The objective of this course is to introduce to students the basic theory of statistics, which is fundamentally important for understanding commonly used statistical concepts and methods. This course also provides students the necessary basis for a further study of advanced statistical courses.

Topics to be covered:

2. Point estimation: method of moments, maximum likelihood estimators, Bayes estimators, best unbiased estimators, the EM algorithm.
3. Hypothesis testing: likelihood ratio tests, Bayes tests, most powerful tests, p-values.
4. Interval Estimation: inverting method, pivotal method, Bayesian intervals, coverage probability.
5. Asymptotic Evaluations: point estimation, hypothesis testing, interval estimation.

Prerequisites: STAT610 or equivalent

Recommended texts/references:


Grading Rule: Assignments: 10%; First midterm: 25%; Second midterm: 25%; Final examination: 40%.

Lectures: MWF 11:30am–12:20 pm  classroom: Bloc 113
Office hour: Wednesday 15:00-16:00
Grader: Furong Li, furongli@stat.tamu.edu

Statements on the Course:

- No late assignments will be graded.
• A makeup examination will be only given to the students who could provide satisfactory evidence that the absences are due to some causes beyond their control.

• The student’s semester grade will be based solely upon on the above grading rule. No exception will be made at the end of the semester for particular students.

• Incomplete grade: A temporary grade of I (Incomplete) at the end of a semester indicates that the student has completed the course with the exception of a major quiz, final exam, or other work. The instructor shall give this grade only when the deficiency is due to an authorized absence or other cause beyond the control of the student.

ADA, Plagiarism, and Academic Integrity Statement:

• STATEMENT ON DISABILITIES: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Office of Support Services for Students with Disabilities in Room 126 of the Koldus Student Services Building. The phone number is 845-1637.

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