University of Waterloo
Stratford School of Interaction Design and Business
GBDA 228 – 001, 002, 003 and 004
Digital Imaging of Online Applications
Fall 2019
Tuesdays
9:00am–11:50am: 001 (DMS 2022) and 003 (DMS 2024)

1:30pm–4:20pm: 002 (DMS 2022) and 004 (DMS 2024)

Instructor and TA Information

Instructor (001 and 002):	Greg J. Smith
Office:	DMS 2018, Stratford School
Office Hours:	Tuesdays by appointment
Email:	g28smith@uwaterloo.ca

Instructor (003 and 004):	Ray Drainville
Office:	DMS 3014, Stratford School
Office hours:	Thursdays, 12:00pm–2:00pm
Email:	ray.drainville@uwaterloo.ca

TA (001 and 002):	Emilia Lilek
Email:	eelilek@edu.uwaterloo.ca

TA (003 and 004):	Tania Sharma
Email:	t23sharma@edu.uwaterloo.ca

Open Lab:	Greg McIntyre
Email:	greg.mcintyre@uwaterloo.ca

Open Lab:	Jay Mielke
Email:	jmielke@uwaterloo.ca

Description

In this course, students are introduced to digital tools through a series of exercises and assignments that cultivate both artistic expression and technical skill. This course focuses on two primary aspects. First, students will develop a critical understanding of design, layout, typography, colour theory, and content accessibility for the purpose of both web and app design. Second, students will learn how to build basic websites using HMTL & CSS. Note that this is a studio design course, not a CS course, and its primary focus will be placed 50/50 on design and introductory front-end web development concepts using HTML & CSS.

Note: this is a studio design course, not a computer science course. Its primary focus will be placed 50/50 on design and introductory front-end web development concepts using HTML & CSS.

Goals and Learning Objectives

By the end of the course, students will be able to:

- build basic websites using HTML & CSS.
- demonstrate the ability to work together in a design team environment.
- understand and employ all aspects of the design process in projects.
- be familiar with different design theories and terminology.
- develop a critical eye in relation to the critique, creation, and execution of design and digital media.

- demonstrate proficient knowledge and usage of the tools necessary for web development.
- develop working prototypes for websites and mobile apps.

Required Texts

- Duckett, Jon (2011). *HTML & CSS: Design and Build Websites.* Indianapolis: Wiley.
  ISBN: 9781118008188
- Marcotte, Ethan (2011). *Responsive Web Design.* New York: A Book Apart. 2014 ed.
  ISBN: 9781937557195
- Apple (2019). UI Design Dos and Don'ts

Duckett's is a standard textbook on the subject. Don't let the multiple chapter readings daunt you: the pages are heavily illustrated and have wide margins. Marcotte's book is a digital download and provides invaluable, in-depth guidance. We'll only go over some of Marcotte's book, but reading the entirety of this half-sized, illustrated book is strongly recommended.

Recommended Readings and Resources

A recommended reading list and resources is available on LEARN for those who are interested to further hone their theoretical and practical understanding of web design and development. Many of the recommended books and resources are available online or at the university and public libraries.

Course Requirements and Assessments

Some assignments will be done as individuals, others as a team and as individuals. However, all grades will be assessed on an individual basis.

Assessment	Weighting
Attendance and Participation:	**10%**
In-Class Labs	1% ea. x best 8 out of 9, i.e., **8%**
Course Reader Quiz	5% ea. x 2, or **10%**
Assignment 1: HTML	**10%**
Assignment 2: CSS	**10%**
Website Redesign and Development Project	
Phase 1 (team component):	10%
Strategic analysis and site map	
Phase 2 (individual component):	10%
Wireframes and user interface design	
Phase 3 (team component):	15%
Website implementation and documentation	
Peer assessments:	7%
Final Presentation:	10%
Project total:	**35%**

Attendance and Participation

Students are expected to attend all classes. The instructor should be notified of any anticipated absences well in advance. Participation and attendance are assessed based on attendance for the duration of the term, participation in class discussions, project critiques, project presentations, class activities, and labs.

Course Reader Quizzes

There are two quizzes in the course: one will concentrate on HTML, and the second on CSS. Together, they form 10% of the grade for the course. Reading of the required texts will ensure the student of good marks.

In-Class Labs

There are 9 *in-class labs* that supplement the lecture content. Each lab includes a set of hands-on exercises that primarily focus on the application of coding concepts introduced in the lectures. During the lab sessions, students must work on the assigned exercises provided. You are *not* expected to complete *all* exercises, though you must complete some (the minimum number will depend on that week's exercises). Your best 8/9 labs will be counted towards your final grade.

The instructor or TAs will assign you a grade at the end of each lab. Grading is at the discretion of the instructor and TAs and is not negotiable.

For each lab, students get one point (1% of your final grade) if you:

- work on the exercises during the entire session
- complete at least 50% of the work

For each lab, students get zero if you:

- are absent for any reason
- do other work during the session
- do not complete at least 50% of the work

Tutorial grading is at the discretion of the instructor and TAs and is not negotiable.

