CSI 3540 - Winter 2023
WWW Structures, Techniques and Standards

Basic infrastructure of the Web. Servers and browsers. Examples of protocols. Internet and viruses. Search engine architecture. WWW Contents and presentation. Web pages, their structuring and interpretation. HTML, XML and their derivatives. Web interfaces to software and databases. Cookies and privacy issues. Semantic Web and ontologies. Web services.

3 hours of lecture per week; 1.5 hours of lab per week; 1.5 hours of tutorials per week; 3 credits.

Prerequisite: CSI2110, CSI2132

Instructors

- **Professor**: Dr. Andrew Forward, aforward@uottawa.ca
- **TA**: Sean Stilwell, sstil051@uottawa.ca

Course Times and Location

Lectures material (videos, PDFS, links to resources, etc) will be made available online on a best effort. The course runs from Jan 9 - Apr 12. Last day to withdraw from a course with no financial credit is March 31. Course withdrawal is not possible after this date. If you simply stop attending a course and do not withdraw, you will receive a failing grade.

Activity	Day	Time	Description
Labs	Tues	13:00 - 14:20	800 King Edward (STE) 0130
Lecture A	Wed	13:00 - 14:20	150 Louis Pasteur (STM) 101
Tutorial	Thurs	11:30 - 12:50	60 University (SMD) 428
Lecture B	Fri	11:30 - 12:50	60 University (SMD) 428

The course website is on Virtual Campus (Brightspace). Course information and materials (e.g., assignments, lecture slides, and announcements, etc.) will appear on the course website when they become available. As the website is updated regularly, you must visit it often and be responsible for knowing all the information posted.

Course Topics

We intent to cover the following material in the course. Changes will be made based on the particular needs of the course section.

1. Internet and World Wide Web (Chap 1)
2. HTML (Chap 2/3)
3. CSS (Chap 4/5)
4. JavaScript (Chap 6-11)
5. DOM (Chap 12)
6. Events (Chap 13)
7. XML (Chap 15)
8. AJAX (Chap 16)
9. Web Servers (Chap 17)
10. Databases (Chap 18)
11. PHP (Chap 19)

We may also touch on the following additional topics not directly covered in the text book based on both student interest and time.

1. Ruby / Sinastra / Rails
2. Elixir / Plug / Phoenix
3. PHPUnit / SimplePHP
4. Databases (Postgres, Sqllite)
5. Cloud hosting (Digital Ocean)
6. Application hosting (Fly.io)
7. Testing (PHPUnit, TDD, GitHub actions)
8. Integrations (Stripe)
9. Web Sockets
10. Tailwind CSS
11. Reactive (not React) "HTML"
12. Accessibility

Textbooks

Required textbook for the course.

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Internet & World Wide Web How to Program (5th Edition)
by Paul Deitel, Harvey Deitel and Abbey Deitel
published by Pearson
ISBN-13: 978-0-13-215100-9
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Optional textbooks.

- JavaScript Web Applications. MacCaw, A. (2011) United-States: O'Reilly Media.
- Simplifying JavaScript: Writing Modern JavaScript with ES5, ES6, and Beyond. Joe Morgan, https://pragprog.com/titles/es6tips/simplifying-javascript/
- Rediscovering JavaScript - Master ES6, ES7, and ES8. Venkat Subramaniam https://pragprog.com/titles/ves6/rediscovering-javascript/

Technologies

The following technologies intend to be used throughout the course.

- BrightSpace - Course Content
- Piazza - Message Board (code: www)
- Zoom - Synchrnous / Remote Discussion
- GitHub - Labs / Project

Evaluation

Participation in lectures, labs and tutorials is mandatory.

> to be admitted to the final examination in a subject, a student must attend a minimum of 80% of classes and must not have more than five unauthorized or unjustified absences in that subject

Please see the evaluation of student learning to define the expectations around participation.

Marking Scheme

The marking scheme is split into several components: labs, tutorials, assignments deliverables and exams (comprises of quizes and a final exam).

Below is a description of how the components are graded.

Component	Weight	Description
Laboratoire	10 points	Top 6 graded
Tutorials	10 points	Top 6 graded
Assignments	30 points	All required
Quizes	20 points	Top 6 graded
Final Exam	30 points	Required

To satisfy the minimum effort for the course, you must demonstrate the following minimum effort.

