

GUJARAT TECHNOLOGICAL UNIVERSITY

iOS PROGRAMMING B.E. 8th Semester

Teaching and Examination Scheme:

| Teaching Scheme | | | Credits | Examination Marks | | | | Total Marks |
|-----------------|---|---|---------|-------------------|--------|-----------------|--------|-------------|
| L | T | P | C | Theory Marks | | Practical Marks | | |
| | | | | ESE (E) | PA (M) | ESE Viva (V) | PA (I) | |
| 4 | 0 | 2 | 6 | 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 # | Topic | Teaching Hrs. | Module Weightage |
|------|--|---------------|------------------|
| 1 | Fundamentals: OOP concepts and SQL Queries, Basics of Designing, Overview of MAC OS and X-Code | 10 | 15% |
| 2 | Learning the Language (Objective C): Data Types, NSInteger, NSNumber, Operators, Loop, Intro to .H and .M, Files Inheritance, Method Overloading, Mutable and Immutable Strings, Mutable and Immutable Arrays, File Management | 10 | 20% |
| 3 | iPhone OS: Introduction to iPhone Architecture, Essential COCOA TouchClasses, Interface Builder, Nib File, COCOA and MVC Framework, Overview of features of latest ios. | 16 | 55% |
| 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 | 15 | 8% |
| 5 | Database: SQLite, Creating Outlets and Actions, Parsing Data with Sqlite, Overview of Networking- SCNetwork, CFHTTP, CFFTP, CFSocket, Berkeley Sockets, Web Server | 5 | 2% |

Reference Books:

1. Building iPhone and iPad Electronic Projects - Mike Westerfield - 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 - Chris Apers, Daniel Paterson - Apress Pub

Course Outcome:

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 introduce Building Mobile Application With iOS
- To introduce cutting edge technology to the students

Instructional Method and Pedagogy:

- Lectures will be taken in class room with the use of multi-media presentations, black board or mix of both.
- Assignments based on above course content will be given to the students at the end of each module. Each assignment contains minimum 10 questions.
- Mini Project based learning.

Reference Links/ e-content

1. **List of Open Source Software/learning website:** Video Tutorials:
<http://www.youtube.com/watch?v=1Xqn5IHbusA&list=PL640F44F1C97BA581>
2. Video Tutorials:
<http://www.youtube.com/watch?v=abcMmyhKCno&list=PL9044DA7A3AD61277>
3. Study Tutorial: <https://developer.android.com/sdk/index.html>