

MOBILE APPLICATION DEVELOPMENT

Program Outline

Major:	MDEV
Length:	1 Year
Delivery:	2 Semesters
Credential:	Ontario College Graduate Certificate
Effective:	2013-2014
Location:	Barrie
Start:	Winter (Barrie)

Description

This program is designed to prepare students for a career in mobile application development either as part of a team or an independent entrepreneur. By leveraging the prior software development experience of students, the program is able to focus on the core techniques, concepts, and architectures of mobile applications.

Using an applied project methodology, students will learn how to resolve common mobile programming challenges, while gaining tangible experience in developing mobile applications. Students will also develop effective technical communication skills, as well as gain exposure to vendor standards, guidelines, and best practices.

Career Opportunities

Graduates of the Mobile Application Development program will be prepared to work independently, or as a member of a team creating, designing, and coding mobile applications using a multitude of programming languages on a variety of mobile platforms.

Program Learning Outcomes

The graduate has reliably demonstrated the ability to:

- identify requirements and implement mobile solutions;
- promote mobile technology solutions using business communication and marketing skills;

- create effective user interfaces that leverage evolving mobile device capabilities;
- design and develop websites that deploy to different devices and platforms;
- design and develop cross-platform applications built with rich-media and HTML-based technologies;
- design and develop device-specific, native applications;
- research and apply various software development kits (SDKs), frameworks and toolkits;
- integrate database and server-side technologies to provide complete mobile development solutions;
- build, test, and deploy secure mobile solutions using appropriate technologies;
- collaborate in a team-based mobile development project;
- apply concepts of entrepreneurship to application development;
- implement strategies to reduce the impact of mobile applications on the environment;
- publish and market mobile applications to an online store.

The Program Progression:

Winter Intake - Barrie

Sem 1		Sem 2

Winter		Summer
2014		2014

Admission Requirements:

Applicants must meet ONE of the following requirements to be eligible for admission to this program:

- post-secondary diploma or degree with a focus in computer studies, or equivalent work experience in software development.

Graduation Requirements:

- 8 Mandatory Courses
- 6 Optional Courses

Graduation Eligibility:

To graduate from this program, a student must attain a minimum of 60% or a letter grade of P (Pass) or S (Satisfactory) in each course in each semester. The passing weighted average for promotion through each semester and to graduate is 60%.

Mandatory Courses

MDEV1000 Application Design and Interfaces
MDEV1001 Mobile Data Management
MDEV1002 Entrepreneurship for Mobile Development
MDEV1003 Mobile Game Design
MDEV1004 Mobile APIs and Frameworks
MDEV1005 Mobile Web Applications
MDEV1012 Mobile App Portfolio 1
MDEV1013 Mobile App Portfolio 2

Optional Courses

BNTR1005 Marketing Innovations and Planning
MDEV1006 Introduction to iOS Development
MDEV1007 Advanced iOS Development
MDEV1008 Introduction to Android Development
MDEV1009 Advanced Android Development
MDEV1010 Introduction to BlackBerry Development
MDEV1011 Introduction to Windows Phone Development

Course Descriptions:

BNTR1005 Marketing Innovations and Planning 42.0 Hours

This course is designed to introduce students to marketing theory and marketing strategies and their relationship to entrepreneurship. Marketing theory will be contextualized within the concept of the entrepreneurial venture. Students will examine successful start-up ventures and small-to-medium sized enterprises, each with distinct needs and limited marketing budgets. Students will then develop effective marketing strategies for their business plan, including e-commerce and social media marketing.

MDEV1000 Application Design and Interfaces 42.0 Hours

Successful application design requires a balance of usability, functionality, and aesthetic qualities. This course examines how to design and build usable and intuitive mobile interfaces that adhere to accepted usability guidelines and best practices.

MDEV1001 Mobile Data Management 42.0 Hours

Mobile applications typically utilize local data stores and remote data sources during the course of operation. This course examines how to develop, manage, and access local

data, as well as how to connect, query, and decode remote data sources to extend the functionality of mobile applications.

MDEV1002 Entrepreneurship for Mobile Development 42.0 Hours

Mobile application development is an emerging and highly dynamic sector. This course is intended to prepare students with the background to setup their own mobile application development business. Students will learn the steps required to register and establish a business, publish mobile applications, as well as apply the principles of marketing, economics, and advertising to mobile applications.

MDEV1003 Mobile Game Design 42.0 Hours

Building immersive and engaging interfaces requires developers to have experience in creating two and three-dimensional environments. This course explores the creation of 2D and 3D worlds, and will examine the concepts of mobile game design such as story boarding, environment design, and world creation.

MDEV1004 Mobile APIs and Frameworks 42.0 Hours

Application Programming Interfaces (APIs) and frameworks can be used to extend the functionality of applications by integrating into other applications and services. This course teaches students how to leverage common APIs and frameworks into their mobile applications.

MDEV1005 Mobile Web Applications 42.0 Hours

Mobile applications often utilize external web applications and web services to carry out their functions. Students will learn how to create and utilize web-based applications on mobile devices and integrate their mobile applications into a larger web application.

MDEV1006 Introduction to iOS Development 42.0 Hours

The Apple iPhone Operating System (iOS) platform is currently one of the most prevalent mobile architectures. This course introduces students to the iOS architecture, development methodologies, and programming practices commonly used to create iOS mobile applications.

MDEV1007 Advanced iOS Development 42.0 Hours

This course will explore additional aspects of the iPhone Operating System iOS System Development Kit (SDK). Students will develop more robust applications while gaining experience working with extended features such as geo-location, accelerometers, and the camera.

MDEV1008 Introduction to Android Development 42.0 Hours

The Google Android platform is one of the fastest expanding mobile architectures. This course introduces students to the Android architecture, development methodologies, and programming practices commonly used to create mobile applications on the Android platform.

MDEV1009 Advanced Android Development 42.0 Hours

This course will examine in detail the more complex aspects of the Google Android System Development Kit (SDK). Students will develop more robust applications while gaining experience with extended features such as processes and threads, multimedia, and external device communications.

MDEV1010 Introduction to BlackBerry Development 42.0 Hours

The BlackBerry platform is commonly found in large corporate enterprise environments. This course introduces students to the BlackBerry architecture, development methodologies, and programming practices commonly used to create mobile applications for BlackBerry mobile devices.

MDEV1011 Introduction to Windows Phone Development 42.0 Hours

The Windows Phone platform is an emerging technology that leverages the Microsoft .NET framework and web technologies on mobile devices. This course introduces students to the Windows Phone architecture, development methodologies, and programming practices commonly used to create applications for Windows Phone.

MDEV1012 Mobile App Portfolio 1 42.0 Hours

In this course students will begin to create a portfolio of artifacts, which documents their application development skills as well as other abilities and activities that are related to the mobile application industry. Students will begin to engage in community service learning as well as entrepreneurial activities designed to enhance their project work.

MDEV1013 Mobile App Portfolio 2 84.0 Hours

In this course students will continue to work on their portfolios, which were begun in Mobile Application Portfolio 1. They will create a final collection of projects, which showcases their abilities. This portfolio will include at least one fully developed project that works through all of the stages of the mobile application development cycle including; requirements definition, feasibility assessment, design, build, publication, marketing. Students will also be expected to establish a support structure for their application.

Course Description Legend

P = Prerequisite; C = Concurrent prerequisite; CO= Corequisite

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timetables or campus locations subject to sufficient enrolment, and the availability of courses.