

**RYERSON UNIVERSITY**  
**DEPARTMENT OF COMPUTER SCIENCE**  
**CPS730 – FALL 2011**

**WEB TECHNOLOGY AND PERFORMANCE MEASUREMENT**

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**Instructor:** Dr. A. Abhari  
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**URL:** <http://www.scs.ryerson.ca/~aabhari>  
**Course:** Web Technology and Performance Measurement  
**Sections:** 01,02  
**Lectures:** Monday 5:00-6:00 p.m. (ENGLG12)  
Tuesday 4:00-6:00 p.m. (VIC200)  
**Lab:** TBA  
**Office Hours:** Wednesday: 2:00 to 5:00 p.m.  
**TA:** Mr. Shahin Talaei \_stalaei@ryerson.ca\_ENG 234

**Main Text Book:** Web Protocols and Practice: HTTP/1.1, Networking Protocols, Caching, and Traffic Measurement, 1st Edition. By Balachander Krishnamurthy and Jennifer Rexford, Addison Wesley Professional, 2001, ISBN 0201710889.

**Supplementary Text Book:** Distributed Systems Concepts and Design, By George Coulouris, Jean Dollimore, Tim Kindberg and Gordon Blair, Addison Wesley; 5 edition (May 7, 2011) ISBN-10: 0132143011, ISBN-13: 978-0132143011

**Socket/System Programming Text Book:**

Inter-process Communications in Linux: The Nooks & Crannies, by John Shapley Gray, Prentice Hall, 2003, ISBN 978-0-130-46042-4

Other references will be given in the class from time to time

<b>Evaluation:</b>	Assignments*	50%
	Midterm Test	20%
	Final Exam	30%

In order to pass the course, it is necessary to obtain at least 50% of the (test + final exam).

\*There will be 6-8 assignments which will be done by the groups consisting of 2 students. To see tentative dates of assignments and more details about the course syllabus please see cps730 course web page at: <http://www.scs.ryerson.ca/~aabhari>

**Prerequisites:** CPS393 or CPS590

**Course Description:**

This course is focusing on understanding the core technologies underlying the World Wide Web such as Protocols (e.g., HTTP), software components (i.e., client, server and proxy), and important web applications (e.g., web caching and web multimedia). Another part of this course is introduction to performance measurement and in particular Web Performance Measurement. The course consists of assignments and practical examples (based on Unix/Linux) which helps students to understand the principles of how distributed applications are built.

The main topics will be covered in this course are:

- Web components
- Web clients and Web servers
- Socket programming
- Web proxies
- HTTP, DNS and other Internet protocols

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- Serving Multimedia in Web
- Web caching
- Web performance measurements and web workload characteristics
- Web Services ,Web2.0, Semantic Web , and information retrieval (depends on the remaining time)

**Lecture Attendance:**

In addition to regular lectures, there is one hour lab that will be used for demonstrating and marking the assignments. Also there will be some bonus assignments and discussion on assignments and case studies that will be presented during the lecture classes. Tests will be based on text book, assignments and the material presented in the class. Students who do not regularly attend the class should not expect to do well in the assignments and tests.

**Late Assignment Policy:**

Assignments are due at the beginning of the lab on the specified due date and should be emailed to the TA before start of the lab hour. Only the emailed assignment that is demonstrated to the TA will be marked. Any assignment handed in after due date will be considered late assignment and will be given a 20% late penalty per day.

**Test Policy:**

Missing a test/exam for any reason (with the exception of medical reasons) results in a mark of **0** for that test/exam. In case of illness, you need to provide a dated doctor's note stating your illness and the expected duration of your illness. Your doctor must fill out the medical form provided by Ryerson. This form should be submitted within 3 working days of a missed assignment, test or exam. See the policy for details at: [www.ryerson.ca/rr/medical.pdf](http://www.ryerson.ca/rr/medical.pdf)

**Cheating Policy:**

Considering the nature of the assignments after email submission their functionality and source code will be examined for marking purpose. Any plagiarism or academic misconduct will be dealt with university policies. Please read the university policies on academic conduct and plagiarism carefully at: <http://www.ryerson.ca/academicintegrity> and <http://www.ryerson.ca/senate/policies/pol60.pdf>

**Email Policy:**

Only emails from Ryerson email accounts will be used for communication purpose.

**Announcements:**

Announcements regarding assignments, additional references, date and location of the tests will be made periodically in class. It is your responsibility to find out about any announcements you have missed. You are also expected to read the course webpage for any possible announcements.

**Grading Concerns:**

Your mark will be based on your performance, i.e., assignments, test and final exam. There will be no deviation from the stated evaluation criteria. It is your responsibility to attend lectures to find out if any marked material has been handed back. Mistakes in addition must be reported within 10 working days of the return of the graded assignment to the class. No marks will be altered after the 10 days deadline.

**THE INFORMATION ON THIS FORM WILL NOT BE ALTERED WITHOUT PRIOR NOTIFICATION AND DISCUSSION IN THE CLASS.**