What This Class Is and Isn’t: This class serves as an introduction to advanced concepts in computer networking. It is not a class about protocols. It is not a class about IP/BGP/RTP/RMTP/etc... Rather, the purpose behind this class is to give the student the mathematical and analytical machinery necessary to do research and comprehend the behavior and performance analysis of communication networks.

Course Specifics:

– Place and Time: Th 6:40-9:30, at SEC-204.
– Instructor: Wade Trappe. Phone: x50611. Office: CORE 523. (Note: I spend the majority of my time in the WINLAB ORBIT facility off-campus) Email: trappe@winlab.rutgers.edu. Office Hours are Th 4:40pm-6:20pm (in CORE). If you desire to speak with me outside of these times, please email me to arrange an appointment.
– TA: None.

Handouts and Materials: All course related materials will be available at the course website www.winlab.rutgers.edu/~trappe/CommNetsF08.html.

Prerequisites: It is expected that students have an undergraduate level background in probability, and are co-registered for Stochastic Signals and Systems. This class is math-intensive. If you don’t know what a moment generating function is, then you need to learn it in the first two weeks.


Grading: This class will be taught at a serious graduate level. There will be a series of weekly quizzes, and one term project.

– Homework: (0%) There will be homework assignments. Homework assignments are not like your undergrad ones... I will recommend some problems. It is up to you whether you want to try them. I don’t solve homework for you– that is not for graduate school.
– Term Project: (1 small projects at 20% each) The purpose of the project is to give students hands on experience with the concepts taught in the class. Students will pair into teams and will report their findings in a short writeup that will be graded. The writeups will be graded based upon the technical content and the clarity of the exposition. There will be a computer aspect to this term project.
– Quizzes: (80 % of your grade) Starting on September 18th, there will be weekly quizzes. These quizzes will consist of one or two questions each, and will cover anything that I have covered up until that point in the class. They will be given at the start of the class each week (so don’t be late), and will run 30 to 40 minutes. In total, there will be 9 quizzes, and I will use the top 8 grades when calculating this component of your grade.

There is no set policy regarding the distribution of grades. However, since this class is considered a core class, the grading will be highly competitive. Not all students will be getting a B or better– grades of C and C+ will be given (or, dare I venture... lower).

Additional Comments: I recognize that this class might seem to be strict and hard. In teaching this class this semester, I have decided to teach this class as I was taught in graduate school. Weekly quizzes might sound horrible, but if you stick with it, you will learn the material far better than "the traditional way" (i.e. two exams, not studying until before the exam, etc).