

ITSE 2071 Course Syllabus

Name of Course: iPhone Programming

2. Number of Clock Hours: 42

3. Course Description:

The iPhone needs programmers! Yet, it uses an unfamiliar language, Objective-C. It has a novel and unfamiliar user interface framework, Cocoa Touch. It requires an unfamiliar integrated development environment, Xcode, running on a familiar Mac. It has unique and unfamiliar capabilities -- a GPS, a compass, Wi-Fi, OpenGL ES and an accelerometer -- that require special coding techniques. In other words, programmers need new skills to write software for the iPhone. This class will cover basic programming of the iPhone. Students will leave this class being able to write simple iPhone programs.

4. Prerequisites:

- At least a year of programming in object oriented languages. Students must submit a code sample at the first class meeting as a condition of admission to the course.
- Students must have access to an Intel based Macintosh.
- Students who want to install their software on an iPad, iPhone or iPod Touch must purchase a \$99.00 membership in the Apple iOS Developer Program.

5. Course Objectives

At the end of the course, students will be able to:

1. Use Xcode compilers and tools
2. Write simple object oriented programs in Objective-C
3. Use mobile user interfaces
4. Create a mobile user interface
5. Use general purpose debugging tools
6. Use general purpose performance analysis tools

6. Rationale:

Upon completion of this course, students will have a better understanding of Apple iPhone programming, the most exciting operating system in use today.

7. Required Materials:

iOS Programming: The Big Nerd Ranch Guide (2nd Edition) (Big Nerd Ranch Guides), by Joe Conway & Aaron Hillegass; Addison-Wesley Professional; 2 edition (July 2, 2011); ISBN-10: 0321773772, ISBN-13: 978-0321773777.

8. Evaluation

Those who participate in class discussions, complete course lab work, and miss no more than three class meetings will be awarded 4.2 continuing education units.

9. Course Outline

1. Welcome to the Jungle
2. Appeasing the Tiki Gods
3. Handling Basic Interaction
4. More User Interface Fun
5. Autorotation and Autosizing
6. Multiview Applications
7. Tab Bars and Pickers
8. Introduction to Table Views
9. Navigation Controllers and Table Views
10. Application Settings and User Defaults
11. Basic Data Persistence
12. Drawing with Quartz and OpenGL
13. Taps, Touches, and Gestures
14. Where Am I? Finding Your Way with Core Location
15. Wheel!
16. iPhone Camera and Photo Library
17. Application Localization
18. Where to Next?