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: 2018-2019
Location: Barrie
Start: Fall (Barrie)

Description
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 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 apply human-computer interaction principles, standards-based technologies, and web application best practices 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 who are well-connected, adaptable, creative, innovative, forward-thinking, and personable team players with strong communication skills. Job titles might include Web Designer/Developer, User Experience Designer, Interactive Designer, Front-End Developer, Full-Stack Developer, Web Content Manager, and User Interface Designer.

Program Learning Outcomes
The graduate has reliably demonstrated the ability to:
• complete both individual and collaborative interactive media projects effectively;
• use best practices and tools to design and develop dynamic, rich media content;
• contribute to the assessment of the requirements of an interactive media project;
• contribute to the development, budgeting, planning and professional presentation of an interactive media project;
• design a 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 media project;
• contribute to the assessment of the financial, technical and artistic success of an interactive 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

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Articulation:
A number of articulation agreements have been negotiated with universities and other institutions across Canada, North America and internationally. These agreements are assessed, revised and updated on a regular basis. Please contact the program co-ordinator for specific details if you are interested in pursuing such an option. Additional information can be found on our website at http://www.georgiancollege.ca/admissions/credit-transfer/

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 or greater
- 250GB hard drive

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

SOFTWARE
- Adobe Photoshop**
- Adobe Illustrator**
- 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:
18  Mandatory Courses
2   Communications Courses
1   Optional Course
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  HTML, CSS, and JavaScript Fundamentals
COMP1006  Introduction to Web Programming using PHP
COMP1030  Programming Fundamentals
COMP1051  Digital Design Principles  
COMP1054  Interface Design Using CSS  
COMP1072  Bitmap, Vector, Video and Emerging Media  
COMP1073  Client-Side JavaScript  
COMP1102  User Experience  
COMP2003  Relational Database  
COMP2081  Advanced Interface Design Using CSS  
COMP2083  Web Project Studio  
COMP2084  Server-Side Scripting using ASP.NET  
COMP2105  Motion Graphics for Interaction  
COMP2106  Advanced Server-Side Scripting Using MEAN  
COMP2107  Social Media, Search and Analytics  
COMP2109  Content Management and E-Comm Platforms  
COMP2112  Advanced Client-Side JavaScript  
MGMT2008  Project Management for Information Technology  

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

Optional Course  
To be selected from College list  

General Education Courses  
To be selected from College list  

Co-op Work Term  
COOP1026  Interactive Web Design and Development Work Term  

Course Descriptions:  
COMP1002 HTML, CSS, and JavaScript Fundamentals  42.0 Hours  
Through an introduction to HyperText Markup Language, Cascading Style Sheets, and JavaScript for the Web, students learn how to structure content, style pages, add interaction, and publish files to a Web server. Students leverage server-side technologies like PHP to build basic dynamic page content. The creation of files that conform to Web standards and that adhere to industry best practices is emphasized. Basic competence and familiarity with the fundamental components of Web applications is the primary focus for students.  

COMP1006 Introduction to Web Programming using PHP  42.0 Hours
While building foundational programming knowledge and skills for application development on the Internet, students learn about the Web as a development platform through the use of popular representative languages such as PHP. Students learn to plan, design, construct, and integrate basic server-side components of modern Web applications, including forms and databases.

P- COMP1002 HTML, CSS, and JavaScript Fundamentals and P- COMP1030 Programming Fundamentals

COMP1030 Programming Fundamentals 42.0 Hours
Students gain a broad understanding of modern computer programming, acquiring introductory skills in problem analysis, solution design, and program construction with this key foundational course. Through practical programming activities, students gain an appreciation of the nature and history of computer programming.

COMP1051 Digital Design Principles 42.0 Hours
Students are introduced to the principles and elements of design and are required 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.

COMP1054 Interface Design Using CSS 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, image optimization, typography, advanced CSS syntax, and mobile design considerations. The fundamentals of designing for the screen is explored in the process of producing original page layouts for the web.

COMP1072 Bitmap, Vector, Video and Emerging Media 42.0 Hours
Students are introduced to the various interfaces, tools, and capabilities of current digital imaging, graphic design, audio, and video applications. Each software package is used as appropriate for crafting web-suitable user interface components or content. The workflow involved in creating/obtaining, organizing, and optimizing bitmap, vector, audio, and video assets is addressed.

