
Moulinath Banerjee

University of Michigan

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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/stat426win04.html

Office Hours: 3:30 to 4:30 P.M. on Mon, Wed and Thurs. Class meets 2:00 to 3:00 p.m.
on Mon, Wed and Fri, in 513, Dennison.

2 GSI information.

GSI: Jin Dong Park – 436, West Hall

e-mail: jdpark@umich.edu

3 Course information.

Duxbury Press.

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: Feb 15 (Monday) in class during class hours.
- Midterm 2: Mar 29 (Monday) in class during class hours
- Final Exam: Apr 28 (Wednesday) in class from 10:30 a.m. to 12:30 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.