CSci 4211: Data Communications and Computer Networks

Time: Monday and Wednesday 1 pm to 2:15 pm
Location: Vincent Hall 16
Spring 2016, 3 Credits
Instructor

David Hung-Chang Du
Email: du@cs.umn.edu
Office: EE/CS 4-225B for Office Horus
Walter Library 421
Phone: 612-6252560
Office Hours: Monday and Wednesday 2:30 pm to 3:30 pm
Teaching Assistant

Wenchao Jiang, jiang832@umn.edu
Office: KHKH 2-209
612-6267512
Office Hours: Tuesday and Thursday 1 pm to 2 pm
Attendance Sheet

• If your name appears, please initial it
• Otherwise, write the following information
  – Name
  – Student ID
  – Registered or Waiting
  – Grading basis
  – Class/year (grad, senior, junior etc.)
  – Major (CS, CE, EE etc.)
  – Email address
Admission to the Class

• Students who have registered
  – If thinking of dropping, please decide soon
• If room available, those in the waiting list will be admitted in the following order
  – CS,CE graduate students,
  – Outside department students, others
  – Note that 4211 is now only for undergraduate students
• Admitted student list will be posted on the web and get the magic number from CS front desk
Scholastic Conduct

• See the policy in the appropriate college bulletin. Students are encouraged to discuss with classmates and to help each other learn and understand course material. However, you should not go beyond the boundaries of the individual responsibility.

• Any academic misconduct will be reported.
What is CSci 4211 about?

• Introductory computer networking course
• Fundamental principles and general concept
  – Not survey of existing protocol standards
• How Internet works?
• Focus on network software architecture
  – Only discuss some relevant network hardware
• Some hands-on experiences (via projects)
  – Not queuing theory
Course Materials

• Required textbook
  – Website: http://www.aw.com/kurose-ross

• Recommended references
Class Information

http://www-users.cselabs.umn.edu/classes/Spring-2016/csci4211/

• Lecture Notes
  – Posted on website a day before the class

• Bulletin Board
  – Participate in the discussions actively

• Announcements
  – Check the web page periodically

• Class Mailing List: csci4211@cselabs.umn.edu

• Help Hot Line: csci4211-help@cs.umn.edu
Course Prerequisites

• A rudimentary understanding of computer architecture, and operating systems would be helpful

• Basic probability theory may be needed to understand some performance analysis

• *Programming experience in C or other languages*
  – Two programming projects a
  – You need computer account at IT or grad labs
Course Requirements and Workload

• Four to five homework assignments (20%)
• One or two programming projects (15%)
  – Details will be announced later
  – Based on socket Programming
• One midterm exam (30%)
  – Date will be decided later; roughly 7th week
• One final exam (35%): May 11th (Wednesday) 8:00 to 10:00 am
Policies and Guidelines

• No late homework or project
  Hand in during classes or drop off in 4-225B by the midnight of due date

• Make-up exam
  – Only for those who have legitimate reasons (e.g. conflict of finals etc.)

• Incomplete
  – Not granted unless proof of emergency
  – Need to fill “Agreement for Incomplete” form
# Tentative Schedule

<table>
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<tr>
<th>Week</th>
<th>Topic</th>
<th>Notes</th>
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<tbody>
<tr>
<td>1</td>
<td>1. Computer Networks and Internet</td>
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<tr>
<td>2</td>
<td>Chapter 1 Continued</td>
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<td>3</td>
<td>2. Application Layer</td>
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<td>4</td>
<td>3. Transport Layer</td>
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<td>5</td>
<td>Chapter 3 Continued</td>
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<td>6</td>
<td>4. Network Layer</td>
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<td>7</td>
<td>Chapter 4 Continued</td>
<td>Mid-Term Review</td>
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<td>Mid-Term Review</td>
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<tr>
<td>8</td>
<td>5. Link Layer: Links, Access Networks and LANs</td>
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## Tentative Schedule (cont’d)

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<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Week 9</td>
<td>Chapter 5 Continued</td>
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<td>Week 10</td>
<td>Additional Network Architectures</td>
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<td>Week 11</td>
<td>6. Wireless and Mobile Networks</td>
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<td>Week 12</td>
<td>Chapter 6/7</td>
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<td>Week 13</td>
<td>7. Multimedia Networking</td>
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<td>Week 14</td>
<td>8. Security in Computer Networks</td>
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<td>Week 15</td>
<td>9. Network Management</td>
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<td>Week 16</td>
<td>Research Topics and Final Review</td>
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<tr>
<td>Week 17</td>
<td>Final Exam</td>
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<td></td>
<td>May 11th 8:00 to 10:00 am</td>
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