UNIVERSITY OF SOUTHERN CALIFORNIA

EE 550 - Design and Analysis of Computer Communication Networks

Course Syllabus – SPRING 2011

Catalog Description: Applications of stochastic modeling and optimization techniques to communication network design and analysis. Data link control; performance models; multi-access channels; routing and flow control. Prerequisite: EE 450; EE 465.

Lectures: Monday and Wednesday 9:30-10:50am, OHE 100D

Instructor: Prof. John Silvester, EEB 240, silvester@usc.edu, +1.213.740.9730

Office hours: Monday and Wednesday 4-6pm, EEB 240.

TA: TBD


Assignments and supplemental handouts will be available through the DEN Blackboard site.

Good texts for Computer Networks (EE 450 prerequisite material and more):
2) Computer Networks by A. S. Tanenbaum (4th ed.)

Good texts for analytical modeling (EE 465 prerequisite material and more)
1) Introduction to Probability Models by S. Ross (8th or 9th ed.)
2) Queueing Systems Volume 1: Theory by L. Kleinrock

Grading: There will be problem sets (roughly every 2 weeks), two exams (midterm and final), and a (perhaps multi-part) project to be weighted in an overall score as follows: Assignments 10%, Exams 35% each, Project 20%.

Course Project: You will work on a project involving a deeper study of a particular network technology or concept. The project can be done alone, but group projects with 2-3 people in each group are strongly encouraged. The project will involve a report, analytical and/or simulation results, and a class presentation. You should fit your project goals and results into the context of the theory taught in the course, although the project does not have to be confined to technologies we cover in the course. Ask a question, take a guess about expected results, and then evaluate your guess via analysis and/or simulations. Be innovative and inventive. All groups must submit reports and presentation slides, along with a paragraph describing the contributions of each member. The reports should be approximately 5 pages (+2-3 per group member), and the slides should be appropriate for a 10 - 15 minute presentation.
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**Statement for Students with Disabilities:** Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m - 5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

**Statement on Academic Integrity:** USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that *individual work* will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one’s own academic work from misuse by others as well as to avoid using another’s work as one’s own. All students are expected to understand and abide by these principles. Scampus, the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: http://www.usc.edu/dept/publications/SCAMPUS/gov/.

Should there be any suspicion of academic dishonesty, students will be referred to the Office of Student Judicial Affairs and Community Standards for further review. The Review process can be found at: http://www.usc.edu/student-affairs/SJACS/. Plagiarism (copying or modifying someone else’s work and presenting it as your own) and other forms of cheating will not be tolerated. Please ask the TA or instructor if you have questions about proper behavior.