

# CSTP 2305: IOS MOBILE APP PROGRAMMING

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**Last approved:** Fri, 20 May 2022 12:23:52 GMT

**Course Name:**

iOS Mobile Application Programming

**Effective Date:**

September 2022

**School/Centre:**

Trades, Technology & Design

**Department:**

Computer Systems Technology (4702)

**Banner Course Name:**

iOS Mobile App Programming

**Subject Code:**

CSTP - Computer Systems Technology

**Course Number**

2305

**Year of Study**

2nd Year Post-secondary

**Credits:**

3

**Bridge College Code**

TT

**Bridge Billing Hours**

3

**Bridge Course Level**

01

**Course Description:**

In this course students study basic iOS application development for Apple mobile devices as well as cross platform application development for both Android and Apple devices. This course is designed for students who already have basic understanding of Object-Oriented programming using modern programming languages such as C++. Studies will learn how to use Apple's Swift programming language using development environment Xcode to develop general purpose application for Mac OS or iOS operating system. Students will utilize a cross platform development tool to create a mobile application that can run on multiple platforms.

The emphasis in this course is gaining familiarity with the toolchain, the necessary APIs, working with MacOS and Xcode, and basic coding in the Swift programming language. Students will have access to modern Mac Labs to develop and test their applications, but for publishing and using the latest updates and packages it is recommended students have access to a Mac PC such as Mac mini.

**Course Pre-Requisites (if applicable):**

CSTP 1205, CSTP 1206.

**PLAR (Prior Learning Assessment & Recognition)**

No

**Course Learning Outcomes (CLO):**

Upon successful completion of this course, students will be able to:	
CLO #1	Discuss application development for iOS mobile devices
CLO #2	Describe the development toolchain, testing, and publishing applications on Mac OS and iOS devices
CLO #3	Handle user touches, connect to the Internet, utilize accelerometer, timers and location in Mac or iOS environment

CLO #4	Develop software in Swift using Xcode that can run on an iOS devices and Mac PC.
CLO #5	Develop software that can run on an iOS device using object-oriented concepts
CLO #6	Employ basic debugging and troubleshooting on Mac PC
CLO #7	Develop a mobile application using a cross platform development tool that can run on multiple device platforms
CLO #8	Publish and submit an iOS application on the Apple App Store

**Instructional Strategies:**

Instructional strategies include classroom lectures, demonstrations, group discussions, computer lab and hands-on practical work. Software required is Xcode 11.6 or Higher. Students needs access to a Mac running Mac OS 10.15.6 or higher. Student can use alternatives to owning their own Mac using services like those listed in this website: <https://codewithchris.com/xcode-for-windows/>

**Evaluation and Grading****Grading System:**

Letter Grade (A-F)

**Passing grade:**

C

**Evaluation Plan:**

Type	Percentage	Brief description of assessment activity
Lab Work	20	weekly
Project	25	
Quizzes/Tests	20	
Final Exam	20	
Midterm Exam	15	

**Hours by Learning Environment Type**

To complete this section:

1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS:

60

**Category 1: Lecture, Online, Seminar, Tutorial**

Hours in Category 1:

25

**Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio**

Hours in Category 2:

35

**Category 3: Practicum, Self Paced, Individual Learning****Course Topics****Course Topics:**

Application development on Xcode IDE and iOS devices.

Swift fundamentals and code flow.

Building single view app on iOS

Creating multi-screen app on iOS

Adding behavior and data driven lists to iOS apps

Adaptive UI on iOS

Publishing to the App Store.

### **Badge Information**

NOT REQUIRED FOR GOVERNANCE APPROVAL.

For use when a Badge is offered for this course. If you have any questions, contact the Registrar's Office.

### **Marketing Information**

FOR MARKETING PURPOSES ONLY. NOT REQUIRED FOR GOVERNANCE APPROVAL.

This section is used by Marketing to help populate course information on the website. If you have any questions about this section, contact [webmaster@vcc.ca](mailto:webmaster@vcc.ca).