

Session Plan: iOS App Development

Program: iOS App Development

Duration: 10 Days **Daily Timing:** 9:30 AM - 12:30 PM & 1:30 PM - 4:30 PM (8 hours total)

Excluded Dates: July 11 (Saturday) & July 12 (Sunday)

Day 1:

Focus: Unit 1: Getting Started - Foundations

Time	Session Type	Topics Covered	Activities
9:00 AM	Inauguration	Welcome & Program Briefing	Reporting at LT601
9:30 - 10:45	Theory	Defining Your App, Introduction to Swift & Playgrounds	Lecture, Demo, Interactive Q&A
10:45 - 11:00	Break		
11:00 - 12:30	Lab Practice	Xcode & Playgrounds Setup, Constants & Variables	Hands-on: Create first Playground, declare constants/variables
12:30 - 1:30	Lunch		
1:30 - 2:45	Theory	Data Types, Operators	Lecture, Demo, Code Walkthrough
2:45 - 3:00	Break		
3:00 - 4:30	Lab Practice	Working with Data Types & Operators	Hands-on: Type inference, type safety, arithmetic/logical operators exercises

Key Topics: Defining Your App, Introduction to Swift and Playgrounds, Constants, Variables, Data Types, Operators .

Day 2:**Focus:** Unit 1: Getting Started - Control Flow & App Mechanics

Time	Session Type	Topics Covered	Activities
9:30 - 10:45	Theory	Control Flow (if/else, switch), Building & Running Apps	Lecture, Demo, Code Walkthrough
10:45 - 11:00	Break		
11:00 - 12:30	Lab Practice	Control Flow Exercises	Hands-on: Write if/else, switch statements, loops
12:30 - 1:30	Lunch		
1:30 - 2:45	Theory	Debugging an App, Xcode Tools	Lecture, Demo: Breakpoints, Console
2:45 - 3:00	Break		
3:00 - 4:30	Lab Practice	Debugging Exercises	Hands-on: Set breakpoints, use debugger, fix runtime errors

Key Topics: Control Flow, Building/Running/Debugging an App, Quiz: Control Flow, Quiz: Xcode .

Day 3:**Focus:** Unit 1: Getting Started - UI Basics & Guided Project

Time	Session Type	Topics Covered	Activities
9:30 - 10:45	Theory	Documentation, Interface Builder Basics, Storyboards	Lecture, Demo: UI Components
10:45 - 11:00	Break		
11:00 - 12:30	Lab Practice	Interface Builder, Outlets & Actions	Hands-on: Connect UI elements to code
12:30 - 1:30	Lunch		
1:30 - 2:45	Theory	Guided Project - Light Walkthrough	Lecture, Demo: Step-by-step
2:45 - 3:00	Break		
3:00 - 4:30	Lab Practice	Guided Project - Light (Complete)	Hands-on: Build Light app from scratch

Key Topics: Interface Builder Basics, Guided Project - Light, Unit 1 Summary .

Day 4:**Focus:** Unit 2: Introduction to UIKit - Swift Language Deep Dive (Part 1)

Time	Session Type	Topics Covered	Activities
9:30 - 10:45	Theory	Strings, Functions	Lecture, Demo, Code Walkthrough
10:45 - 11:00	Break		
11:00 - 12:30	Lab Practice	Strings & Functions Exercises	Hands-on: String manipulation, write functions
12:30 - 1:30	Lunch		
1:30 - 2:45	Theory	Structures, Classes & Inheritance	Lecture, Demo, Code Walkthrough
2:45 - 3:00	Break		
3:00 - 4:30	Lab Practice	Structures & Classes Exercises	Hands-on: Define structures, create class hierarchy

Key Topics: Strings, Functions, Structures, Classes, Inheritance .

Day 5:**Focus:** Unit 2: Introduction to UIKit - Swift Language Deep Dive (Part 2) & UI Basics

Time	Session Type	Topics Covered	Activities
9:30 - 10:45	Theory	Collections, Loops	Lecture, Demo, Code Walkthrough
10:45 - 11:00	Break		
11:00 - 12:30	Lab Practice	Collections & Loops Exercises	Hands-on: Use arrays/dictionaries, write loops
12:30 - 1:30	Lunch		
1:30 - 2:45	Theory	Introduction to UIKit, Displaying Data	Lecture, Demo: UIKit framework
2:45 - 3:00	Break		
3:00 - 4:30	Lab Practice	UIKit Basics	Hands-on: Create basic UI programmatically

Key Topics: Collections, Loops, Introduction to UIKit, Displaying Data .

