Syllabus
Android Application Development - COMP 475
3:00 – 4:15 MW Science 207
Spring 2014

Instructors: Dr. Frank McCown
Contact: Office: 501-279-4826, HU Box 10764, fmccown@harding.edu
Home Page: http://www.harding.edu/fmccown/classes/comp475-s14/ (Syllabus, useful links)
Office Hours: Science 208: 11 – 12 MW, 2 – 5 TR, 11 – 12 and 3 – 4 F, or by appointment

Course Description

In this course you will learn how to develop applications for one of the most popular mobile platforms: Google Android. Students will work in teams through the software development process to create applications that will run on Android phones and tablets. Students are expected to have experience programming with Java. Prerequisites: COMP 245 and 345.

This course is largely modeled on David Janzen's Android Course at Cal Poly - San Luis Obispo.

Required text: *Android Programming: The Big Nerd Ranch Guide* by Phillips and Hardy (2013)

Grades

Final grades will be computed as follows:

Tutorials	25%
Individual Assignments	25%
Course Project	40%
Final Exam	10%

Standard letter grades: A = 90-100%, B = 80-89% C = 70-79%, D = 60-69%, F = 0-59%

Final grades are not rounded unless the student has given significant effort which is evidenced by regular attendance, completion of nearly all homework assignments, and being a significant contributor to one's team.

Extra credit: The McChallenge is available.

Late work: A maximum of 10% will be taken off *each day* (not each class period) an assignment is late, up to 50%. Every day is counted, including weekends.   Nothing more than 1 week late will be accepted.

Tutorials

A total of 15 tutorials will be assigned that come directly from the textbook chapters. Each tutorial takes about 1-2 hours to complete. The first 12 tutorials encompass material that everyone will need to know to get started building Android apps. The final 3 tutorials will be of your choosing from the remaining chapters in the book. Tutorials are to be completed individually, and each of you is to assess the degree to which you completed each tutorial. See the *Student/Instructor Contract for Android Tutorials* handout which has more information.

Individual Assignments

Each of you will complete a number of assignments that relate to the Course Project. The assignments combined will account for 25% of your final grade in this course:

1.	App Proposals	5%
2.	Code Review	5%
3.	Alpha Release Evaluation	5%
4.	Beta Release Evaluation	4%
5.	Midterm & Final Team Evaluations	6%
	Total	**25%**

These assignments are to be completed *individually*, not in teams. More detail about each assignment will be given later.

Course Project

The goal of this course is for each student team (2 or 3 students per team) to create an Android app that will perhaps be good enough to be placed on the Android Market. The app can be a game, a utility, educational, etc. as longs as it is non-trivial, sufficiently useful or entertaining, and can be completed in a semester's time. Teams and project themes will be assigned near the beginning of the semester.

A number of project milestones will be assigned throughout the semester that when combined will be worth 40% of your final grade:

1. Horizontal Prototypes   5%
2. Vertical Prototype   5%
3. Pre-Alpha Version   5%
4. Alpha Release   5%
5. Alpha Release Eval Eval   5%
6. Beta Release   15%
   Total   **40%**

Teams will use git to manage their source code and host their projects on github.com. If you do not already have a github.com account, you should create one soon.

Final Exam

There will be a single exam, the final exam, which will assess your ability to write an Android app that uses some of the features you have learned this semester from the tutorials. The entire app will be written during the final exam time period.

Miscellaneous

1. To be successful in this course, be prepared to spend **at least two hours outside of class** for every hour in class reading, completing tutorials, meeting with your team, and working on your project. This works out to about 9 hours a week. If you do not have this much time to dedicate to the course, you should take it some other semester when you can make that commitment.

2. It is important that you **check your e-mail regularly (everyday)** because I often give timely announcements, help on assignments, and share interesting links that relate to the course material through email. It's the only way I can communicate with you all outside of the classroom.

3. I expect every one of you to hold to the **highest standard** of personal conduct and **integrity**. Cheating in all its forms is inconsistent with Christian faith and practice and will result in sanctions up to and including dismissal from the class with a failing grade. When you reuse code found on the Web, it is important that you cite in the source code where you obtained that code and the author so you do not give the impression to others that you have written the code yourself. Code that is repurposed from the Web and not cited will negatively influence your final evaluations.

4. I expect you to adhere to the **dress code** as spelled out in the Student Handbook. This includes (men) removing caps while in class. Please wear shoes to class (flip flops are OK).

5. **Food and drinks** are not permitted in the lab. This is expensive equipment and carpet that is easily spoiled by an accident.

6. Lab computers may be used during class to **take notes and write programs**. They may not be used for non-class activities like Facebook, email, surfing the Web, games, etc. If you violate this rule, you will not be allowed to use the lab computers.

7. Silence your cell phones, and **put them away**. It is very distracting to me and those around you when you text in class.

If you ever need assistance in this class or anything else, please don't hesitate to come by my office or give me a call.

Assessment

Harding University, since its charter in 1924, has been strongly committed to providing the best resources and environment for the teaching-learning process. The board, administration, faculty, and staff are wholeheartedly committed to full compliance with all criteria of the Higher Learning Commission of the North Central Association of Colleges and Schools. The university values continuous, rigorous assessment at every level for its potential to improve student learning and achievement and for its centrality in fulfilling the stated mission of Harding. Thus, a comprehensive assessment program has been developed that includes both the Academic units and the Administrative and Educational Support (AES) units. Specifically, all academic units will be assessed in reference to the following Expanded Statement of Institutional Purpose: **The University provides programs that enable students to acquire essential knowledge, skills, and dispositions in their academic disciplines for successful careers, advanced studies, and servant leadership.**

Assessment of the knowledge, skills, and dispositions of each student for the purpose of assigning a letter grade at the completion of this course will be based on the projects, individual assignments, and exams that were described previously in this syllabus.

Students with Disabilities

It is the policy for Harding University to accommodate students with disabilities, pursuant to federal and state law. Therefore, any student with a *documented disability* condition (e.g. physical, learning, psychological, vision, hearing, etc.) who needs to arrange reasonable accommodations, must contact the instructor and the Disabilities Office at the *beginning* of each semester. (If the diagnosis of the disability occurs during the academic year, the student must self-identify with the Disabilities Director *as soon as possible* in order to get academic accommodations in place for the remainder of the semester.) The Disabilities Office is Room 205 of the Student Center, telephone, (501) 279-4019.

Schedule

The following schedule is subject to change but gives you an idea of how the class will progress. Project milestones are in **bold**.

Week 1 Jan 13	Introduction to mobile app dev Android SDK and Eclipse Tutorials 1 & 2	Week 6	Tutorials 14 & 15 **Vertical Prototype**	Week 11	Android services Alpha Release Evaluation
		Week 7	Fragments Code Review	Week 12 Apr 7	SQLite **Alpha Release Eval Evaluation**
Week 2	*MLK Day – no class* Tutorials 3 & 4 App Proposals	Week 8 Mar 3	Custom views **Pre-Alpha Version** Midterm Team Evaluation	Week 13	Android web apps
Week 3	Tutorials 5 - 7 **Horizontal Prototypes**			Week 14	Testing apps **Beta Release**
		Spring Break			
Week 4 Feb 3	Using git Tutorials 8 - 10	Week 9	Threading GPS and Google Maps API	Week 15	Beta Release Evaluation Final Team Evaluation
Week 5	Local files Tutorials 11 - 13			Week 16 May 5	Final Exam
		Week 10	Notifications **Alpha Release**		

"Whatever you do… do all to the glory of God." - 1 Corinthians 10:31