

Apple Specialist Degree Syllabus

Program description

The Apple Specialist Degree Program helps students learn key computing concepts and build a solid foundation in programming with Swift, a robust and intuitive programming language created by Apple. It's easy to learn, simple to use, and very powerful, which makes it a great language for first-time coders and full-time developers.

Our sessions accelerate students' coding skills by taking them from mastering the basics to creating their very own apps using Swift Playgrounds and Xcode Playgrounds.

Swift Playgrounds introduces students to the world of coding and app design through interactive puzzles and coding challenges.

Xcode Playgrounds provides an interactive coding environment that lets students experiment with code and build their real apps immediately.

Learning objectives

The purpose of this program is to prepare students for a career in app development using the Swift programming language by:

- Exploring Xcode Playgrounds through unplugged and playground activities
- Recognizing and applying foundational concepts such as sequencing, conditionals, types, and parameters
- Examining the vital role that diversity plays in designing balanced and equitable algorithms
- Differentiating between types to learn about the power of behaviors and attributes
- Creating and interpreting several app projects by adding user interface (UI) elements, connecting them to code, and responding to the events generated by user interaction

Learning outcomes

Upon completion of the Apple Specialist Degree program, students will be able to:

- Define and differentiate between various fundamental coding concepts
- Create and interpret app development concepts and app design processes to build a summative project in Swift Playgrounds
- Explore and use developer tools such as Playgrounds, Xcode, Simulator, and Interface Builder
- Analyze a problem and create an algorithm to solve it
- Recognize and identify common iOS frameworks using hands-on app projects
- Build and design iOS apps for Apple products such as iPhone or Mac devices

Topics covered

Session	Topic
Unit 1: Coding with puzzles	
1	Commands
2	Functions
3	For loops
4	Variables
5	Conditional code
6	Types and initialization
7	Functions with parameters
8	Logical operators
9	While loops
10	Arrays and refactoring
Unit 2: Coding with adventures	
11	Object in views
12	Events and handlers
13	Arrays
14	Return types and outputs
15 & 16	Build your own app

Session	Topic
Unit 3: Values	
17	Xcode Playground basics
18	Build a PhotoFrame app
19	Design for people
Unit 4: Algorithms	
20	Play with programs
21	Build a QuestionBot app
22	Design an experience
Unit 5: Organizing data	
23	Play with complex data
24 & 25	Build a BouncyBall app
26	Design a prototype
Unit 6 : Building apps	
27	Build a ColorPicker app
28	Build a ChatBot app
29	Build a Rock,Paper,Scissor app
30	Build a MemeMaker app
31 & 32	Build an ElementQuiz app
33	Design for impact
34, 35 & 36	Preparation tests

Tips for success

- Attending every class session
- Engaging actively in classroom discussions
- Reading and practicing the assigned material before coming to class

Instructional methodology

- Discussions and debates
- Project-based