Syllabus: Distributed Systems

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1 Course Number
630.

2 Course Title
Distributed Systems.

3 Credits
4.

4 Term, place, time, instructor
Fall ’2012. Gerlinger 303. MW 2-3:20 PM. Jun Li.

5 Place in Curriculum
This course serves as a core course for graduate students (both MS and PhD). The prerequisite of this class will be networking and operating systems from the undergraduate study, or instructor approval.

6 Format
Lecture and Discussion.

7 Outline of Subject and Topics Explored
Distributed systems are at the heart of the current revolution in computing systems technology because they provide unprecedented degrees of resource sharing, scalability, and cost/performance benefits. In many respects, anything that involves computers involves some aspect of distributed systems.

This course is designed for students to learn both classic and state-of-art topics related to distributed systems. The course will cover theory and models of distributed systems, their design, and implementation. In particular, we will investigate exemplar case studies, including cloud computing, peer-to-peer systems, online social networking, Internet of things, and various artifacts from Google.
8 Course Materials


- Readings. Will be posted before the class.

9 Expectations for Students

- Student Engagement Inventory

<table>
<thead>
<tr>
<th>Educational activity</th>
<th>Hours student engaged</th>
<th>Explanatory comments (if any)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course attendance</td>
<td>30</td>
<td>2 lectures a week, 1.33 hours per lecture</td>
</tr>
<tr>
<td>Assigned readings</td>
<td>40</td>
<td>2 readings a week, estimated 2 hours per reading</td>
</tr>
<tr>
<td>Project</td>
<td>50–80</td>
<td>a student needs to work on a class project with approximately 5–8 hours a week on average</td>
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<tr>
<td>Lab or workshop</td>
<td></td>
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<td>Field work/experience</td>
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<td>Online interaction</td>
<td></td>
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<tr>
<td>Performance/creative activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total hours:</strong></td>
<td><strong>120–150</strong></td>
<td></td>
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</table>

Table 1:

- Course attendance. Students should actively participate in the class (laptop usage is forbidden unless used to make class notes), including raising questions and being involved in discussions.

- Reading and pop quiz. Students should carefully prereview the class materials before the class. At the beginning of some lectures, the instructor will use 2–4 pop quizzes to test every student’s understanding of readings assigned to a lecture.

- Project. Either individually or with a team, every student is required to work on a class project that tries to answer a good question in distributed systems. Novelty is encouraged!

- Writing. At each lecture students should take notes that they can use for their after-class review of what they learned. 2–3 notes for some lectures need to be handed in in a typed form.

The students will also need to write class project reports at different stage: a 1-page proposal due in the third week, a 2-page intermediary report due in the fifth week, and a 10-page final report due in the final week.

- Presentation. Every student will briefly present their project ideas in the second week, a bit more time on their progress in the fifth week, and do the final project presentation in the tenth week.

10 Assessment

- Methods: Students will be evaluated based on their performance in the classroom, their exam, and their performance in working on their class project. The classroom performance includes their participation, their quiz scores, and the class notes they turned in later. The project performance includes their presentations and reports at different stages and the intellectual merits of their work.

- Times or frequency: See Section 9 above for times and frequency of the pop quizzes, class notes, presentations, and reports.

- Grading policy:
  
  | Class performance: participation, quiz, notes | 20% |
  | Midterm: | 30% |
  | Class project: | Presentation 10% | Report 20% |
  | | Intellectual merits 10% | Individual contribution 10% |

11 Academic Dishonesty

For this course, all work must be done individually, except for the class project. The use of sources (ideas, quotations, paraphrases) must be properly acknowledged and documented, including those from your classmates.

The student conduct code allows an instructor to impose an appropriate sanction for a student found guilty of academic dishonesty, up to and including an N or an F.

For more information on academic honesty, please talk to the instructor or see the Student Conduct Code at http://arcweb.sos.state.or.us/rules/OARS_500/OAR_571/571_021.html.

12 Universal Learning Environment

The University of Oregon is working to create inclusive learning environments. Please notify me if there are aspects of instruction or design of this course that result in barriers to your participation.

(Students with a UO disability notification letter should please meet with me at their earliest convenience during the first two weeks of the term. You may also wish to contact Disability Services in 164 Oregon Hall at 346-1155. For information about Support and Services for Students with Disabilities, see the Disability Services web page (http://ds.uoregon.edu/).)