

FALL 2014 - STAT 330 D100

**INTRODUCTION TO MATHEMATICAL STATISTICS (3)***Delivery Method: In Person***COURSE TIMES + LOCATION:**Mo 10:30 AM – 12:20 PM  
RCB 8100, BurnabyWe 10:30 AM – 11:20 AM  
BLU 9660, Burnaby**EXAM TIMES + LOCATION:**Dec 6, 2014  
12:00 PM – 3:00 PM  
SWH 10041, Burnaby**INSTRUCTOR:**

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**PREREQUISITES:**

Prerequisite: : STAT 285 and MATH 251.

## Description

**CALENDAR 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. Quantitative.

**COURSE DETAILS:****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

Assignments (weekly assignments)

20%

Midterms (2 midterms)

35%

Final Exam

45%

**NOTES:*****All grading is subject to change.***

## Materials

**REQUIRED READING:****Required Textbook:*****Introduction to Mathematical Statistics (7th ed.)*** by R. Hogg, J. McKean, A. T. Craig. Publisher: Pearson**DEPARTMENT UNDERGRADUATE NOTES:****Students with Disabilities:**

Students requiring accommodations as a result of disability must contact the Centre for Students with Disabilities 778-782-3112 or [csdo@sfu.ca](mailto:csdo@sfu.ca)

**Tutor Requests:**

Students looking for a Tutor should send an email to [stat@sfu.ca](mailto:stat@sfu.ca) with "Tutor Request" in the subject line. Please only include information that you would like forwarded to our tutors mailing list (contains people external to the University). We accept no responsibility for the consequences of any actions taken related to tutors.

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