

# Swift Essentials

## Syllabus



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## Course Overview

This intensive 2-day course teaches the Swift programming language. Starting with the basic syntax and grammar, the course includes coverage of Swift development best practices and patterns.

Students will learn from the authors of Big Nerd Ranch guides while collaborating with developers from across the country.



### Who Should Take This Course

- Developers with iOS experience in Objective-C that are ready to upgrade their skills and codebase to Swift
- Anyone preparing to learn iOS or macOS development
- Those serious about their development as a professional developer

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## Swift Basics

- Start with Swift's basic syntax for working with variables and control flow.
- Safely work with the absence of values with the Optional type.
- Work with failable operations by handling errors safely.

## The Standard Library

- Learn to use the basic types from the standard library for storing, organizing, and processing data.
- Define functions and closures for doing your app's work.

## Modeling with Custom Types

- Design custom structures, classes, and enumerations.
- Understand object initialization, lifetime, and memory management.
- Customize behavior of standard library types with protocols and extensions.

## Go Deeper

- Write flexible code using generics.
- Discuss modern patterns including protocol-oriented programming.