
Moulinath Banerjee

University of Michigan

September 8, 2004

1 Instructor information.

Instructor: Moulinath Banerjee.

Office: 445-C, West Hall.

e-mail: moulib@umich.edu

Course web-page: www.stat.lsa.umich.edu/~moulib/stat426fall041.html

Office Hours: 2:45 - 4:00 P.M. on Tue and Thurs. Class meets 1:00 to 2:30 p.m. on Tue and Thurs, in 245 Dennison.

2 GSI information.

GSI: Martin Lenardon.

Office hours: 11:30 - 1:00 on Monday in 441 West Hall and 10 - 11:30 on Friday in 470, West Hall. e-mail: jsbach@umich.edu

3 Course information.


Distribution of weights: 2 Midterms each carrying 20, Final Exam carries 40 and 4 Homeworks (best 4 out of 6) carry 20.

Exam schedule:
• Midterm 1: Oct 26 (Tuesday) in class during class hours.
• Midterm 2: Dec 7 (Tuesday) in class during class hours
• Final Exam: Dec 23 (Thursday) in class from 1:30 p.m. to 3:30 p.m.

Outline of topics to be covered:

• **Probability Revision**: Basic probability; Random Variables; Joint Distributions; Expectation; Law of Large Numbers; Convergence in Distribution, Central Limit Theorem.
  
  Relevant Chapters: 1 - 5

• Distributions related to the Normal; Sampling
  
  Relevant Chapters: 6 and 7

• **Parametric Statistical Inference (Estimation)**: Introduction; Parametric Distributions; Exponential Families and Sufficiency; Estimation Techniques: Method of Moments, Maximum Likelihood Estimation; The Cramer Rao Inequality; Asymptotics of the MLE.
  
  Relevant Chapter: 8

• **Parametric Statistical Inference (Hypothesis Testing)**: Confidence Intervals and Hypothesis Testing; Likelihood Ratio Tests; Chi-Squared Tests.

**Homework information**: There will be 6 Homeworks in all and the best 4 will be counted towards your grade. Each homework will contribute 5 points towards your total grade. Homeworks need to be turned in during class to the instructor. Due dates will be announced in class.