332: 423 Telecommunication Networks — Fall 2002

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Office Hours: Tu3, Th4

Class Home Page: http:www.ece.rutgers.edu/~gajic/423.html

Textbook: T. Saadawi, M. Ammar, and A. Hakeem, *Fundamentals of Telecommunication Networks*, John Wiley & Sons, New York, 1994.

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TA's Office Hours: F4

TOPICS

Introduction to Computer/Communication Networks (Chapter 1: Sections 1.1–1.6). 1 week

Data Communication Principles (Chapter 2: Sections 2.1–2.5, 2.9). 2 weeks.
Homework Problems: 2.1–2.5, 2.8–2.11, 2.14

Queueing Systems (Chapter 3: Sections 3.1–3.3, 3.4 (pages 92–93 and 98 only), 3.5, 3.6 (no derivations), 3.7 (no derivations), 3.8–3.10. 2.5 weeks.
Homework Problems: 3.1–3.13, 3.15, 3.17–3.19.

Exam I

Data Link Layer and X.25 (Chapter 4: Sections 4.1–4.8), 2 weeks
Homework Problems: 4.1–4.2, 4.4–4.7, 4.9–4.13

Routing in Packet Switched Networks (Chapter 5: Sections 5.1–5.5), 2 weeks
Homework Problems: 5.1–5.3–5.6–5.8

Flow and Congestion Control (Chapter 6, Sections 6.1–6.5), 1 week
Homework Problems: 6.2–6.7

Exam II

Multiple Access Communication Protocols (Chapter 7)
Homework Problems: to be assigned, 1–1.5 weeks

Integrated Services Digital Networks, ATM, SONET (Chapter 11), 1 week

Introduction to 3G wireless and 2G optical networks (if time permits), class notes

Grading:

Exam I: (Chapters 1–3) 35%

Exam II: (Chapters 4–6) 35%

Final Exam: (Material covered after Exam II and a selected topic from the previous chapters) 30%