

INTERACTIVE MEDIA DESIGN - WEB

Program Outline

Major:	IMDW
Length:	2 Years
Delivery:	4 Semesters, plus 1 work term
Credential:	Ontario College Diploma, Co-op
Effective:	2016-2017
Location:	Barrie
Start:	Fall (Barrie)

Description

This program prepares graduates for careers as web designers and developers. Students are instructed in the use of current Web and Internet technologies to create innovative, interactive products for a variety of users, platforms, and devices. They are taught to plan, design, and develop engaging and intuitive user interfaces. Courses cover the use of current technologies including but not limited to HTML, CSS, JavaScript, the Document Object Model (DOM), Application Programming Interfaces (APIs), and a variety of popular scripting frameworks. With a focus on user-centred design, students will apply human interface guidelines, standard-based structures, and web design and development principles to create an accessible, usable, and captivating user experience.

Career Opportunities

Graduates may find employment as designers and/or developers of interactive interfaces for a wide variety of organizations. They may function as internal specialists, or as part of an external team as a contractor or vendor. Such roles require professionals that are well-connected, adaptable, creative, innovative, forward-thinking, and personable team players with strong communication skills. Job titles might include Web Designer, User Experience Designer, Interactive Designer, and User Interface Designer.

Program Learning Outcomes

The graduate has reliably demonstrated the ability to:

- complete both individual and collaborative interactive media projects effectively for the web;
- use best practices and tools to design and develop dynamic, rich-media content for the web;
- contribute to the assessment of the requirements of an interactive media web project;
- contribute to the development, budgeting, planning and professional presentation of a web-based interactive media project;
- design a web-based media project (interface, navigation, graphics, text treatment) using current best practice design and development principles, and applying conceptual and theoretical frameworks;
- build effective and dynamic Web sites and/or mobile applications;
- identify and analyze ethical and professional issues arising in an online environment;
- apply research and conceptual skills to propose possible solutions for mobile/multimedia/Web development problems;
- use creative and critical thinking techniques in the effective design, development and implementation of an interactive web-based;
- contribute to the assessment of the financial, technical and artistic success of an interactive web-based media project;
- employ environmentally sustainable practices within the profession;
- apply basic entrepreneurial strategies to identify and respond to new opportunities.

Practical Experience:

Co-operative Education is a mandatory component of all Co-op programs at Georgian College; it has been designed as a process by which students integrate their academic education with work experience related to their programs of study. This integration affects much more than simply earning a salary, including the adjustment to the work environment and the development of professionalism. It also reinforces skills and theory learned during academic semesters, develops professional contacts, job knowledge and career path, improves human relations and communication skills, and promotes personal maturity and financial independence.

Students are requested to register, attend and participate in their scheduled co-operative education classes. These classes are scheduled for all first year students and are expected to be completed in order for students to proceed successfully to their first co-op work experiences. To ensure students are eligible to proceed onto any co-op work experience, students should refer to Promotional Status and Eligibility for Co-op as outlined in the College Calendar. Co-op policies and procedures can be located on our website: www.georgiancollege.ca/student-services/co-op-and-career-services/students-tab/

Georgian College follows the Co-operative Education guidelines set out by the Canadian Association for Co-operative Education (CAFCE) and Education at Work Ontario (EWO) by supporting the learning outcomes designed for the program specific graduate profile and curriculum as set out by the Ministry of Training, Colleges and Universities.

The Program Progression:

Fall Intake - Barrie

Sem 1	Sem 2	Work Term	Sem 3	Sem 4

Fall	Winter	Summer	Fall	Winter
2016	2017	2017	2017	2018

Admission Requirements:

OSSD or equivalent with
- Grade 12 English (C or U)

Mature students, non-secondary school applicants (19 years or older), and home school applicants may also be considered for admission. Eligibility may be met by applicants who have taken equivalent courses, upgrading, completed their GED, and equivalency testing. For complete details refer to: www.georgiancollege.ca/admissions/policies-procedures/

Applicants who have taken courses from a recognized and accredited post-secondary institution and/or have relevant life/learning experience may also be considered for admission; refer to the Credit Transfer Centre website for details:
www.georgiancollege.ca/admissions/credit-transfer/

Additional Information:

To be successful in this program, you are required to have a personal notebook computer (either PC or Mac*) prior to the start of the program that meets or exceeds the following specifications:

HARDWARE

- Intel i3 processor or AMD equivalent
- 4GB of memory
- 250GB hard drive

OPERATING SYSTEM

- Microsoft Windows (current version) or
- Apple OS X (current version)*

SOFTWARE

- Adobe Photoshop**
- Adobe Illustrator**
- Adobe Dreamweaver**
- Adobe Flash**
- Microsoft Office***
- Microsoft Visual Studio***

Please note that your existing notebook computer will likely satisfy the above hardware requirements. Contact the Program Co-ordinator if you need further information about these requirements.

