

204528 Queueing Theory and Applications in Networks

1st semester 2003 (June – September)

Instructor Information

Instructor: Dr. Anan Phonphoem
Office: Building 1, Room # 1504
Office Hours: Mon 14:00 – 16:00 , Wed 11:00 – 12:30 or by appointment
Tel. No.: 02-942-8555 ext 1428
Email: anan@cpe.ku.ac.th
URL: <http://www.cpe.ku.ac.th/~anan/>

Course Information

Lecture: Mon 18:00 – 21:00 Room E1102
Class URL: <http://www.cpe.ku.ac.th/~anan/204528.htm>
Prerequisite: 204312 Probability Theory
Course Description: Single server and multi-server: exponential, Erlang, constant and general form of input and time service. Limited source, dependent service, consumer and producer rate and service priority
Text Book: “Queueing Systems,” Volume I: Theory, Leonard Kleinrock, A Wiley-Interscience Publication, 1975, ISBN 0-471-49110-1
Supplement:
1. “Fundamentals of Queueing Theory,” 3rd Edition, Donald Gross and Carl M.Harris, A Wiley-Interscience Publication, 1998, ISBN 0-471-17083-6
2. “Introduction to Queueing Systems,” Sanjay K.Bose, Kluwer/Plenum Publishers, ISBN 0-306-46734-8
3. “Data Networks” 2nd Edition, Demetri Bertsekas and Robert Gallager, Prentice-Hall, 1992, ISBN 0-13-201674-5

Grading Policy (Tentative)

20% Homework
10% Assignments
30% Midterm Exam
40% Final Exam

Note

- Any form of cheating will receive an F Grade (for all involved parties)
- Minimum Score to pass the course is 60 %
- Late assignment will not be graded

Tentative Course Schedule

Lecture#	Date	Description
1	16 June 2003	Introduction to Queueing Theory
2	23 June 2003	Probability Theory Review
3	30 June 2003	Markov Chains
4	7 July 2003	Birth-Death Queueing Systems
5	14 July 2003	No Class – Buddhist Lent Day
6	21 July 2003	Classical Queueing System: M/M/1
7	28 July 2003	M/M/ ∞ , M/M/m and its family
8	4 August 2003	Midterm Exam
9	11 August 2003	M/G/1 System
10	18 August 2003	M/G/1 Queue with vacations and batch arrivals
11	25 August 2003	G/M/m System
12	1 September 2003	Multiaccess Communication
13	8 September 2003	Queueing Theory in Research
14	15 September 2003	Queueing Theory Applications
15	22 September 2003	Final Exam