

Module Title iOS Application Development	Reference CM3067 SCQF SCQF 9 Level SCQF Points 15 ECTS Points 7.5 Created September 2009 Approved July 2016 Amended January 2013 Version No. 1
Keywords Object oriented programming, Mac OS X, iOS, Swift, Cocoa touch, Graphical User Interfaces, evolutionary prototyping	

This Version is No Longer Current

The latest version of this module is available [here](#)

Prerequisites for Module

The student should have previous experience of using an object-oriented programming language. This could be evidenced by successful completion of CM2015 Object Oriented Software or CM3008 Object Oriented Programming.

Indicative Student Workload

<i>Contact Hours</i>	Full Time
Laboratories	36
<i>Directed Study</i>	
Directed reading	54
<i>Private Study</i>	
Private study	60

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To extend the student's knowledge and proficiency in object oriented programming to cover the Swift

Mode of Delivery

Key concepts and ideas are introduced in lectures. In the lab sessions, the students will develop and implement practical aspects of iphone/ipod touch applications. The labs will involve the use of existing IDE and GUI tools for the development, deployment and testing of GUI applications.

programming language in a Mac OS X and iOS environment. To become proficient in developing applications, both native and web-based, that take advantage of the Cocoa Touch framework that enables touch and motion control of a GUI application. To incorporate an evolutionary prototyping approach to developing applications.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

1. Use the facilities of an Integrated Development Environment (IDE) and Graphical User Interface (GUI) to develop touch and motion controlled applications on the iPhone/iPod touch.
2. Design, code and implement input/output screens for both native and web-based applications.
3. Employ a Model-View-Controller (MVC) approach linked to an evolutionary prototyping approach to software development.
4. Test and document the overall touch and/or motion controlled applications.
5. Appraise security implications in the development of iOS mobile applications.

Assessment Plan

	Learning Outcomes Assessed
Component 1	1,2,3,4,5

Component 1 - Coursework worth 100% of the total module assessment.

Indicative Bibliography

1. RAY, J. Sams Teach Yourself iOS 9 Application Development in 24 Hours. SAMS, 2016
2. TOPLEY, K., OLSSON, F. AND NUTTING, J. Beginning iPhone Development with Swift: Exploring the iOS 9 SDK. Apress, 2015.

Indicative Module Content

Overview of Swift, Cocoa Touch and developing/debugging tools within Mac OS X / iOS environment. Use of existing classes/methods within the available frameworks. Creating custom classes and inheritance. Controls and target-action within the IDE and GUI. Design implications inherent in iphone/ipod touch applications eg memory management, battery life, screen display, navigation controls. Creation of web-based and native applications that exploit the features of the iphone/ipod touch eg accelerometer, audio, video, touch and multi-touch.