



INTRODUCTION TO SWIFT PROGRAMMING

Module 1: Introduction



INTRODUCTION TO SWIFT PROGRAMMING

Agenda

- Introduction
- Program Overview
- Course Structure
- Introduction to swift programming

MODULE 1- Introduction

INTRODUCTION TO SWIFT PROGRAMMING**Program Overview**

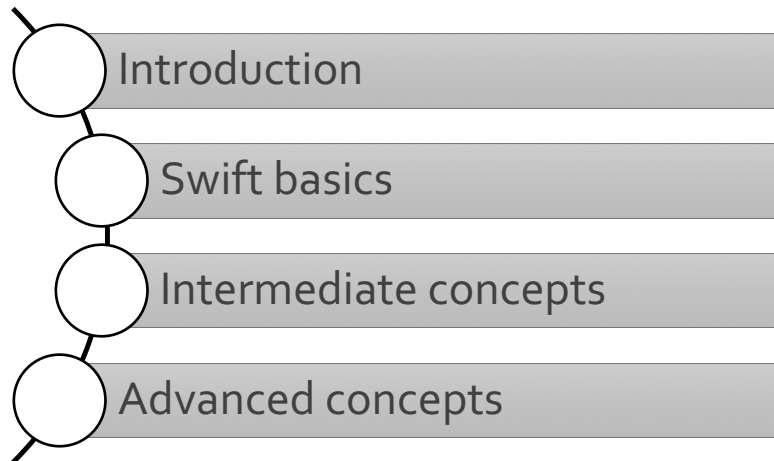
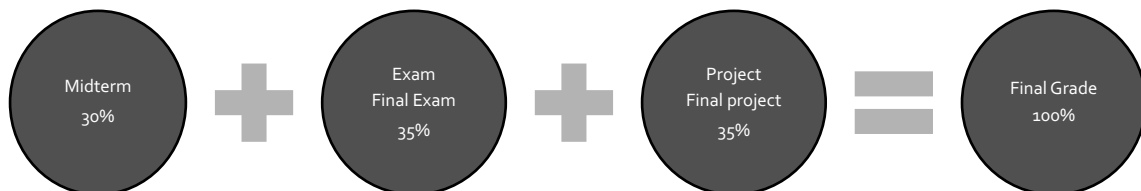
- ❖ Mobile app development is the act or process by which a mobile app is developed for mobile devices.

- ❖ This program will allow students the opportunity to develop a wide variety of skills in applications for mobile and tablet devices.

MODULE 1- Introduction**INTRODUCTION TO SWIFT PROGRAMMING****Program Overview in Term 1**

- CBD-2303: Database Design
- MAD-3463: Programming Java
- MAD-3004: Introduction to Swift Programming
- MAD-3115: iOS Programming Fundamentals
- MAD-3125: Android Development Fundamentals

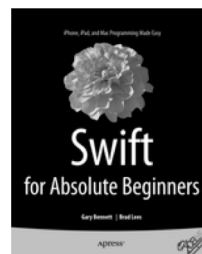
MODULE 1- Introduction

INTRODUCTION TO SWIFT PROGRAMMING**COURSE
STRUCTURE****MODULE 1- Introduction****INTRODUCTION TO SWIFT PROGRAMMING****Assessment Breakdown****Required Textbook**

- Bennett, G., Lees, B.; (2016). Swift for Absolute Beginners, 3rd Ed.

Useful links:

- <https://swift.org/>

**MODULE 1- Introduction**

INTRODUCTION TO SWIFT PROGRAMMING**Course overview**

- Introduction to swift programming
- Variables and Constants
- Operators
- Collection types
- String handling
- Functions
- Control flow
- Structures and Classes
- Enumerations
- Protocols
- Closures
- Methods
- Inheritance
- Polymorphism
- Type casting
- Error handling
- ...

MODULE 1- Introduction**INTRODUCTION TO SWIFT PROGRAMMING****Evaluation:**

Due Date	Test/Assignment	Chapters/Units Covered	Weighting towards Final Mark
Oct-15-2019	Midterm Test	Day 1 – 8 Topics	30%
Oct-23-2019	Final Exam	All	35%
Oct-24-2018	Final project	All	35%
Total			100%

MODULE 1- Introduction

INTRODUCTION TO SWIFT PROGRAMMING**Introduction to Swift**

- ❖ A new programming language for iOS, macOS, watchOS, and tvOS app development.
- ❖ An **object oriented, compiled** and **multi-paradigm** programming language
- ❖ A **fast, modern, safe, interactive** programming language
- ❖ It is functional, general purpose, strong typed, type safe and inferred
- ❖ Developed by Chris Lattner, the father of this language, in 2010
- ❖ First introduced at Apple's 2014 Worldwide Developers Conference (WWDC)
- ❖ Swift took language ideas from many others like " Objective-C, Rust, Haskell, Ruby, Python, C#, CLU and ...

MODULE 1- Introduction**INTRODUCTION TO SWIFT PROGRAMMING****Why this programming language is very important today ?**

- ❖ Swift is open source
- ❖ Swift is easy to learn
- ❖ Swift makes iOS and OS X easier and safer than ever before
- ❖ Great access to existing cocoa frameworks
- ❖ It doesn't need a separate library import to support functionalities like input/output or even the string handling
- ❖ Hundreds of thousands programmers have already built apps for iPhones and iPads using Swift
- ❖ Swift unifies the procedural and object-oriented portions of the language

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INTRODUCTION TO SWIFT PROGRAMMING**Swift features**

- ❖ Statements do not need to end with a semicolon
- ❖ Strong typing
- ❖ Type inference
- ❖ Header files are not required
- ❖ much newer, much faster, less time and memory –consuming
- ❖ completely open-source language

MODULE 1- Introduction**INTRODUCTION TO SWIFT PROGRAMMING****Swift vs Objective-C**

- **Pros of Objective-C:**
 - ❖ It has existed for many years and is well tested
 - ❖ Good compatibility with C and C++
 - ❖ It's stable
- **Cons of Objective-C:**
 - ❖ It is hard to learn
 - ❖ Decreasing number of developers
 - ❖ An app developed in Objective-C could be potentially easier to hack than its Swift alternative

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INTRODUCTION TO SWIFT PROGRAMMING**Swift vs Objective-C**

- **Pros of Swift:**
 - ❖ Swift is safer
 - ❖ Apple is focused on Swift
 - ❖ You will be more popular with your developer's team
- **Cons of Swift:**
 - ❖ Migrations and changes

MODULE 1- Introduction**INTRODUCTION TO SWIFT PROGRAMMING****Tools**

- **Xcode**
- **Playground**

MODULE 1- Introduction

INTRODUCTION TO SWIFT PROGRAMMING**Next Module**

- Playing with playground
- Swift basics

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Thank you for your Attention

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