Component	Minimum Effort
Laboratoire	Participate in at least 3 labs
Tutorials	Participate in at least 3 tutorials
Assignments	At least 40% **overall**
Quizes / Final Exam	At least 40% **cumulative**

All course components (i.e. labs, homework, etc.) must be met otherwise students may receive an EIN as a final grade (equivalent to an F). This also applies to a student taking the course for a second time.

The following are examples of unsatisfactory participation that will warrant an EIN score.

- You only completed 2 labs
- You only completed 2 tutorials
- You receive 38% (overall) on the homework
- You receive 37% (cumulative) on exams (quizes, final)

Here are some examples of satisfactory participation

- You completed 3 labs
- You completed 3 tutorials
- You receive 42% (overall) on the homework
- You receive 48% (cumulative) on exams (quizes, final)

Once you have met the minimum requirements above, you will receive a letter-grade.

Course Plan

Lectures

The schedule below is subjective to change, please refer to the course website for the most up-to-date schedule.

#	WEEK STARTS	LECUTRES	LAB	TUT	DELIVERABLE
01	Jan 09	Intro 1-www	--	--	--
02	Jan 16	2-html 3-css	Lab1-git	Tut1-www	Quiz 1
03	Jan 23	4-js	Lab2-pr	Tut2-html	Quiz 2
04	Jan 30	4-js	Lab3-html	Tut3-css	Quiz 3 Assignment #1
05	Feb 06	5-dom 6-ally	Lab4-js	Tut4-js	Quiz 4
06	Feb 14	7-php	Lab5-design	Tut5-design	Quiz 5 Assignment #2
07	Feb 20	**Reading Week**	**Feb 20 - 26**		
08	Feb 27	8-ajax 9-xml	Lab6-php	Tut6-php	Quiz 6
09	Mar 06	10-db	Lab7-ajax	Tut7-ajax	Quiz 7
10	Mar 13	11-servers	Lab8-proj	Tut8-dom	Quiz 8 Assignment #3
11	Mar 20	12-media	Lab9-db	Tut9-db	Quiz 9
12	Mar 27	TBD	Lab10-canvas	Tut10-canvas	Quiz 10
13	Apr 03	Review	--	--	Assignment #4

Labs

(Nearly) Weekly labs will be given to provide hands-on experience with the tools to help put in practice the theory from the course. Some labs will be directly related to your homework assignments.

Preparation for the labs is expected.

Tutorials

(Nearly) Weekly tutorials will be given to provide time for the students to answer questions to reinforce their learnings from the lectures and prepare the students for quizzes and exams.

Assignments

There will be four homework assignments worth a total of 30%. This work will be submitted individually, but students are allowed to collaborate to foster peer learning. The dates below are subject to change.

Assignment	Weight	Assigned	Due	Graded
Asg 1	7	Jan 11	Jan 31	Feb 7
Asg 2	7	Jan 24	Feb 16	Mar 07
Asg 3	8	Feb 28	Mar 16	Mar 23
Asg 4	8	Mar 08	Apr 06	Apr 13

Notes

- It is your responsibility to download the assignments from this course website (BrightSpace) as soon as they become available - see Assignment Schedule below.
- All assignments will be submitted individually. Student are allowed to collaborate to foster peer learning. Such collaboration must be clearly documented otherwise duplication of work will be considered academic fraud.
- Late assignment submissions will NOT be accepted: They will receive the grade of zero.
- For each assignment, you must submit your completed assignment to the course website (BrightSpace) by the date indicated in the Assignment Schedule below.
- All the TAs participate in the marking of your assignments. Marked assignments will be released (made available for your viewing) on this course website by the TAs, by date indicated in the Assignment Schedule above. Note that solutions to assignments will not be posted on the course web site. However, they will be presented and explained.

- If you miss an assignment, you will get zero unless you have legitimate reasons (e.g., being ill during the entire or most of the time period given to complete that assignment and having valid medical certificate), in which case your average assignment mark will be applied to that assignment.
- If you register late and miss the first assignment, you will still be required to submit the assignment with the due date based on individual circumstances.

Quizes

There will be (nearly) weekly 20 minute quizes at 11:40am during the Friday lectures. The focus will be on the lecture and tutorial material and will be an good preparation for the exams.

