



## Certificate in Apple iOS Mobile App Development

### M109: iOS Platform Components

#### Module Description

After this module the learner should be competent in understanding and working with the following:

- Joining the Apple iOS developer program
- Provisioning iOS devices and working with profiles
- Understanding the Xcode interface
- Understand MVC Design
- Understand the iOS layered model
- Aware of the challenges when programming for mobile devices
- iOS Frameworks
- Aware of the iOS User Interface Guidelines

It is recommended that you complete the iOS Programming in Swift Module - M115 before attempting this Module.

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#### Duration:

- 3 weeks – blended/flipped classroom mode using iTunes U

#### Eligibility and Pre-Requisites

- Anyone around the world but only HCT full time staff qualify for the certificate if they complete all the assessment tasks.

## **Course Outline**

### **1. Getting Started**

- 1.1. Joining the Apple iOS developer program
- 1.2. Provisioning iOS devices and profiles
- 1.3. Compiling, uploading and running a test app

### **2. Working in Xcode**

- 2.1. Project Windows
- 2.2. Project file and dependencies
- 2.3. Build Phases, setting and schemes
- 2.4. Interface builder and Storyboards
- 2.5. UI Elements - Bars, Content Views, Controls and Temporary Views
- 2.6. Inspectors
- 2.7. Libraries

### **3. MVC Design**

- 3.1. Model
- 3.2. View
- 3.3. Controller

### **4. iOS layered model**

- 4.1. Core OS
- 4.2. Core Services
- 4.3. Media
- 4.4. Cocoa Touch



### **5. Challenges when programming for mobile devices**

- 5.1. Single Window - Single Active application
- 5.2. Limited Screen size and Memory
- 5.3. Fast response times

### **6. iOS Frameworks**

- 6.1. Finding help in the documentation

### **7. iOS User Interface Guidelines**

- 7.1. iOS Themes - Deference, Clarity, Depth
  - 7.2. IOS Design Principles - Aesthetic Integrity, Consistency, Direct Manipulation, Feedback, Metaphors, User Control
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## **Assessment**

Written Research Assignment - 25% of final grade

