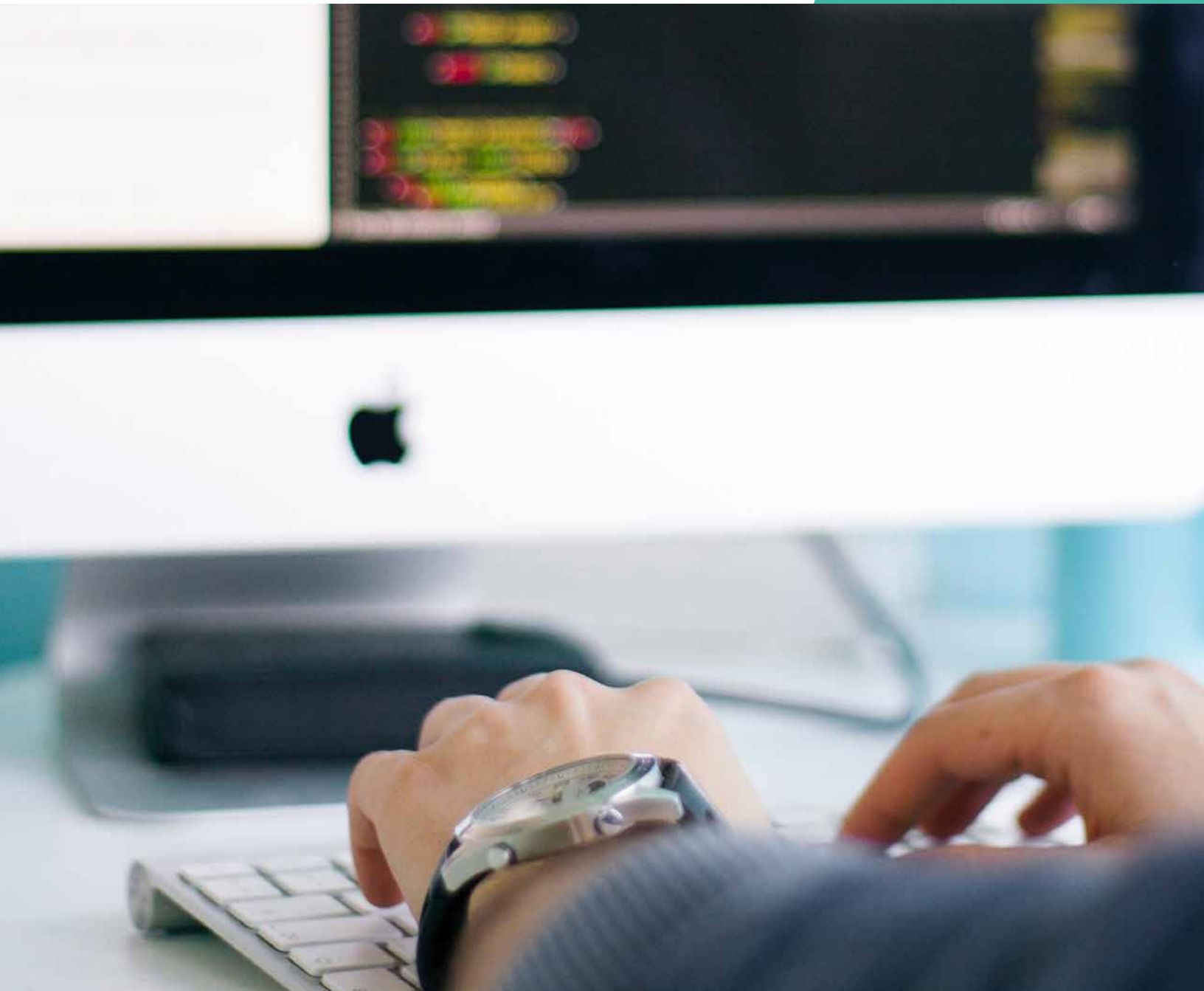# WEB & MOBILE APP DEVELOPMENT
CO-OP DIPLOMA

