Subject Name: Mobile Application Development with iOS

Subject Code: IT 703 - 3 / CE 703-3

Teaching Scheme (Credits and Hours)

Teaching scheme				Total Credit	Evaluation Scheme					
L	T	P	Total		Theory		Mid Sem Exam	CIA	Pract.	Total
Hrs	Hrs	Hrs	Hrs		Hrs	Marks	Marks	Marks	Marks	Marks
04	00	04	08	6	3	70	30	20	30	150

Learning Objectives:

The main objectives to give the subject Mobile Application Development in iOS are:
- To introduce basic concepts of Objective C Programming
- To introduce iOS
- To building Mobile Application With iOS

Outline of the Course:

Sr. No	Title of the Unit	Minimum Hours
1	Fundamentals of programming	5
2	Learning Objective C	9
3	Introduction to iPhone OS	9
4	Application Development in iPhone	16
5	Database integration with SqLite	10
6	Deploying your iOS app	5
7	Introduction to application development for windows phone	6

Total hours (Theory): 60

Total hours (Lab): 60

Total hours: 120

Detailed Syllabus

Sr. No	Topic	Lecture Hours	Weight age(%)
1	**Fundamentals of programming** OOP concepts and SQL Queries, Basics of Designing, Overview of MAC OS and X-Code	5	10
2	**Learning Objective C** Data Types, NSInteger, NSNumber, Operators, Loop, Introduction to .H and .M, Files Inheritance, Method Overloading, Mutable and Immutable Strings, Mutable and Immutable Arrays, File Management	9	17
3	**Introduction to iPhone OS** Introduction to iPhone Architecture, Essential COCOA Touch Classes, Interface Builder, Nib File, COCOA and MVC Framework, Overview of features of latest ios	9	17
4	**Application Development in iPhone** Controls and Gestures, Controllers and Memory Management, Using Application Delegate, Connecting Outlets, Managing Application Memory, Advance Controllers Programming, Views (Alert View, Table Views, Picker, Date and Time, Image), Navigation Based Application Development, Tab Bar and Tool Bar, Audio and Video, Releasing Memory, Reading PDF File in iPhone Simulator, Animation, Accelerometer, Location Services and 2-D Graphics, Email Sending, XML Parsing, JSON Parsing, Web Services Integration, Exploring maps and local search	16	26
5	**Database integration with SqLite** SqLite, Creating Outlets and Actions, Parsing Data with SqLite, Overview of Networking- SCNetwork, CFHTTP, CFFTP, CFSocket, Berkeley Sockets, Web Server	10	15
6	**Deploying your iOS app** Deploying the app to Beta Tester, Registering Beta device, Generating digital certificates, Submitting app to Apple by registering Apple Id, Validating and submitting App	5	5
7	**Introduction to application development for windows phone** Application life cycle, syntax and semantics of visual studio 2013, design and build windows phone app, integrating map and location in app, advanced topics	6	10
		60	**100**

Instructional Method and Pedagogy:

- At the start of course, the course delivery pattern, prerequisite of the subject will be discussed.
- Lectures will be conducted with the aid of multi-media projector, black board, OHP etc.
- Attendance is compulsory in lecture and laboratory which carries 10 marks in overall evaluation.

- One internal exam will be conducted as a part of internal theory evaluation.
- Assignments based on the course content will be given to the students for each unit and will be evaluated at regular interval evaluation.
- Surprise tests/Quizzes/Seminar/tutorial will be conducted having a share of five marks in the overall internal evaluation.
- The course includes a laboratory, where students have an opportunity to build an appreciation for the concepts being taught in lectures.
- Experiments shall be performed in the laboratory related to course contents.

Reference Books:
1. Building iPhone and iPad Electronic Projects - MikeWesterfield - O'Reilly Media Pub.
2 . Head First iPhone and iPad Development, 2nd Edition - Dan Pilone, Tracey Pilone – O'Reilly Media
3. Beginning iPhone and iPad Web Apps - ChrisApers, Daniel Paterson - Apress Pub
4. Beginning iOS Programming – Building and deploying iOS application, Nick Harris, Wrox Publication

List of Practical:

Sr. No	Title
1	Print "Hello World" in iOS
2	Handling button events / actions in iOS
3	Implement UI elements like TextFields, Label, Toolbar, Statusbar, Tabbar
4	Handling image in iOS using ImageView
5	Implement UI elements like ScrollView, TableView, Pickers, Switches
6	Implement UI elements like Sliders, Alerts, Icons
7	Handling Accelerometer to manage change in position
8	Managing camera in iOS
9	Make Registration page using UI elements and SQLite Database
10	Handling audio, video and file in iOS
11	Deploying iOS app on app store
12	Create simple app for windows phone