

GUJARAT TECHNOLOGICAL UNIVERSITY

Master in Computer Application (Integrated MCA)

Year IV – (Semester-VIII) (W.E.F. December 2016)

Subject Name: IOS

Subject Code: 4480609

1. Learning Objectives:

- To understand the students with the core concepts of mobile application development using iOS using XCode
- To learn the concepts starting from the basics like architecture of iOS, application development process, basic steps involved in application development, basic controls involved in application development, various layouts, design requirements, local data storage and database integration which are widely required when developing an entire application

2. Prerequisites: Knowledge of Core JAVA Programming, Database Concepts

3. Contents:

Unit No.	Course Content	Weightage	No of Lectures
I	<p style="text-align: center;">Understanding iOS development process</p> <p style="text-align: center;">Preparing for development Understanding iOS platform, running an iOS application, overview of developer technology</p> <p style="text-align: center;">XCode and iOS Simulator Using XCode, using iOS simulator</p> <p style="text-align: center;">Swift and iOS playground Object oriented programming and Swift, exploring Swift file structure, Swift programming basics, memory management and automatic reference counting, introduction to iOS playground</p> <p style="text-align: center;">Interface Builder Understanding interface builder, creating user interfaces, customizing user appearance, connecting to code</p>	20%	8
II	<p style="text-align: center;">MVC Application Design Understanding MVC design pattern, understanding how XCode implements MVC, using single view application template</p> <p style="text-align: center;">Working with basic controls Basic user input and output, using text fields, text views and</p>	20%	8

	<p>buttons</p> <p>Working with multiple scenes Introduction to multiple scene storyboard, using segues and popovers</p>		
III	<p>Working with advanced controls Working with image views, sliders and steppers. Using switches, segmented controls, web views and scroll views.</p> <p>Providing alerts Alerting the user and exploring different methods to alert the user</p> <p>Working with choice controls Understanding toolbars, exploring pickers like date picker and time picker. Creating and using a custom picker</p>	20%	8
IV	<p>Navigation in storyboards Advanced view controllers. Exploring navigation controllers, understanding tab bar controllers. Using a navigation controller, using a tab bar controller</p> <p>Table Views and Split view controllers Understanding tables, exploring split view controller, creating a master detail application</p> <p>Building responsive user interfaces Responsive interfaces, using auto layout, programmatically defined interfaces</p>	20%	8
V	<p>Reading and Writing application data iOS applications and data storage, data storage approaches, creating implicit preferences, implementing system settings, implementing file system storage</p> <p>Interacting with iOS services iOS service integration, using address book, email and maps</p> <p>Implementing location services Understanding core location, creating a location – aware application</p> <p>Publishing the app Creating the store account, steps to publish the app</p>	20%	8

4. Text Book(s):

- 1) John Ray, iOS 8 Application Development in 24 hours Pearson Education

5. Suggested Additional Reading:

1. Paul Deitel, Harvey Deitel, Swift for Programmers, Pearson Education
2. Wei – Meng Lee, Beginning Swift Programming, Wrox Publication
3. Jesse Feiler, iOS Programming with Swift for Dummies, Wiley India

Web Resources:

1. <https://developer.apple.com/programs/how-it-works/>
2. <https://developer.apple.com/app-store/submit/>
3. <https://developer.apple.com/library/ios/documentation/IDEs/Conceptual/AppDistributionGuide/SubmittingYourApp/SubmittingYourApp.html>
4. https://developer.apple.com/library/ios/documentation/IDEs/Conceptual/AppDistributionGuide/ConfiguringYourApp/ConfiguringYourApp.html#//apple_ref/doc/uid/TP40012582-CH28-SW1
5. https://developer.apple.com/library/ios/documentation/LanguagesUtilities/Conceptual/iTunesConnect_Guide/Chapters/SubmittingTheApp.html#//apple_ref/doc/uid/TP40011225-CH33

6. Chapter wise Coverage from Main Reference Book(s):

Unit	Topics
1	Chapter 1,2,3,5
2	Chapter 6,7,11
3	Chapter 8,9,10,12
4	Chapter 13,14,16
5	Chapter 15,20,21

7. Tools to be used:

1. iOS [latest version] using Swift
2. XCode [7.0.1 or latest]

8. Accomplishments

Students will understand a high-level overview of the mobile application development process on iOS platform. Student will understand various activities of mobile application like activity, content etc..