Day 6:**Focus:** Unit 2: Introduction to UIKit - Controls & Auto Layout

Time	Session Type	Topics Covered	Activities
9:30 - 10:45	Theory	Controls In Action (Buttons, TextFields, Labels)	Lecture, Demo
10:45 - 11:00	Break		
11:00 - 12:30	Lab Practice	Implementing Controls	Hands-on: Add & configure UI controls, connect actions
12:30 - 1:30	Lunch		
1:30 - 2:45	Theory	Auto Layout, Stack Views	Lecture, Demo: Constraints, Stacks
2:45 - 3:00	Break		
3:00 - 4:30	Lab Practice	Auto Layout & Stack Views Exercises	Hands-on: Add constraints, use stack views

Key Topics: Controls In Action, Auto Layout & Stack Views .

Day 7:**Focus:** Unit 2: UIKit - Guided Project & Unit 3 Start

Time	Session Type	Topics Covered	Activities
9:30 - 10:45	Theory	Finish Your App Prototype, Guided Project - Apple Pie	Lecture, Demo: Project Walkthrough
10:45 - 11:00	Break		
11:00 - 12:30	Lab Practice	Guided Project - Apple Pie (Part 1)	Hands-on: Build Apple Pie app
12:30 - 1:30	Lunch		
1:30 - 2:45	Theory	Optionals, Type Casting & Inspection	Lecture, Demo, Code Walkthrough
2:45 - 3:00	Break		
3:00 - 4:30	Lab Practice	Optionals & Type Casting Exercises	Hands-on: Unwrapping, guard, type checking

Key Topics: Guided Project - Apple Pie, Optionals, Type Casting and Inspection, Unit 2 Summary .

Day 8:**Focus:** Unit 3: Navigation & Workflows - Advanced Swift & Navigation

Time	Session Type	Topics Covered	Activities
9:30 - 10:45	Theory	Guard, Constant & Variable Scope, Enumerations	Lecture, Demo
10:45 - 11:00	Break		
11:00 - 12:30	Lab Practice	Guard, Scope, Enumerations Exercises	Hands-on: Write guard statements, define enums
12:30 - 1:30	Lunch		
1:30 - 2:45	Theory	Segues, Navigation Controllers	Lecture, Demo: Show/Modal segues
2:45 - 3:00	Break		
3:00 - 4:30	Lab Practice	Segues & Navigation Controllers Exercises	Hands-on: Implement navigation between screens

Key Topics: Guard, Constant/Variable Scope, Enumerations, Segues and Navigation Controllers .

Day 9:**Focus:** Unit 3: Navigation & Workflows - Tab Bars & View Lifecycle

Time	Session Type	Topics Covered	Activities
9:30 - 10:45	Theory	Tab Bar Controllers	Lecture, Demo: Tab bars
10:45 - 11:00	Break		
11:00 - 12:30	Lab Practice	Tab Bar Controllers Exercises	Hands-on: Add tab bar to app
12:30 - 1:30	Lunch		
1:30 - 2:45	Theory	View Controller Life Cycle	Lecture, Demo: View lifecycle methods
2:45 - 3:00	Break		
3:00 - 4:30	Lab Practice	View Controller Life Cycle Exercises	Hands-on: Log lifecycle events, manage resources

Key Topics: Tab Bar Controllers, View Controller Life Cycle .

Day 10:**Focus:** Unit 3: Workflows, Guided Project & Pre-T3 Preparation

Time	Session Type	Topics Covered	Activities
9:30 - 10:45	Theory	Building Simple Workflows, Evaluate Your App	Lecture, Demo
10:45 - 11:00	Break		
11:00 - 12:30	Lab Practice	Workflow Exercises	Hands-on: Build a 3-screen workflow app
12:30 - 1:30	Lunch		
1:30 - 2:45	Theory	Guided Project - Personality Quiz Walkthrough, Unit 3 Summary	Lecture, Demo
2:45 - 3:00	Break		
3:00 - 4:30	Lab Practice	Guided Project - Personality Quiz (Complete)	Hands-on: Build complete quiz app

Key Topics: Building Simple Workflows, Guided Project - Personality Quiz, Unit 3 Summary, Appendix .

Updated Summary: Total Sessions

Unit	Days	Theory Sessions	Lab Practice Sessions
Unit 1: Getting Started	3 (Jul 6-8)	6	6
Unit 2: Introduction to UIKit	4 (Jul 9-10, 13-14)	8	8
Unit 3: Navigation & Workflows	3 (Jul 15-17)	6	6
Total	10	20	20

Key Assessments (as per curriculum)

- **Quizzes:** Included after each major topic (4-10 questions each, 2-10 points)
- **Guided Projects:** Light, Apple Pie, Personality Quiz
- **Pre-T3 Evaluation:** End of July (3 rounds, top 4 shortlisted)