COURSE SYLLABUS
[CMPT 350: WEB-PROGRAMMING]

Catalogue Description:
Web programming involves the development (or coding) of Web-based applications that typically follow the client-server architecture model. This course will focus on the concepts, technologies and tools needed for the development of web-centric applications. Special emphasis will be given to client-server programming, scripting, integration of existing application and high-level Web services choices, e.g., use of SOAP and REST.

Prerequisite(s): CMPT 280
Class Time & Location: 1:30 pm - 2:20 pm, MWF, Thorvaldson Building 124
Website: Moodle

Instructor Information
Instructor: Richard K. Lomotey
Contact: Email: richard.lomotey@usask.ca
Office Phone: [306 966 6518]
Office Hours: Location: 178.5 Thorvaldson Building
Hours: 10.00 am – 12.00 noon, MW

Course Objectives
• Students will understand the concept of Web technology languages (e.g., HTML5, JavaScript, PHP)
• Students will become familiar with key concepts in designing Web services (client-server systems, REST, SOAP).
• Students will become familiar with back-end design and storage issues including RDBMS and NoSQL systems.
• Students will be briefly introduced to cloud computing and its impact on Web programming and API usage.

Student Evaluation
Grading Scheme

<table>
<thead>
<tr>
<th>Participation</th>
<th>5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments</td>
<td>20%</td>
</tr>
<tr>
<td>Pop Quiz</td>
<td>5%</td>
</tr>
<tr>
<td>Project</td>
<td>25%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>45%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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There will be three (3) assignments in the class. The first is due at the end of January, the second is due end of February, and the third is due end of March. Projects will be marked during the last week of classes.
Criteria that must be met to Pass
Completion of assignments and projects.

Attendance Expectation
You are expected to attend all lectures and labs.

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

Recommended Texts

Recommended Sources
• Good sources of information and instruction on:
  a. HTML5, SQL, and Javascript is the W3Schools website, accessible at http://www.w3schools.com/

Lecture Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Major Items</th>
<th>Topics</th>
<th>Slides/References</th>
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</thead>
</table>
| Week 1|             | • Introduction to WWW  
• HTML                              | Chapter (2, 3) |
| Week 2|             | • HTML5                    |                   |
| Week 3|             | • Responsive Web  
  o CSS  
  o Media Queries  
  o Content Adaptation               | Chapter (4,5) |
<p>| Week 4|             | • JavaScript                | Chapter (6, 7, 8) |</p>
<table>
<thead>
<tr>
<th>Week</th>
<th>Assignment</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>1</td>
<td>• DOM&lt;br&gt;• AJAX&lt;br&gt;• XML&lt;br&gt;• JSON</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>• PHP (I)&lt;br&gt;• HTTP Client and Server&lt;br&gt;• Tomcat</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>• PHP (II)&lt;br&gt;• RDBMS&lt;br&gt;  o MySQL</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>• NoSQL</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>• Web Services&lt;br&gt;  o REST&lt;br&gt;  o SOAP</td>
</tr>
<tr>
<td>10</td>
<td>2</td>
<td>• JQuery</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>• Mobile Web (Frameworks I)&lt;br&gt;  o J quer y mo b ile</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>• Frameworks (II)&lt;br&gt;  o Node.js&lt;br&gt;  o Angularjs</td>
</tr>
<tr>
<td>13</td>
<td>3</td>
<td>• Cloud Computing</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td><strong>Project Inspection and Marking</strong></td>
</tr>
</tbody>
</table>

**Course Overview**

The course will tentatively cover the following topics:

- HTML5 and Scripting Languages
- Responsive and Adaptive Web Design
- Web-based frameworks for cross-platform application design
- Client-server architectures (Caching, Proxies, SQL, NoSQL)
- Web services
- Cloud computing and the adoption of Web-based APIs

**Policies**

**Recording of Lectures**

Students should seek approval from the instructor.

**Late Assignments**
Discuss with the instructor but there will be 10% penalty.

**Missed Assignments**
Discuss with the instructor

**Missed Examinations**
1. Students who miss an exam should contact the instructor as soon as possible. If it is known in advance that an exam will be missed, the instructor should be contacted before the exam.

2. "A student who is absent from a final examination due to medical, compassionate, or other valid reasons, may apply to the College of Arts and Science Undergraduate Student’s Office for a deferred exam. **Application must be made within three business days of the missed examination** and be accompanied by supporting documents." ([http://artsandscience.usask.ca/students/help/success.php](http://artsandscience.usask.ca/students/help/success.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 percentile 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 percentile 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](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](http://policies.usask.ca/policies/academic-affairs/academic-courses.php))

**Academic Honesty**

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


Academic honesty is also defined and described in the Department of Computer Science Statement on Academic Honesty ([http://www.cs.usask.ca/undergrad/honesty.php](http://www.cs.usask.ca/undergrad/honesty.php)).

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](http://www.usask.ca/secretariat/student-conduct-appeals/forms/IntegrityDefined.pdf)

Examinations with Disability Services for Students (DSS)

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Disability Services for Students (DSS) if they have not already done so. Students who suspect they may have disabilities should contact DSS for advice and referrals. In order to access DSS programs and supports, students must follow DSS policy and procedures. For more information, check [http://students.usask.ca/health/centres/disability-services-for-students.php](http://students.usask.ca/health/centres/disability-services-for-students.php), or contact DSS at 966-7273 or dss@usask.ca.

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