Module Title **Programming The iPhone** **Keywords** Object oriented programming, Mac OS X, iphone/ipod touch, Objective-C, Cocoa touch, Graphical User Interfaces, evolutionary prototyping	Reference CM3065 SCQF Level SCQF 9 SCQF Points 15 ECTS Points 7.5 Created September 2009 Approved November 2009 Amended Version No. 1

This Version is No Longer Current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 progamming language. This could be evidenced by successful completion of CM2015 or CM3008.

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To extend the student's knowledge and proficiency in object oriented programming to cover the Objective-C programming language in a Mac OS X environment. To become proficient

Indicative Student Workload

Contact Hours	Full Time
Assessment	12
Coursework preparation	36
Laboratories	24
Lectures	24
Private study	54

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 invovle the use of existing IDE and GUI tools for the development, deployment and testing of GUI applications.

Assessment Plan

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.

Indicative Module Content

Overview of Objective-C, Cocoa Touch and developing/debugging tools within a Mac OS X environment. Use of existing

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

Component 1 - Coursework

Indicative Bibliography

1. RAY,J. Sams Teach Yourself ios 8 Application Development in 24 Hours. SAMS, 2015
2. TOPLEY, K.,OLSSON, F. AND NUTTING, J. Beginning iPhone Development with Swift: Exploring the iOS 8 SDK. Apress, 2015.

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.