iOS App Development Bootcamp

This comprehensive training program teaches students how to develop iOS apps using Swift and Xcode. Gain hands-on experience with programming fundamentals, build real apps, and create a final project for your portfolio.

Group classes in NYC and onsite training is available for this course. For more information, email hello@nobledesktop.com or visit: https://www.nobledesktop.com/classes/ios-app-development-bootcamp

Course Outline

Week 1

Introduction to Tools of the Course
- XCode
- iOS
- Swift

Projects
- Hello World App
- Roll The Dice App

The Swift Programming Language
- The Swift Playground
- Comments
- The println() function

Variables
- Variables
- Constants
- Data types
- Optionals
- Type inference

Conditional Statements & Operators
- The if statement
- The else statement
- The else if statement
- Comparison operators
- Arithmetic operators
- Logical operators

**Strings**
- Literals
- Mutable strings
- Comparing strings
- Concatenating strings

**Week 2**

Tip Calculator App

**Functions**
- Functions with parameters
- Functions with returned values

**Optional Unwrapping**
- Forced optional unwrapping
- Implicitly unwrapped optionals
- Optional binding

**Loops**
- For loops
- While loops
- For in loops
- Iterating over arrays

**Creating a Class**
- Object-oriented programming
- Objects & classes
- Methods
- Properties

**Methods**
- Methods with parameters
- Methods with return values

**Structs**
- Creating a struct
- Accessing a struct

**Inheritance**
- Creating a subclass
- Method overriding

**Extensions**
- Extending existing classes
- Using extensions

**Protocol & Delegates**
• Defining & implementing protocol
• Delegate design pattern
• Implementing & using delegates

Closures
• Defining a closure
• Closures with parameters
• Closures with returned values
• Closures as callbacks

Week 3

ENUMS
Creating & using enumerations

Type Casting
• Type checking
• Type casting
• Downcasting

Tuples
Creating & using tuples

Type aliases
Creating & using type aliases

ARC
• Strong & weak references
• Avoiding strong reference cycles

Card War App
• Importing the images
• Adding the button that draws the cards
• Labeling the deck & each player’s score
• Adding constraints to our labels
• Adding a button to restart the game & constraining it
• Adding & constraining the background image

Week 4

Auto Layout
• Stacks
• Nested Stacks
• Downcasting
• Constraints
• Content Hugging Priority
• Compression Resistance Priority

Card War: The Data Model & Linking the UI to Code
● Connecting the UI to the View Controller
● Modeling a single card by adding a Card class
● Modeling all the cards by adding a Deck class
● Adding the shuffle functionality

Card War: Adding Variables to the View Controller
● Declaring variables
● Responding to changes in a variable’s value using the didSet property observer
● Starting with the drawingCards function

Card War: Displaying the Cards & Score
● Creating the UIImageViews that will hold the cards
● Setting the size & position of the cards that are drawn
● Revealing the cards & updating the winner’s score
● Defining what happens when the game is restarted

Card War: Animating the Cards
● Animating the cards’ move from the deck button to their respective positions
● Revealing the cards’ values after they are done moving
● Revealing the cards’ values with a flipping transition
● Incorporating the final code into the animation

Week 5

Building the Lists App
Previewing on iPhone without Developer Account

Establishing an Apple Developer Account
● Creating an Apple Developer Account
● Registering your device to run apps directly from Xcode

Lists: UI with Two View Controllers That Display Table Cells
● Creating files for a dual View Controller app
● Adding a Navigation Controller to manage our two views
● Adding UI elements to the first View Controller
● Constraining the UI objects on the first View Controller
● Copying the first View Controller to create the second

Lists: Refining & Beautifying the UI
● Adding images from the designer
● Improving the UI design on our Storyboard screens
● Differentiating the two View Controllers
● Setting View Controller & Table View Cell classes

Outline Your App Idea

Week 6

Building the Lists App, Continued
Lists: The Data Model & Linking the UI to Code
- Cleaning up the View Controller & Table View Cell files
- Connecting both UI screens to their respective files
- Creating List & List Item classes in the data model

Week 7

Weather Forecast App
- Acquiring an API Key
- Using the Weather Underground API
- Reading JSON
- App Transport Security Settings
- Adding Error Messages
- Linking to an Outside Website
- Completion Handlers
- Do... Catch
- Converting Strings into Floats
- Displaying the Keyboard in the Simulator
- Dismissing the Keyboard

Week 8

Met Gallery App Part 1

Met Gallery: Assets, Launch Screen, & Home View Controller
- Creating files for a multiple View Controller app
- Adding assets & using the Assets Catalog
- Creating a launch screen
- The Home View Controller & UI elements
- Adding constraints to the UI elements
- Connecting the View Controller to its code file

Met Gallery: View Controller with a Collection View
- The gallery view controller UI
- Refining the collection view
- Connecting the view controller to its respective files

Met Gallery: The Painting Detail View Controller
- Adding the UI objects to the Painting Detail VC
- Constraining the UI objects
- Adding Swipe & Tap Gesture Recognizers
- Connecting the View Controller to its code file

Final Project: Start Coding!

Week 9

Met Gallery App Part 2
Met Gallery: Full Screen View Controller with a Scroll View
- Creating the full screen painting View Controller
- Setting size classes
- Constraining the scroll view & connecting the code

Met Gallery: Adding a Spinner, Data Model, & Gallery VC
- Adding a Spinner
- Creating the data model
- Adding the Collection View methods

Met Gallery: Painting Detail & Adding Gesture Recognizers
- Loading the painting details
- Refining the Image View
- Making the online reference button functional
- Segueing to the full screen scroll view
- Adding the image to the full screen view
- Implementing the swipe gestures

Work on Final Project

Week 10
Course Wrap Up
Test Flight and Submitting to the App Store
Final Projects
Final Project Presentations