Department of Information Systems
College of Business Administration

IS 545 STANDARD COURSE OUTLINE

I. General Information

Course Number: IS 545
Course Title: Internet Applications Development
Units: 3
Prerequisite: IS 540 or equivalent programming experience
Course Coordinator: Ying Liu
SCO prepared by: Ying Liu
Date prepared/revised: October 13, 2012

II. Catalog Description

Design, management, and applications of Internet-based electronic business transaction systems. Topics include HTML, CSS, JavaScript, dynamic web page design and development and integration of backend back-end e-commerce systems. Lecture, hands-on, software project and case studies. Letter grade only (A-F)

III. Curriculum Justification(s)

This course is designed to teach student (1) quantitative and technical skills in the areas of Internet technology and Web application development; (2) team and interpersonal skills by team-based discussion and using collaborative development tools; (3) critical thinking skills in business analysis and Web application design.

IV. Course Objectives

The course covers many aspects of web application development:
- Technical concepts of WWW and WWW architecture.
- Concepts and best practices of Web site design
- Concepts of HTML and XHTML.
- Concepts and applications of CSS
- Concepts and applications of client-side programming technology including Javascript and JavaScript-based framework.
- Developing Web applications using a server-side Web framework such as ASP.NET or Node.js

Upon the completion of this course students will be able to design and develop standard-based web pages, format the page with CSS style sheet, add interactivity with Javascript and create database-driven dynamic web site using a server-side Web framework.

V. Outline of Subject Matter

- Web concept, HTTP protocol and protocol analysis tools
- Web application development process and team development.
- HTML elements, HTML5 standards and web site design issues
- Cascade Style Sheet (CSS) and new layout design tools.
- JavaScript programming language
- Browser-side JavaScript framework such as jQuery
- Backend framework such as Node.js, ASP.Net, JSP or PHP.
- Database access framework such as ADO.NET.
- Design and development of highly scalable Web Applications

VI. Methods of Instruction

The course will be taught primarily by formal lectures in a computer lab. Presentation slides, hands-on demonstrations and computer labs are used in a typical class session. Due to the technical contents and the complexity of Application development, students are required to read the course material before the class. Homework and course project should be assigned to students to give them plenty of practices in the technical topics covered by the class.

Each instructor can decide on the structure of their exams. Multiple choices, short essay questions, program assignments or a mixture of different forms can be used to measure student performance.

Due to the rapid changes of Web technology and the abundance of free online resources, each instructor can decide on the textbooks. An example of the used textbook is

> Title: Internet and World Wide Web How To Program, 5/E
> Author: Harvey Deitel, Abbey Deitel
> ISBN-10: 0132151006
> ISBN-13: 9780132151009
> Publisher: Prentice Hall
> Copyright: 2012
> Format: Paper; 992 pp
> Published: 11/09/2011

VII. Instructional Policies Requirements

This course follows the University policies on [Final Course Grades, Grading Procedures, and Final Assessments (PS 05-07)](#), [Attendance (PS 01-01)](#), [Course Syllabi (PS 04-05)](#), [Final Course Grades, Grading Procedures, and Final Assessments (PS 05-07)](#), and [Withdrawals (PS 02-02 rev)](#). Following are some special considerations for this course:

A. Assessment Criteria

<u>Homework</u>
Students are encouraged to discuss their class work and homework assignments together. However, after the discussion, each of you should work on your own homework independently from scratch.

<u>Quizzes and Exams</u>
Students need to take the mid-term exam (required) and the final exam (required).

<u>Projects</u>
Instructors are strongly encouraged to assign comprehensive course project (individual or group) that requires problem solving skills, the understanding of the course materials and the use of development tools.

B. Required Statement

In compliance with university policy: Final grades will be based on at least three, and preferably four or more, demonstrations of competence. In no case will the grade on any class tests count for more than one-third of the course grade.

C. Attendance, Withdrawal, Late Assignments

Students are expected to attend courses and turn in assignments on time. Specific attendance and late assignment policies are up to each individual instructor's discretion.

D. Disabilities

Students with disabilities are responsible for notifying their instructor as early as possible of their needs for an accommodation of a verified disability. A student with a disability is urged to consult with Disabled Student Services as soon as possible in order to identify possible accommodations to enhance academic success.