uCertify

Course Outline

iOS 17 Programming for Beginners

07 Jul 2024

1. Pre-Assessment
2. Exercises, Quizzes, Flashcards & Glossary

   Number of Questions
3. Expert Instructor-Led Training
4. ADA Compliant & JAWS Compatible Platform
5. State of the Art Educator Tools
6. Award Winning Learning Platform (LMS)
7. Chapter & Lessons

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   Chapter 2: Exploring Xcode

   Chapter 3: Simple Values and Types

   Chapter 4: Conditionals and Optionals

   Chapter 5: Range Operators and Loops

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   Chapter 8: Classes, Structures, and Enumerations

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Videos and How To

8. Practice Test

   Here's what you get

   Features

9. Performance Based labs

   Lab Tasks

   Here's what you get

1. Pre-Assessment

Pre-Assessment lets you identify the areas for improvement before you start your prep. It determines what students know about a topic before it is taught and identifies areas for improvement with question assessment before beginning the course.

2. Expert Instructor-Led Training

uCertify uses the content from the finest publishers and only the IT industry's finest instructors. They have a minimum of 15 years real-world experience and are subject matter experts in their fields. Unlike a live class, you can study at your own pace. This creates a personal learning experience and gives you all the benefit of hands-on training with the flexibility of doing it around your schedule 24/7.

3. ADA Compliant & JAWS Compatible Platform

uCertify course and labs are ADA (Americans with Disability Act) compliant. It is now more accessible to students with features such as:

- Change the font, size, and color of the content of the course
- Text-to-speech, reads the text into spoken words
- Interactive videos, how-tos videos come with transcripts and voice-over
- Interactive transcripts, each word is clickable. Students can clip a specific part of the video by clicking on a word or a portion of the text.

JAWS (Job Access with Speech) is a computer screen reader program for Microsoft Windows that reads the screen either with a text-to-speech output or by a Refreshable Braille display. Student can easily navigate uCertify course using JAWS shortcut keys.

4. State of the Art Educator Tools

uCertify knows the importance of instructors and provide tools to help them do their job effectively. Instructors are able to clone and customize course. Do ability grouping. Create sections. Design grade scale and grade formula. Create and schedule assessments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

5. Award Winning Learning Platform (LMS)

uCertify has developed an award winning, highly interactive yet simple to use platform. The SIIA CODiE Awards is the only peer-reviewed program to showcase business and education technology's finest products and services. Since 1986, thousands of products, services and solutions have been recognized for achieving excellence. uCertify has won CODiE awards consecutively for last 7 years:

- **2014**
    1. Best Postsecondary Learning Solution

- **2015**
    1. Best Education Solution
    2. Best Virtual Learning Solution
    3. Best Student Assessment Solution
    4. Best Postsecondary Learning Solution
    5. Best Career and Workforce Readiness Solution
    6. Best Instructional Solution in Other Curriculum Areas
    7. Best Corporate Learning/Workforce Development Solution

- **2016**
    1. Best Virtual Learning Solution
    2. Best Education Cloud-based Solution
    3. Best College and Career Readiness Solution
    4. Best Corporate / Workforce Learning Solution
    5. Best Postsecondary Learning Content Solution
    6. Best Postsecondary LMS or Learning Platform
    7. Best Learning Relationship Management Solution

- **2017**
    1. Best Overall Education Solution
    2. Best Student Assessment Solution
    3. Best Corporate/Workforce Learning Solution
    4. Best Higher Education LMS or Learning Platform

- **2018**
    1. Best Higher Education LMS or Learning Platform
    2. Best Instructional Solution in Other Curriculum Areas
    3. Best Learning Relationship Management Solution

- **2019**
    1. Best Virtual Learning Solution
    2. Best Content Authoring Development or Curation Solution
    3. Best Higher Education Learning Management Solution (LMS)

- **2020**
    1. Best College and Career Readiness Solution
    2. Best Cross-Curricular Solution
    3. Best Virtual Learning Solution

6. Chapter & Lessons

uCertify brings these textbooks to life. It is full of interactive activities that keeps the learner engaged. uCertify brings all available learning resources for a topic in one place so that the learner can efficiently learn without going to multiple places. Challenge questions are also embedded in the chapters so learners can attempt those while they are learning about that particular topic. This helps them grasp the concepts better because they can go over it again right away which improves learning.

Learners can do Flashcards, Exercises, Quizzes and Labs related to each chapter. At the end of every lesson, uCertify courses guide the learners on the path they should follow.

Syllabus

Chapter 1: Preface

- Who this course is for
- What this course covers
- To get the most out of this course
- Conventions used

Chapter 2: Exploring Xcode

- Technical requirements

- Downloading and installing Xcode from the App Store
- Exploring the Xcode user interface
- Running your app in Simulator
- Running your app on an iOS device
- Summary

Chapter 3: Simple Values and Types

- Technical requirements
- Introducing Swift playgrounds
- Exploring data types
- Exploring constants and variables
- Understanding type inference and type safety
- Exploring operators
- Using the print() statement
- Summary

Chapter 4: Conditionals and Optionals

- Technical requirements
- Introducing conditionals

- Introducing optionals and optional binding
- Summary

Chapter 5: Range Operators and Loops

- Technical requirements
- Exploring range operators
- Exploring loops
- Summary

Chapter 6: Collection Types

- Technical requirements
- Exploring arrays
- Exploring dictionaries
- Exploring sets
- Summary

Chapter 7: Functions and Closures

- Technical requirements
- Exploring functions

- Exploring closures
- Summary

Chapter 8: Classes, Structures, and Enumerations

- Technical requirements
- Understanding classes
- Understanding structures
- Understanding enumerations
- Summary