*Mac users will need to have Microsoft Windows installed either as a disk partition or using a third-party virtualization software package

**All Adobe products are available via a monthly subscription license fee (check <http://adobe.com> for current education pricing)

***Microsoft product licenses are provided through an agreement with Microsoft Canada at no additional cost

Graduation Requirements:

- 19 Mandatory Courses
- 2 Communications Courses
- 3 General Education Courses
- 1 Co-op Work Term

Graduation Eligibility:

To graduate from this program, the passing weighted average for promotion through each semester, from year to year, and to graduate is 60%. Additionally, a student must attain a minimum of 50% or a letter grade of P (Pass) or S (Satisfactory) in each course in each semester unless otherwise stated on the course outline.

Mandatory Courses

- COMP1002 Web and Internet Fundamentals
- COMP1006 Introduction to Web Programming

COMP1030 Programming Fundamentals
COMP1051 Design Principles
COMP1053 Information Architecture
COMP1054 Web User Interface Design
COMP1072 Bitmap and Vector Graphics
COMP1073 Client-Side Scripting
COMP1074 Web Usability and Accessibility
COMP2003 Relational Database
COMP2081 Advanced Web User Interface Design
COMP2083 Web Project Studio
COMP2084 Server-Side Scripting
COMP2105 Motion Graphics for Interaction
COMP2106 Advanced Server-Side Scripting
COMP2107 Social Media, Search and Analytics
COMP2112 Advanced Client-Side Scripting
COMP3027 User Experience and Interaction Design
MGMT2008 Project Management for Information Technology

Communications Courses

To be selected at time of registration from the College list, as determined by testing.

General Education Courses

To be selected from College list

Co-op Work Term

COOP1026 Interactive Web Design and Development Work Term

Course Descriptions:

COMP1002 Web and Internet Fundamentals 42.0 Hours

This course covers HTML, client-side scripting and design issues for the World Wide Web. Students will learn how to use HTML source tags, build websites, manage a website's directories, and publish a website. The creation of web pages that conform to web standards and that use cascading style sheets for presentation will be emphasized. Students will work in groups to build mock commercial, institutional, government or educational websites. More advanced topics, such as bandwidth, aesthetics, human-interface and future developments will also be covered.

COMP1006 Introduction to Web Programming 42.0 Hours

This course is designed to provide the student with foundational programming knowledge and skills for application development on the Internet. The student will

learn about the Web as a development platform through the use of popular representative languages (such as PHP). The student will learn to plan, design, construct, and integrate basic server-side components of modern web applications including databases and scripts.

COMP1030 Programming Fundamentals 42.0 Hours

In this course the student will gain a broad understanding of modern computer programming. The student will acquire introductory skills in problem analysis, solution design, and program construction. Through practical programming activities, the student will gain an appreciation of the nature and history of computer programming.

COMP1051 Design Principles 42.0 Hours

This course introduces the principles and elements of design and requires students to apply them to the design of simple web page or interface layouts. Rationale are developed to defend and support design decisions. Current design trends in web design are discussed. Basic vector and bitmap editing software programs are introduced. Students are challenged to translate branding strategies and assets from a print to a web-based environment.

COMP1053 Information Architecture 42.0 Hours

This course builds the foundation for understanding the core principles of information architecture as they apply to the design of web sites, applications, and interfaces. Students learn to analyze the needs of clients through user research, content audit and organization, task analysis, documenting organizational structures, and producing interface prototypes. Students assemble proposals that balance business or organizational needs, content categories and characteristics, and end-user requirements.

COMP1054 Web User Interface Design 42.0 Hours

Design principles meet web standards and aesthetic challenges in this interface and design course. Topics covered include HTML and CSS page layout techniques, interactive interface elements, colour, file formats, and image and file optimization for web applications, typography, rollovers, and web page production. Fundamentals of screen design are explored in the process of producing original page layouts for the web.

C- COMP1002 Web and Internet Fundamentals

COMP1072 Bitmap and Vector Graphics 42.0 Hours

Students are introduced to the various interfaces, tools, and capabilities of current digital imaging and graphic design applications. Each software package is used as appropriate for crafting web-suitable bitmap or vector user interface components or content. The workflow involved in creating/obtaining, organizing, and optimizing bitmap and vector assets are addressed.

COMP1073 Client-Side Scripting 42.0 Hours

This course introduces the use of client-side scripting to implement interactive behaviour within the browser environment. Standard client-side scripting syntax, operations, conditional statements, loops, functions, methods, and objects are examined. The course focuses on the manipulation of the standard Document Object Model (DOM). Students modify the structure (HTML) and appearance (CSS) of valid web pages and/or interfaces for the purposes of improving the user experience.

