Course duration

- 3 days

Course Benefits

- Learn the underlying programming language for building iPhone and iPad applications.
- Learn the basics of the Objective-C language.
- Understand the memory management model for Objective-C and options for the developer.
- Learn about the Foundation classes for data manipulation and their use in Objective-C programming.

Course Outline

1. Objective-C Overview
    1. The Xcode IDE
        1. Projects
        2. Hello World Application
    2. Objective-C
        1. Language Features
        2. Brief History
        3. Role in Mobile Device Applications
2. Variables
    1. Numeric Variables
        1. Numeric Representations
        2. Integers
        3. Floating Point
        4. Comments
    2. Nonnumeric Variables
        1. char
        2. boolean
    3. Reference Variables
    4. The * and & Operators
    5. Variable Scope
3. Arithmetic
    1. Arithmetic Operators
        1. Addition and Subtraction
        2. Multiplication, Division, and Modulus
        3. Shorthand Notation
    2. Type Casting
    3. Math Library Functions

    3. Placing Objects in Collections
        1. Using NSMutableArray
    4. Runtime Identification of Objects
9. Arrays
    1. The "Classic" C Array
        1. Defining the Array
        2. Processing the Array
    2. Foundation Framework Arrays
        1. NSArray
        2. NSMutableArray
10. Foundation Framework
    1. The Foundation Framework
        1. Strings
        2. Date/Time
        3. Numbers
        4. Collections
    2. NSString
        1. Replacing char*
        2. Initialization
        3. NSString Methods
    3. NSNumber and NSNumberFormatter
        1. Replacing int, float, and more
        2. Initialization
        3. NSUInteger and NSInteger
        4. Formatting
    4. NSDate and NSDateFormatter
        1. NSDate
        2. NSDateFormatter
11. Memory Considerations
    1. Memory Management in Objective-C
        1. Manual Retain-release
        2. Automatic Reference Counting
        3. Garbage Collection
    2. Strong and Weak
    3. Release and Retain
    4. Atomic and Nonatomic
    5. Automatic Reference Counting

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 Objective-C class:

- Object-oriented programming experience.

Experience in the following *would be useful* for this Objective-C class:

- c++ or C# experience.

Follow-on Courses

- iOS Application Development for iPhone and iPad Using Objective-C