Chapter 9: Protocols, Extensions, and Error Handling

- Technical requirements
- Exploring protocols
- Exploring extensions
- Exploring error handling
- Summary

Chapter 10: Swift Concurrency

- Technical requirements

- Understanding Swift concurrency
- Examining an app without concurrency
- Updating the app using async/await
- Improving efficiency using async-let
- Summary

Chapter 11: Setting Up the User Interface

- Technical requirements
- Learning useful terms in iOS development
- A tour of the JRNL app
- Modifying your Xcode project
- Setting up a tab bar controller scene
- Summary

Chapter 12: Building Your User Interface

- Technical requirements
- Adding a table view to the Journal List screen
- Connecting storyboard elements to the view controller

- Configuring data source methods for the table view
- Presenting a view modally
- Summary

Chapter 13: Finishing Up Your User Interface

- Technical requirements
- Implementing the Journal Entry Detail screen
- Implementing the Map screen
- Summary

Chapter 14: Modifying App Screens

- Technical requirements
- Modifying the Journal List screen
- Modifying the Add New Journal Entry screen
- Modifying the Journal Entry Detail screen
- Summary

Chapter 15: Getting Started with MVC and Table Views

- Technical requirements

- Understanding the Model-View-Controller design pattern
- Understanding table views
- Revisiting the Journal List screen
- Summary

Chapter 16: Getting Data into Table Views

- Technical requirements
- Understanding model objects
- Creating a class to represent a journal entry
- Creating sample data
- Displaying data in a table view
- Summary

Chapter 17: Passing Data between View Controllers

- Technical requirements
- Passing data from the Add New Journal Entry screen to the Journal List screen
- Removing rows from a table view
- Exploring text field and text view delegate methods
- Passing data from the Journal List screen to the Journal Entry Detail screen

- Summary

Chapter 18: Getting Started with Core Location and MapKit

- Technical requirements
- Getting your device location using the Core Location framework
- Updating the JournalEntry class to conform to the MKAnnotation protocol
- Displaying annotation views on the Map screen
- Displaying a map snapshot on the Journal Entry Detail screen
- Summary

Chapter 19: Getting Started with JSON Files

- Technical requirements
- Creating a singleton
- Modifying the JournalEntry class to be JSON-compatible
- Loading and saving JSON data
- Summary

Chapter 20: Getting Started with Custom Views

- Technical requirements

- Creating a custom UIStackView subclass
- Adding your custom view to the Add New Journal Entry screen
- Adding your custom view to the Journal Entry Detail screen
- Summary

Chapter 21: Getting Started with the Camera and Photo Library

- Technical requirements
- Creating a new UIImagePickerController instance
- Implementing UIImagePickerControllerDelegate methods
- Getting permission to use the camera or photo library
- Summary

Chapter 22: Getting Started with Search

- Technical requirements
- Implementing a search bar for the Journal List screen
- Modifying table view data source methods
- Modifying the prepare(for:sender:) method
- Modifying the method to remove journal entries

- Summary

Chapter 23: Getting Started with Collection Views

- Technical requirements
- Understanding collection views
- Modifying the Journal List screen to use a collection view
- Dynamically modifying collection view cell size using size classes
- Testing your app on different devices
- Summary

Chapter 24: Getting Started with SwiftData

- Technical requirements
- Introducing SwiftData
- Modifying the JournalEntry class
- Implementing SwiftData components
- Modifying the JournalListViewController class
- Summary

Chapter 25: Getting Started with SwiftUI

- Technical requirements
- Creating a SwiftUI Xcode project
- Creating the Journal List screen
- Adding model objects and configuring navigation
- Using MapKit for SwiftUI
- Completing the Journal Entry Detail screen
- Summary

Chapter 26: Getting Started with Widgets

- Technical requirements
- Introducing widgets
- Adding a widget target to your app
- Providing timeline entries to your widget
- Customizing your widget’s view
- Adding a widget to your Home and Lock screens
- Summary

Chapter 27: Getting Started with visionOS

- Technical requirements

- Introducing visionOS
- Adding a visionOS target to your project
- Improving your app’s appearance in visionOS
- Adding 3D objects to your app
- Summary

Chapter 28: Testing and Submitting Your App to the App Store

- Technical requirements
- Getting an Apple Developer account
- Exploring your Apple Developer account
- Submitting your app to the App Store
- Testing your app
- Summary

7. Practice Test

Here's what you get

Features

Each question comes with detailed remediation explaining not only why an answer option is correct but also why it is incorrect.

Unlimited Practice

Each test can be taken unlimited number of times until the learner feels they are prepared. Learner can review the test and read detailed remediation. Detailed test history is also available.

Each test set comes with learn, test and review modes. In learn mode, learners will attempt a question and will get immediate feedback and complete remediation as they move on to the next question. In test mode, learners can take a timed test simulating the actual exam conditions. In review mode, learners can read through one item at a time without attempting it.

8. Performance Based Labs

uCertify's performance-based labs are simulators that provides virtual environment. Labs deliver hands on experience with minimal risk and thus replace expensive physical labs. uCertify Labs are cloud-based, device-enabled and can be easily integrated with an LMS. Features of uCertify labs:

- Provide hands-on experience in a safe, online environment
- Labs simulate real world, hardware, software & CLI environment
- Flexible and inexpensive alternative to physical Labs
- Comes with well-organized component library for every task
- Highly interactive - learn by doing
- Explanations and remediation available
- Videos on how to perform

Lab Tasks

Here's what you get

GET IN TOUCH:

3187 Independence Drive
Livermore, CA 94551,
United States

+1-415-763-6300

support@ucertify.com

www.ucertify.com