STAT 4352-501	**MATHEMATICAL STATISTICS**	SPRING 2005

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Office hours: TR 3:00-5:15 PM

Prerequisite: STAT 4351 or equivalent

Text: Miller and Miller, J. Freund's Mathematical Statistics, 7th Edition, Addison Wesley, 2004

Goals: Introduce the basic concepts of mathematical statistics. Prepare students for an advanced statistical methods course and other advanced courses in statistics.

SYLLABUS

Week		Sections
1	Introduction to statistics, Distributions of statistics	8.1-8.7
2	Decision theory, Bayesian statistics}	9.1-9.7
3	Estimation, Unbiasedness, Mean Squared Error, Consistency	10.1-10.3
4	Sufficiency, Robustness, Method of Moments	10.3-10.7
5	Maximum likelihood estimation, Bayesian estimation	10.8-10.10
	First midterm	
6	Confidence intervals, Pivots	11.1-11.2
7	Specific Estimation Applications	11.3-11.8
8	Hypothesis testing	12.1-12.4
9	Power function, Optimal tests	12.5-12.7
10	Applications of hypothesis tests	13.1-13.9
11	Nonparametric tests	16.1-16.3
	Second midterm	
12	Regression	14.1-14.3
13	Inference in regression	14.4-14.5
14	Multiple regression, Experimental Design	14.6-14.8, 15.1-15.3
15	Analysis of variance, Review	15.4-15.4
	Final exam	

Grading: About nine10 minute quizzes will be given on the homework. The lowest 2 quiz scores will be dropped. If you miss a quiz there is no makeup. If you are going to miss an exam you must notify me **before the exam is given** to arrange a makeup exam or you will receive a zero on the exam. Quizzes and exams will be different from those for STAT 5390.

Midterm 1	100
Midterm 2	100
Final exam	200
Quizzes	100
Project	20
Total	520