

iOS App Development

Course Title: iOS App Development

Institution: Alliance University

Program Type: Non-degree, skills-based credential

Mode of Delivery: Hybrid

Total Contact Hours: 40 hours

Course Syllabus -

Module	Name	Contact Hours
Module -I	Introduction to Swift and Playgrounds	8 hours
- Xcode - Building, Running, and Debugging an App - Documentation - Console - Open source playground - Results Sidebar - Constants - Variables - Naming constant - Comments - Types - Type inference - Required values - Assign a value in operator - Operator - Basic arithmetic - Compound - Remainder - Order of operations - Numeric type conversion - comparison - Logical - Ternary conditional operators.		
Conditional statement in Swift Programming		
Conditional statement - If statement - If-else statement - Interval matching - Switch statement - Closed range operator - For loop - Half-open range operator - Iteration - Repeat-while loop - While loop - Control transfer statements - breakpoint - bug - deprecated code - compiler error, or error - exception - landscape – portrait - step control buttons – warning.		
Module -II	Strings, Function, Structure in Swift Programming	8 hours
Strings - case sensitivity - concatenation – equality - escape character - index - literal - range - string interpolation - substring - Unicode - Concatenation and interpolation - String equality and comparison - More advanced strings - Unicode - Defining a function - Parameter - Argument label - Default parameter values - Return values – Structures - Instances - initializer - Custom initializer - Instance methods - Mutating methods - Computing properties - Property observers - Type property and methods - Copying - Self - Variable properties.		
Class and Inheritance		
Class and Inheritance - base class - state - subclass - superclass - Inheritance - Override methods and properties - Override initializer - references - Memberwise initializer - Array - set - dictionary - arrays - Array types - Working with arrays - Add/remove/modify dictionary - Accessing a dictionary		
Module - III	Optional	8 hours
Optionals - nil - Specifying the type of optional - optional binding - Working with optional value - Functional and optionals - Failable initializer - Optional chaining - Nested optional - Implicitly unwrapped optionals.		

Introduction - Tables		
Introduction - Tables and Persistence ,Protocols , Comparing Information with Equitable , Sorting Information with Comparable - Encoding and Decoding Objects with Codable		
Module - IV	Anatomy	8 hours
Creating a protocol - Delegation - App Anatomy and Life Cycle - Break Down the App Delegate - App Event Count Model-View-Controller - Meal Detail View Controller		
Project Organisation		
Project Organisation - Favourite Athlete - Scroll Views - Scroll View in IB - Programmatic Constraints to Content Layout Guide - Define content view using stack view - Add constraints - keyboard issues - Content inset and scroll indicator insets - scroll view family		
Module - V	Table view	9 hours
Table view - Anatomy - Controllers - styles - cells - index path - array and table views - Cell dequeuing - table view protocols - Table view data source - implement data source - table view delegate - reload data - Intermediate Table Views - custom table view cells - content hugging - Add and edit emoji - Automatic row height - compression resistance		
Data -Saving, encoding, decoding		
Saving data - encoding and decoding with Codable - writing data to file - system view controller - share with the activity controller - using safari services to display web content - present and alert controller - access the camera - send email from app		