

Course duration

- 5 days

Course Benefits

- Develop a thorough understanding of the Swift programming language
- Understand iOS application development architecture
- Gain familiarity with Xcode and other Apple development tools
- Design app UIs using storyboards
- Build a network connected app
- Use best practices for targeting both iPhone and iPad devices

Available Delivery Methods

Public Class

Public expert-led online training from the convenience of your home, office or anywhere with an internet connection. Guaranteed to run .

Private Class

Private classes are delivered for groups at your offices or a location of your choice.

Course Outline

1. Intro
 1. Swift Versions
 2. swift.org
 3. Xcode
2. Native vs Cross-Platform
3. Structure of an App
 1. iOS Templates
 2. View Controllers
 3. Views
 4. Storyboards
 5. Icons
 6. Object Library
 7. SwiftUI
 8. 8. App Delegate
 9. 9. Scene Delegate

4. Lab 1: Hello World
5. Swift vs JavaScript
6. Tour of Xcode
 1. Target Settings
 2. Navigators
 3. Editor Area
 4. Inspectors
7. Debugging
 1. Breakpoints
 2. Debug Area
8. Lab 2: Debug
9. Classes
 1. Single Inheritance
 2. Properties: let/var
 3. Initializers/deinit
 4. Functions
10. Lab 3: Class/Function
11. Structs
 1. Similarities to Classes
 2. Differences to Classes
12. More on Properties
 1. didSet/didSet Observers
 2. Computed
13. OOP in Swift
14. Simulator
15. UI Design
 1. Controls (Label, Button, Picker, Slider, Stepper, etc.)
 2. Views
 3. Outlets (Lab 4)
 4. Actions (Lab 5)
 5. TextField (Lab 6)
16. Lab 7: Tip Calculator
17. UI Design Comparisons
18. Collections
 1. Array
 2. Set
 3. Tuples
 4. Dictionary
 5. String
 6. Operators
19. Control Flow
 1. Ranges
 2. Loops
 3. Switch
20. Lab 8: Tip Calc: Collections
21. UI Design: Auto-Layout
 1. Constraints

- 2. Variants
- 3. Stack Views
- 22. Lab 9: Tip Calc: UI
- 23. Constraints in Code
- 24. Lab 10: Tip Calc: Code UI
- 25. Swift UI *
- 26. Lab 11: Tip Calc SwiftUI *
- 27. Thinking Swifty
 - 1. Error/Throw
 - 2. do/try/catch
 - 3. Enums
 - 4. Optionals
 - 5. Operators & Types
 - 6. Guard
 - 7. Defer
 - 8. 8. Access Control
 - 9. 9. Typealias
- 28. Lab 12: Enum/Op/Guard
- 29. Unit Testing
 - 1. Unit Tests
 - 2. Performance Tests
 - 3. UI Tests
- 30. Lab 13: Unit Tests
- 31. Patterns
 - 1. Extensions
 - 2. Protocols
 - 3. Delegate
- 32. TableView
 - 1. Table
 - 2. Cells
 - 3. Delegate/Datasource
- 33. Lab 14: TableView
- 34. More TableView
 - 1. Delete
 - 2. Editing Actions
 - 3. Swipe Actions
- 35. UI Design: Advanced TableView
 - 1. Refresh Control
 - 2. TableView Controller
 - 3. Custom Cells
- 36. Controllers
 - 1. Navigation
 - 2. Segues
 - 3. Tab Bar
- 37. Lab 15: Navigation
- 38. Data
 - 1. Data Class

- 2. Files
- 3. UserDefaults
- 39. Lab 16: Files
- 40. Closures
 - 1. Higher Order Functions
 - 2. Closures
 - 3. Function Types
- 41. Lab 11: Higher Order Functions
- 42. Server Communication with URLSession
- 43. Lab 11: Server Communication
- 44. JSON & Codable
 - 1. Decodable
 - 2. Encodable
 - 3. CodingKeys
- 45. Lab 13: Server/JSON
- 46. UI Interaction
 - 1. Touches
 - 2. Gestures
 - 3. Animation
- 47. Lab 20: Gestures/Animation
- 48. Notifications
 - 1. Local
 - 2. Push
 - 3. Handling Notifications
 - 4. NotificationCenter
- 49. Threading
- 50. Frameworks
 - 1. CoreData
 - 2. CoreLocation
 - 3. MapKit
- 51. Lab 21: Map & Location
- 52. WebView
 - 1. WebKit
 - 2. SafariKit
- 53. Lab 22: WebView & JavaScript
- 54. Lab 23: More WebView & JavaScript
- 55. App Dev Considerations
 - 1. App States
 - 2. Git
 - 3. Pods
 - 4. Icons
- 56. Localization
- 57. Deployment

Class Materials

Each student will receive a comprehensive set of materials, including course notes and all the class examples.

Class Prerequisites

Experience in the following *is required* for this Apple Swift class:

- OOP experience in Java, Objective-C, C#, or C++.
- macOS experience (and the class must be taken on a Mac).