

**Mathematical Statistics, MA 486-1E**      Spring 2003

Class meets Mondays, Wednesdays, Fridays 12:20pm-1:10pm in Room 101 CB15

**Instructor:** Dr. Nikolai Chernov

**Office:** 492 A Campbell Hall, ph. 934-2154 or 934-8613

**Office hours:** Mondays and Fridays, 11am-noon, and by appointment

**E-mail:** chernov@math.uab.edu

**Text:** Hogg & Tanis *The Probability and Statistical Inference*, Ed. 6

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

Homework	10 % or	0 %
Midterm I (February 10)	30 %	30 %
Midterm II (March 7)	30 %	30 %
Final (May 2, 10:45-1:15)	30 %	40 %

**To 586 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 ones are mandatory. The extra assignments will make 15% of your course grade, the rest will count for 85%.

**Homework:** Problems will be assigned weekly on Mondays, unless announced otherwise. Homework will be due the next Monday after assignment. Corrected and graded HW will be returned on Wednesday 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 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.

**Withdrawal Policy:** Last day to withdraw from the course with a "W" is February 26 (for undergraduates).

All tests in this course are **open-book** and **open-notes**.  
You may use a calculator, and you may actually need one.

*Welcome to MA 486 and best of luck to you all.*

## Syllabus

1. Display of data	1.2+1.4	Jan 6
2. Point estimation	7.1	Jan 8–13
3. Percentiles	4.4	Jan 15
4. CI for means	7.2	Jan 17
5. CI for means	7.3	Jan 22
6. CI for variances	7.4	Jan 24–27
7. CI for proportions	7.5	Jan 29
8. Size of sample	7.6	Jan 31
9. Sufficient statistics	9.1	Feb 3
10. Rao-Cramer	9.6	Feb 5
TEST - I (covers 1–8)		Feb 10
11. Tests for binomials	8.1	Feb 7,12
12. Tests for normals	8.2+8.3	Feb 14–19
13. Power and sample size	9.2	Feb 21–24
14. Goodness-of-fit	8.4	Feb 26–28
15. Contingency tables	8.5	Mar 3-5
TEST - II (covers 9–14)		Mar 7
16. Tests for several means	8.6	Mar 10
17. Two factor analysis	8.7	Mar 12
18. Regression	1.6+7.8+7.9+8.8	Mar 14–21
19. Order statistics	5.6	Mar 24
20. CI for percentiles	7.7	Mar 26–28
SPRING BREAK		
21. Wilcoxon test	8.9	Apr 7–9
22. Run tests	8.12	Apr 11–14
23. Kolmogorov-Smirnov test	8.10	Apr 16–18
24. Resampling	8.11	Apr 21–23
25. Factor analysis	10.2	Apr 25–28
FINAL EXAM (content to be announced)		May 2

The syllabus is tentative, some changes are possible.

Homework assignments, some class materials and past exams, some with answers are available at

[www.math.uab.edu/chernov/teach.html](http://www.math.uab.edu/chernov/teach.html)

(or just go to [www.math.uab.edu](http://www.math.uab.edu), click on “people”, then “chernov”, then “teaching”). You will need an Acrobat Reader (it is free software) to view/print the class material. Instructions are provided on the instructor’s web page.