

Branch Name:	Computer Engineering / Information Technology
Semester/Year:	Semester VI / Third Year
Subject Title:	Mobile Application Development using iOS
Subject Code:	1ET1030607
Pre-requisite:	Basic knowledge of C and Object-Oriented Programming

Course Objective:

This course will help student to Understand iOS Market and its future perspective and growth in the marketplace. This will also help student to Implement Data and Knowledge Management and use of iOS Devices. The subject offers hands on experience in iOS development.

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture (L)	Tutorial (T)	Practical (P)	Credit	Theory (Marks)		Practical (Marks)		Total (Marks)
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
03	-	02	04	70	30	30	20	150

Subject Contents				
Sr. No	Topic	Total Hours	Weight (%)	
01	Introduction: Understanding MAC OS and its Programing Platforms. Evolutions of iOS devices and Architecture of iOS Mobile devices, Basics of COCOA Touch Classes, Interface Builder, Nib File. COCOA and MVC Framework. Introduction to Objective C	07	10%	
02	Swift Programing: Moving to Swift, types, constants, variables, operators, control statements, loop and arrays, dictionaries and collections, functions, enumerations, structure, classes, inheritance	07	20%	
03	Application development: Layout, Views, Outlets and Actions, Single view Controller, Master-Detail View Controller, Navigation View Controller, Managing Application Memory, Application delegate, Handling Input, UI Controllers: Label, Button, Text Field, Slider, Switch, Progress View, Page Control, Table View, Collection View, Image View, Text View, Web View, Map View, Date Picker, Picker View, Search Bar, Gestures, push notification, Image Picker, QR Code Scanner, Audio and Video, Accelerometer, Location service, 3D touch, attribute tracking, Database management using SQLite	15	50%	
04	Web Api Integration: JSON and XML Parsing Web Services.	7	10%	
05	Game development App Store subscription and Publishing	4	10%	

Course Outcome:

After successful completion of the course, student will be able to:
Design and develop the application based on iOS platform,

Reference books:

1. iOS 10 Programming Fundamentals with Swift by Matt Neuburg - O'Reilly Media Pub
2. Building iPhone and iPad Electronic Projects - Mike Westerfield - O'Reilly Media Pub.
3. Head First iPhone and iPad Development, 2nd Edition - Dan Pilone, Tracey Pilone - O'Reilly Media
4. Beginning iPhone and iPad Web Apps - Chris Apers, Daniel Paterson - Apress Pub

List of Experiments(Reference):

Installation of x-code on MAC.

1. Write a program to demonstrate all usage of Control statement.
2. Write a program to demonstrate all usage of Operating casting.
3. Write a program to perform XML Parsing.
4. Write a program to create a simple calculator in swift.
5. Write a program to demonstrate different UI controllers.
6. Write an application to demonstrate the use of table control & views.
7. Develop an iphone application in which user can insert, update and delete the record in database.
8. Develop a program to generate a sign-up form which contains following fields. Username, Password, Gender, Birth-date, Country, Image, Submit, Terms and conditions. On successful registration attempt system must generate one alert message. (Label, Round rectangle button, Segmented control, Text field, Picker view, Data picker, Image view, Navigation)
9. Write an i-phone application which can play audio and video files.
10. Develop a medium size project using iOS programming with using all controllers, notifications, database & views.