Department of Computer Science
176 Thorvaldson Building
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Telephone: (306) 966-4886 Facsimile: (306) 966-4884

Web Programming, CMPT 350, Winter 2020

COURSE SYLLABUS
[CMPT 350: WEB PROGRAMMING]

Catalogue Description:

This course will focus on the concepts, technologies and tools needed for the development of web applications. Special emphasis will be given to the front-end and back-end integration in a web system. Also, Web strategies, cloud services, web security, and mobile web will be introduced.

Prerequisite(s): [CMPT 280]

Class Time & Location: [lectures: Monday, Wednesday, Friday (12:30 pm- 1:20 pm)

Tutorials: Monday (3:30pm- 4:20pm), Wednesday (10:30 am- 11:20 am), Wednesday (4:30 pm- 5:20pm), Thursday (9:00 am- 9:50 am)]

Instructor Information

Instructor: [Sara Rouhani, sessional lecturer]

Contact: Email**:** [Sara.rouhani@usask.ca]

Office Hours: Location**:** [Thorvaldson/room 178.9]

Hours**:** [Monday, Wednesday 8am-12pm, 1:30pm-4:30pm]

Course Objectives

- Students will understand HTML, CSS, and JavaScript as the base of the Web development
- Students will become familiar with the back-end (Java servers, NodeJS) and database storage
- Students will become familiar with the Ajax and Front-end Frameworks
- Students will become familiar with key concepts of Web servers and Web services
- Students will be briefly introduced to cloud computing and Web strategies
- Students will be briefly introduced to Web security
- Students will be briefly introduced to mobile Web

Student Evaluation

Grading Scheme

Assignments (4 assignments)	25%
Class Project	30%
Final Exam (3 hours)	45%
Total	**100%**

Assignments details and date

Each assignment is graded equally and assignments three and four will include the bonus part as well.

Assignment 1 release date: Jan 17th, Due date: Jan 28th

Assignment 2 release date: Jan 29th, Due date: Feb 7th

Assignment 3 release date: Feb 8th, Due date: Feb 24th

Assignment 4 release date Feb 26th, Due date: Mar 10th

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Criteria that must be met to Pass

Students must attend the final examination and students need 15% of the final exam or better on the final exam to pass the course.

Attendance Expectation
Students are expected to attend all lectures.

Final Exam Scheduling:

The Registrar schedules all final examinations, including deferred and supplemental examinations. Students are advised not to make travel arrangements for the exam period until the official exam schedule has been posted.

Note: All students must be properly registered in order to attend lectures and receive credit for this course.

Textbook Information
Required Text (not compulsory)
- Deitel & Deitel, "Internet & World Wide Web: How to Program", 5th Edition (2011),
- Hoar and Connolly, "The Design of Websites"

Recommended Texts
- HTML5, SQL, and Javascript: http://www.w3schools.com/
- HTML5: http://html5demos.com/
- Web‑based frameworks: http://jquery.com, https://angularjs.org/, https://facebook.github.io/react/
- NodeJS: http://www.lynda.com/Node-js-tutorials/Node-js-Essential-Training/417077-2.html

Lecture Schedule
- Introduction [~1 week]
  - History
  - Client-Server Architecture
  - Network
  - HTTP
- Front-End (1) [~2 weeks]
  - HTML
  - CSS
  - HTML5
  - Java Script
  - DOM
- Database (1) [~2 weeks]
  - Data Models
  - Relational Model
  - SQL
- Back-End (1) [~1.5 week]
  - Apache Tomcat
  - NodeJS and express
  - Servlets and Java servers
- Front-End (2) [~1.5week]
  - AJAX
  - Frameworks

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- Web Services [~1 week]
    - o SOAP
    - o REST
- Web Security [~1 week]
    - o Authentication
    - o Authorization
- Database (2) [~1 week]
    - o NoSQL
    - o Web Stores
    - o MongoDB
- Mobile Web [~1 week]
    - o Mobile Web Pages
    - o Embedded Browsers
    - o Responsive Design
- Cloud computing [~1 week]
    - o AWS
    - o GCP

Course Overview

- The tutorial sessions are for presenting tutorials by TAs, student's problem solving and answering their questions, and assignments presentations and marking can also be done directly in tutorial sessions.
- Projects must be presented at the end of the semester and including presenting a demo of the project (the project details will be presented later by the instructor). Students who are not comfortable to present their project should talk with instructor isor for submission details.

