CNT 4704: Analysis of Computer Communication Networks
Fall 2012

Instructor: Dr. Cliff Zou (HEC 243),   407-823-5015,   czou@eecs.ucf.edu

Course Time: TuTh 10:30AM - 11:45AM, ENG2-105

Office Hour: TuTh 12PM – 1:30PM

Course Webpage: http://www.cs.ucf.edu/~czou/CNT4704/

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 applications, 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. Kurose and K.W. Ross, Addison-Wesley Longman, 2010.   (4th edition of this book is also OK)

Grading Policy:

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

Coursework	Approximate amount	approximate percentage
Written homework	4	32%
Programming projects	2 or 3	24% or 30%
Lab assignments (Wireshark)	2	10
Midterm exam	1	14%
Final exam	1	20% or 14%