CS 347: Mobile Application Development

College of Arts and Sciences Syllabus
February 26, 2016

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COURSE INFORMATION

Credit Hours: 3

Course Description: This course covers programming applications for mobile platforms. Students will learn about mobile application environments and platforms and how to design and develop applications to account for the limited screen size, memory, and access to the internet. Students will incorporate graphics, networking, security, media to create new, real world, practical applications. Development, design, implementation, testing, debugging, and maintaining these applications will also be covered. Students will use a variety of programming languages to create these applications.

Course Prerequisites: CS207 and CS300 with a minimum grade of C.

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FACULTY INFORMATION

Instructor: Francisco Iacobelli
Office Location: Lech Walesa Hall 3060
Office Hours: TR:12:30-2:00p; W:5:00-7:00p
Phone Extension: 4728
email: f-iacobelli@neiu.edu

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COURSE MATERIALS

Course Website: desire2learn, piazza (http://piazza.com) and http://cs.neiu.edu/~fiacobelli/courses/mobileApps/www/

Textbook: None.


Conditions to take this course:

• You will need to sign up with www.stackoverflow.com a discussion forum for programmers. All your questions should go there.
• You must be able to save documents as PDF and pictures as PNG or JPEG.
• You need to have a digital camera (or a camera phone with at least 2 mega pixels. Basically any smartphone will do)
• You will have to allocate some time to go over the content online and also to take a few tests online. The tests will require about 2 hours.
• Homework Due: Thursdays BEFORE 4pm each week. No late work will be graded.
Hybrid Mode: This course will meet once a week, but roughly 1.2 hours of materials will be assigned to be viewed at home. You are expected to view that material before coming to the face to face meeting of the class.

Time Expectations: Expect to spend an average of 10 hours a week in this course. Some weeks will take more time than others.

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COURSE OBJECTIVES/STUDENT LEARNING OUTCOMES

Objective: This course will provide the concepts and practice necessary to effectively develop mobile applications, in particular on the iOS platform as well as on the Android platform.

Learning Outcomes: At the end of the course the students should be able to develop small mobile applications using ta persistance, graphics and the device hardware components such as a camera and a GPS.

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STUDENT TASKS/ASSIGNMENTS/REQUIREMENTS

Assignemnts

- Essay on interaction design
- Complete the MVC tic tac toe
- Install AndroidStudio and the Android platform
- Install Android Studio and create a hellow world app.
- Create a temperature converter in Android
- Add data persistance to lab app.
- Build an RSS Reader in Android
- Find a Mac to work on XCode.
- Create a class in swift.
- Create a game in ObjectiveC/Swift (mastermind).
- Create temperature converter for iOS
- Add data persistence for the lab app.
- Ideas for final project
- Paper prototypes for projects
- Final Project (an app with at least 3 features we covered in class and one we didn’t)

Grading Policies and Formulae

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<th>Item</th>
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<tr>
<td>Assignment/Quiz Average</td>
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<td>Stack Overflow Reputation</td>
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<tr>
<td>Projects (2)</td>
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<thead>
<tr>
<th>Weighted Average</th>
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<td>90% or higher</td>
<td>A</td>
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<td>80% – 89%</td>
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Course Outline

Week 1: Interaction Design in Mobile Apps

Week 2-3: Design Patterns and MVC

Week 4: Android SDK.

Week 5: Opening Activities in Android.

Week 6-7: Master Detail in Android.

Week 8: Data Persistence in Android.

Week 9: Design Considerations.

Week 10: Getting Started with XCode and Swift.

Week 11: First iOS App: Hello World

Week 12: Utilizing Views.

Week 13: Data Persistence.

Week 14: Master Detail in iOS.

Week 15: iOS Storyboard.

Week 16: Using the WWW in iOS and Android.

Other Topics: If time allows, we may cover all or some of the following topics.

- Android GeoLocation, iOS’s CoreLocation
- TouchEvents in Android, Touch Events in iOS
- Using the Camera in android and iOS
- Other topics useful for features of final projects.

COURSE POLICIES AND STATEMENTS

Absence Policy

There is no absence policy.

Academic Integrity

By enrolling in this course, you are bound by the NEIU Student Code of Conduct. You will be informed by your instructor of any additional policy specific to your course regarding plagiarism, class disruptions, etc.

ADA Statement

Northeastern Illinois University (NEIU) complies with the Americans with Disabilities Act (ADA) in making reasonable accommodations for qualified students with disabilities. To request accommodations, students with special needs should make arrangements with the Student Disability Services (SDS) office, located on the main campus in room D104. Contact SDS via (773) 442-4595 or http://www.neiu.edu/university-life/student-disability-services.
Campus Safety

Web links to Campus Safety: Emergency Procedures and Safety Information can be found on NEIUport on the MyNEIU tab or as follows: [http://homepages.neiu.edu/~neiutemp/Emergency_Procedures/MainCampus/](http://homepages.neiu.edu/~neiutemp/Emergency_Procedures/MainCampus/)

Late Work Policy

There will be many assignments. All work MUST be submitted on their given due date or a grade of zero will be assigned. No late homework assignments will be accepted. Please begin assignments early to ensure that you finish them on time. All grades for each assignment will be posted online on D2L at most one week after the due date. All assignments are due Thursdays before 4:00 p.m.

Web Link to Emergency Information

It is recognized that a safe university environment is a shared responsibility of faculty, staff, and students, all of whom are expected to familiarize themselves with and cooperate with emergency procedures. Emergency Procedures and Safety Information can be found on NEIUport on the MyNEIU tab or at:

Main campus: [http://www.neiu.edu/~neiutemp/Emergency_Procedures/MainCampus/](http://www.neiu.edu/~neiutemp/Emergency_Procedures/MainCampus/)


