Course Name: Programming Mobile Devices I

Course Number: CSC* E262

Credits: 3

Catalog description: An introduction to the platforms, technologies, and programming techniques used to develop apps for mobile devices. The course focuses on the major mobile platforms, such as Apple iOS, Android OS, and other platforms as appropriate. Students will develop mobile apps using specialized platform-specific software-development tools.

The course is offered in a hybrid format with three hours of classwork in a hands-on computer laboratory environment and two hours of online work per week.

Prerequisite: CSC*E105 Programming Logic *or* permission of the instructor

Corequisite or Parallel:

General Education Competencies Satisfied:

HCC General Education Requirement Designated Competency Attribute Code(s):

None

Additional CSCU General Education Requirements for CSCU Transfer Degree Programs:

None

Embedded Competency(ies):

None

Discipline-Specific Attribute Code(s):

☒ **COMP**   **Computer Science Elective**

Course objectives:

General Education Goals and Outcomes:

None

Course Specific Objectives:

1. Install and configure the integrated development environments of major mobile platforms
2. Develop mobile apps using the development tools of major mobile platforms
3. Develop mobile apps using correct programming design patterns
4. Develop mobile apps that have well-designed graphical user interfaces
5. Develop mobile apps that respond adequately to events
6. Develop mobile apps that appropriately utilize application programming interfaces (APIs)
7. Develop mobile apps that properly manage data
8. Take a mobile app through its entire development life cycle
9. Develop a cross-platform web app

Course Content:

- Installing the Xcode integrated development environment (IDE) for developing Apple iOS apps
- Using the Apple IDE in conjunction with the Swift or the Objective C programming language to create an iOS app with a suitable user interface that responds to events, connects to APIs, and manages data
- Testing and debugging the app using the iOS simulator
- Installing the app on Apple test devices
- Installing the Android Developer Studio IDE for developing Android apps
- Using the Android IDE in conjunction with the Java programming language to create an Android app with a suitable user interface that responds to events, connects to APIs, and manages data
- Testing and debugging the app using the Android simulator
- Installing the app on Android test devices
- Introduction to cross-platform web apps

Date Course Created: Spring 2016

Date of Last Revision: 04/03/2017