



PROGRAM OUTLINE

PROGRAM DESCRIPTION

Concentration 1:

General Programming

This **diploma** program focuses on preparing you to work as a programmer requiring the application of current industry policies, practices, procedures and tools.

Concentration 2:

Graphic and Web

This **diploma** program focuses on preparing you to work as a programmer specializing in graphical and web based applications, requiring the use of current industry policies, practices, procedures and tools.

Concentration 3:

E-Commerce

This **diploma** program focuses on preparing the student to work as a programmer specializing in web based E-Commerce and E-Commerce applications requiring the use of current industry policies, practices, procedures and tools.

LEARNING OBJECTIVES

Concentration 1:

General Programming

Upon successful completion, students will have demonstrated the ability to apply theoretical knowledge and hands-on skills in industry standard programming languages, database design and application, fundamentals of object oriented programming, HTML, JavaScript and practical software applications.

Concentration 2:

Graphic and Web

Upon successful completion, students will have demonstrated the ability to apply theoretical knowledge and hands-on skills in industry standard programming languages, database design and application, fundamentals of object oriented programming, C sharp, visual basic, HTML, PHP, JavaScript, web design and Photoshop.

Concentration 3:

E-Commerce

Upon successful completion, students will have demonstrated the ability to apply theoretical knowledge and hands-on skills in industry standard programming languages, database design and application, fundamentals of object oriented programming, C sharp, visual basic, HTML, XML, PHP, JavaScript, web design and Photoshop.

ADMISSION REQUIREMENTS

- Grade 12 graduate or mature student status (British Columbia, 19 years or older)
- Meet minimum English language proficiency requirements.

DELIVERY METHODS

- In-class instruction
- Distance education
- Combined delivery (both in-class and distance)

PROGRAM DURATION

Total instructional hours	960
Total program hours	960
Total program length (weeks)	48

GRADUATION REQUIREMENTS

- Successful completion of all program courses.
- Successful completion of program coop.

CAREER OPPORTUNITIES

Concentration 1:

General Programming

Upon successful completion graduates will be able to secure employment, for example, as application programmers, programmer analysts and software development programmers.



PROGRAM OUTLINE

Concentration 2:

Graphic and Web

Upon successful completion graduates will be able to secure employment as, for example, web based application programmers, web developers and web programmers.

Concentration 3:

E-Commerce

Upon successful completion graduates will be able to secure employment as web based application programmers.

PROGRAM BREAKDOWN

Concentration 1:

General Programming

Course No.	TERM 1	Hours
ICR100	Introduction to Computers	40
ICR110	Algorithms, flowcharts & Problem Solving	40
ICR120	Introduction to HTML & JavaScript	60
ICR130	Web Site Building with CSS	60
ICR140	Databases & SQL	40
Course No.	TERM 2	Hours
IGP200	ASP & ASP.Net	80
IGP220	Programming C#	80
IGP210	Visual Basic.Net	80
Course No.	TERM 3	Hours
IGP300	Introduction to Programming with C	60
IGP310	Object Oriented Programming with C++	160
IGP320	C Project	20
Course No.	TERM 4	Hours
IGP330	Programming with PHP	60
IGP400	Introduction to Computer Networks	60
IGP420	Java Programming	120

PROGRAM BREAKDOWN

Concentration 2:

Graphic and Web

Course No.	TERM 1	Hours
ICR100	Introduction to Computers	40
ICR110	Algorithms, flowcharts & problem solving	40
ICR120	Introduction to HTML & JavaScript	60
ICR130	Web Site Building with CSS	60
ICR140	Databases & SQL	40
Course No.	TERM 2	Hours
IGP200	ASP & ASP.Net	80
IGP220	Programming C#	80
IGP210	Visual Basic.Net	80
Course No.	TERM 3	Hours
IGP300	Introduction to Programming with C	60
IGP310	Object Oriented Programming with C++	160
IGP320	C Project	20
Course No.	TERM 4	Hours
IGW300	Programming with PHP	60
IND100	Foundations of Art & Design	40
IGP400	Introduction to Computer Networks	60
IGP410	HTML 5	40
ITN220	Photoshop I	40



PROGRAM OUTLINE

PROGRAM BREAKDOWN

Concentration 3: E-Commerce

Course No.	TERM 1	Hours
ICR100	Introduction to Computers	40
ICR110	Algorithms, flowcharts & problem solving	40
ICR120	Introduction to HTML & JavaScript	60
ICR130	Web Site Building with CSS	60
ICR140	Databases & SQL	40
Course No.	TERM 2	Hours
IGP200	ASP & ASP.Net	80
IGP210	Visual Basic.Net	80
IGP220	Programming C#	80
Course No.	TERM 3	Hours
IEC300	Existing Technology on E-Commerce	40
IEC310	E-Business Model & Marketing	40
IEC320	Legal Issues & Online Transactions	40
IGP330	Programming with PHP	60
IGP400	Introduction to Computer Networks	60
Course No.	TERM 4	Hours
GRD110	Photoshop I	40
IEC400	Procedural E-commerce Web Building	40
ITN400	Introduction to XML	40
ITN420	Network & Online Security	40
IGP410	HTML 5	40
IEC800	Portfolio Development	40

TERM 1

All Concentrations:

ICR100 Introduction to Computers

This is an introductory to the basics of computer hardware, especially those components that are used frequently by programmers including RAM and CPU. Students will also be introduced to operating systems.

