

Department of Information Systems
IS 457 STANDARD COURSE OUTLINE

I. General Information

Course Number:	IS 457
Course Title:	Wireless Systems and Mobile Applications
Units:	3
Prerequisite:	IS 340 or IS 343
Course Coordinator:	Ying Liu
SCO prepared by:	Ying Liu
Date prepared/revised:	October 5, 2012

II. Catalog Description

This course covers the application of information technologies and their management in a wireless and mobile environment. It emphasizes the technical aspects of wireless internetworking and mobile applications to support managerial activities, business transactions, and consumer applications. Pervasive and ubiquitous computing environment and their applications are covered. Current technical issues, application development, and human interface design are emphasized. 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 wireless and mobile devices and applications; (2) team 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 web application development:

- The concepts, trends and roles of mobile computing in business.
- The fundamental programming skills.
- The basic concepts behind mobile application development.
- The framework for constructing applications.
- The tools for developing and testing mobile applications.
- A deep knowledge in selected areas of the mobile development tools.
- Best practices to produce quality mobile applications.
- Any issues/new technology not known at this moment.

Upon the completion of this course students will be able to develop mobile applications for a business domain in a team environment.

V. Outline of Subject Matter

- Basic programming concepts such as loop, conditional statements.
- Introduction to object-oriented application development
- Mobile application framework such as Android
- Mobile application development platform such as Eclipse SDK and Android SDK
- Mobile application user interface design and development
- Mobile application backend process design and development
- Network communication in mobile application
- Data storage or database access in mobile application

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. Two examples of the used textbooks are:

Title: The Busy Coder's Guide to Android Development and Android Programming Tutorials
Author: Mark Murphy
ISBN-13: 978-0-9816780-0-9
Publisher: CommonsWare
Format: Paper; 1772 pp
Published: August 2012
Edition: 4.1

Title: Introduction to Java Programming, Brief, 9/e
Author: Y. Daniel Liang
ISBN-13: 978-013292373
Publisher: Prentice Hall
Format: Paper; 768 pp
Published: March 2012
Edition: 9th

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.