

Syllabus for Introduction to Stochastic Processes IND405

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Week 1	Random variables
Week 2	Conditional probability and conditional expectation (Assignment 1)
Weeks 3-4	Markov chains
Weeks 5-6	The exponential distribution and the Poisson processes (Assignment 2)
Weeks 7-8	Markov processes (Assignment 3)
Week 9	The $M/M/1$ and $M/M/c$ queues
Weeks 10-11	The $M/G/1$, $M/G/c$, $GI/M/1$, and $GI/M/c$ queues (Assignment 4)
Weeks 12-13	Queueing systems with bulk service, random-sized batch arrivals, network of queues (Assignment 5)

References:

Introduction to probability models

S.M. Ross

Academic Press

Introduction to stochastic processes

E. Çinlar

Prentice Hall

Workload:

1 Comprehensive exam

2 Midterms

5 Assignments

The final grade =

0.40 of the grade of the comprehensive exam +

0.25 of the grade of the midterm 1 +

0.25 of the grade of the midterm 2 +

0.10 of the average grade of the 5 assignments

Office hours: Tuesday 9.00-12.00

The assignments must be delivered at the beginning of the next lecture.

Delayed assignments will not be accepted.