P- COMP1002 Web and Internet Fundamentals

COMP1074 Web Usability and Accessibility 42.0 Hours

In this course, technologies and strategies that enable differently-abled users to access and use web-based interfaces are implemented, tested, and evaluated for their effectiveness. Strategies such as the Web Content Accessibility Guidelines (WCAG) are explored. The impact of accessibility legislation and compliance is investigated. Usability principles are considered in the interest of creating intuitive and inclusive web resources.

P- COMP1002 Web and Internet Fundamentals

COMP2003 Relational Database 42.0 Hours

In this course, the student is introduced to the process of planning, creating and managing a relational database using Structured Query Language (SQL) statements. The emphasis of this course is data manipulation and extraction.

COMP2081 Advanced Web User Interface Design 42.0 Hours

Building on foundational web design techniques and considerations, this course explores more advanced methods for building aesthetically pleasing, user-friendly, functional web sites and applications. The course investigates how HyperText Markup Language (HTML) can be manipulated with Cascading Style Sheets (CSS), and JavaScript (JS) to craft popular current user-interface components. A variety of visual design solutions will be explored using popular CSS frameworks, JS code libraries, and emerging standards-based technologies.

P- COMP1054 Web User Interface Design

COMP2083 Web Project Studio 42.0 Hours

Students will learn to develop Web-based products from concept through prototype using a design/production model with emphasis on targeting user characteristics; teamwork essentials; rudiments of budgeting, production scheduling and timelines; and applying the model for the analysis, design, production, evaluation and implementation of content for Web-based products.

P- COMP1002 Web and Internet Fundamentals and P- COMP1006 Introduction to Web Programming and P- COMP1054 Web User Interface Design

COMP2084 Server-Side Scripting 42.0 Hours

This course provides further development in designing and creating web sites that can create, read, update, and delete (CRUD) data from a database. The students will use

web concepts, Object-Oriented Programming (OOP), relational database principles, and other server-side scripting to create web-based, data-driven applications.

P- COMP1006 Introduction to Web Programming

COMP2105 Motion Graphics for Interaction 42.0 Hours

This course introduces principles and concepts of motion graphics. The focus will be incorporating movement to support interactive elements of a user interface and animated content. Storyboarding, timelines, keyframes, path animation, and scripting will be employed. Popular animation applications will be used to create content for the web—both with and without the support of browser plug-in technology.

COMP2106 Advanced Server-Side Scripting 42.0 Hours

This course will investigate more powerful features of current server-side technologies, like Object-Oriented Programming (OOP) structures, Model-View-Controller (MVC) frameworks, and popular Application Programmer Interfaces (APIs) for a variety of web services. Work may include extending the capabilities of current content management platforms to address more challenging web-based application requirements.

P- COMP2084 Server-Side Scripting

COMP2107 Social Media, Search and Analytics 42.0 Hours

As search technologies become ever-more personalized, the impact of social media and related technologies will become key to a web site being found. This course will help demystify the entire process of reaching, acquiring, converting, and retaining users from a particular target market. Students will integrate all of the components of a particular campaign and use current analytics tools to evaluate their effectiveness.

P- COMP1002 Web and Internet Fundamentals

COMP2112 Advanced Client-Side Scripting 42.0 Hours

Students apply the programming fundamentals learned in earlier courses to scripting techniques frequently used in front-end web development. They will use JavaScript and related technologies to create useful interfaces and aggregations of dynamic content. Scripts are examined for understanding and tailoring of specific web applications.

P- COMP1073 Client-Side Scripting

COMP3027 User Experience and Interaction Design 42.0 Hours

This course introduces the student to the principles, processes, and techniques of Human-Computer Interaction (HCI). The student will gain an understanding of and develop skills in effective interaction design. The parts of design life cycle will be studied in depth: initial information gathering, iterative design, and testing. The student will learn how to organize a user experience group, develop prototypes, and conduct usability tests.

COOP1026 Interactive Web Design and Development Work Term 560.0 Hours

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MGMT2008 Project Management for Information Technology 42.0 Hours

This course introduces the fundamental principles necessary for successful management of Information Technology (IT) projects. Project planning, management and control techniques will be discussed and the application of computers in project management will be studied.

Course Description Legend

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

Information contained in College documents respecting programs is correct at the time of publication. Academic content of programs and courses is revised on an ongoing basis to ensure relevance to changing educational objectives and employment market needs. The college reserves the right to add or delete programs, options, courses, timetables or campus locations subject to sufficient enrolment, and the availability of courses.