



STATISTICS 280-3 APPLIED PROBABILITY MODELS

Fall 2002
DAY COURSE

Instructor: Madjid Amir

Prerequisite:

STAT 270 (or Math 272).

Textbook:

Concepts in Probability and Stochastic Modelling by James J. Higgins & Sallie Keller-McNulty, publisher Duxbury Press (Nelson).

Calendar Description:

Review of elementary probability models. Conditional probability and conditional expectation. Fitting and testing adequacy of models. Applications to productionw o0110malfE2f8ia1 age

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1. A Review of Elementary Probability Models
 2. Conditional Probability and Conditional Expectations
 3. Introduction to Markov Chains
 4. Introduction to Lifetime Analysis
 5. Introduction to Queueing Models
 6. Introduction to Birth-Death Models

The course will emphasize the modelling process: from a loose description of a real-world phenomenon (e.g. a sports game, traffic flow, population growth) students will learn how to formulate a probability model of the phenomenon. The use of the model will be to examine the phenomenon, as modelled, through a blend of mathematical and computer-intensive techniques, and to judge whether or not the model is a good one for certain practical purposes. The main aim of the course is that students will be able to make practical use of basic probability theory.

Grading:

A grading scheme will be announced by the instructor at the beginning of the semester.

Students should be aware that they have certain rights to confidentiality concerning the return of course papers and the posting of marks. Please pay careful attention to the options discussed in class at the beginning of the semester.

Revised June 2002