The quiz questions will focus on the most recent topics, but may include topics from previous weeks lectures.

Quiz	Date	Focus Topic
Q1	Jan 19	HTML
Q2	Jan 26	CSS
Q3	Feb 02	JS
Q4	Feb 09	JS
Q5	Feb 16	DOM
Q6	Mar 02	Events
Q7	Mar 09	PHP
Q8	Mar 16	AJAX
Q9	Mar 23	DB
Q10	Mar 30	Media

Notes

- It is your responsibility to be present for Quizes
- The top 6 quizes will be used to calculate your grade.
- If you miss a quiz, you will get zero. If you miss more than 6 quizzes with a legitimate reason, you mark will be based on the remaining completed quizes.

- Late registrants are still able to achieve 100% on quizes as only the top 6 quizes are used to calculate your grade

Exams

There will be a compulsory final exam that will be scheduled by the university. Any accommodations (such as requiring extra time) must be coordinated with SASS.

Information sharing and copyright

All documents prepared by the course instructor, including assignments, course notes, and exams, are protected by copyright. Copying, digitizing, or publishing on a Web site is therefore a violation of copyright and is illegal.

Plagiarism

Academic fraud is an act by a student that may result in a false evaluation (including papers, tests, examinations, etc.). It is not tolerated by the University. Any person found guilty of academic fraud will be subject to severe sanctions.

Here are some examples of academic fraud:

- Plagiarism or cheating of any kind;
- Present research data that has been falsified;
- Submit a work for which you are not the author, in whole or part;
- Submit the same piece of work for more than one course without the written consent of the professors concerned.

Please consult https://www.uottawa.ca/vice-president-academic/academic-integrity/resources-students it contains regulations and tools to help you avoid plagiarism.

An individual who commits or attempts to commit academic fraud, or who is an accomplice, will be penalized. Here are some examples of possible sanctions:

- Receive an "F" for the work or in the course in question;
- Imposition of additional requirements (from 3 to 30 credits) to the program of study; • Suspension or expulsion from the Faculty.
- You can refer to the regulations on https://www.uottawa.ca/administration-and-governance/academic-regulation-14-other-important-information.

SASS - Student Academic Success Service

Counselling service

There are many reasons to take advantage of the Counselling Service. They offer:

- Personal counselling
- Career counselling
- Study skills counselling

Access service

The Access Service acts as an intermediary between students, their faculty and other University offices to ensure that the special needs of these students are addressed and that the best possible learning conditions are being offered.

Prevention of sexual violence

The University of Ottawa will not tolerate any act of sexual violence. This includes acts such as rape and sexual harassment, as well as misconduct that take place without consent, which includes cyberbullying. The University, as well as various employees and student groups, offers a variety of services and resources to ensure that all uOttawa community members have access to confidential support and information, and to procedures for reporting an incident or filing a complaint. For more information, please visit https://www.uOttawa.ca/sexual-violence-support-and-prevention.

Full Zoom Details

This information might change.

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Andrew Forward is inviting you to a scheduled Zoom meeting.

Topic: CSI 3540
Time: This is a recurring meeting Meet anytime

Join Zoom Meeting
https://uottawa-ca.zoom.us/j/95646700172?pwd=YkUxZ1VOV1VUREF0REx1WExHcUNFQT

Meeting ID: 956 4670 0172
Passcode: 5B9dWh
One tap mobile
+16475580588,,95646700172#,,,,*429361# Canada
+17789072071,,95646700172#,,,,*429361# Canada

Dial by your location
        +1 647 558 0588 Canada
        +1 778 907 2071 Canada
        +1 204 272 7920 Canada
        +1 438 809 7799 Canada
        +1 587 328 1099 Canada
        +1 613 209 3054 Canada
        +1 647 374 4685 Canada
        +1 669 900 6833 US (San Jose)
        +1 929 205 6099 US (New York)
        +1 253 215 8782 US (Tacoma)
        +1 301 715 8592 US (Washington DC)
        +1 312 626 6799 US (Chicago)
        +1 346 248 7799 US (Houston)
Meeting ID: 956 4670 0172
Passcode: 429361
Find your local number: https://uottawa-ca.zoom.us/u/adMNf3mgCX
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