

Math 483: Mathematical Statistics

Fall 2009

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Office Hours:

M, W, F 9-9:50 am M W 1-1:50 pm Thur 11-12 am or by appt

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Catalog description:

"Introduction to decision theory. Multivariate distributions. Sampling distributions for the normal case. Convergence of random variables. Different methods of estimation. Principles of hypothesis testing."

The main goal is to familiarize you with theoretical concepts behind modern statistical practice. However, we will also pay attention to data examples, and simulation as a powerful inferential tool.

Textbook: *Introduction to Mathematical Statistics*, 6th edition,
by Hogg, McKean and Craig; Pearson, 2005

COURSE POLICY

You are encouraged to seek help from the instructor. Your course grade will be determined on the basis of combined scores from Homework and Exams. In order to make up any assignment, a valid excuse should be documented. The instructor decides if an excuse is a valid one.

Homework: All homework is due at the beginning of the lecture (the day it's assigned). One lowest score will be dropped.

Grading is based on the percentage of total points earned (the individual tests, homework etc. are not assigned a letter grade).

Distribution of points:

Homework 30% Midterm 35% Final exam (comprehensive) 35%

Grading Scale (tentative): A: 90-100%; B: 80-89; C: 70-79; D: 60-69; F: 0-59

Course outline:

- Review of Probability (Chapters 1-3)
- Asymptotic Theory (Chapter 4)
- "Elementary" Inferences (Chapter 5)
- Maximum Likelihood (Chapter 6)
- Advanced topics: Sufficiency, Bayesian Inference – as time allows.

The instructor reserves the right to change any part of this syllabus as he sees fit.