Track C (Mobile Applications)

Course 7. iOS Programming

Sl. No.	Module Name	Hours
1	Fundamentals of Computer & OS Concepts	20
2	Objective C and OOPs concepts	60
3	Software Development Life Cycle	16
4	Database Technology	20
5	Mobile And Wireless Technologies	20
6	iOS Programming	84
7	Management Development Program	60
8	Project	40
	Total	**320**

Eligibility: Any Engineering /Science graduate with mathematics up to 10+2 level.

Course Pre-requisites: Sound knowledge of Computing Fundamentals and Fundamentals of Programming.

Course Focus: The objective of this course is to provide the student with an expertise in iOS Programming. After doing the course the student will be able to design, develop and maintain iOS applications.

Detailed Syllabus

Fundamentals of Computer & OS Concepts (20 Hours)

- Computer Fundamental: Uses of Computer, Hardware, Accessories,
- Types of computer
- Hardware and Software
- Operating System
- Process Management
- Threads
- Process Scheduling
- Memory Management
- Virtual Memory
- Input Output Management
- File Management
- Deadlocks
- Inter–process Communication
- Classification of Computers
- Introduction to windows operating systems
- The desktop, The window, application window, document window, Dialog Window
- The Icons, Explore Your Computer, The Start Button and Taskbar.
- My Computer, Windows Explorer, Starting and Closing Programs,
- Installing Operating System
- Performing a New Installation for Windows
- Installing a Software other than OS

- Setting up a printer
- Uninstalling software

Objective C and OOPs concepts (60 Hours)

- Introduction to Objective-c programming
- Primitive Data Types and Operators
- Flow Control Statements
- Arrays and Structures
- Classes, Objects, and Messaging
- Memory Management and Properties
- Protocols and Categories
- Introduction to Foundation Framework Classes
- Property Lists, NSCopy, and Archiving
- Selectors and Targets
- Dynamic Typing and Dynamic Binding
- OOP concepts
    - Overloading
    - Inheritance
    - Polymorphism

Software Development Life Cycle (16 Hours)

- Software: A Process
- Various Phases in s/w Development
- Software life cycle agile model
- Introduction to Coding Standards
- Testing Strategies and Tactics
- Writing Test Cases
- Configuration management
- Software Quality Assurance

Database Technology (20 Hours)

- Introduction to DBMS
- Introduction to Oracle
- SQL* Plus
- DDL, DML and DCL
- Tables, Indexes and Views
- PL/SQL
- Cursors
- Stored Procedures
- Triggers

Mobile and Wireless Technologies (20 Hours)

- Basics of Wireless Technologies
- Cellular Communication: Single cell systems, multi-cell systems, frequency reuse, analog cellular systems, digital cellular systems
- GSM standard: Mobile Station, BTS, BSC, MSC, SMS sever, call processing and protocols
- CDMA standard: spread spectrum technologies,

- 2.5G and 3G Systems: HSCSD, GPRS, W-CDMA/UMTS, 3GPP and
- International roaming, Multimedia services
- CDMA based cellular mobile communication systems
- Wireless Personal Area Networks: Bluetooth, IEEE 802.11a/b/g standards
- Mobile Handset Device Interfacing: Data Cables, IrDA, Bluetooth, Touch-
- Screen Interfacing
- Wireless Security, Telemetry

iOS Programming (84 Hours)

- Introducing iOS core specifications
- Understanding iOS input and output
- Designing web pages for the iOS
- Capturing iOS events
- Introducing the webkit
- CSS transforms transitions and animations
- Using iUI for web apps
- Using Canvas for web apps
- Building web apps with Dashcode
- Debugging iOS web pages
- SDK programming for web developers
- Using Xcode and Interface builder
- Programming with the SDK Toolkit

Management Development Program

Introduction to communication, Barriers to communication, Kind of communication, Confidence building Non-verbal Communication, Fluency and vocabulary, Synonyms, Antonyms, Grammar, Noun Pronoun, Verb, Adjective, Preposition, Conjunction, Words of Idioms & phrases, Sentence Construction, Fill up the blanks, Pronunciation, Conversation practice, Polite Conversation, Greeting, Logical reasoning, General Aptitude, Writing: Covering letter, Resume, Email, Presentation Skill, group discussion, Interview skills, Mock interview

Project