



## COURSE OUTLINE: MAP201 - IOS DEVELOPMENT

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Approved: Corey Meunier, Chair, Technology and Skilled Trades

<b>Course Code: Title</b>	MAP201: PROGRAMMING: HANDS-ON IOS DEVELOPMENT
<b>Program Number: Name</b>	2191: MOBILE APPS DESIGN
<b>Department:</b>	COMPUTER STUDIES
<b>Semesters/Terms:</b>	19W
<b>Course Description:</b>	In this course, students will continue their study of mobile development for the iOS platform. The focus will be a student-driven, deeper dive into the study of various APIs such as location, data management, networking and internet, wearable technology, and game development.
<b>Total Credits:</b>	5
<b>Hours/Week:</b>	5
<b>Total Hours:</b>	75
<b>Prerequisites:</b>	There are no pre-requisites for this course.
<b>Corequisites:</b>	There are no co-requisites for this course.
<b>Essential Employability Skills (EES) addressed in this course:</b>	<p>EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.</p> <p>EES 3 Execute mathematical operations accurately.</p> <p>EES 4 Apply a systematic approach to solve problems.</p> <p>EES 5 Use a variety of thinking skills to anticipate and solve problems.</p> <p>EES 8 Show respect for the diverse opinions, values, belief systems, and contributions of others.</p> <p>EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.</p> <p>EES 10 Manage the use of time and other resources to complete projects.</p> <p>EES 11 Take responsibility for ones own actions, decisions, and consequences.</p>
<b>Course Evaluation:</b>	Passing Grade: 50%, D
<b>Other Course Evaluation &amp; Assessment Requirements:</b>	<p>The student must pass both the lab and test portions of the course.</p> <p>Attendance: Sault College is committed to student success. There is a direct correlation between academic performance and class attendance, therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.</p> <p>Absences due to medical or other unavoidable circumstances should be discussed with the instructor. Students are required to be in class on time and attendance will be taken within the first five minutes of class.</p> <p>Absentee reports will be discussed with each student during regular meetings with Faculty Advisors.</p>



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Grade  
 Definition Grade Point Equivalent  
 A+ 90 - 100% 4.00  
 A 80 - 89%  
 B 70 - 79% 3.00  
 C 60 - 69% 2.00  
 D 50 - 59% 1.00  
 F (Fail) 49% and below 0.00  
 CR (Credit) Credit for diploma requirements has been awarded.  
 S Satisfactory achievement in field /clinical placement or non-graded subject area.  
 U Unsatisfactory achievement in field/clinical placement or non-graded subject area.  
 X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.  
 NR Grade not reported to Registrar's office.  
 W Student has withdrawn from the course without academic penalty

**Books and Required Resources:**

iOS Programming (The Big Nerd Ranch Guide) by Christian Keur, Aaron Hillegass  
 Publisher: Pearson Edition: 6  
 ISBN: 9780134682334

**Course Outcomes and Learning Objectives:**

<b>Course Outcome 1</b>	<b>Learning Objectives for Course Outcome 1</b>
What are CocoaPods, APIs, and Frameworks.	1.1 Describe how APIs and frameworks provide additional app functionality. 1.2 Understand what CocoaPods are and how to find/install them. 1.3 Use CocoaPods and various APIs and Frameworks to build iOS apps.
<b>Course Outcome 2</b>	<b>Learning Objectives for Course Outcome 2</b>
MapKit and MapView.	2.1 Understand what a URL is and how iOS behaves with certain URLs. 2.2 Discover how to access the Maps app. 2.3 Practice adding framework dependencies to an Xcode project. 2.4 Use the MapView interface component and the MapKit framework to build a map driven app.
<b>Course Outcome 3</b>	<b>Learning Objectives for Course Outcome 3</b>
CoreLocation.	3.1 Describe the Core Location framework and how to use it. 3.2 Discover how to configure a device location with the iOS Simulator. 3.3 Implement location updates to track physical movement. 3.4 Use the Core Location framework to build a tracking app.
<b>Course Outcome 4</b>	<b>Learning Objectives for Course Outcome 4</b>
NoSQL, asynchronous tasks, and JSON serialization.	4.1 Understand the NoSQL method of storing data. 4.2 Explore the Firebase SDK. 4.3 Use URLSession and the dataTask function to make asynchronous data calls. 4.4 Understanding REST API calls and JSON serialization. 4.5 Build an app that can browse web pages and REST APIs.
<b>Course Outcome 5</b>	<b>Learning Objectives for Course Outcome 5</b>

	SpriteKit.	5.1 Understand and explore the SpriteKit framework. 5.2 Describe SKNode, SKScene, and SKActions. 5.3 Create multiple game levels using the scene editor and adding objects. 5.4 Build a game.
	<b>Course Outcome 6</b>	<b>Learning Objectives for Course Outcome 6</b>
	Bluetooth Low Energy (BLE), central manager, peripherals, services, and characteristics.	6.1 Understand Bluetooth Low Energy (BLE) basics. 6.2 Discover the Core Bluetooth framework. 6.3 Implement scanning for peripherals and discovering services and characteristics. 6.4 Build a panic app that integrates Bluetooth.

**Evaluation Process and Grading System:**

Evaluation Type	Evaluation Weight
Lab 1	5%
Lab 10	5%
Lab 2	5%
Lab 3	5%
Lab 4	5%
Lab 5	5%
Lab 6	5%
Lab 7	5%
Lab 8	5%
Lab 9	5%
Test 1	20%
Test 2	30%

**Date:** September 19, 2019

**Addendum:** Please refer to the course outline addendum on the Learning Management System for further information.