



**Course Name:** Principles of Web Development  
COMP 307 – Fall 2020

**Instructor:** Joseph Vybihal  
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Office hours: M 11:30 Zoom (after class)  
W 16:00 Slack or by appointment

**Credits:** 2 credits  
**Prerequisite:** COMP-206  
**Co-Requisite:** COMP-303

**Motivation:** Developing the front and back end of web sites, together with comprehending the various paradigms, theories and current technologies involved in web development is an important and relevant skill to have for students graduating from computer science and planning to work as programmers.

**Course Objectives:** Students wanting to work as web site developers will need to understand the concepts behind server-side execution, client-side execution, security, language paradigms, distributed processing, interpreters, deployment methods, web frameworks, the architecture of the Internet, and some of the latest techniques and technologies. This would include common practises and common programming languages.

**Primary learning outcome:** To get a clear understanding of the major principles & algorithms that underlie web development and receive practical hands-on experience through a project.

**Secondary learning outcomes:** After taking this course, the student should be able to: (1) identify the core technologies in web development and how they are architect-ed, (2) explain the paradigms and principles on which the core functions are built on, (3) be able to discuss major performance issues (data storage and run-time load), and (4) discuss the web technologies and techniques required for a particular target application.

**Course Description:** The course discusses the major principles, algorithms, languages and technologies that underlie web development. Students receive practical hands-on experience through a project.

**Primary Text:** Internet & World Wide Web: How to Program; Pearson; ISBN 978-0-13-215100-9

**Additional Text:** Software Systems; Kendall hunt; ISBN 978-0-7575-9514-1

**Evaluation:**

- 9 Mini Assignments . . . . . 30%
  - 2 Perusall . . . . . 5%
  - 2 PeerGrade . . . . . 5%
  - 5 Regular assignments. . . . . 20%
- Project . . . . . 20%
  - Code quality
- Demo . . . . . 20%
  - Execution quality
- Final Exam . . . . . 30%

Late work: You will be notified in advance of assignment due dates. All assignments are due on My Courses at the indicated time and date. Late assignments will lose 5% of its grade per day late. Assignments beyond 2 days late will not be accepted. You may not submit assignments via e-mail without the permission of the instructor.

Additional Work: Students with grades of D, F or J will not be given the opportunity to complete additional work to upgrade their grade.

Supplemental Exam: There will be no supplemental exam for this course.

Re-grading: Mistakes can occur when grading. Not surprisingly, requests for re-grading always involve those mistakes in which the student received fewer points than they deserved, rather than more points than they deserved. With that in mind: if you wish me to re-grade a question on an exam or assignment, I will do so. I reserve the right to re-grade other questions as well.

Cheating/Collaboration: Collaboration is encouraged but your discussions should be public in the sense that anyone including the professor should be allowed to listen in. Assignments are original works created by the student alone. You are permitted and encouraged to have conversations with other students concerning the contents of the assignments and how to do them, but your work must be original. If two or more assignments are found to be identical (or portions of assignments) then all parties will lose points. This includes the student who permitted their assignment to be copied. This includes written solutions and software source code.

Grading: All software solutions must compile with zero errors and must run to be graded. It does not need to run correctly for grading but it must run. If your program compiles with errors or does not run at all then you will receive zero points. The grader will not fix your code or look at the source code to give you partial grades.

## Communication

My Courses: All official communication, including announcements, lecture material, assignments, grades will be found on My Courses.

Course Discussions: The online free tool, piazza.com, is used as our course discussion board. Please make sure to enroll in the Fall 2020 COMP 307 course on Piazza. Use this as your primary communication medium, since your questions are public and can help other students.

Private Email: The professor and TA have private email accounts that you may also use, however these communication channels are for personal queries. For example: if you have a problem with your grade then email the TA who graded you directly, do not email the prof and do not use the course email address.

Appointments: Please email directly the one you want to communicate with to book at appointment outside office hours.

Office Hours: Please take a look at all posted office hours. Come to those times without appointment.

After lecture: Some optional time will be available just after class to ask questions. I do not guarantee the length of this time since other constraints may interfere.

```
CommunicationAlgorithm() :
    if (public) piazza(); // all will benefit
    else if (about marks) emailTAPrivate();
    else if (medical or special) emailProfPrivately();
```