Course Policies

Recording of Lectures

The lectures will not be recorded and no recording of lectures without permission.

Copyright

Course materials are provided to you based on your registration in a class, and anything created by your professors and instructors is their intellectual property, unless materials are designated as open education resources. This includes exams, PowerPoint/PDF slides and other course notes. Additionally, other copyright-protected materials created by textbook publishers and authors may be provided to you based on license terms and educational exceptions in the Canadian Copyright Act (see http://laws-lois.justice.gc.ca/eng/acts/C-42/index.html).

Before you copy or distribute others' copyright-protected materials, please ensure that your use of the materials is covered under the University's Fair Dealing Copyright Guidelines available at https://library.usask.ca/copyright/general-information/fair-dealing-guidelines.php. For example, posting others' copyright-protected materials on the open web is not covered under the University's Fair Dealing Copyright Guidelines, and doing so requires permission from the copyright holder.

For more information about copyright, please visit https://library.usask.ca/copyright/index.phpwhere there is information for students available at https://library.usask.ca/copyright/students/rights.php, or contact the University's Copyright Coordinator at mailto:copyright.coordinator@usask.ca or 306-966-8817.

Late Assignments

Discuss with the instructor but there will be 5% penalty for each day of delay

Missed Assignments

Discuss with the instructor

Grading Concerns

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Please contact the marker regarding any assignment marking concerns, with a CC to the instructor. Should you continue to have concerns, please escalate to the instructor. Please note that should your concern be a comparison with another's work, you need to submit both for re-grading: we reserve the right to re-grade your work and the other's work. Furthermore, the instructor will re-grade the entire work, not just selected portions.

Other Policies

Missed Examinations

Final exams. Final examinations may be scheduled at any time during the examination period (April 9th - 29th); students should therefore avoid making prior travel, employment, or other commitments for this period. A student who is absent from a final examination through no fault of his or her own, for medical or other valid reasons, may apply to the College of Arts and Science Dean's office. The application must be made within three days of the missed examination along with supporting documentary evidence. Deferred exams are written during the February mid-term break for Term 1 courses and in early June for Term 2 and full year courses. (http://students.usask.ca/academics/exams.php)

Incomplete Course Work and Final Grades

"*When a student has not completed the required course work, which includes any assignment or examination including the final examination, by the time of submission of the final grades, they may be granted an extension to permit completion of an assignment, or granted a deferred examination in the case of absence from a final examination.*

Extensions past the final examination date for the completion of assignments must be approved by the Department Head, or Dean in non-departmentalized Colleges, and may exceed thirty days only in unusual circumstances. The student must apply to the instructor for such an extension and furnish satisfactory reasons for the deficiency. Deferred final examinations are granted as per College policy.

In the interim, the instructor will submit a computed percentage grade for the class which factors in the incomplete coursework as a zero, along with a grade comment of INF (Incomplete Failure) if a failing grade.

In the case where the student has a passing percentage grade but the instructor has indicated in the course outline that failure to complete the required coursework will result in failure in the course, a final grade of 49% will be submitted along with a grade comment of INF (Incomplete Failure).

If an extension is granted and the required assignment is submitted within the allotted time, or if a deferred examination is granted and written in the case of absence from the final examination, the instructor will submit a revised assigned final percentage grade. The grade change will replace the previous grade and any grade comment of INF (Incomplete Failure) will be removed.

A student can pass a course on the basis of work completed in the course provided that any incomplete course work has not been deemed mandatory by the instructor in the course outline and/or by College regulations for achieving a passing grade." (http://policies.usask.ca/policies/academic-affairs/academic-courses.php)

For policies governing examinations and grading, students are referred to the Assessment of Students section of the University policy "*Academic courses: class delivery, examinations, and assessment of student learning*" (http://policies.usask.ca/policies/academic-affairs/academic-courses.php)

Academic Integrity

The University of Saskatchewan is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Conduct & Appeals section of the University Secretary Website and avoid any behavior that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or

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participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students should read and be familiar with the *Academic Student Misconduct Regulations* (https://secretariat.usask.ca/student-conduct-appeals/academic-misconduct.php) as well as the *Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals* (https://secretariat.usask.ca/student-conduct-appeals/non-academic-misconduct.php). Much of this derives from the *Student Discipline Policy* (https://policies.usask.ca/policies/student-affairs-and-activities/student-discipline.php).

