



STATISTICS 870-4 APPLIED PROBABILITY MODELS

Fall 2004
DAY COURSE

Instructor: Dr. Richard Lockhart

Textbook:

Introduction to Probability Models by S.M. Ross. Publisher Harcourt/AcademicPress. Seventh Edition, 2000.

Prerequisite:

Permission of the instructor. Some background in probability such as STAT 280 or 380 is probably best.

Meeting Schedule:

Mon. & Fri.: 10:30 - 12:20

Course Outline:

Course Structure: There will be 4 hours per week of lectures, assignments and in class presentations by students. I intend to tailor the course to student interests as much as possible. I will do about 4 weeks of basic probability theory. I will provide as much or as little measure theory as there seems to be demand for. Then I will do introductions to Markov Chains, to Poisson Processes, to Point Processes, to Brownian Motion and maybe to Renewal theory or Queuing theory or diffusions. The last two weeks of the course will be taken up, I expect, with 1/2 hour presentations from each student taking the course for credit.

Web Materials: In the frame at the left there are links to notes on individual lectures. There I will put only summaries of material covered in individual lectures. I don't yet know if I will be able to produce complete course notes. If I do the actual notes for the course, it would be in a postscript file under the course notes link. Assignment questions will be drawn from various texts. I will not be posting solutions.

Computing Requirements: There will be a computational component to this course; you will be expected to do a simulation project as one assignment. You will have some choice concerning the nature of this project so feel free to make suggestions.

Grading:

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| Assignments | 50% |
| Presentation | 25% |
| Final Exam | 25% |

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 April 2004