

Syllabus

Mobile Computing - COMP 475

3:00 – 4:15 MW Science 206

Spring 2010

Instructors: Dr. Frank McCown and Mr. Gabriel Foust
Contact: McCown: 501-279-4826, HU Box 10764, fmccown@harding.edu
Foust: 501-279-4434, HU Box 10764, gfoust@harding.edu
Home Page: <http://www.harding.edu/fmccown/classes/comp475-s10/> (Syllabus, useful links)
Office Hours: McCown: Science 208: 4:15 – 5:15 MW, 1 – 4 TR, 3 – 5 F or by appointment
Foust: Science 209: 1 – 2 daily, 11 – 12 MWF, 4 – 5 TR or by appointment

Course Description

Mobile devices are becoming ubiquitous for a number of reasons: exponential growth in computing power and storage, increased Internet accessibility, growth of cloud computing services, novel advances in human-computer interfaces, and drop in hardware prices. Developers are now rushing to develop applications for today's devices. In this course, we will be learning how to develop applications for two of the most popular mobile platforms: Apple's iPhone/iPod Touch and Google Android. We will also spend some time focusing on usability issues of mobile devices and learning how to develop web applications for mobile devices. Prerequisite: COMP 245 and 345.

There are no required textbooks for this course. The class home page contains links to a number of online resources.

Suggested texts: *Pro Android* by Hashimi and Komatineni (2009)
Beginning iPhone 3 Development: Exploring the iPhone SDK by Mark and LaMarche (2009)

The first half of this course will be taught by Dr. McCown. The second half will be taught by Mr. Foust. Each half will be mostly self-contained with its own homework and project assignments. An exam will be given at the conclusion of each half.

Exams

There will be two exams: a midterm exam covering the first half of the semester, and a final exam covering the material from the second half of the semester. If you are unable to take an exam as scheduled due to a serious illness or some other emergency, it is **your responsibility** to call the instructor and leave a message **before** the exam or as soon as you are physically able. If an official school function takes you out of class on an exam date, it is your responsibility to make arrangements *one week prior* to the exam as to when you will take the exam. Usually it will be given early, not late.

Programming Projects

There will be a variety of programming projects to be completed, either in Java for Google Android or Objective C for the iPhone. These range from 25 – 100 points. You may work independently on all programs or in pairs (two people only) when permitted. Pair programming has been shown to have a number of benefits including increased personal satisfaction and fewer errors¹. If you work in pairs, both of you must work together on a *single* computer, and both of you must write *approximately half* of the code. **No code can be written without the other partner present and watching.** Both of you should understand completely what is being written since you will have to complete your exams individually. When you submit a program that has been written in pairs, you must include both your names in the source code. Only one person should submit the solution to Easel.

Homework Assignments

Homework assignments worth 10 points each will be assigned weekly. The homework will usually provide you an opportunity to learn more thoroughly the material presented in class that week. Unless otherwise indicated, homework assignments need to be completed

¹ See *All I Really Need to Know about Pair Programming I Learned in Kindergarten* (2000) for more information on effectively using pair programming at <http://citeseer.ist.psu.edu/williams00all.html>.

individually.

Grades

Final grades will be computed by taking the total number of points you earn and dividing it by 1000. Here is the break-down in points:

Android homework:	100
Android projects:	200
Midterm exam:	200
iPhone homework:	100
iPhone projects:	200
Final exam:	200
Total:	1000

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

Extra credit will occasionally be given on homework assignments and projects.

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

Expectations

1. It is important that you **check your e-mail regularly (everyday)** because I occasionally give hints or corrections to homework assignments via e-mail. This is also the best way to communicate with the class outside of the classroom.
2. 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. That doesn't mean you can't help others with their programs and homework; everyone will at some time struggle and need assistance from fellow students. But simply giving someone your source code to copy or letting someone copy your answers is dishonest and isn't going to help either of you. Come by during office hours (or we'll arrange a time) for assistance on programs. Also take advantage of the tutor who will be available several times a week.
3. I expect you to adhere to the **dress code** as spelled out in the Student Handbook. This includes (men) removing caps while in class.
4. You may bring laptops to take notes in class, but you are not allowed to do non-class activities like Facebook, email, surfing the Web, games, etc. If you violate this rule, you will no longer have the privilege of bringing your laptop to class.
5. Silence your cell phones.

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, homework assignments, and exams that were described previously in this syllabus. Near the completion of your major in the department of Computer Science, you will be assessed by a comprehensive examination covering core courses in your major (not including this course). This examination will influence your final grade in the senior capstone course.

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 located in Room 102 of the Lee Academic Center, telephone, (501) 279-4019.

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