Empower your career

CORNERSTONE
International Community College of Canada

YOUR **SUCCESS**
OUR **PRIORITY**

WEB & MOBILE APP DEVELOPMENT CO-OP DIPLOMA
Co-op Diploma

Curriculum Overview

Cornerstone International Community College of Canada (CICCC) is one of the first private colleges in Canada to offer a program like Web & Mobile Application Development. WMAD is a 24-month co-op diploma program comprised of 8 academic courses and 12 months of paid internship. It is designed to prepare students for a career as either a web developer or a mobile application developer; rapidly growing industries that are in-demanded by small businesses to large corporations, along with everything in between.
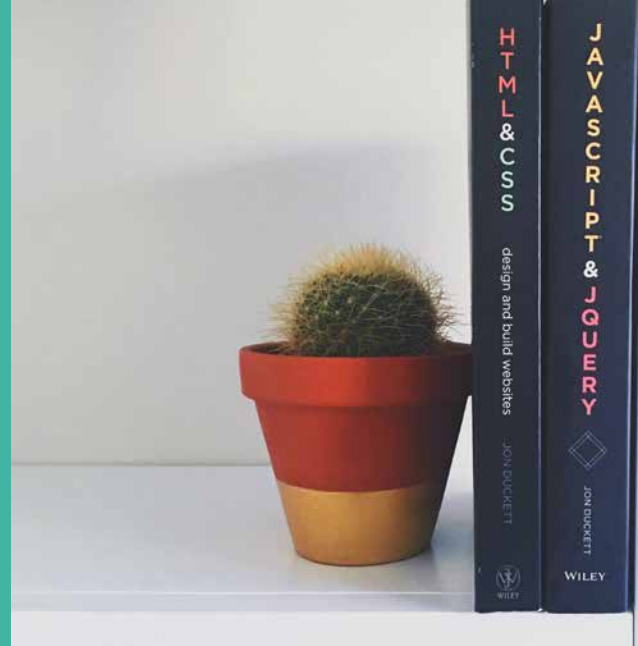
> "*Everybody should learn to program a computer, because it teaches you how to think*" |**Steve Jobs**

Co-op work term Overview

The co-op work term is an essential step in our students development. By working directly with Canadian tech companies, students will have the opportunity to learn practical skills that compliment their academic learning. This will ground the theories and practices studied inside the classroom and, at the same time, help them to develop their personal and professional network giving them the industry experience they need to start their careers.

"**Vancouver** is the **Fastest-growing** Technology **Sector** in Canada"

– Delloite

Program duration 24 months total

12 months

+

12 months

Academic training

Co-op work

Work Load

This is an intensive and comprehensive program. Students can expect to devote a minimum of 1-3 hours to assigned reading and homework each day, as well as supplementary personal study based on background in the field and personal interests.
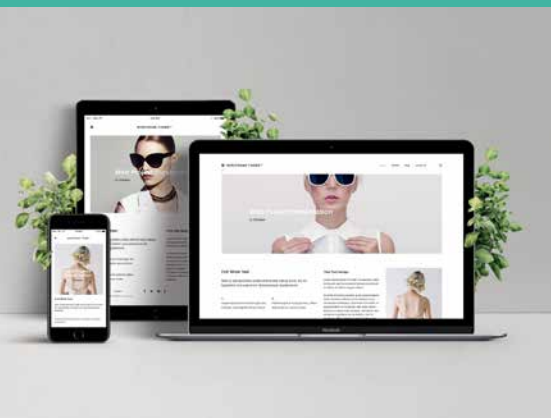
Admission requirements

1. High School Graduation or equivalent; or 18 years of age.

2. Applicants must successfully demonstrate an English language proficiency level based on one of the following:

   • TOEFL PBT – 513; CBT – 183; IBT – 65;

   • TOEIC – 620;

   • IELTS – 5.5;

   • Cornerstone Placement Test – Level 5 or equivalent.*

You may study ESL courses prior to starting the program

Introduction 260 hr

Introduction to Computing

Algorithms, Flow Charts
& Problem Solving

JAVA (Intro to OOP)

Web Development 500 hr

Web Development I

Web Development II

React.js &
Modern JavaScript

Node.js Fundamentals

Introduction
Students will be introduced
to the fundamentals of
computing, logical problem
solving, and programming
with Java before choosing
to specialize in either Web or
Mobile App Development.

LEARNING

Specialization
Students who choose
to specialize in Web
Development will learn to
build, style, and maintain
websites using HTML5, CSS3,
JavaScript, React.js, and
Node.js.

PATHWAY

Mobile App Development 500 hr

Android App Development

iOS Application Development

Objective-C Programming

Swift Programming

Specialization

Students who choose to specialize in Mobile App Development will learn to develop applications for both Android and iOS systems.

Final Presentation

Once students have completed their specialization, they will submit a proposal for a 200h final project and demonstrate their development skills in a final presentation.

