DALHOUSIE UNIVERSITY
Faculty of Computer Science

ECMM-6010 — Technology Issues for Electronic Commerce
Course Syllabus

Instructor Information

Instructor:	M. Gabriella Mosquera	**Office:**	CS 314
E-mail:	mosquera@cs.dal.ca	**Office Hours:**	by appointment
Class Meeting Time:	TR 11:35am - 12:55pm	**Room No:**	FASS 2021
Lab Meeting Time:	M 11:35am - 12:55pm	**Room No:**	CS 133
Tutorial Meeting Time:	F 11:35am - 12:55am	**Room No:**	CS 133
Course Homepage:	https://dal.brightspace.com/		
Course Mail List:	ecmm6010a-01@lists.dal.ca		
Course TAs:	Keerthana Kumar (Keerthana.Kumar@dal.ca)		

Important Dates

- Thanksgiving (no classes): October 9, 2017
- Fall Study Break (no classes): November 6 - 10, 2017
- Test: December 5, 2017
- Final Withdrawal Date with financial penalty: September 18, 2017
- Final Withdrawal Date without academic penalty: October 2, 2017

Course Description

This hands-on course examines the technologies and infrastructure required to support electronic commerce. The course examines the major components of the infrastructure such as networks, databases and data warehousing, electronic payment, security, and human-computer interfaces. Key web concepts and skills for designing, creating, and maintaining websites such as Grid Theory, HTML5, CSS, Javascript (i.e., MEAN Stack languages) and AJAX theory, PHP, SQL and NoSQL. Other principles such as Web Accessibility, Usability, and User eXperience, as well as security best practices, will be explored in detail through a combination of lectures, in-class examples, individual lab work and assignments, and a final group project.

Learning Outcomes

- Understand principles of interaction design, user experience design, web design, and connect these concepts to users' expectations and behaviours to increase an application's usability.
- Learn to apply key web concepts (e.g., Information Architecture, Task Flow) and development languages and technologies (e.g., HTML, CSS, Javascript, NoSQL, MongoDB, Express, Angular, Node.JS) for creating usable, accessible, and interactive web applications.
- Judge the accessibility of a given web site from the perspective of end users' and web crawlers', in order make decisions about a site's Search Engine Optimization (SEO) strategies.
- Understand web security issues, and identify the interactions between the concepts of cookies, sessions, and SSL, when creating a secure web application, and make decisions about an application's security requirements while considering its infrastructure and constraints, as it relates to the field of e-Commerce.
- Interact with others and apply concepts discussed in class, to build interactive, usable, secure, and accessible medium size e-Commerce client-server web applications.
- Be more interested in current trends, technologies, and security principles used in web application development, their security requirements, and be able to apply ethical web development principles.

Class Format and Course Communication

- Content will be delivered via a combination of lectures, labs, reference slides, and interactive group exercises
- Students must ask the instructor permission before recording class lectures.
- Course announcements and deadlines will be posted to the course mail list, which comprises the instructor's and students' Dal emails, as well as through the course's Brightspace site. It is the student's responsibility to check their Dal e-mail, and Brightspace account on a daily basis. To access your Dal e-mail see: https://www.dal.ca/dept/its/o365/services/email.html
- Course material will be posted through the course's Brightspace site. It is the student's responsibility to revise the material **before** lectures and labs.

Evaluation Criteria

40% Group Work

- 10% Proposal (approx. 4-6 pages)
- 15% Report (approx. 8-10 pages)
- 10% Demonstration
- 5% Presentation

60% Individual Work

- 30% Assignments (6% each)
  - Best 5 out of 6 assignments
- 10% Participation
- 15% Test
  - To be held in class
- 5% Peer-Evaluations (PEs)
  - Two PEs, approx. 1 page long each

Notes

- As of 2015, a minimum grade of C must be achieved in all required CS courses.
- The grade conversion scale in Section 17.1 of the Academic Regulations, Undergraduate Calendar will be used.
- Late assignments are not accepted. However, no penalty will be assessed for assignments that are late due to documented situations. Any grievance regarding marks must be brought to the attention of the instructor within one week.
- A student must **achieve an overall average of 50% or higher on examinations and/or tests** for assignments and labs to count for credit towards their final grade.

General Assignment Guidelines

These guidelines suggest points to consider when preparing, writing and presenting your work. Criteria for assessment will be based on attention to these general guidelines as well as on evidence of wide reading and reflection of the topics under consideration.

- Please ensure you have read, and understand Dalhousie University policies on academic integrity.

- Written reports and assignments must follow the template available of the course's learning management system (i.e., BrightSpace); in general, written reports and assignments are 1.5 or double spaced, pages should be numbered, font - Times New Roman 12-point size, margins – 2cm (5% deduction for any submission not matching the required format specification).

- Depending on a particular assignment, written work should have a bibliography of the items used in the preparation of the report, using the ACM or IEEE citation style.

- Assignments are due at 23:59pm on the due date, unless specified otherwise by the instructor.

- All written assignments must be submitted electronically via the class website (i.e., Brightspace), unless specified otherwise by the instructor. The only acceptable file format for written reports is PDF (5% deduction for any submission not matching the required format specification).

