CNT 4704: Analysis of Computer Communication Networks  
Fall 2011  

Instructor: Dr. Cliff Zou (HEC 243),  407-823-5015,   czou@eecs.ucf.edu  
Course Time: TuTh 10:30AM - 11:45AM, COMM 0114 (Nicholson School of Communication)  
Office Hour: TuTh 12PM – 1:30PM  

Prerequisite:  
Algorithms, Basic knowledge of Operating Systems, C or C++ programming.  

Description:  
This course introduces the fundamental concepts in computer communication networks, their  
protocols, and applications. Topics to be covered include: overview of network architectures and  
aplications, network programming interfaces (e.g., sockets), transport, congestion, routing, and  
data link protocols, addressing, local area networks, wireless networks, and network security.  
Examples will be drawn from the Internet (e.g., TCP, UDP, and IP) protocol suite, and from many  
real world cases.  

In current world, almost everything is computerized and everything is connected. Knowledge  
on networking becomes as indispensable to Computer Science students as Algorithms or  
Operating Systems. Network related jobs compose a large portion of the job market in IT  
industries. Therefore, computer networking knowledge and skill will be critical for Computer  
Science students in their future career.  

In the Wireshark assignments, students will learn how to monitor the real network traffic in  
and out of their own computers. They will also learn how to manually send out a fake email (to  
know that how easy for attackers to send spam email). In the programming assignments, students  
will program basic client and server code to really communicate to each other on two separated  
machines. They will also program to learn how TCP works.  

Online Video Streaming:  
We will use UCF Tegrity system. Each lecture’s video will be posted online about two hours  
after the corresponding lecture time. We will also use Webcourse for student discussions,  
questions and answers, homework/project assignment and submission.  

Textbooks:  
Computer Networking: A Top Down Approach Featuring the Internet (5th edition), J.F.  

Grading Policy:  
The final grade will use +/- policy, i.e., you may get A, A-, B+, B, B- … grade.  

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<thead>
<tr>
<th>Coursework</th>
<th>Approximate amount</th>
<th>approximate percentage</th>
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<tbody>
<tr>
<td>Written homework</td>
<td>4</td>
<td>32%</td>
</tr>
<tr>
<td>Programming projects</td>
<td>2 or 3</td>
<td>24% or 30%</td>
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<tr>
<td>Lab assignments (Wireshark)</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Midterm exam</td>
<td>1</td>
<td>14%</td>
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<tr>
<td>Final exam</td>
<td>1</td>
<td>20% or 14%</td>
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