You are encouraged to complete the *Academic Integrity Tutorial* to understand the fundamental values of academic integrity and how to be a responsible scholar and member of the USask community, at https://library.usask.ca/academic-integrity.   For more information on what academic integrity means for students see the Student Conduct & Appeals section of the University Secretary Website at: http://www.usask.ca/secretariat/student-conduct-appeals/forms/IntegrityDefined.pdf.

Collaboration Policy

You may neither possess work from other students (including those not enrolled in this course) nor share your work (rough drafts, finished answers, or graded assignments) with another student at any time during the course: **before and after** any assignment is due. Study groups and group discussion are encouraged; but if you plan to employ these then you must adhere to a *no-recording* policy:

> Collaboratively, you may discuss and sketch on a non-permanent surface (e.g. white board), but no written-on-paper and no typed-into-computer activities are allowed. Every student must leave the session without a record (no written notes or document, no computer file, no photograph, and no audio/video recording) and must reproduce the result from their own memory. The impermanent surface must be erased at the end of the session.

Offering another's work as your own is academic misconduct, see above. But, one student's possession of other students' work (even after the due date) is also *prima facia* evidence of academic misconduct on the part of **both** students, even if one is not registered in this class.

System Outages

System (moodle, labs, network) outages of 6 hours or longer, in the 24 hours before a deadline, automatically grant a 24-hour extension. Shorter outages, even if they overlap with a deadline, do not. Most systems allow resubmission, students are counselled to submit early, and submit regularly as progress is made.

Examinations with Access and Equity Services (AES)

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Access and Equity Services (AES) if they have not already done so. Students who suspect they may have disabilities should contact AES for advice and referrals at any time. Those students who are registered with AES with mental health disabilities ad who anticipate that they may have responses to certain course materials of topics, should discuss course content with their instructors prior to course add/drop dates. In order to access AES programs and supports, students must follow AES policy and procedures. For more information or advice, visit https://students.usask.ca/health/centres/access-equity-services.php or contact AES at (306) 966-7723.

Students registered with AES may request alternative arrangements for mid-term and final examinations. Students must arrange such accommodations through AES by the stated deadlines. Instructors shall provide the examinations for students who are being accommodated by the deadlines established by AES.

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Student Supports

Student Learning Services (SLS) offers assistance to U of S undergrad and graduate students. For information on specific services, please see the SLS website at http://library.usask.ca/studentlearning/ .

Teaching, Learning and Student Experience

The Teaching, Learning and Student Experience Unit (TLSE) focuses on providing developmental and support services and programs to students and the university community. For more information, see https://students.usask.ca/.

Financial Support

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact Student Central (https://students.usask.ca/student-central.php).

Aboriginal Students' Centre

The Aboriginal Students' Centre (ASC) is dedicated to supporting Aboriginal student academic and personal success. The centre offers personal, social, cultural and some academic supports to Métis, First Nations, and Inuit students. The centre is also dedicated to intercultural education, bringing Aboriginal and non-Aboriginal students together to learn from, with, and about one another in a respectful, inclusive and safe environment. Students are encouraged to visit the ASC's Facebook page to learn more (https://facebook.com/aboriginalstudentcentre).

International Student and Study Abroad Centre

The International Student and Study Abroad Centre (ISSAC) supports student success in their international education experiences at the U of S and abroad. ISSAC is here to assist all international undergraduate, graduate, exchange and English as a Second Language students and their families in their transition to the U of S and Saskatoon. ISSAC offers advising and support on all matters that affect international students and their families and on all matters related to studying abroad. Please visit https://students.usask.ca/ for more information.

Treaty Acknowledgement

As we gather here today, we acknowledge we are on Treaty Six Territory and the Homeland of the Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship with one another.