MATH 4751/6751 – Mathematical Statistics I – Syllabus

Instructor: Prof. Xiaojing Ye, E-mail: xye@gsu.edu Office: COE 704, Phone: 413-6444.

Course Website: http://www.math.gsu.edu/~xye/course/mathstat.html


Prerequisites: A grade of C or higher in Math 2215 Multivariate Calculus.

Course Outline:

Chapter 1 Introduction ................................................. approx. 3 lectures
Chapter 2 Probability .................................................. approx. 5 lectures
Chapter 3 Probability Distributions and Probability Densities . approx. 6 lectures
Chapter 4 Mathematical Expectation ................................. approx. 4 lectures
Chapter 5 Special Probability Distributions ....................... approx. 3 lectures
Chapter 6 Special Probability Densities ............................. approx. 3 lectures
Chapter 7 Functions of Random Variables ........................ approx. 2 lectures

Course Description: Probability, random variables and their distributions, mathematical expectation, moment generating functions, sampling distributions.

Grading Scales:

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Homework: 10 homework assignments are given during lectures. Each one has a total of 3 points.

Exam: There are two midterm exams and one final exam. All exams are held in lecture room.

Academic Honesty: All work submitted by a student for a grade must have been done without help from other persons. Cheating and plagiarism are strictly forbidden. A first occurrence will result in a grade of 0 on the assignment for all concerned parties as well as an Academic Dishonesty form being filed with the Dean of Students. A second occurrence will result in a grade of F for the course for the concerned parties and a second Academic Dishonesty form being filed. See the University’s policy on academic honesty at http://codeofconduct.gsu.edu/.

Attendance Policy: Students are required to attend lectures. A student who incurs an excessive number of absences may be withdrawn from a class at the discretion of the professor.

Makeup Policy: Exams may be made up only in the event of a suitable verifiable excuse (e.g., a doctor’s note is necessary).

Remarks:

• Whilst every effort will be made to adhere to the syllabus, the circumstances may make it necessary to deviate from it.

• Your constructive assessment of this course plays an indispensable role in shaping education at Georgia State. Upon completing the course, please take time to fill out the online course evaluation.
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Course Website: http://www.math.gsu.edu/~xye/course/mathstat.html


Prerequisites: A grade of C or higher in Mathematical Statistics I (Math 4751).

Course Outline:

Chapter 7 Functions of Random Variables ......................... 6 lectures
Chapter 8 Sampling distributions ..................................... 8 lectures
Chapter 9 Decision theory ............................................ 7 lectures
Chapter 10 Point estimation ............................................ 8 lectures
Chapter 11 Interval estimation ....................................... 7 lectures
Chapter 12–13 Hypothesis testing .................................... 7 lectures

Course Description: Theory of estimation and hypothesis testing, applications of statistical inference, introduction to regression and correlation.

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