

Department of Information Systems
IS 583 STANDARD COURSE OUTLINE

I. General Information

Course Number:	IS 583
Course Title:	Advanced Business Programming
Units:	3
Prerequisite:	Graduate standing, IS 540
Course Coordinator:	Ying Liu
SCO prepared by:	Ying Liu
Date prepared/revised:	October 5, 2012

II. Catalog Description

Advanced topics in business application development. Emphasis on design and development of applications to improve business operation and new business models. Topics include business process analysis, application design, application development, human interface design and current technical issues. 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 business analysis, business applications design and development; (2) team, leadership and interpersonal skills by team-based discussion and team-based course project using collaborative development tools; (3) critical thinking skills in business analysis and mobile application design.

IV. Course Objectives

The course covers many aspects of business application development:

- Business process analysis.
- Business application design concepts.
- Introduction to a programming language such as Python, Java or C#.
- A deep knowledge in selected areas of the application development tools.
- Best practices to produce quality applications.
- Team-based mobile application development.
- Business analysis and design for innovative business applications

V. Outline of Subject Matter

- Basic programming concepts such as loop, conditional statements.
 - Introduction of programming theories.
 - Basic data Structure.
- Topics in object-oriented application development
 - Class and Object
 - Inheritance
 - Interface design
- An application design framework such as Node.js, Django, Java EE or ASP.NET.
- Business process analysis.
- Business application design.
- Project management.
- Team working skills.
- Best practices in business application development.

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 mobile 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 textbook is:

Title: How to Think Like a Computer Scientist: Learning with Python
Author: Allen B. Downey, Jeffrey Elkner, Chris Meyers
ISBN-13: 978-0971677500
Publisher: Green Tea Press
Format: Paper; 288 pp
Published: January 2012
Edition: 2nd

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

Homework

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.

Quizzes and Exams

Students need to take the mid-term exam (required) and the final exam (required).

Projects

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.