

ISyE 6739 — Statistical Methods — Summer 2009

(Revised May 25, 2009)

Instructor: Dave Goldsman; Room 433; email sman@gatech.edu; web www.isye.gatech.edu/~sman; phone 404-894-2365/2301 (O/F).

Course Website: www.isye.gatech.edu/~sman/courses/6739.

Class Times and Place: T θ 2:00–3:45 pm, IC 105.

Office Hours: T θ 8:00–9:00 am (and by appointment). Please honor these office hours and come *prepared*. TV students can call anytime you can catch me.

Teaching Assistants: (Note that these guys are very friendly and want to help you.)

Zhi Han; zhan9@gatech.edu; Office Hours: W 2:00–3:30 pm, θ 10:30 am – 12:00 pm; Main 335.

Norbert Remenyi; nremenyi@gatech.edu; Office Hours: M 2:00–3:30 pm, T 11:30 am–1:00 pm; Main 432.

Required Text: W. W. Hines, D. C. Montgomery, D. Goldsman, and C. Borror, *Probability and Statistics in Engineering*, 4th Edition, 2003, John Wiley and Sons.

Course Objectives: Provide intro to probability and statistics, emphasizing applications in science and engineering.

Prerequisites: You should be familiar with some programming language and maybe even a spreadsheet package. You should also know enough calculus to be able to integrate any easy function.

Grading:

???	Homework	
1/3	Exam 1	Thursday, June 11
1/3	Exam 2	Thursday, July 9
1/3	Final	Thursday, July 30

Homework: I assign HW every week. HW consists of theoretical problems and computer programming problems. HW must be neat, organized, stapled, and handed in on time. Never turn in more than two pages per HW problem. For questions concerning the HW, email or see the TAs first. We do not accept electronic copies of the HW from in-class students except in extraordinary cases. It simply places an unfair burden on us to print out multiple documents from multiple students. TV students can of course mail us their HWs.

Make-Up Exams: I hate make-up exams.

Regrading: If we have made a mistake in grading something, we will be happy to fix things. In order for a test to be regraded, you must submit a *Grade Grovelling* form, available off of my website.

Class Policy: If your cell phone rings during class, a very bad thing will happen to you.

Course Outline:

1. Probability Intro
2. Random Variables
3. Discrete Distributions
4. Continuous Distributions
5. Normal Distribution

6. Descriptive Statistics
7. Point Estimation
8. Confidence Intervals
9. Hypothesis Testing
10. Discrete Data Analysis
11. Analysis of Variance
12. Simple Linear Regression
13. Multiple Linear Regression
14. Experimental Design