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## BY THE END OF THIS COURSE

Students will be able to create an iOS app for iPhone or iPad that is App Store ready

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### UNIT 1: TRANSLATE WIREFRAMES INTO FUNCTIONAL APP INTERFACES

#### INTRODUCTION: XCODE, APPLE'S INTEGRATED DEVELOPMENT ENVIRONMENT

- › Learn the basics of git and use GitHub to manage code base.
- › Label all parts of the Xcode IDE
- › Operate Xcode to create new projects and build interfaces using Storyboard

#### IOS APP CONTROL FLOW

- › Describe the control flow of an iOS app
- › Demonstrate how to extend an app to multiple screens
- › Outline how elements are drawn on screen

#### PROGRAMMING BASICS WITH SWIFT

- › Practice connecting interface builder to your Swift code
- › Create a custom Swift function

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### UNIT 2: EXPERIMENT WITH OBJECT ORIENTED SWIFT TO ADD LOGIC TO IOS APPLICATIONS

#### LOGIC / COMPUTATIONAL THINKING WITH SWIFT

- › Define computational thinking and translate instructions into basic pseudo code

#### OBJECT ORIENTED PROGRAMMING WITH SWIFT

- › Object Oriented Programming with Swift
- › Describe Object Oriented Programming
- › Define MVC pattern as it relates to iOS app development: Show them sample code and have them label it M/V/C
- › Utilize data structures to store multiple objects in an array and hash
- › Programmatically create views.
- › Apply Autoresizing and Autolayout for more flexible views and layouts.

#### APPLYING OOP TO IOS APPS

- › Identify design patterns, such as delegation and notifications, to pass information throughout our apps
- › Use Apple's Swift documentation to apply gestures to create interactive iOS apps



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### **UNIT 3: BUILD APPS WITH PERSISTENT DATA AND REMOTE APIS**

#### **IOS FILES AND FILE I/O**

- Discuss how iOS file system works
- Produce applications that store data across app sessions

#### **IOS NETWORKING AND OPEN-SOURCE NETWORKING FRAMEWORKS**

- Create iOS app network connections
- Describe how networking works at a lower level
- Describe AFNetworking's value, how it differs from iOS's built-in networking APIs

#### **ADVANCED NETWORKING INTEGRATING OBJECTIVE-C AND SWIFT**

- Explain how to use complex remote APIs and common Cocoa toolkits (using Swift/ObjC bridge)
- Integrate an arbitrary objective-C framework into a Swift project

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### **UNIT 4: DESCRIBE THE IOS APP STORE SUBMISSION PROCESS**

#### **SUBMITTING YOUR APP TO THE APP STORE**

- Utilize Xcode tools like Crash/Usage Tracking to optimize apps
- Navigate the app approval and distribution process
- Identify App store best practices and apply them to your final application