<h1 style="text-align:center">Probability,   MA 485/585-25   Winter 2001</h1>

Class meets on Tuesdays and Thursdays 5:45pm-7:50pm in Room 128 CB

Instructor: Dr. Nikolai Chernov
Office: 492 A Campbell Hall, ph. 934-2154 or 934-8613
Office hours: Tuesday and Thursday 4:30-5:30pm and by appointment
E-mail: chernov@math.uab.edu

Text: S. Ghahramani, *Fundamentals of Probability*, 2nd Ed.
Class notes are available on the web (see back).

Grading policy: (One of two schedules that yields a better grade for you)

Homework	15 % or	0 %
Midterm I (Jan 25)	25 %	30 %
Midterm II (Feb 15)	25 %	30 %
Final (Mar 8, 6-9pm)	35 %	40 %

To 585 students: You are taking this course at a *graduate* level! You will be given extra, more difficult, assignments periodically. Unlike regular homework assignments, those extra assignments are mandatory. The extra assignments will make 15% of your course grade, the rest will count for 85%. They can be turned in any time before or on the final test. Early submission is recommended – you will have chance to correct your mistakes. If you do correctly 80% of 585 problems, you will get full credit for this part of the course. If you do more, you'll get extra credit.

Homework: Problems will be assigned weekly on Tuesdays, unless announced otherwise. HW will be due the next Tuesday after assignment. Corrected and graded HW will be returned on Thursday the same week. If you turn the HW in and the schedule #1 above gives you a better grade, it will be automatically applied. Otherwise, your HW scores (if any) will be dropped and the schedule #2 will be applied. One (lowest) HW score will be dropped in any case. Half credit is given for late homework.

All tests in this course are **open-book** and **open-notes**.
You may use a calculator, and most likely you will need one, so bring it with you.

Welcome to MA 485/585 and best of luck to you all.

Syllabus:

1. Combinatorial probabilities	2.2 + 2.3 + 2.4	Jan 4
2. Concept of probability, notation	1.2 + 1.3 + 1.4 + 1.7	Jan 9
3. Conditional probability	3.1 + 3.2 + 3.3 +3.4	Jan 11
4. Independence, random variables	3.5 + 4.1	Jan 16
5. Discrete random variables	4.3 + 5.1 + 5.2 +5.3	Jan 18
6. Continuous random variables	4.2 + 6.1 + 7.1	Jan 23
7. TEST - I (covers classes 1–5)		Jan 25
8. Exponential r.v., tranformations	7.3 + 6.2	Jan 30
9. Normal random variables	7.2	Feb 1
10. Joint distributions	8.1 + 8.2 + 8.4 + 8.5	Feb 6
11. Mean, variance, standard deviation	4.4 + 4.5 + 6.3 +9.1	Feb 8
12. Moments, generating function	10.1 + 10.2	Feb 13
13. TEST - II (covers classes 6–11)		Feb 15
14. Covariance, correlation	9.2 + 9.3	Feb 20
15. Law of large numbers, DeMoivre-Laplace	10.3 + 10.4 + 7.2	Feb 22
16. Central limit theorem	10.5	Feb 27
17. Random walks (gambler's ruin)	from 3.3	Mar 1
18. Poisson process	from 5.2	Mar 6
19. FINAL EXAM (covers classes 12–18 + selected topics from 1–11)		Mar 8

The syllabus is tentative, some changes may occur.

The class lectures contain material that is not in the book.
The class notes cover all lectures.

Class notes (and past exams, some with answers, and more) are available at
www.math.uab.edu/chernov/teach.html
(or just go to www.math.uab.edu, click on "people", then "chernov", then "teaching").
You will need an Acrobat Reader (it is free) to view/print the class notes and other material. Instructions are provided on my web page.

Regular class attendance is very important and strongly encouraged.