GUJARAT TECHNOLOGICAL UNIVERSITY

Subject Name: Advanced Programming on Mobile Devices – I (Major Elective – III)
Subject Code: 3725304
Semester II

Type of course: ME - Computer Engineering (Wireless And Mobile Computing)

Prerequisite: Fundamental concepts of C Programming,
Fundamental concepts of object oriented programming,
Objective C

Rationale: NA

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks				Total Marks
L	T	P	C	Theory Marks		Practical Marks		
				ESE (E)	PA (M)	ESE(V)	PA (I)	
3	2#	0	4	70	30	30	20	150

L- Lectures; T- Tutorial/Teacher Guided Student Activity; P- Practical; C- Credit; ESE- End Semester Examination; PA- Progressive Assessment;

Content:

Sr. No.	Content	Total Hrs	% Weightage
1	Introduction to Mobile Platforms, Overview of iPhone , iPhone OS Technology Layers ,Learning Objective C – Basics, Learning Objective C – Advance, Understanding the Basics of creating an iPhone application, Tools for iPhone OS Development, Xcode IDE, Interface Builder ,View Controller (Table ,NavBar, Text, TabBar, ToolBar, Web) Handling Touch Events ,Capturing iPhone events ,Event Handling, Creating Views Programmatically Introduction to OpenGL, Creating Animations	10	30
2	Device Support : Accelerometer, Accessory (Camera, Bluetooth, GPS, Maps) Core Data,SQLite- AddressBook, Application Preferences, Mail Message, Apple URL Scheme, Reference	10	15
3	multithreading on iPhone OS, Playing Audio and Video on iPhone, Using Web Service, Bonjour Programming, Programming iCloud, Building web apps with Dashcode, Graphics, Signing Code for iPhone Development Case Study	10	25

Text Book:

1. iPhone in action by Christopher Allen / Dreamtech

2. The iOS5 Developer‟s Cookbook: Core Concepts and Essential Recipes for iOS Programmers by Erica Sadun

3. Beginning iOS 5 Application Development by Wei Meng Lee

References Books:

1. Beginning iphone Sdk Programming with Objective-C by Wei-meng Lee/Wiely

2. Head First iPhone Development by Tracey Pilone, Dan Pilone/ O'Reilly

3. Professional iphone And ipad Database Application Programming,Alessi by Patrick

Alessi/wiely India

Course Outcome:

After learning the course the students should be able to:

Student undergoing this course are expected to…

1. Study the Architecture of iOS and.
2. Knowledge on x-code and dash code programming.
3. Design & implement a programming for iphone & iOS.

List of Experiments: (with Open Ended Problems)

1. Create Student Information Form containing field like Student Name, Student ID , Address. Enter this information from user and after click on Display button it should be display on next screen.

2. Create Table view showing Employes list after click on employee Name it show detail information of that employee. Table view row show Name and surname of employee.

3. Create Application download video from network and show in next view after click on Show button.

4. Create Navigation based application showing list of fruits. once clicked on particular fruit cell next view should be launched showing the image view of the particular fruit.

5. Create Tab Bar based application in which one tab show web view display data from net, second tab show table view showing list of fruits, third tab show details of that fruits like colour ,test ,some description.

6. Create Navigation based application which show two types of message sending types -- SMS Send and Mail Send

After click on Send SMS or Send Mail option it sends sms or mail.

7. Create Person Information form including fields First Name,Last Name,Address,Phone Number. After click on save button it should save into data base and after click on display button All person information in next view. (For Displaying person information use table view)

8. Create Map based application showing current location of person.

Major Equipments:

Iphone

Macintosh

List of Open Source Software/learning website:

X-Code IDE , DASH CODE

Review Presentation (RP): The concerned faculty member shall provide the list of peer reviewed Journals and Tier-I and Tier-II Conferences relating to the subject (or relating to the area of thesis for seminar) to the students in the beginning of the semester. The same list will be uploaded on GTU website during the first two weeks of the start of the semester. Every student or a group of students shall critically study 2 papers, integrate the details and make presentation in the last two weeks of the semester. The GTU marks entry portal will allow entry of marks only after uploading of the best 3 presentations. A unique id number will be generated only after uploading the presentations. Thereafter the entry of marks will be allowed. The best 3 presentations of each college will be uploaded on GTU website