Assignments and Group Project

The term projects will consist of two individual assignments—the first to create a personal site in HTML and the second to style that site in CSS—and a large group project with specific deliverables due according to the course schedule. Details about the projects can be found on LEARN.

The Web Redesign and Development project will be done in part in teams and in part independently. Students are responsible for organizing and managing their teams. Assignments 1 and 2 must be completed independently.

Project Extensions and Lateness Policy

Team deliverables: A flexible deadline extension of 48-hours will be available to each team. You may use it for one 48-hour extension on either of the Website Redesign & Development project during Phase 1 or 3, or split it between the two Phases. Using a group extension will apply the extension to all group members.

Individual deliverables: A flexible deadline extension of 48-hours will be available to each student. You may use it for one 48-hour extension on one individual assignment or two 24-hour extensions split between two individual assignments of your choice (A1 or A2).

Details about the policy will be provided in class. Once the extensions are used up for the team and individual deliverables, projects handed in late will be penalized by a deduction of 10% per 24-hour period, or part thereof, out of the final mark received on the assignments.

Open lab sessions (optional)

There are 9 *optional* weekly open lab sessions outside of class. Each lab is 1.5 hours and *complementary* to the lecture content and in-class exercises. Because these are optional, they are *by appointment* and you must therefore book a place with the TA for your section.

Time: Mondays, 3:30–5:00
Location: DMS 2024

Tentative Course Schedule

This is a tentative timeline: the content of the lectures and order may change based on both class progress and interest. The overall plan is as follows: an introduction to the subject; the structure of HTML; how to style HTML with CSS; the principles of consistent design; practical tips and information.

Week	Date	Topic	Readings	Assignments
1	10 Sept	**Class introduction** **Lecture**: Why the web? How did it develop?	No readings	Open lab sessions begin 16 Sept at the Stratford School (Mon, 3:30–5:00)
2	17 Sept	**Lecture**: HTML **Lab**: HTML structures & tags	Ch.1: Structure Ch.2: Text (HTML) Ch.3: Lists Ch.4: Links Ch.8: Extra Markup	Website options presented for redesign. Team leaders must choose by 20 Sept
3	24 Sept	**Lecture**: Special elements: graphics, media, tables, forms, and optimization **Lab**: Adding graphics, creating tables and forms	Ch.5: Images (HTML) Ch.6: Tables (HTML) Ch.7: Forms (HTML) Ch.9: Video & Audio	
4	1 Oct	**Lecture**: Typography & Colour **Lab**: Formatting text and Specifying colours	Ch.11: Colour Ch.12: Text Ch.14: Tables & Forms (CSS) Ch.16: Images (CSS)	Quiz 1 (Weeks 2–3 readings) on LEARN, due 2 Oct, 5pm Website redesign phase 1 due 7 Oct, 5pm
5	8 Oct	**Lecture**: CSS Layout **Lab**: Positioning content	Ch 13: Boxes Ch 15: Layout	
6	15 Oct	**READING WEEK**	No readings	
7	22 Oct	**Lecture**: Visual design principles; Styling tables and forms; App design with Invision **Lab**: Styling table and form elements		Assignment 1 due 21 Oct, midnight; Quiz 2 (Weeks 4–5 readings) on LEARN, due 23 Oct, 5pm
8	29 Oct	**Lecture**: Web design processes (organization, wireframes, mockups) **Peer assessments**	Ch.18: Process & Design	Website redesign phase 2 due 30 Oct at midnight
9	5 Nov	**Lecture**: Responsive web design **Lab**: Responsive design with Media Queries	Marcotte, *Responsive Web Design* (ch. 2, 4, 5 especially)	

10	12 Nov	**Website Redesign Project Workshop**	No readings	Assignment 2 due 10 Nov, midnight
11	19 Nov	**Lecture**: Menus and Navigation Bars, and other tips **Lab**: Rollover menus	Ch.12 (289-292) Ch.13 (321-322) Ch.16 (417-418) Ch.17: HTML5 Layout	
12	25 Nov	**Lecture**: Practicalities of the job: SEO, Analytics **Lab**: TBA	Ch19: Practical Information	Website redesign phase 3, final presentations due 24 Nov at midnight
13	3 Dec	**Last day of class**: **Web project presentations**	No readings	

Notes on Avoidance of Academic Offenses

Academic Integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect, and responsibility. Check Office of Academic Integrity webpage for more information.

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70, Student Petitions and Grievances, Section 4. When in doubt please be certain to contact the department's administrative assistant who will provide further assistance.

Discipline: A student is expected to know what constitutes academic integrity (check the Office of Academic Integrity to avoid committing an academic offence, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course instructor, academic advisor, or the undergraduate Associate Dean. For information on categories of offences and types of penalties, students should refer to Policy 71: Student Discipline. For typical penalties check Guidelines for the Assessment of Penalties, please refer to www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm.

Appeals: A decision made or penalty imposed under Policy 70 (Student Petitions and Grievances) (other than a petition) or Policy 71 (Student Discipline) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals), found at check Guidelines for the Assessment of Penalties.

A Note for Students with Disabilities

The Office for persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations, please register with the OPD at the beginning of each academic term.