Final Project 200 hr

PROGRAM CURRICULUM

* This program is comprised of 3 Modules, Introduction (Module 1), Specialization (Module 2), and Final Project (Module 3). All students will complete Modules 1 and 3. For Module 2, students will choose a concentration in either Web Development (WD) or Mobile Application Development (AD).

Course 101

Introduction to Computing · 40hr

This course is an introductory to the basics of computer hardware, software, and operating systems. Students will use this knowledge to understand and distinguish between programming languages and their respective platforms.

Course 102

Algorithms, Flow Charts and Problem Solving · 60hr

Understanding the vocabulary, grammar, and syntax is key to solving programming problems. All programming languages have been created around a fundamental set of principles. This course introduces theory and practice of programming logic without using a specific programming language, but rather the basic syntax and logic found in all programming languages.

Course 202

Java (Introduction to Object Oriented Programming) · 160hr

Using Java, students are introduced to object-oriented programming (OOP), the concept of organizing and grouping information within 'objects' used to contain data. Topics will include classes, objects, data types, constructors, methods, flow control, collections, data abstraction, modularity, testing, debugging, and specific object-oriented programming concepts such as encapsulation, inheritance, and polymorphism.

Course 410

WD - Web Development I · 120hr

Students will learn the principles and techniques behind the design and development of effective web sites. As the foundation for several advanced web applications, this hands-on course provides an introduction to web technologies including, HTML, CSS, and FTP file management software. This course will also provide an introduction to advanced languages such as JavaScript, used for client-side scripting, and PHP, used for server-side scripting.

Course 411

WD - Web Development II · 120hr

Continuing from Web Development I, students will to gain a deeper understanding of web programming using HTML5 and CSS3 by focusing on responsive design, for both desktop and mobile applications, using Media Queries. Students will also use frameworks such as jQuery and JavaScript to add functionality to their websites to enhance the user experience of their web sites.

Course 412

WD - React.js and Modern Javascript · 140hr

First implemented in Facebook's 2011 news feed, React is a Javascript library used to build user interfaces. In this challenging, hands-on course students will apply the concepts of Web Development I and II and learn to create fast and modular applications using React, Document Object Model (DOM), JavaScript ES6, JSX, and Redux. This course focuses on structuring and developing industry standard single page applications.

CO-OP Work Experience · 960hr

502

Course 413

WD - Node.js Fundamentals · 120hr

Node.js is a multi-platform open source server environment used to communicate information between the client and the server including, data collection and file management. Students will use their comprehensive understanding of HTML, CSS, and JavaScript and learn to use the Node.js programming asynchronous model, along with data storage and package management, to build networked web applications.

Course 301

AD - Android App Development · 140hr

Android offers a world-class platform for creating mobile applications and games, as well as an open marketplace for distributing them instantly. This course will teach students to develop with a single application model that supports broad deployment across a wide range of devices– from phones to tablets and beyond.

Course 401

AD - Swift Programming · 140hr

Swift is an intuitive programming language developed by and specifically for Apple applications including macOS, iOS, watchOS, and tvOS. In this course, students will develop a basic understanding of core programming procedures using the Swift language while focusing on mobile application development for iOS systems.

Course 402

AD - Objective-C Programming · 40hr

Objective-C is an object-oriented programming language. Before developing Swift, Objective-C served as the foundation of macOS and iOS operating systems for over 10 years. Many existing iOS tools and frameworks still utilize Objective-C programming and students will be expected to work with both when entering the industry.

Course 403

AD - iOS Application Development · 180hr

In this course students will implement their fundamental understanding of both Swift and Objective-C programming and apply their knowledge to develop working iOS applications.

Course 501

Program Project · 200hr

This course gives students the opportunity to practice and apply the knowledge they have gained to create a real-world Web, iOS, or Android application. The students will create a proposal for their development project and submit it to their instructor for approval. Once approved, students will develop and demonstrate their project with a final presentation.

"iOS Developer Average **Salary** in Vancouver

$89,954 CAD"

– indeed

Alumni

Web & Mobile App Development Diploma

Ricardo

"When I started the course, I had no background in web development and I needed to improve my English. Cornerstone helped me through every single step and provided me the support that I needed to start my career as a Developer. Today, I live in Calgary with my family and work as a Mobile App Developer, and soon I will become a Permanent Resident in Canada. Cornerstone helped me to achieve my goals and become the developer I am today. Thank you, Cornerstone!"

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