- The submission file for written reports and labs must be named as follows:

    - For individual assignments: A#_LastName_FirstName.pdf

    - For group deliverables: D#_Group#.pdf

- All web programming assignments must be submitted electronically through bluenose and, if specified by the instructor, BrightSpace. The URL pointing to a lab assignment must be named as follows:

    - http://cs.dal.ca/~yourusername/ecmm6010/a#/

- All programming assignments, if also submitted through BrightSpace and consisting of multiple files, must be compressed into a single .zip file.

Test Requirements

- Photo ID is required
- Closed book
- No dictionaries, notes, calculators, cell phones, PDAs, talking slide rulers, or other electronic aids allowed.

Required Texts and Resources

- There are no required textbooks for this course.
- Lecture and Lab slides, and additional material, will be posted on the learning management system (Brightspace).
- Additional assistance is available from the Student Learning Centre (2nd floor, Goldberg CS Building).

Prerequisites

There are no prerequisites for this course.

Co-requisites

There are no co-requisites for this course

Tentative List of Topics

1. Planning and Design
   - Interaction Design
   - User Experience (U/X)
   - User Interface
   - Information Architecture
2. Computer Programming
   - Problem Solving
   - Client-Side Development
   - Server-Side Development
   - Databases
3. Networking and Databases
   - Network Protocols
   - Client-Server Model
   - Addressing and Name Resolution
   - Security
4. Maintenance and Security
   - Web Security
   - Debugging
   - Maintenance How-To's
   - Code Reusability

Responsible Computing Policy

Usage of all computing resources in the Faculty of Computer Science must be within the Dalhousie Acceptable Use Policies (http://its.dal.ca/policies/) and the Faculty of Computer Science Responsible Computing Policy. For more information please see https://www.cs.dal.ca/downloads/fcs_policy_local.pdf

Culture of Respect[1]

Every person has a right to respect and safety. We believe inclusiveness is fundamental to education and learning. Misogyny and other disrespectful behaviour in our classrooms, on our campus, on social media, and in our community is unacceptable. As a community, we must stand for equality and hold ourselves to a higher standard.

What we all need to do:

1. Be Ready to Act: This starts with promising yourself to speak up to help prevent it from happening again. Whatever it takes, summon your courage to address the issue. Try to approach the issue with open-ended questions like "Why did you say that?" or "How did you develop that belief?"

2. Identify the Behaviour: Use reflective listening and avoid labeling, name-calling, or assigning blame to the person. Focus the conversation on the behaviour, not on the person. For example, "The comment you just made sounded racist, is that what you intended?" is a better approach than "You're a racist if you make comments like that."

3. Appeal to Principles: This can work well if the person is known to you, like a friend, sibling, or co-worker. For example, "I have always thought of you as a fair-minded person, so it shocks me when I hear you say something like that."

4. Set Limits: You cannot control another person's actions, but you can control what happens in your space. Do not be afraid to ask someone "Please do not tell racist jokes in my presence anymore" or state "This classroom is not a place where I allow homophobia to occur." After you have set that expectation, make sure you consistently maintain it.

5. Find or be an Ally: Seek out like-minded people that support your views, and help support others in their challenges. Leading by example can be a powerful way to inspire others to do the same.

6. Be Vigilant: Change can happen slowly, but do not let this deter you. Stay prepared, keep speaking up, and do not let yourself be silenced.

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[1] Source: Speak Up! © 2005 Southern Poverty Law Center. First Printing. This publication was produced by Teaching Tolerance, a project of the Southern Poverty Law Center. Full "Speak Up" document found at: http://www.dal.ca/dept/dalrespect.html. Revised by Susan Holmes from a document provided April 2015 by Lyndsay Anderson, Manager, Student Dispute Resolution, Dalhousie University, 902.494.4140, lyndsay.anderson@dal.ca www.dal.ca/think.

University Statements

This course is governed by the academic rules and regulations set forth in the University Calendar and the Senate.

https://academiccalendar.dal.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=69&chapterid=3457&loaduseredits=False

Academic Integrity

At Dalhousie University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect (The Center for Academic Integrity, Duke University, 1999). As a student, you are required to demonstrate these values in all of the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity. http://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Advising and Access Services Centre is Dalhousie's centre of expertise for student accessibility and ac- commodation. The advising team works with students who request accommodation as a result of: a disability, religious obligation, or any barrier related to any other characteristic protected under Human Rights legislation (NS, NB, PEI, NFLD). http://www.dal.ca/campus_life/student_services/academic-support/accessibility.html

Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students dont follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal mannerperhaps through a restorative justice process. If an informal resolution cant be reached, or would be inappropriate, procedures exist for formal dis- pute resolution.

https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/student-life-policies/code-of-student-conduct.html

Diversity and Inclusion – Culture of Respect

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness (Strategic Priority 5.2). http://www.dal.ca/cultureofrespect.html

Recognition of Mikmaq Territory

Dalhousie University would like to acknowledge that the University is on Traditional Mikmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel and support. Visit the office in the McCain Building (room 3037) or contact the programs at elders@dal.ca or 902-494-6803 (leave a message).

Learning and Support Resources

- General Academic Support — Advising

  http://www.dal.ca/campus_life/student_services/academic-support/advising.html

- Fair Dealing Guidelines

  https://libraries.dal.ca/services/copyright-office/guidelines/fair-dealing-guidelines.html

- Dalhousie University Library http://libraries.dal.ca/