

# iOS & Swift Essentials

## Training Syllabus

---

## Course Overview

If you're new to iOS development and want to write applications that run on the iPhone or iPad, this 7-day course is just what you need. In just seven days, we'll have you building your first iOS application using Swift.

### Who Should Take This Course

- Existing object-oriented developer who wants to learn iOS development.
- Students should already be familiar with basic programming concepts: variables, statements, functions, arrays, data structures and common programming problems.

# Syllabus

## Swift

- Understand elements of the Swift standard library
- Learn about Swift's approach to safety and how to use it to write better apps
- Implement Swift's functional patterns and utilize extensions to extend “out-of-the-box” functionality
- Learn how Swift manages memory, and contrast this with approaches that other languages take

## Xcode

- Navigate Apple's IDE for developing iOS applications
- Debug problems with applications using the tools that Xcode provides

## User Interfaces

- Explore basic interface elements such as labels, buttons, and segmented controls
- Use text fields along with the delegation design pattern to gather user input
- Build interfaces more easily using stack views
- Use containers such as tab bar and navigation controllers to manage more complicated application structures
- Design flexible interfaces that scale across different devices and screen sizes using Auto Layout and size classes

## Collections

- Learn how to utilize the data source design pattern
- Display lists of elements using table views
- Display grids of elements using collection views

## Localization

- Remove hard-coded locale-specific information – such as date formatting and decimal separators – from applications
- Localize applications into more than one language

## Data Persistence

- Learn how the file system is organized on iOS
- Use archiving to persist simple object graphs to the file system

## Web Services

- Interact with live APIs to fetch and display external information to the user
- Parse JSON data into Swift model objects