EEL6507: Queueing Theory and Data Communications

Spring 2015

Instructor: Professor Yuguang “Michael” Fang
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Class time: 5:10-6:00pm, Tuesdays, 5:10-7:05pm, Thursdays
Classroom: 328 Benton
Office Hours: 10:30-11:30am, TTh or by appointment


Syllabus:

1. Introduction to communications networks
2. Probability basics
3. Markov chain theory
4. Queueing model basics and Little’s law
5. M/M/1 and its variants
6. M/G/1, G/M/1 and priority queues
7. Midterm
8. Time-reversibility and multidimensional queueing models
9. Queueing networks: Jackson’s theorem and product form
10. Queueing networks: Generalizations of Jackson’s theorem
11. Multiple access control and ARQ
12. Matrix geometric approach

Grading: Grades are based 10% on homeworks, 45% on midterm and 45% on final. Overall average > 90% is guaranteed an A, > 80% is guaranteed a B, etc. No late homework is accepted.

Honor code: All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a student at the University of Florida and to be honest in all work submitted and exams taken in this class and all others.