

## INTRODUCTION TO PROBABILITY AND STATISTICS (3)

Class Number: 4113 Delivery Method: In Person

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**COURSE TIMES + LOCATION:**

Mo, We, Fr 9:30 AM – 10:20 AM  
RCB IMAGTH, Burnaby

**EXAM TIMES + LOCATION:**

Dec 8, 2016  
12:00 PM – 3:00 PM  
SSCB 9201, Burnaby

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**INSTRUCTOR:**

Joan Hu  
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1 778 782-6714  
Office: SC-K10555

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**PREREQUISITES:**

or Corequisite: MATH 152 or 155 or 158.

### Description

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**CALENDAR DESCRIPTION:**

Basic laws of probability, sample distributions. Introduction to statistical inference and applications. Quantitative.

**COURSE DETAILS:**

**Lab Instructor: Marie Loughin**

### Outline:

1. Introduction to graphical and numerical descriptive statistics including histogram, boxplot, scatterplot, sample mean, sample median, sample standard deviation and sample correlation coefficient.
2. Elementary probability rules, basic combinatorial formulae, conditional probability and independence.
3. Introduction to discrete distributions including probability mass function, expectation, binomial distribution and Poisson distribution.
4. Introduction to continuous distributions including probability density function, expectation, cumulative distribution function, uniform distribution, gamma distribution, exponential distribution, normal distribution, normal approximation to the binomial distribution, jointly distributed random variables, statistics and their distributions, Central Limit Theorem.
5. Single sample inference including estimation and testing for proportions and means.
6. Two sample inference including estimation and testing for differences in proportions and differences in means, paired data.

### Grading

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Midterm 1	11%
Midterm 2	11%
Midterm 3	11%

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Midterm 4

11%

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Final Exam

56%

NOTES:

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

There will be no make-up midterms. Homework will be assigned but not collected/marked

## Materials

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REQUIRED READING:

**Required Textbook:**

***Introduction to Probability and Statistics, 2nd ed.*** by Tim Swartz. Publisher: Pearson.

ISBN: 978-1-269-73721-0

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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 visit <http://www.stat.sfu.ca/teaching/need-a-tutor-.html>. We accept no responsibility for the consequences of any actions taken related to tutors.

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Each student is responsible for his or her conduct as it affects the University community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the University. <http://www.sfu.ca/policies/gazette/student/s10-01.html>

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