

Syllabus - Computer Science 378 - iOS Mobile Computing

The University of Texas at Austin - Fall 2014

Objectives: An overview of mobile computing with an emphasis on developing applications for the iOS operating system. Students will complete a major project. Topics will include the Xcode development environment, Objective-C, user interfaces, audio, networking, graphics, data storage and localization.

Prerequisites: The following coursework with a grade of at least C- in each: Computer Science 311, 311H, 313H, or 313K; Computer Science 307, 314, 314H, 315, or 315H; Computer Science 310, 310H, 429, or 429H; Mathematics 408C, 408K, or 408N; and credit with a grade of at least C- or registration for Computer Science 439 or 439H.

Lecture: 53143 TTH 6:00pm - 7:30pm CLA 1.106

Instructor: Bob Seitsinger, email: bobs1725@cs.utexas.edu, office: GDC 6.704

Office hours: Generally, 1 hour after class, or by appointment.

Teaching Assistant: Craig Corcoran, email: ccor@cs.utexas.edu

Textbook: (not required, but recommended)

Creating iOS Apps, Develop and Design, Second Edition, Richard Warren
Publisher: PeachPit Press, ISBN-13: 978-0-321-93413-0

Computing Facilities: There are 5 Macs available for this class in GDC 2.212. All the machines should have Xcode 5 installed.

Tools: Xcode 5 (do not use Xcode 6)

Language: Objective-C. We will not be doing anything with Swift this semester.

iOS Device: You are NOT required to have an iOS device. All the class deliverables can be produced using the iOS simulator that comes with Xcode.

Class Discussion Tool: I will be setting up a discussion group for the class on Piazza. I will provide instructions on how to get access to it when it becomes available.

Class Assignment Tool: All class assignments will be posted to Canvas.

Grading Policy:

The grade will be based on a total of 1000 points.

Grade component breakdown:

Component	Points
Attendance	2 per class
Homeworks	25 per homework, 175
App idea paper	100
Mockups paper	150
Alpha Version	200
Beta Version	200
Project demo	150
Total	975 + attendance

The final letter grade will be assigned based on your total points, with the following scale:

Point Range	Grade
1000 - 950	A+
949 - 925	A
924 - 900	A-
899 - 850	B+
849 - 825	B
824 - 800	B-
799 - 750	C+
749 - 725	C
724 - 700	C-
699 - 600	D
599 - 0	F

If you are dissatisfied with a grade you receive on an assignment you must submit your complaint via email, along with supporting evidence or arguments, to me or the TA within **one week** of the date the teaching staff first attempted to return the assignment to you.

Academic Honesty: Take from the CS department Code of Conduct.

“The University and the Department are committed to preserving the reputation of your degree. It means a lot to you. In order to guarantee that every degree means what it says it means, we

must enforce strict policy that guarantees that the work that you turn in is your own and that the grades you receive measure your personal achievement in your classes.

Every piece of work that you turn in with your name on it must be yours and yours alone unless explicitly allowed by an instructor in a particular class. Specifically, unless otherwise authorized by an instructor.

- Students may not discuss their work with anyone except the instructor and other members of the instructional staff (instructor, TA, lab proctor or partner on a pair assignment).
- Students may not acquire from any source (e.g. another student or an internet site) a partial or complete solution to a problem or project that has been assigned.

You are responsible for complying with this policy in two ways:

1. You must not turn in work that is not yours, except as expressly permitted by the instructor of each course.
2. You must not enable someone else to turn in work that is not theirs. Do not share your work with anyone else. Make sure that you adequately protect all your files. Even after you have finished a class, do not share your work or published answers with the students who come after you. They need to do their own work on their own.

The penalty for academic dishonesty will be course grade of **F** and a referral of the case to the **Dean of Students**. Further penalties, including suspension or expulsion from the university may be imposed by that office.

One final word: This policy is not intended to discourage students from learning from each other, nor is it unmindful of the fact that most significant work in computer science and in the computing industry is done by teams of people working together. But, because of our need to assign individual grades, we are forced to impose an otherwise artificial requirement for individual work. In some classes, it is possible to allow and even encourage collaboration in ways that do not interfere with the instructor's ability to assign grades. In these cases, your instructor will make clear to you exactly what kinds of collaboration are allowed for the class."

It is expected that you are to do a significant amount of the work on your own.

Religious Holidays: By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

Students with Disabilities: Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 512-471-6259, www.utexas.edu/diversity/ddce/ssd/.

Personal Issues: Students experiencing significant nonacademic problems (extended health problems or family emergencies) should contact the CNS Dean's Office (WCH 1.106, 512-471-4536) or the Dean of Student's Office (<http://deanofstudents.utexas.edu/emergencyresources.php>) for assistance.

Schedule: A schedule of lecture topics and assignments, with due dates, follows.

Class #	Day of Week	Date	Topic	Notes
1	Thu	8/28	Introduction and Syllabus, Xcode, Anatomy of an iOS app	
2	Tue	9/2	Objective-C - classes, properties, objc_msgSend	
3	Thu	9/4	Objective-C - delegates, blocks, ARC	Homework 1 due
4	Tue	9/9	Objective-C - concurrency, protocols	
5	Thu	9/11	MVC - model, view, controller, View controllers	Homework 2 due
6	Tue	9/16	UI Basics - Table view controller, Navigation controller	
7	Thu	9/18	UI Basics - Page view controller	Homework 3 due
8	Tue	9/23	UI Basics - Tab view controller	App idea paper due
9	Thu	9/25	Core data	Homework 4 due
10	Tue	9/30	Core data	
11	Thu	10/2	Core audio	Mockups paper due
12	Tue	10/7	Core audio	
13	Thu	10/9	Core animation	
14	Tue	10/14	Core animation	Homework 5 due
15	Thu	10/16	Core graphics	Alpha version due
16	Tue	10/21	Graphics - 2D	
17	Thu	10/23	Graphics - 3D	
18	Tue	10/28	KVO and Notifications	Homework 6 due
19	Thu	10/30	Networking	
20	Tue	11/4	Networking	
21	Thu	11/6	Open	Homework 7 due
22	Tue	11/11	Gesture recognizers	Beta version due
23	Thu	11/13	Gesture recognizers	

Class #	Day of Week	Date	Topic	Notes
24	Tue	11/18	Video	
25	Thu	11/20	Localization	
26	Tue	11/25	Demos - session 1	
27	Thu	11/27	Thanksgiving	
28	Tue	12/2	Demos - session 2	
29	Thu	12/4	Demos - session 3	Final release due
30	Tue	12/9	Demos - session 4	
31	Thu	12/11	Digital Demo Day - all students are expected to present their app at this event	