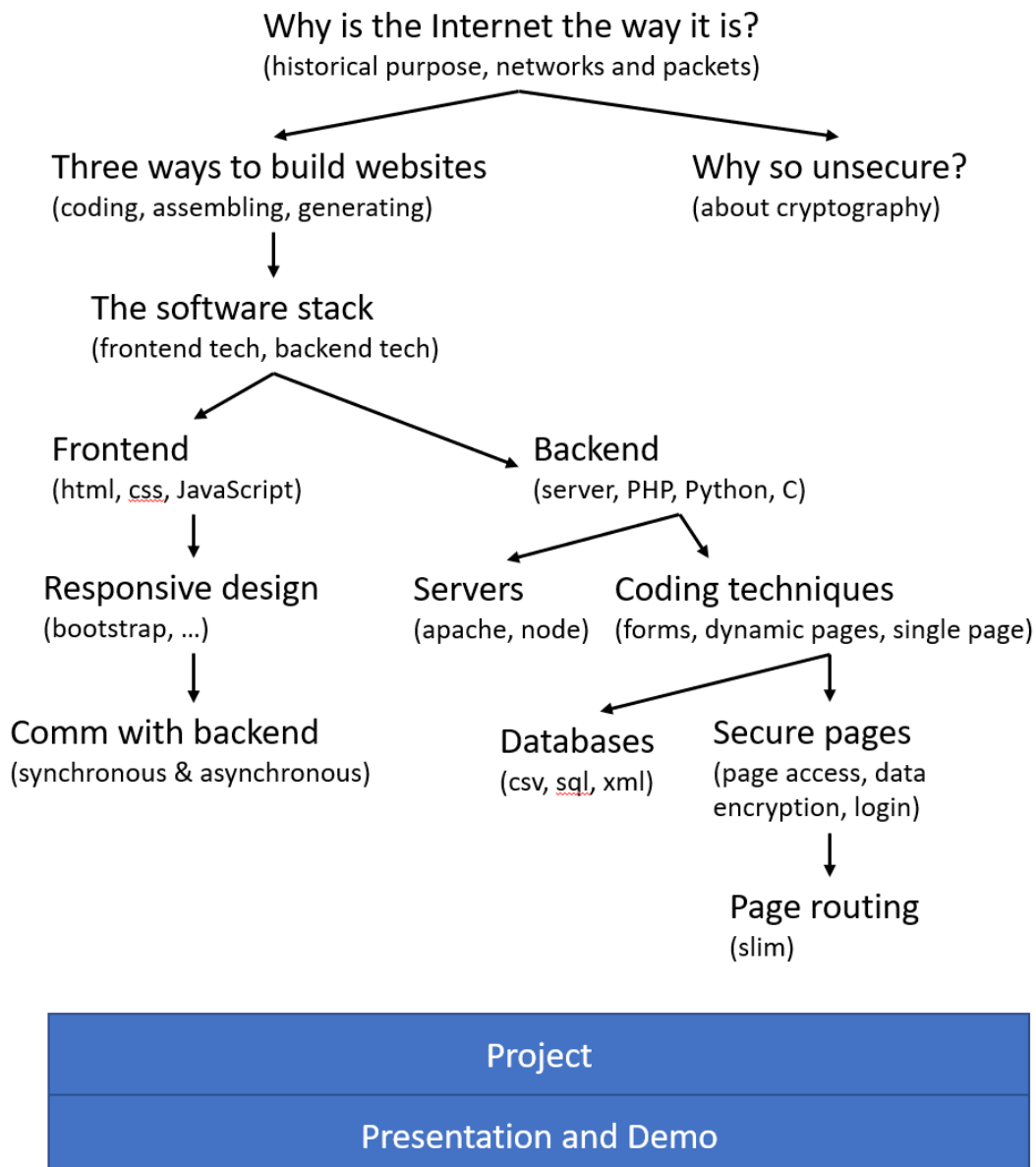
Students to TA ratio 52:1

This TA will be responsible for grading your assignments and this TA will hold weekly tutorials, which you can attend optionally.

The full details about your TA can be found in myCourses.

Your TA will contact you to determine the best time to hold the weekly tutorial. It might happen that a common time is impossible to find. In that case, the TA will find a tutorial time that maximizes the number of attending students. Do not worry if you cannot attend. These tutorials are optional, and the work is posted on myCourses, so you can do them on your own and then go to any TA office hour for help.

## Tentative Course Schedule



# Course Delivery Fall 2020

Week	Mon Wed Class	Homework	Friday Video Lecture
Sep 2	Introduction (no Wed class)	XXXXXXXXXXXXXX	Sept 7 Video Networks, Packets, Security
Sep 7	Wireshark SOCS web server	PeerGrade Ass 1	Sept 14 Video 3 Ways & the Stack
Sep 14	Local dev + Templates	Perusall Ass 2	Sept 21 Video Introduction to HTML
Sep 21	Local HTML W3Schools.com	PeerGrade Ass 3	Sep 28 Video Introduction to CSS
Sep 28	Local CSS	Program Ass 4 (HTML+CSS)	Oct 5 Video Java Script
Oct 5	JS programming	Program Ass 5	Oct 12 Video Responsive design
Oct 12	Bootstrap, Canvas & Grids	Program Ass 6 (YouTube)	Oct 19 Video Comm with backend
Oct 19	Asynchronous Synchronous	Project Handout Perusall Ass 7	Oct 26 Video Backend programming 1
Oct 26	Apache, PHP & SQL	Program Ass 8	Nov 2 Video Backend programming 2
Nov 2	SOCS websites, C and Python	Program Ass 9 (4 points)	Nov 9 Video Responsive backend
Nov 9	Dynamic pages vs Single Page	Program Ass 10 (4 points)	Nov 16 Video Securing pages
Nov 16	Access, routing, encryption, login	XXXXXXXXXXXXXX	GUEST EDGE TECH SPEAKER (maybe video, maybe Zoom)
Nov 23	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
Nov 30	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
DEMO	Project submission to myCourses last day of classes		
EXAM	Organized by the university		

## General Course Information

**Course Requirements:** The pre-requisite for this course is COMP-202 or COMP-250.

**Right to submit in English or French written work that is to be graded**

In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.

