

EECS 395/495: Development for Mobile Devices

Spring 2009

Location: Tech LG 76

Time: 1:00 - 1:50, MWF

Instructor: Nathan Nichols

Faculty Advisor: Prof. Kristian Hammond

Office: Ford Building, 2.206

Office Hours:

Monday, Wednesday, Friday: 10-12 am

Tuesday, Thursday: 1-3 pm

and by appointment.

These are just the times when I'm guaranteed to be in my office, but I am typically here from 9 until 6 or so. Really, feel free to just stop by or email me to schedule an appointment.

Course web page: <http://eecs395.ndnichols.com/>

All of the handouts, assignments, and lecture notes from the course will be posted there.

Course Group: <http://groups.google.com/group/rtfm-development-for-mobile-devices>

This group is for the class. I *highly* suggest posting questions/problems/solutions to the list before coming and talking to me. You should check the group daily as I will also be posting any announcements, solutions, etc. to the list. I will add you all to the list.

The course won't use Blackboard.

Lab: If you don't have an Intel-based Mac, don't worry. There is a Mac lab in the basement of Northwestern's Library that has the SDK installed for you to use. We will discuss the details of this in class.

Textbook & Handouts: There is no textbook for the course. There are suggested readings available on the website, and I will provide handouts and links to other resources as the course progresses.

Course Description: The purpose of this course is for students to learn how to develop applications for next-generation mobile devices. This includes specific programming techniques and technologies, and more general user interface/user experience principles that apply to handheld, always-connected devices. The main development

platform the course targets is the Apple iPhone. Some programming experience is expected. Here are some important details about the course:

- Development on the iPhone is done in the Objective-C programming language. ObjC is something of a hybrid between static languages (like Java, C++, or C#) and dynamic languages (like Python or PHP.)
- Although mobile devices are rapidly getting more powerful, they are still not nearly as powerful or spacious as a desktop PC. The course will emphasize writing small, fast code, and this should help you write good code even when you're back developing for a faster machine.
- The course will have four projects/assignments. The first two are small projects designed to teach the basics. The third project is a multi-week/multi-part complete application the class will complete together. The final project is an independent project you will do by yourself or in a small group. You will propose the project to a small panel, and then present it during the final week. The goal is for your final project to be submitted and accepted onto Apple's App Store.

Learning Goals: The following are goals to guide your learning in this course. Upon completing the course:

- Students will have designed, implemented, and debugged two complete mobile applications.
- Students will understand and be able to design for mobile UI/UX considerations.
- Students will have experience programming using professional tools and techniques, like IDEs, debuggers, profilers, etc.
- Students will understand an application's development lifecycle, and gain experience proposing an independent project, receiving feedback, and developing the project.

Grades: Grades for the course will be determined entirely by the four projects. Because we do not have a textbook, class attendance is very important in that material covered during class sessions will be critical for completing the projects.

Your grade for the course will be calculated as follows:

Class participation: 5 percent
Project 1: 5 percent
Project 2: 15 percent
Project 3: 35 percent
Project 4: 40 percent

Each project is due by the start of class on the day it is due. Projects should be turned in with **scp**, we will discuss the details of this in class. The specific grading criteria for each project will be discussed during class and covered in the assignment handouts.

Late policy: You will lose 10% of the possible points for every day your project is late.

Final: The final for the course will be given on ? from ?-?. During this time, students will present their final projects for their classmates.

Academic Honesty: As you would expect, I take academic honesty very seriously. If you are cheating, you will get a zero on that assignment; with the small number of assignments the class has, this will hurt your grade badly.

In general, talking and discussing problems or solutions is acceptable, and encouraged! (The mailing list works well for this.) Copying and pasting code, or having two people sitting at the same machine, is not. If you are unsure whether something is appropriate, *please ask me*. I will NOT be angry with you for asking, but I will be angry if you cheat. This is not one of those times where it is better to beg forgiveness than ask for permission!