Course Syllabus
Spring 2011

General Information

CS 107 – Computing, Robots, and the Web (Section 02)
Android Programming Edition · Spring 2011

Harney Science Center · Room 235
Tuesdays & Thursdays · 9:55am – 11:40am

Website:
http://www.cs.usfca.edu/~sjengle/courses/spring2011/cs10702/
http://blackboard.usfca.edu/bin/common/course.pl?course_id=_39216_1

Mailing List:
cs10702@cs.usfca.edu · https://cs.usfca.edu/mailman/listinfo/cs10702

Announcements:
Announcements will be posted on Twitter account `sjengle` using hashtag #cs10702. You may view these announcements at http://twitter.com/#search?q=from%3Asjengle%20%23cs10702 or on the course website.

Calendar:
Lectures, assignment deadlines, and exam dates will be posted on the public Google Calendar for this course. See the course website for more details.

Description:
An introduction to computer science for non-majors with no prior programming experience. In this class, students will use App Inventor to program Android phones, providing a gentle introduction to computing and programming. See the **Introduction** for more information.

Core:
This course fulfills the Core Math B2 requirement, and counts towards a minor in Computer Science.

Pre-Requisites:
There are no pre-requisites for this course. You do not need to have any prior experience with computers.

Introduction

Welcome to **CS 107 – Computing, Robots, and the Web**! The "Android Programming Edition" of this course uses Android phones as the robots of the course, and emphasizes mobile programming as an extension of the ubiquitous web. This edition of the course began as a pilot program offered by Google to select universities in

2009. Google provided 20 Android phones and early access to App Inventor, a visual programming language for creating mobile applications.

Students will be using these phones and App Inventor to develop mobile applications for their portfolio. *Students do not need prior programming experience to take this course.* The pace of this course is much slower compared to CS 110, which is often the first course taken by CS majors. Instead, this class focuses on providing a *gentle* introduction to computing in a fun environment.

Students will also develop problem-solving skills and gain valuable experience working with computers, mobile platforms, and the Internet—all of which are valuable no matter what discipline you choose.

Topics and Schedule

We will cover several different type of apps, folding in a discussion of programming and problem-solving in each section. The topics will be:

- Animated Apps
- Location-Aware Apps
- Informational Apps
- Communication Apps
- Web-Aware Apps (Using APIs)

We will spend approximately two weeks on each subject. There will also be two exams (see below), occurring in the middle and towards the end of the semester.

This is subject to change at any time. Please see the schedule on the course website for the latest.

Instructor

Professor Sophie Engle
sjengle@usfca.edu · http://www.cs.usfca.edu/~sjengle/

Office Hours:
Harney Science Center · Room 140B
Mondays & Wednesdays 4:45pm – 5:45pm
Tuesdays 11:45am – 12:45am *(or by appointment)*

Teacher Assistants

Paul Cafardo · pncafardo@usfca.edu   *Teacher assistants' office hours to be announced.*
Chris Casey · cpcasey@usfca.edu

Required Materials

If you do not already have an Android cell phone that works with AppInventor, you will be required to share a phone with another student. (This person will likely be your partner for the group projects throughout the

semester.) The phones may be checked out from Gleeson Library and returned at the end of the semester. As with any library check-out, your group is responsible for lost items. In this case, the charge for a lost phone is $400.00, so be careful!

Your group will eventually be required to have a text messaging plan for the phone. Those of you with T-Mobile or AT&T SIM cards *may* be able to insert them into the Android phone directly. Otherwise, your group is required to purchase a prepaid text messaging plan for the phone from either T-Mobile or AT&T. You may split the cost with each student in your group. The cost of this plan will be less than most textbooks.

There are no required textbooks for this course.

Grading

The final grade will be calculated as follows:

> 10% Participation
> 25% Lab Assignments
> 25% Group Projects
> 40% Midterm Exams (2)

Letter grades will be assigned according to the following scale:[†]

A+ $\geq$ 97.0%	C $\geq$ 73.0%	[†] *Note that this scale is subject to change at any time.*
A $\geq$ 93.0%	C− $\geq$ 70.0%	
A− $\geq$ 90.0%	D+ $\geq$ 67.0%	
B+ $\geq$ 87.0%	D $\geq$ 63.0%	
B $\geq$ 83.0%	D− $\geq$ 60.0%	
B− $\geq$ 80.0%	F $<$ 60.0%	
C+ $\geq$ 77.0%		

Instead of a final exam, students will be expected to complete and present a final project. More information about the final project will be provided later in the semester.

Participation

Students may earn participation points by volunteering during class discussions. Each student must also participate in at least one group project presentation, as well as present their final project at the end of the semester. Students will also earn participation points for critiquing each others' projects and presentations. In summary, there are three ways to earn participation credit: (1) class discussion, (2) group presentations, and (3) project evaluation.

Lab Assignments

During most lectures, you will be given a hands-on lab assignment to complete individually. While you are given class time to complete these lab assignments, most will also require out-of-class work to complete. You may use the CS Computer Labs (located in HR 530 and HR 535), the Kudlick Lab (HR 235) in the evenings, or your own laptops and home computers to complete your lab.

Students are responsible for properly documenting each lab assignment in their portfolios. These portfolios will be periodically checked and graded throughout the semester.

Major Projects

Students will work in groups to design and implement innovative mobile or web applications. These projects will be included in each student's portfolio. An A+ grade will only be assigned to those projects that demonstrate creativity and an understanding of the underlying logic.

Midterm Exams

There will be two midterm exams, together worth 40% of your final grade. These exams will be closed note and closed book. There will be a review session prior to each exam.

There will not be a final exam for the course. Instead, students are required to complete and present a final project. Presentations will be given on the finals day for this course, which is posted on the course schedule.

Attendance

Attendance is mandatory. For each unexcused absence, one percentage point of your *overall* grade will be deducted. If you miss more than three classes, you will be asked to drop the course. Absences are only excused in cases of verified family or medical emergency.

Late Policy

All deadlines are firm. Students are responsible for meeting all homework and project deadlines. Extensions will not be granted and late homework will not be accepted except in case of verified medical or family emergency. You must discuss your situation with me personally before the deadline to receive an extension. The same holds for all exams.

Academic Honesty

Simply put, do *not* cheat and do *not* plagiarize or copy (from other students *or* from the web). I expect all students to adhere to the academic honesty policies at USF. More information is available in the Fogcutter Student Handbook, available at http://www.usfca.edu/fogcutter/studentconduct/.

Students caught violating the academic honesty policy will face severe penalty. A first offense will result in a 0 on an assignment or exam, and a report to the Dean's office. Repeat offenses may result in an F for the course.

This syllabus is based off previous iterations of this course developed
by Professor Wolber. See http://www.appinventor.org/ for more details.