

# IOS App Development

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**Duration: 50 Hours**

**Prerequisites**

- Knowledge of Object oriented Programming

**Course Contents**

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**1. Introduction**

**2. Xcode 5**

- iPhone and iPad Device Anatomy
- iOS Architecture and SDK Frameworks
- iOS and SDK Version Compatibility
- Apple iOS Developer Program
- Tour of the IDE
- Templates, Projects, and Workspaces
- Creating a New Project
- LLVM and LLDB
- Debug Gauges
- Asset Management
- XCTest Testing Framework
- Continuous Integration and Bots
- Automatic Configuration

**3. Introduction to Swift**

- Expand Variables, Types, and Control Flow
- Expand Optional Types
- Expand Collections
- Expand Functions and Closures
- Expand Classes and Structures
- Expand Enumerations
- Expand Pattern matching
- Expand Memory Management
- Expand Protocols
- Expand Extensions
- Expand Generics
- Expand Operators
- Expand Error Handling
- Expand Interop with Objective-C
- Expand Swift 2.0

**4. Views and Windows**

- The View Hierarchy
- Containers
- Controls
- Text and Web Views
- Navigation View and Tab Bars
- Alert Views and Action Sheets
- Controlling Rotation Behavior
- View Autosizing
- Autolayout

**5. Storyboards**

- Adding Scenes
- Segues
- Transitions
- Using in a Tab Bar Application

**6. Table Views**

- Static and Dynamic Table Views
- Delegates and DataSources
- Table View Styles
- Custom Cells

**7. Navigation Based Applications**

- Adding the Root View Controller
- Creating the Navigation Controller
- Controlling the Stack Navigation Programmatically

**8. UIPickerView and UIDatePicker**

- Designing the UI
- Coding for the Data Picker
- Hiding the Keyboard
- Memory Management

**9. Directories and Files**

- NSFileManager, NSFileHandle, and NSData
- Working with Directories
- Working with Files
- Reading and Writing from a File
- iCloud
- Key-Value Data
- Archiving

**10. Working with Data**

- SQLite Integration
- Using SQLite Directly
- Overview of Core Data
- Managed Objects
- Persistent Store Coordinator
- Entity Descriptions
- Retrieving and Modifying Data
- Multitouch, Taps, and Gestures
- The Responder Chain
- Touch Notification Methods
- Enabling Multitouch on the View
- Gesture Motions
- Gesture Recognizers

**11. Drawing**

**12. Animation**

- Core Graphics and Quartz 2D
  - Lines, Paths, and Shapes
  - Core Animation Blocks
  - Animation Curves
  - Transformations
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### **13. Multitasking**

- Application States
- Background Execution
- Background App Refresh in iOS 7
- State Restoration

### **14. Notifications**

- Local Notifications
- Push Notifications
- Core Location Framework
- Location Accuracy
- Obtaining Location Information
- Calculating Distances
- MapKit Framework and MKMapView

### **15. Concurrency**

- Grand Central Dispatch (GCD)
- Serial and Concurrent Queues
- Main Dispatch Queue
- Completion Blocks
- Operation Queues

### **16. Networking**

- Reachability
- Synchronous Downloads
- Asynchronous Downloads
- Handling Timeouts
- Sending HTTP GET and POST Requests
- Parsing JSON
- Parsing XML
- AirDrop

### **17. Targeting Multiple Devices**

- iPhone vs. iPad
- Universal Apps
- Multiple SDK Support
- Detecting Device Capabilities
- Supporting iOS 6 and iOS 7

### **18. Localization**

- Resources
- Language and Region
- NSLocale
- Text
- Dates
- Numbers

### **19. Performance and Power Optimization**

- Measuring Performance
  - Instruments
  - Responsiveness
    - Memory Usage, Spikes, and Leaks
    - Networking and Power
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