CMPE 150/150L: Introduction to Computer Networks
Fall 2010

Syllabus and General Information

Instructor

Amijan Varma, Professor, Computer Engineering
E-mail: varma@soe.ucsc.edu
Phone: 459-3505
Office location: E2-221
Office Hours: Mon 2:00 – 3:00 PM

Teaching Assistants

Marc Mendonca, msm@soe.ucsc.edu
Yakda Edalat, yakda@soe.ucsc.edu
The lab sessions will start in the week of October 4th.

Class Timings

Monday, Wednesday 5:00–6:45 PM, Physical Sciences 114
Final Exam: Dec 7, 7:30–10:30 PM

Lab Sections

Tuesday, 4:00–6:00 PM, Baskin Engineering 168
Wednesday, 10:00 AM–12:00 Noon, Baskin Engineering 168
Thursday, 10:00 AM–12:00 Noon, Baskin Engineering 168

Course Description

This is an upper-division introductory course on computer networks. The course provides a basic overview of computer network architectures and protocols, with emphasis on the basic protocols used in the Internet.

Prerequisites

1. CMPE 16
2. Either CMPE 12 and 12L, or CMPS 12B and 12M

Text (optional)


Lab Reference (optional)

**Class Schedule**

<table>
<thead>
<tr>
<th>Dates</th>
<th>Topics</th>
<th>Chapter</th>
</tr>
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<tbody>
<tr>
<td>Sep 27, 29</td>
<td>Introduction, networking basics, history of the Internet, protocol layering, number systems</td>
<td>Chapter 1</td>
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<tr>
<td>Oct 4, 6</td>
<td>Application Layer, common application-layer protocols, Domain Number System (DNS)</td>
<td>Chapter 2</td>
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<tr>
<td>Oct 11, 13</td>
<td>Transport Layer, mechanisms for reliable data transfer, TCP and UDP</td>
<td>Chapter 3</td>
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<tr>
<td>Oct 18, 20</td>
<td>Transport Layer, continued</td>
<td>Chapter 3</td>
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<tr>
<td>Oct 25, 27</td>
<td>Network Layer, Internet Protocol (IP) Routing in the Internet.</td>
<td>Chapter 4</td>
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<td>Nov 1</td>
<td>Network Layer, continued</td>
<td>Chapter 4</td>
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<tr>
<td>Nov 3</td>
<td>Midterm</td>
<td>Chapters 1-4</td>
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<tr>
<td>Nov 8, 10</td>
<td>Data Link Layer: Local Area Networks, Ethernet, switches and bridges, spanning tree protocol</td>
<td>Chapter 5</td>
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<tr>
<td>Nov 15, 17</td>
<td>Data Link Layer, continued</td>
<td>Chapter 5</td>
</tr>
<tr>
<td>Nov 22, 24</td>
<td>Wireless and cellular networks</td>
<td>Chapter 6</td>
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<tr>
<td>Nov 29, Dec 1</td>
<td>Network management, network security</td>
<td>Chapter 8</td>
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<tr>
<td>Dec 7</td>
<td>Final exam, 7:30 - 10:30 PM</td>
<td>comprehensive</td>
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**Evaluation Criteria**

Homeworks – 10 percent  
Midterm – 30 percent  
Final – 30 percent  
Lab assignments – 20 percent  
Lab project – 10 percent

**Lab**

You must attend one of the lab sessions every week. You will be assigned 6 or 7 lab exercises over the quarter. You will carry out the experiments in teams of two students each, but must prepare and submit the reports individually. Exercises will be posted one week in advance.
Project

A lab project will be assigned during the first week of November. The projects must be done individually.

Class Webpages

The class Web page is at www.soe.ucsc.edu/classes/cmpe150/Fall10. A Class Forum forums.soe.ucsc.edu will be available for questions and discussion. Whenever possible, please post your questions to the Forum instead of sending e-mail.

Academic Integrity

All work submitted, including homework solutions, must be your own. Any unauthorized collaboration will be treated as a case of Academic Dishonesty and handled according to University policies (see rule book at http://www2.ucsc.edu/judicial/index.html for details).