**Classroom Rules:** All electronic devices (cell phones and beepers) must be turned off or left on silent mode during class time.

**Assignments Pickup:** All assignments are submitted to and picked-up from My Courses.

**Computing Resources:** Trottier 3<sup>rd</sup> floor.

**Examinations and Grading:**

Students are responsible for all materials for the tests and exams, whether it is covered in class. Exams will be a combination of all types of questions based on all sources, and students may be required to integrate theoretical concepts from the text to substantiate their arguments.

**No make-up tests or make-up assignments are allowed in this course.** A supplemental exam is possible for 52% of the grade (to replace your final exam).

If you are not satisfied with the grading of an assignment or mid-term test, you may request a review within 7 days of return. Indicate in writing or during a meeting with the instructor where and why you feel the marks are unjustified and give it back to your instructor for re-grading. Note that the entire assignment or mid-term test will be re-graded and your grade can go up or down (or stay the same) accordingly.

*Calculators*

Only non-programmable, no-tape, noiseless calculators are permitted. Calculators capable of storing text are not permitted in tests and examinations.

*Dictionaries*

Dictionaries are not permitted, but translation dictionaries are.

*Handheld Devices*

Handheld devices capable of storing text and having calculator functionality (e.g. Palm, etc.) are not permitted.

**Additional Information:** The course slides are not meant as a complete set of notes or a substitute for a textbook, but simply constitute the focus of the lecture. Important gaps are left in the slides that are filled in during class, thus lecture attendance should be considered essential.

The material covered in the classroom will be used to supplement textbook readings.

**Academic Integrity:** *Code of Student Conduct*

*McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences*

under the Code of Student Conduct and Disciplinary Procedures (see [www.mcgill.ca/integrity](http://www.mcgill.ca/integrity) for more information).

*L'université McGill attache une haute importance à l'honnêteté académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l'on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon le Code de conduite de l'étudiant et des procédures disciplinaires (pour de plus amples renseignements, veuillez consulter le site [www.mcgill.ca/integrity](http://www.mcgill.ca/integrity)).*

**Final Exam Policy:***Regulations*

Students should not make other commitments during the final exam period. Vacation plans do not constitute valid grounds for the deferral or the rescheduling of examinations. See the Centre Calendar for the regulations governing Examinations:

<http://www.mcgill.ca/student-records/exams/regulations/>

Students are required to present their I.D. Card (with photo) for entrance to their examination.

*Conflicts*

If you are unable to write your final examination due to scheduling conflicts, you must submit a Final Exam Conflict Form with supporting documentation at least **one month** before the start of the final examination period. Late submissions will not be accepted. For details, see

<http://www.mcgill.ca/student-records/exams/conflicts/>

*Exam Timetable*

Examination schedules are posted at the Centre and on the following page approximately 6-8 weeks before the examination period commences

<http://www.mcgill.ca/student-records/exams/>

The Centre cannot provide examination dates over the telephone.

**Email Policy:**

E-mail is one of the official means of communication between McGill University and its students. As with all official University communications, it is the student's responsibility to ensure that time-critical e-mail is accessed, read, and acted upon in a timely fashion. If a student chooses to forward University e-mail to another e-mail mailbox, it is that student's responsibility to ensure that the alternate account is viable.

*Please note that to protect the privacy of the students, the University will only reply to the students on their McGill e-mail account.*

**Students Rights and Responsibilities:**

Regulations and policies governing students at McGill University can be downloaded from the website:

<http://www.mcgill.ca/deanofstudents/rights/>

**Students Services and Resources:**

Various services and resources, such as email access, walksafe, library access, etc., are available to students:

<http://www.mcgill.ca/student-records>

**Minerva for Students:** <http://www.mcgill.ca/minerva-students/>

**Important Note:**

In the event of extraordinary circumstances beyond the University's control, the evaluation scheme in a Course is subject to change, provided that there be timely communications to the students regarding the change.

**Land acknowledgement:**

McGill University is on land which has long served as a site of meeting and exchange amongst Indigenous peoples, including the Haudenosaunee and Anishinabeg nations. We acknowledge and thank the diverse Indigenous people whose footsteps have marked this territory on which people of the world now gather. Please see here for more details: <https://www.mcgill.ca/edu4all/other-equity-resources/traditional-territories> .