**Syllabus**

**COEN 237 Internet Architecture and Protocols**  
Department of Computer Engineering  
Santa Clara University

Dr. Ming-Hwa Wang  
Summer Quarter 2007  
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Course website: http://www.cse.scu.edu/~mwang2/tcpip/  
Office Hours: Tuesday & Thursday 9:00-9:30pm

**Course Description**

In-depth study of computer networking algorithms and protocols at Layer 3+. Topics include Internet Protocols (IPv4, IPv6, ICMP), addressing (ARP), auto-configuration (DHCP), inter- and intra-domain routing (RIP, OSPF, and BGP), transport protocols (TCP), multicast routing and transport, name services (DNS), end-to-end services. Protocols for the next-generation Internet will also be discussed.

**Prerequisites**

Computer Networks (COEN233).

**Required Textbooks**


**Recommended Textbooks**

1. "TCP/IP Illustrated 3 Volume Set", by W. Richard Stevens, etc. Addison Wesley, 2002  

**References**

10. "Fixed Broadband Wireless Access, Networks and Services", by Oliver C. Ibe, John Wiley & Sons, 2002  

**Grading Policy**

Course grade is determined based on the total score (maximum 1000 points + up to 200 optional bonus points for extra work) from:

1. Mid-term and final exams of 250 points each (close book with one A4 note and a calculator.) Makeup exams (must have a very good reason for makeup) are much difficult than normal exams.
2. Two programming assignments of 100 points each (late penalty: 20 points/day.) Makeups are more difficult too.
3. A group (prefer 2-3 people in a team) programming term project of 300 points (late penalty: 60 points/day.) No makeup is allowed.
4. Bonus assignments will be assigned at each lecture with 10 points each. Due before next lecture begin. The solution for bonus point will be posted on my protected web page. No late work accepted for bonus assignments. 75-80% of exam questions are similar to bonus.
5. Class average targeted at B+.

**Course Schedule** (Tuesday & Thursday 7:10pm-9:00pm)

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<tr>
<th>#</th>
<th>week</th>
<th>Readings</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>1</td>
<td>6/19</td>
<td>introduction</td>
<td>submit due 6/21</td>
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<tr>
<td>2</td>
<td>6/26</td>
<td>Internet Protocol</td>
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<tr>
<td>3</td>
<td>7/3</td>
<td>ARP and RARP</td>
<td>program #1 due 7/1</td>
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<tr>
<td>Date</td>
<td>Topic</td>
<td>Due Date</td>
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<td>4/7/10 7/12</td>
<td>ICMP</td>
<td>program #2 due 7/15</td>
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<td>4/7/17 7/19</td>
<td>UDP, TCP, SCTP</td>
<td>problem due 7/17</td>
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<tr>
<td>4/7/24 7/26</td>
<td>RIP, OSPF, BGP</td>
<td>mid-term exam 7/24</td>
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<tr>
<td>4/7/31 8/2</td>
<td>multicast, BOOTP, DHCP</td>
<td>paper presentation 7/31 8/2</td>
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<td>4/8/7 8/9</td>
<td>application layer</td>
<td>proposal due 8/7</td>
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<td>4/8/14 8/16</td>
<td>wireless and mobile</td>
<td>final exam 8/23</td>
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<td>4/8/21 8/23</td>
<td>multimedia</td>
<td>project defense 8/28</td>
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**Reminder**

- No cheating, and no register complaint without talking to me first.
- No incomplete. Due date for withdraw is August 24.
- No sit-in or audit the class except formally registered.
- Read files under /home/mwang2/tips for help.
- Handouts, assignments, and solutions will be posted on the web. You should check the class web site at least once a week. You are responsible for printing and bring the handout to the class.
- Put a cover page posted my website on top of each of your submitted written/hardcopy assignment.
- Office hours: Tuesday & Thursday 9:00pm-9:30pm.

**Honor Code**

All students taking course in the school of engineering agree, individually and collectively, they will neither give nor receive unpermitted aid in examinations or other course work that is to be used by the instructor as a basis of grading.

**Disability Accommodation Policy:**

To request academic accommodations for a disability, students must contact Disability Resources located in The Drahmann Center in Benson, room 214, (408) 554-4111; TTY (408) 554-5445. Students must provide documentation of a disability to Disability Resources prior to receiving accommodations.