ICR110 Algorithms, Flowcharts, and Problem Solving

Understanding the language, grammar and syntax of a programming language is key to the application of that language in solving programming problems. All programming languages have been created around a fundamental set of language theories and conventions. This course introduces the student to theory and practice of programming and programming logic. This course does not introduce the student to a specific programming language but rather to the basic language, grammatical, and syntactical constructs and logic found in all programming languages. Students will solve programming problems using pseudo-code.

ICR120 Introduction to HTML and JavaScript

This course will introduce students to web page and simple website infrastructure. Students will construct simple webpage and websites using authoring tools, HTML 4.0 and JavaScript. Student will learn basic programming principles and best practices. Students will use their programming skills to enhance a web site they have developed by building simple interactive functionality into their webpages.

ICR130 Website Building with CSS

You will learn how to create all of the key components required in a 21st century commercial web site. You will learn how to apply your HTML, CSS, and JavaScript skills in a commercial context.

ICR140 Databases & SQL

This is an introductory database course. You will be introduced to the role and function of databases and to accepted dbase design and development methodologies. You will also be introduced to database software manipulation systems using Classic ASP and Microsoft Access tools.



PROGRAM OUTLINE

TERM 2

All Concentrations:

ICP200 ASP.Net

In this course students learn how to create web form pages using ASP.net and Microsoft SQL Server 2008 Express. A variety of different controls to present and edit dynamic data on ASP.NET pages will be explored. Students will also work with Internet Information Services on Windows client platform and will finally deploy an ASP.NET website on IIS.

IGP210 Visual Basic

In this course students learn how to create desktop applications using a rapid development tool - Visual Basic.Net. They will also be introduced to Object Oriented Programming.

IGP220 Programming C#

In this course students learn how to create desktop applications using C#.Net. Students will learn how to create windows based applications along with database connectivity. They will learn simple concepts of Object Oriented Programming and create multiple projects based on Object Oriented concepts in C#. Students will also learn Inheritance and polymorphism along with the concept of static and dynamic binding.

TERM 3

Concentration 1:

General Programming

Concentration 2:

Graphic and Web

IGP300 Introduction to Programming with C

This course introduces students to basic C programming principles and structures. Students will learn to develop console applications in C while they learn the Visual Studio IDE. Pointers will be introduced. Students will learn how to use pointers to self-referential data structures.

GP310 Object Oriented Programming with C++

In this course students will learn object oriented terminology and concepts using C++. Students will learn to create classes and implement inheritance and polymorphism. Advanced concepts like templates and operator overloading are also discussed in this course.

IGP320 C Project

In this course students will apply what they have learned to a programming problem.

TERM 3

Concentration 3:

E-Commerce

IEC300 Existing Technology on E-Commerce

As E-commerce evolves, new technologies are being introduced and new web sites are implemented with them. This course is a comprehensive course that introduces and compares all existing platforms that an E-Commerce web site can be built and hosted with. In this course different operating systems, different web servers, and different CGI based programming languages are introduced and compared.

IEC310 E-Business Model & Marketing

This course will cover various aspects of running a business online (eBusiness): SEO for eCommerce and Shopify. Touching upon the basics of evaluating websites and identifying conversion goals, measuring and interpreting website analytics, get the most out of SEO, and set up first text and display ads. With a hands-on, practical approach, students will create a Shopify ecommerce website. Topics include, configuring tax and notification settings, setting up payment processing and shipping options, and adding inventory (digital or physical), customizing the look and feel of the store, processing orders and managing customer accounts.



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IEC320 Legal Issues & Online Transactions

Ecommerce has evolved and has become a major marketing force for most business in most countries around the world. Given licensing regulations set forth by governments and the evolving state of information access technology what applies in one country may not in another. In this course students will be introduced to the broad spectrum of legal issues related to ecommerce focusing on online fraud, security of personal information, encryption, intellectual property, and cyber-crime.

