

Montgomery County Community College
CIS 238
iPhone Application Development
3-2-2

COURSE DESCRIPTION:

This is a comprehensive course on how to develop applications for Apple's iPhone, iPod touch, and iPad. Students will learn how to utilize the iPhone SDK, Objective-C programming language, and the standard Apple development tools Xcode, Interface Builder, and Instruments to build applications for distribution via the iTunes App Store. Although students may use the College's Macintosh labs to complete their course work, it is highly recommended that students have access to an Intel-based Macintosh to complete work outside of class. An iPhone, iPod touch, or iPad is not required for the course but is also recommended.

REQUISITE(S):*Previous Course Requirements*

- * CIS 111B Computer Science II: Object-Oriented Programming with a minimum grade of "C"

Concurrent Course Requirements

None

COURSE COMMENTS

- * Experience with C or C++ programming is recommended but not required.

LEARNING OUTCOMES Upon successful completion of this course, the student will be able to:	LEARNING ACTIVITIES	EVALUATION METHODS
1. Demonstrate the ability to utilize the iPhone SDK to build iPhone applications.	Assigned Readings AV/Multimedia Materials Demonstration and Practice Lecture/Discussion Student Presentations Examinations	Projects Presentation
2. Demonstrate the ability to utilize Apple's suite of developer tools (Xcode, Interface Builder, and Instruments) to build and debug iPhone applications.	Assigned Readings AV/Multimedia Materials Demonstration and Practice Lecture/Discussion Examinations	Competency Checklist

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
3. Demonstrate the ability to use the Objective-C programming language.	Assigned Readings AV/Multimedia Materials Demonstration and Practice Lecture/Discussion Examinations	Projects
4. Describe the process to submit, sell, and/or distribute applications via the iTunes App store.	Assigned Readings AV/Multimedia Materials Demonstration Lecture/Discussion Examinations	Competency Checklist
5. Design applications that utilize the unique hardware and multi-touch software features of the iPhone, iPod touch, and iPad.	Assigned Readings AV/Multimedia Materials Demonstration and Practice Lecture/Discussion Examinations	Projects

At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Associate Vice President of Academic Affairs. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria*.

SEQUENCE OF TOPICS:

1. Introduction to the iPhone SDK, Objective-C, and XCode development suite.
2. Objective-C fundamentals
 - a. Frameworks
 - b. Memory Management
 - c. Syntax and language features
3. Interface Builder
4. iPhone SDK design patterns
 - a. Model, View, Controller
 - b. Delegation
5. Device configuration and deployment for development
6. View Controllers
7. Table Views
8. Navigation Controllers
9. Data persistence
 - a. File I/O
 - b. Preferences
 - c. Core Data
 - d. SQLite

10. Networking
 - a. Peer-to-Peer
 - b. Web Services
11. Events and Multitouch
12. Core Location
13. Accelerometer
14. Address Book
15. Map Kit
16. Audio & Video APIs
17. Notifications
18. Using the iTunes App Store to distribute your application

LEARNING MATERIALS:

Keur. *iOs Programming: The Big Nerd Ranch Guide, 6th Edition*. Pearson. ISBN: 9780134682334

Other learning materials may be required and made available directly to the student and/or via the College's Libraries and/or course management system.

COURSE APPROVAL:

Prepared by: Jason Wertz	Date: 10/2009
VPAA/Provost Compliance Verification: Dr. John C. Flynn, Jr.	Date: 6/23/2010
Revised by: Jason Wertz	Date: 7/23/2013
VPAA/Provost or designee Compliance Verification: Victoria Bastecki-Perez, Ed.D.	Date: 7/26/2013
Revised by: Patricia Rahmlow	Date: 5/2017
VPAA/Provost or designee Compliance Verification:	Date: 8/21/2017



This course is consistent with Montgomery County Community College's mission. It was developed, approved and will be delivered in full compliance with the policies and procedures established by the College.