CS4153: Mobile Applications Development
Fall 2019 Course Syllabus

Last updated: August 19, 2019 Subject to Change!

Instructor

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- Office hours: T & TH - 10:30 to Noon or by appointment if necessary
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During my office hours, please feel free to visit my office or contact me via Skype using the information provided above. If I am helping another student at that time, feel free to leave a message, and I will get back to you as soon as possible.

Teaching Assistant

- Saptami Biswas
- Office: MSCS 204
- Office hours: M, W & F - Noon to 1 p.m. or by appointment if necessary
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Course Meetings

- Time: T & TH - 9:00 to 10:15 a.m.
- Place:
  - Stillwater: MSCS 222
  - Tulsa: MCB 2203

Prerequisites

A good working knowledge of Object Oriented Programming, and either a good working knowledge of Java (e.g., CS 2133) or C++ (e.g., CS 2433).

Textbooks (required)

None! Freely-available materials will be used to supplement in-class sessions.

Topics Covered

- Introduction to iOS & Xcode
- Introduction to Swift programming
- Source control
- Graphics & Colors
- Delegation
- Gestures
- Debugging & Segues
- Table views & Alerts
- Auto layout
- Databases & Core data
- Introduction to Android & Android Studio
- Resources & Common controls
- View holders & Recycler views
- Anko & Anko commons
- Intents
- Android database

Course objectives

By the time you finish this course, you should have learned the following:

- The primary differences between traditional computer programs and mobile apps, and how to address those differences when writing an app.
- The use of the Xcode IDE (Interactive Development Environment) to develop, test, and debug apps for devices that run the Apple iOS operating system.
- The syntax and semantics of the Swift programming language, as well as several fundamental iOS APIs (Application Program Interfaces) necessary to develop apps.
- Use of the Kotlin programming language and Android Studio to develop Android apps.
- Several fundamental Android APIs necessary to develop apps.
- Working as part of a team to develop apps more effectively and efficiently.

Software/Hardware requirements

- An Apple Macintosh Computer running Mac OS High Sierra (10.13) or Mojave (10.14). iMacs are available for your use in the Stillwater lecture lab, 222 MSCS.
- Xcode 10 – Go to App Store and download Xcode 10 for your own, personal Mac. If you use one of the lab computers, you will find that Xcode 10 already is installed.
- Android Studio and Java for Android development toward the end of the semester.
- Optional: any iPod Touch, iPhone, or iPad that is compatible with iOS 11 or 12.
- Other software as specified during the semester.

Grading

- Assignments:
  - Undergrad sections: 50%
  - Grad sections: 40%
- Team projects: 30% (1 @ 5%, 1 @ 25%)
- Midterm Exam: 10%
- Final Exam: 10%
- Graduate project (only for grad sections): 10%

Letter grades

- A: [90-100]
- B: [80-90)
- C: [70-80)
- D: [60-70)
- F: [0-60)

Exam Dates and Times

Unless an announcement is made in class and posted to the Canvas site to the contrary, exams will be held at the following dates/times:

- Midterm Exam: Tuesday, October 8, 9:00 to 10:15 a.m.
- Final Exam: Thursday, December 12, 8:00 to 9:50 a.m.

Course policies

- Assignments are ordinarily due on Wednesdays by 11:59 PM on the date specified on the assignment handout posted on the course Canvas site.

- Late submissions are accepted no later than 11:59 PM on the following Mondays to the original due date with a 10% penalty. Submissions made after that will not be graded and are worth zero points.
- All programming solutions must be submitted via the corresponding drop boxes on the course Canvas site.
- All files associated with a given submission must be zipped into a single file for submission. The zipped files must retain their folder structures and contain all needed assets so that – once opened – they can be built and run by the grader. Solutions that are uncompressed or compressed with a format other than zip will be ignored.

Collaboration policies

Assignments: Discussion of concepts, ideas, and techniques is acceptable. After discussion, each student must write up his/her own solution. Copying another person's work, in part or in whole, is not allowed. Giving another student your work, in part or in whole, is considered cheating as well. If you are unsure whether your collaboration is acceptable, speak with the instructor in advance. Take care that your solutions are not exposed to or by other students.

Team projects: Sharing of work among students on a project team is acceptable. Inter-team discussion of concepts, ideas, and techniques is acceptable, but inter- team sharing of work is not permitted. If you are unsure whether your collaboration is acceptable, speak with the instructor in advance.

Examinations: No discussion of any kind (except with the instructor or proctor) is allowed. No access to any type of material (such as, written or electronic) is allowed, unless explicitly stated otherwise for a specific exam.

Students who do not comply with the collaboration policies described above will be assigned sanctions in accordance with OSU policy 2-0822 (Academic Integrity). Depending on the circumstances of the violation, the sanctions may result in a score of zero on an assignment, a final grade of F! for the course, or dismissal

from the OSU graduate program. In all instances, the violation will be reported to the appropriate institutional officials.

Disabilities act

According to the Americans with Disabilities Act, each student with a disability is responsible for notifying the University of his or her disability and to request accommodations. If you think that you have a qualified disability and needs special accommodations, you should notify the instructor and request verification of eligibility for accommodations from the Office of Student Disability Services, 315 Student Union, (405)744-7116. Please advise the instructor of such disability as soon as possible, and contact Student Disability Services, to ensure timely implementation of appropriate accommodations. The instructor of this class will respond when he receives official notice of a disability, but he does not provide retroactive accommodations.

Syllabus attachment

Other useful information, such as important dates throughout the semester, can be found on the OSU syllabus attachment for the current semester.