IGP330 Programming with PHP

Hypertext Preprocessor (PHP) is one the popular open source programing languages for creating dynamic web sites. PHP is usually created using a MySql database. In this course students will learn how to install PHP and MySql on IIS and how to create dynamic web sites using PHP and MySql.

IGP400 Introduction to Computer Networks

Computer networks allow for increased productivity and simplified instantaneous information sharing. The Internet, the World Wide Web and the 'cloud' continue build upon basic network theory and practice. This is an introductory course were you will learn to design and implement simple networks based on client needs, using existing network tools, practice and hardware.

TERM 4

Concentration 1:

General Programming

IGP330 Programming with PHP

Hypertext Preprocessor (PHP) is one the popular open source programing languages for creating dynamic web sites. PHP is usually created using a MySql database. In this course students will learn how to install PHP and MySql on IIS and how to create dynamic web sites using PHP and MySql.

IGP400 Introduction to Computer Networks

Computer networks allow for increased productivity and simplified instantaneous information sharing. The Internet, the World Wide Web and the 'cloud' continue build upon basic network theory and practice. This is an introductory course where you will learn to design and implement simple networks based on client needs, using existing network tools, practice and hardware.

IGP420 Java Programming

In this advanced course students will explore the Java language along with related Java classes from simple applets to advanced servlets. In this course students will also learn object oriented terminology and concepts. Students will learn to create classes and implement inheritance and polymorphism.

TERM 4

Concentration 2:

Graphic and Web

IGP330 Programming with PHP

Hypertext Preprocessor (PHP) is one the popular open source programing languages for creating dynamic web sites. PHP is usually created using a MySql database. In this course students will learn how to install PHP and MySql on IIS and how to create dynamic web sites using PHP and MySql.

IND100 Foundations of Art & Design

This is a survey course. In this course you will be introduced to the fundamentals of art and design. You will explore significant periods in art history with an emphasis of understanding period art and design themes and trends and how they influence communication, architecture, costumes, ornaments and entertainment today.

IGP400 Introduction to Computer Networks

Computer networks allow for increased productivity and simplified instantaneous information sharing. The Internet, the World Wide Web, and the 'cloud' continue build upon basic network theory and practice. This is an introductory course where you will learn to design and implement simple networks based on client needs, using existing network tools, practice and hardware.



PROGRAM OUTLINE

IGP410 HTML5

HTML5 has been designed to simplify many of the processes and techniques used in HTML 4, and to add significant new functionality, simply, across a wide variety of devices. HTML 5 introduces new elements that assist with page structure, content and new phrasing tags that add new meaning to content within a page.

GRD110 Photoshop I

This course introduces students to industry standard digital imaging software – Photoshop. Students will learn the fundamentals of digital image manipulation, editing tools and techniques.

TERM 4

Concentration 3:

E-Commerce

GRD110 Photoshop I

This course introduces students to industry standard digital imaging software – Photoshop. Students will learn the fundamentals of digital image manipulation, editing tools and techniques.

IEC400 Procedural E-commerce Web Building

This course is intended to cover the entire process required for modern E-Commerce website development and is suitable for intermediate to upper-level computing students. It covers both the concepts and the practice of the entire scope of web development and focused on the web development reality of today's world and in anticipation of future trends. The course comprises of realistic and engaging case studies.

ITN400 Introduction to XML

Extensible Markup Language is a markup language that defines a set of rules for documents in a format which is human and machine-readable. XML is a software and hardware independent tool for storing and transporting data. In this course student learn how to create XML files and how to extract XML data in a programming language. Students also learn to transfer data in between computers using XML files.

ITN420 Network and Online Security

In a hyper-interconnected world where the majority of transactions occur via web or app enabled technologies, data and application security is of strategic importance to companies of all sizes. In this course you will learn methods for securing servers, services and applications running on Windows 2008 Server.

IGP410 HTML5

HTML5 has been designed to simplify many of the processes and techniques used in HTML 4, and to add significant new functionality, simply, across a wide variety of devices. HTML 5 introduces new elements that assist with page structure, content and new phrasing tags that add new meaning to content within a page.

IEC800 Portfolio Development

Prepare for your career in the E-Commerce by producing an online and print portfolio targeted for future career plans or for obtaining new clients for own freelancing contracting purposes. This course will also include introduction to preparation and presentation techniques.

Methods of Evaluation

Course grading is indicated on each course outline. Generally assessment will consist of quizzes, exams, and assignments.

Required Course Material

Not all courses may have textbooks. Textbooks are listed on the course outline. Textbooks may not be available through the college.

Equipment

Computer and requisite software are provided at the college. No other equipment is required unless otherwise indicated on the course outline.

Program

Course currency and relevancy may change depending on the requirements of industry. The school may make changes at any time. Changes will be effective when made.

Other

For proof of *English Language Proficiency* please refer the Student Handbook.