

Mobile Application Technologies

ITP 140 (2 Units)



Fall 2013

Objective

This class covers the mobile industry, devices, operating systems, types of apps, and how to monetize apps. Students will learn how to design an app, build a prototype, conduct usability tests, and create a business plan.

Concepts

Mobile devices, user experience, user interface, mobile app design, wire framing, prototyping, mock-ups.

Prerequisites

None

Instructor

Trina Gregory

Contacting the Instructor

trina.gregory@usc.edu
OHE 412

Office Hours

Listed on Blackboard under Contacts

Lab Assistants

Listed on Blackboard under Contacts

Lecture/Lab

1.5 hours, twice a week, for a total of 3 hours

Required Textbooks

None.

Optional Textbooks

None.

Website

All course material will be on Blackboard (<http://blackboard.usc.edu>).

Grading

The following percentage breakdown will be used in determining the grade for the course.

Assignments	50%
Midterm	20%
Final Project	30%
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Total	100%

Grading Scale

The following shows the grading scale to be used to determine the letter grade.

93% and above	A
90% - 92%	A-
87% - 89%	B+
83% - 86%	B
80% - 82%	B-
77% - 79%	C+
73% - 76%	C
70% - 72%	C-
67% - 69%	D+
64% - 66%	D
63% and below	F

Policies

No make-up exams (except for documented medical or family emergencies) will be offered nor will there be any changes made to the Final Exam schedule.

The labs will be posted on Blackboard under the "Assignments" section. Each lab will include instructions, a due date, and a link for electronic submission. Labs must be submitted using this link. Do not email them to the lecturer or lab assistant. Always keep a backup copy of them.

It is your responsibility to submit your assignments on or before the due date. Assignments turned in one day late will have 10% of the total points deducted from the graded score. Assignments turned in two days late will have 20% of the total points deducted from the graded score. Assignments turned in three days late will have 50% of the total points deducted from the graded score. After three days, submissions will not be accepted and you will receive a 0.

Each time the class meets, a roster will be passed around the room. Please initial by your name for the appropriate week.

Incomplete and Missing Grades

Excerpts for this section have been taken from the University Grading Handbook, located at <http://www.usc.edu/dept/ARR/grades/gradinghandbook/index.html>. Please see the link for more details on this and any other grading concerns.

A grade of Missing Grade (MG) “should only be assigned in unique or unusual situations... for those cases in which a student does not complete work for the course before the semester ends. All missing grades must be resolved by the instructor through the Correction of Grade Process. One calendar year is allowed to resolve a MG. If an MG is not resolved [within] one year the grade is changed to [Unofficial Withdrawal] UW and will be calculated into the grade point average a zero grade points.

A grade of Incomplete (IN) “is assigned when work is no completed because of documented illness or other ‘emergency’ **occurring after the twelfth week** of the semester (or 12th week equivalency for any course scheduled for less than 15 weeks).”

Academic Integrity

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one’s own academic work from misuse by others as well as to avoid using another’s work as one’s own. All students are expected to understand and abide by these principles. *Scampus*, the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: <http://www.usc.edu/dept/publications/SCAMPUS/gov/>. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: <http://www.usc.edu/student-affairs/SJACS/>.

If the instructor, a grader, or a lab assistant suspects you of academic dishonesty, it has to be reported to SJACS. Do not share lab assignments with another student. Do not submit another student’s work as your own. Do not look at other students’ papers during exams. Do not leave the room during an exam. Do not cheat! As Trojans, we are faithful, scholarly, skillful, courageous, and ambitious.

Students with Disabilities

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to your course instructor (or TA) as early in the semester as possible. If you need accommodations for an exam, the form needs to be given to the instructor at least two weeks before the exam.

DSP is located in STU 301 and is open from 8:30am to 5:00pm, Monday through Friday. Contact info: 213-740-0776 (Phone), 213-740-6948 (TDD only), 213-740-8216 (FAX), ability@usc.edu, http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html.

Emergency Preparedness/Course Continuity in a Crisis

In case of emergency, when travel to campus is difficult, if not impossible, USC executive leadership will announce a digital way for instructors to teach students in their residence halls or homes using a combination of the Blackboard LMS (Learning Management System), teleconferencing, and other technologies. Instructors should be prepared to assign students a “Plan B” project that can be completed ‘at a distance.’ For additional information about maintaining your classes in an emergency, please access: <http://cst.usc.edu/services/emergencyprep.html>

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Course Outline

Week 1 – Mobile Industry

- Course overview
- History and main players of the mobile industry
- Mobile devices

Assignment/Lab

Post on one of the forums (mobile-related) in the Discussion Boards on Blackboard.

Week 2 – Mobile & Web Apps

- Internet and networks
- Web vs. native apps
- Responsive web design

Assignment/Lab

Post a comment on the Discussion Boards on Blackboard.

Week 3 – Design for Mobile

- Mobile design including 4 steps
- App definition statement
- Colors, images, icons
- Photoshop

Assignment/Lab

Write a document about 5 websites and the differences viewing them on a desktop and a mobile device.

Week 4 – User Experience

- Graphical user interface
- Human interface guidelines
- Application styles

Assignment/Lab

Get into groups, come up with various ideas for a mobile app, and pick one.

Week 5 – Monetization

- Paid apps
- Free apps
- Display advertising
- Freemium

Assignment/Lab

Create a document containing the app definition statement, key features, and user profile for your group's app.

Week 6 – User Interface for iOS

- Apple's human interface guidelines
- User interface components
- User interface controls

Assignment/Lab

Create an icon image and a color palette for your group's app.

Week 7 – User Interface for Android

- Design for Android
- Versions
- Themes and colors
- User interface components

Assignment/Lab

Create paper prototypes for your group's app.

Week 8 – Wireframing and Prototyping

- Wireframing tools
- Balsamiq
- Prototyping tools

Assignment/Lab

Create wireframes for your group's app using Balsamiq or another tool.

Week 9 – Midterm

- Midterm review
- Midterm

Week 10 – Build vs. Buy

- Cost for design
- Cost for development
- Return on investment

Assignment/Lab

Finish wireframes for your group's app.

Week 11 – User Testing

- Usability testing
- Usability review
- Finding reviewers

Assignment/Lab

Conduct usability testing on your group's wireframes.

Week 12 – Analytics, APIs, and Cloud Computing

- Analytics and metrics
- APIs
- RESTful API
- Facebook and Twitter
- Cloud computing

Assignment/Lab

Each student needs to write a document evaluating two mobile apps.

Week 13 – Windows 8 Mobile Apps

- Windows 8 mobile devices
- Tools such as TouchDevelop

Assignment/Lab

Develop an interactive prototype for your group's app incorporating the feedback from the usability testing.

Week 14 – Business Plans for Mobile App Development

- Venture capitalists
- Business plan presentation
- Estimation

Assignment/Lab

Continue working on your group's prototype.

Week 15 – Deployment

- Submitting your app to the app store
- Monitoring the success of your app
- User feedback

Assignment/Lab

Create a business plan for your group's app.

Final Project

- Business plan presentation and prototype of an app
- Each group will give a presentation and demonstration of their app

Date, Time, and Place

According to the final exam schedule