P- COMP1051 Digital Design Principles

COMP1073 Client-Side JavaScript 42.0 Hours
The use of client-side scripting to implement interactive behaviour within the browser environment is an important part of modern web applications. Standard client-side scripting syntax, operations, conditional statements, loops, functions, methods, and objects are examined. Students learn to manipulate the standard Document Object
Model (DOM), by modifying the structure (HTML) and the appearance (CSS) of Web pages and/or interfaces for the purposes of improving the user experience.

P- COMP1002 HTML, CSS, and JavaScript Fundamentals and P- COMP1030 Programming Fundamentals

COMP1102 User Experience  42.0 Hours
A framework for the planning required to build an easy-to-use Web application is the focus of students in this fundamentals course. Students learn how to satisfy both the end user and the organization that maintains an application. Students examine the process of identifying user groups, defining their needs, documenting business requirements, and specifying precisely what needs to be built. This work includes information architecture, content audits, taxonomies, iterative prototyping, and basic usability testing.

COMP2003 Relational Database  42.0 Hours
Students are introduced to the process of planning, creating and managing a relational database using Structured Query Language (SQL) statements. Data manipulation and extraction are emphasized in this course.

COMP2081 Advanced Interface Design Using CSS  42.0 Hours
Building on foundational web design techniques and considerations, students explore more advanced methods for building aesthetically pleasing, user-friendly, functional Web sites and applications. Students investigate 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 other emerging technologies.

P- COMP1054 Interface Design Using CSS

COMP2083 Web Project Studio  42.0 Hours
Students learn to develop Web-based products from concept through prototype using a design/production model, with an emphasis on targeting user characteristics, teamwork essentials, rudiments of budgeting, production scheduling, and timelines. Students also apply the models for the analysis, design, production, evaluation and implementation of content for Web-based products.

P- COMP1006 Introduction to Web Programming using PHP and P- COMP1054 Interface Design Using CSS and P- MGMT2008 Project Management for Information Technology

COMP2084 Server-Side Scripting using ASP.NET  42.0 Hours
Students gain development in designing and creating web sites that can Create, Read, Update, and Delete (CRUD) data from a database. Students 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 using PHP

COMP2105 Motion Graphics for Interaction  42.0 Hours
Students are introduced to the principles and concepts of motion graphics, and focus on incorporating movement to support interactive elements of a user interface and animated content. Storyboarding, timelines, keyframes, path animation, and scripting are employed. Popular animation applications are used to create content for the Web—both with and without the support of browser plug-in technology.

P- COMP1072 Bitmap, Vector, Video and Emerging Media

COMP2106 Advanced Server-Side Scripting Using MEAN  42.0 Hours
Students 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 using ASP.NET

COMP2107 Social Media, Search and Analytics  42.0 Hours
As search technologies become ever-more personalized, social media and related technologies are becoming an increasingly important way to drive traffic to Web sites. Students experience the entire process of reaching, acquiring, converting, and retaining users from a particular target market. All of the components of a particular campaign and current analytics tools are used by students to evaluate their effectiveness.

P- COMP1102 User Experience

COMP2109 Content Management and E-Comm Platforms  42.0 Hours
A number of popular Web applications have emerged as de-facto publishing standards for various types of content. These applications often include the capability to process payments and to facilitate fulfillment of product orders. Students learn how to compare and contrast various platforms, and also how to install, configure, and customize the most common of these software and/or services to address defined business or organizational needs.

P- COMP1006 Introduction to Web Programming using PHP and P- COMP1054 Interface Design Using CSS

COMP2112 Advanced Client-Side JavaScript  42.0 Hours
Students apply the programming fundamentals learned in earlier courses to scripting techniques frequently used in front-end web development. They 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 JavaScript

COOP1026 Interactive Web Design and Development Work Term  560.0 Hours
Co-operative Education is a mandatory component of all Co-op programs at Georgian College. Students are required to attend and participate in their scheduled semester co-op classes in order to proceed successfully to their first co-op work experience.

MGMT2008 Project Management for Information Technology  42.0 Hours
Students are introduced to the fundamental principles necessary for successful management of Information Technology (IT) projects. Project planning, management and control techniques are discussed and the application of computers in project management is examined.

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.