STATISTICS 330-3
INTRODUCTION TO MATHEMATICAL STATISTICS

Spring 2006
DAY COURSE

Students requiring accommodations as a result of disability, must contact the Centre for Students with Disabilities 604-291-3112 or csdo@sfu.ca

Instructor: Dr. R. Sitter (SC K10567)

Prerequisites:

STAT 285 and Math 251

Textbook:

Introduction to Mathematical Statistics, 6th ed. by Hogg, Craig, McKean, Pearson Prentice Hall publishers.

Course Description:

Review of probability and distributions. Multivariate distributions. Distributions of functions of random variables. Limiting distributions. Inference. Sufficient statistics for the exponential family. Maximum likelihood. Bayes estimation, Fisher information, limited distributions of MLEs. Likelihood ratio tests.

Outline:

1. Review of Probability and Univariate Distributions
2. Multivariate Distributions
3. Distributions of Functions of Random Variables
4. Limiting Distributions
5. Inference. Sufficient Statistics for the Exponential Family.
6. Maximum Likelihood, Limiting Distributions
7. Bayes Estimation.
8. Fisher Information
9. Likelihood Ratio Tests

Grading

Homework – 25%
Midterms (3) – 75%

Students should be aware that they have certain rights to confidentiality concerning the return of course papers and the posting of marks. Please pay careful attention to the options discussed in class at the beginning of the semester. Students are reminded that Academic Honesty is a cornerstone of the acquisition of knowledge. Scholarly integrity is required of all members of the University. Please consult the General Guidelines of the calendar for more details.

Revised October 2005