2511 or IS2470.) Students who do not have these prerequisites must consult with the instructor before registering. The course assumes familiarity with procedural and object oriented programming languages, operating systems, and development tools.

Presentation

The method of presentation is through lectures, reading, coding, homework assignments (both written and computer assignments) and class projects.

Assignments

Several programming tasks, and written exercises.

Regarding Homework Submissions

All assignments should be submitted via CourseWeb.

University of Pittsburgh

There is nothing more frustrating to a student than to have homework not be graded. There is nothing more frustrating to an instructor than to have homework submitted incorrectly or with insufficient information. Before you submit an assignment, please make sure that it meets the specific requirements for how it is to be submitted. While there may be additional specific requirements set up in class, the following guidelines should be of help.

- In both the mail note to which the project is attached and in the main file of the project, you should include:
  - The names of all participants
  - Email addresses
  - The course, the term
  - The assignment for which the paper is submitted.
- Papers:
  - Any paper that is submitted should be carefully proofread and formatted professionally. It should be submitted in word format.
- Projects:
  - Any project that is submitted should be thoroughly tested to insure that I will be able to run it on my machine. The project source code and executable files should both be included. The material, if it is extensive, should be zipped up in a zip or jar file. Care should be taken to make sure that all necessary supporting DBMS and lib or jar files are included. A readme file should be included that explains any particular constraints or steps that need to be taken.

Final Project Requirements

The final project will be either a prototype system for E-Business based on a real world need, or a proposed system using the Eclipse or NetBeans IDEs and one of the frameworks. Your system should have a client interface (either Web or native) and a server backend (i.e., database, middleware, controllers, etc.).

You can build a mobile app, a desktop application, or a cross-platform application for E-business.

You shall upload the source code in CourseWeb together with a documentation on how to run your code. Also, prepare a short presentation on the project. The slides should be uploaded as well. You will be showing a demo of the final project in class.

Technical Topics

The technical topics covered in the course will cover the scope of technologies being used to build e-business sites/applications. We shall explore the following.

- HTML5, CSS, XML
- JavaScript
- Using DAO design pattern
- MySQL database
- JDBC and Java
- JSF
- Android app design

Evaluation

Some of the assignments will require individual attempts while some can be done in groups. The class project can be completed in teams (strongly encouraged) or in some exceptional scenarios, individual projects will be accepted. Students should discuss their challenges with the instructor regarding projects and assignments. In summary, grades will be distributed according to the table below.

University of Pittsburgh

Class Participation	10%
Homework/Assignments	35%
Project	20%
Midterm Exam	15% (tentative date: March 06 2019)
Final Exam	20%
Total	**100%**

Texts

Strongly Recommended:

Laudon & Traver, E-Commerce 2017: Business, Technology, and Society, 13th Edition, ©2018, Pearson, ISBN-13: 9780134602141

Recommended:

Professional Web 2.0 Programming (Paperback), by Eric van der Vlist, Wrox Professional Guides, 2006

ISBN-10: 0470087889; ISBN-13: 978-0470087886

e-Business 2.0: Roadmap for Success by Ravi Kalakota and Marcia Robinson, Addison Wesley, 2001

ISBN-10: 0201721651; ISBN-13: 978-0201721652

List of Topics (Not to be followed in strict order)

Week 1. The Revolution is Just Beginning

Week 2. E-commerce Business Models and Concepts

Week 3. E-commerce Infrastructure: The Internet, Web, and Mobile Platform

Week 4. Building an E-commerce Presence: Websites, Mobile Sites, and Apps

Week 5. E-commerce Security and Payment Systems

Week 6. E-commerce Marketing and Advertising Concepts

Week 7. Social, Mobile, and Local Marketing

Week 8. Student Presentation(s)

- This is a group presentation that will be graded. Completion of a brief (5-10 pages) paper on a conceptual issue. You should also prepare a 5-10 slide PowerPoint presentation that can be delivered in 10-15 minutes in class. Some suggestions for topics might include:
    - the emergence of registries -- directories of services for web services and the current state of the registry entry -- UDDI versus ebXML

University of Pittsburgh

- the current state of e-money -- digital mechanisms to simulate the characteristics of cash
- the status of biometrics for authentication and access control
- The use of certificates for authentication and access control
- The current status of the WS-* standards
- Personalization in e-business, the current state of the art
- Privacy in e-business -- the status of machine readable privacy and usage statements
- The financial prospects of social systems
- E-government: The current state and prospects for offering government services via the web
- Collaboration via web technologies (e.g. e-money, biometrics)

Week 9. Ethical, Social, and Political Issues in E-commerce

Online Retail and Services

Week 10. Online Content and Media

Week 11. Social Networks, Auctions, and Portals

Week 12. B2B E-commerce: Supply Chain Management and Collaborative Commerce

Week 13 - . Technical topics, Final Project Presentation, Final Exam

Recommended Readings

Weekly reading materials and video links will be provided by the instructor.

Academic Integrity

You are expected to be fully aware of your responsibility to maintain a high quality of integrity in all of your work. All work must be your own, unless collaboration is specifically and explicitly permitted as in the course group project. Any unauthorized collaboration or copying will at minimum result in no credit for the affected assignment and may be subject to further action under the University Guidelines for Academic Integrity. You are expected to have read and understood these Guidelines.

You should pay particular attention to plagiarism and copying. Specifically:

- For coding projects, **all code that comes from any source other than your head needs to be fully and carefully marked.** This includes code which you have adapted from some source but which is essentially someone else's work. **Failure to note such use is cause for a grade of 0 on the assignment and may result in an F in the course.** All of your code should be carefully and professionally commented and explained.
- For papers, every word, phrase, or sentence that is copied from the web or some other paper must be placed in quotes and attributed. i.e. the source from which it is taken must be noted. Given the prevalence of plagiarism in recent years, you will prepend the following note to any paper you submit.

University of Pittsburgh

I assert that all of this paper has been written by me and not copied from any source except where specifically noted by placing material in quotes or blocks with attribution to the source. This includes not only specific words, but ideas that came from some other source (i.e., are not my own). Basically, if you take an idea from some source and weave it into your own paper, the source should be identified. You do not have to cite things that are common knowledge - that the average person is very likely to know. Changing a word or two in a sentence usually does not eliminate the need to use quotation.

Disability Services

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and Disability Resources and Services (DRS), 140 William Pitt Union, (412) 648-7890, drsrecep@pitt.edu, (412) 228-5347 for P3 ASL users, as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course.

Accessibility

Blackboard is ADA Compliant and has fully implemented the final accessibility standards for electronic and information technology covered by Section 508 of the Rehabilitation Act Amendments of 1998. Please note that, due to the flexibility provided in this product, it is possible for some material to inadvertently fall outside of these guidelines.

Statement on Classroom Recording

To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor, and any such recording properly approved in advance can be used solely for the student's own private use.

Instructor

Dr. Richard Lomotey

Email: lomoteyr@gmail.com

Grading Scheme

93 above A
90-92 A-
88-89 B+
83-87 B
80-82 B-
78-79 C+
73-77 C
70-72 C-
60's D, possibly D-, D+
50's below F