Syllabus
CSC 371/471 Mobile Application Development for iOS

School of Computing
DePaul University

Winter Quarter AY 2015-16 (January 4, 2016 – March 18, 2016)
First day of class: Tuesday January 5, 2016
Classroom section: Tuesday 5:45 -- 9:00 pm, Loop Campus
On-Line Learning: http://d2l.depaul.edu/
Course Home Page: http://venus.cs.depaul.edu/csc471

Instructor: Dr. Xiaoping Jia
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Tel: (312) 362-6251, Fax: (312) 362-6116
Office Hours: Tuesday 4:00 -- 5:30pm (Loop campus)
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Instructor Home Page: http://venus.cs.depaul.edu/xjia

Course Description

This course introduces the cores issues associated with application development for mobile devices using the iOS platform. Students will learn the Swift language, the XCode IDE, UIKit and other frameworks, the elements and architecture of the user interfaces, and more. Students will be exposed to the iOS system architecture including memory management, MVC, delegates and threads. Topics will also include understanding and handling of multi-touch events, gestures, and motion events.

Prerequisites

Data Structures II (CSC403 or CSC301 or CSC383 or CSC393) and
Computer Systems II (CSC407 or CSC374)
Implies proficiency in object-oriented programming in Java or C++

Textbooks

Optional:

- *Beginning iPhone Development with Swift, Exploring the iOS SDK*, by David Mark, Jack Nutting, Kim Topley, Fredrik Olsson, Jeff LaMarchee, Apress, 2014
  ISBN-13: 978-1-484204-10-8
  Available in eBook

Supplemental readings:

- *Apple's iOS Developer website*
  - *SDK, Lectures, Papers, Example code,*
    http://developer.apple.com/devcenter/ios/index.action

Other Requirements

- This class will target iOS 9 and Swift 2.1, which requires Xcode 7. The minimum system requirement for Xcode 7 is a Mac computer running Mac OS X Yosemite (10.10.x) or OS X El Capitan (10.11.x).

- You need to have access to a Mac running Mavericks/Yosemite/El Capitan to complete the assignments and projects of this class.

- iOS devices (iPhone, iPod, iPad) are not required. You will be able to complete the assignments using iOS simulator only. However, some features are not available on the iOS simulator. If you want to use multi-touch gestures or motion sensors (accelerometer and gyroscope) you will need an iOS device.

Topics

- Introduction to Xcode and iOS SDK
- Introduction to Swift
- iOS application architecture
- Building simple UI and handling basic interactions
- Storyboard
- Multi-view applications
- Table and navigation views
- Tablets and adaptive layout
- Handling taps, touches, and gestures
- 2D graphics drawing
- Accelerometer

Mailing List

You *must* subscribe to the course mailing list. Do it *as soon as possible*.
https://groups.google.com/forum/#!forum/csc-371-471-winter-2016

- I will reply to messages I receive to the course mailing list.
- The mailing list is archived.

If you do not wish to receive messages, you may unsubscribe, or subscribe to a digest.

Grading

- 15% - Weekly on-line quizzes
  - Weight distribution: Weeks 1-5: 33%, Weeks 6-10: 67%
  - Each quiz opens at 9am on Wednesday following the lecture, and closes at **5pm** the following Tuesday.
  - You will be able to view your answers and the correct answers in D2L starting the day after the quiz closes.

- 70% - Weekly (individual) programming assignments
  - Assignments will be posted before Tuesday lecture time and usually due on 11:59pm the following Wednesday. (There will be a 6-hour grace period, during which the late penalty will be waived.)
  - Start early and finish early!
  - All submissions are through the Dropbox in D2L.
  - There will be 7-8 weekly assignments.
- 15% - Final Project
  - Individual or small team project
  - Project proposal (10%, due week 7, February 16, 2016) and instructor approval required
  - Deliverable (60%, due week 11, March 15, 2016)
  - Project demo (10%, week 11, March 15, 2016)
    - In class or by video conference
    - Include a short demo video
  - Documentation (20% due week 11, March 15, 2016)

- Late policy
  - Late programming assignments will be accepted with penalties
    - 10% penalty for up to 7 days
    - An additional 10% penalty for each week thereafter
  - Each student has one free pass for a one-week extension. You may only use the free pass on one assignment during the entire quarter. Use it wisely. To use the free extension pass, indicate that in the comment while you submit your assignment in D2L.
  - The last day to submit programming assignments for partial credit is March 9, 2016 (week 10)
  - No later submission will be accepted for the final project. (The free extension pass does not apply to the final project.)

- Grading scale:

A :	total >= 93	**C+**:	80 > total >=77
A-:	93 > total >=90	**C** :	77 > total >=73
B+:	90 > total >=87	**C-**:	73 > total >=70
B :	87 > total >=83	**D+**:	70 > total >=67
B-:	83 > total >=80	**D** :	67 > total >=63
		D-:	63 > total >=60
		F :	total < 60

Email

Email is the primary means of communication between faculty and students enrolled in this course outside of class time. Students should be sure their email listed under "demographic information" at http://campusconnect.depaul.edu is correct.

Academic Integrity Policy

This course will be subject to the academic integrity policy passed by faculty. More information can be found at http://academicintegrity.depaul.edu/

Plagiarism

The university and school policy on plagiarism can be summarized as follows: Students in this course should be aware of the strong sanctions that can be imposed against someone guilty of plagiarism. If proven, a charge of plagiarism could result in an automatic F in the course and possible expulsion. The strongest of sanctions will be imposed on anyone who submits as his/her own work any assignment which has been prepared by someone else. If you have any questions or doubts about what plagiarism entails or how to properly acknowledge source materials be sure to consult the instructor.

Incomplete

An incomplete grade is given only for an exceptional reason such as a death in the family, a serious illness, etc. Any such reason must be documented. Any incomplete request must be made at least two weeks before the final, and approved by the Dean of the College of Computing and Digital Media. Any consequences resulting from a poor grade for the course will not be considered as valid reasons for such a request.

Resources for Students with Disabilities

Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential. To ensure that you receive the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities (CSD) at: Student Center, LPC, Suite #370, Phone number: (773)325.1677 Fax: (773)325.3720 TTY: (773)325.7296