SPRING 2019 - STAT 270 D100

INTRODUCTION TO PROBABILITY AND STATISTICS (3)

Class Number: 3418 *Delivery Method: In Person*

COURSE TIMES + LOCATION:

Mo, Fr 9:30 AM – 10:20 AM
WMC 3520, Burnaby

We 9:30 AM – 10:20 AM
SSCC 9002, Burnaby

EXAM TIMES + LOCATION:

Apr 13, 2019
3:30 PM – 6:30 PM
RCB IMAGTH, Burnaby

INSTRUCTOR:

Tim Swartz
tswartz@sfu.ca
1 778 782-4579
Office: SC-K10539

PREREQUISITES:

or Corequisite: MATH 152 or 155 or 158. Students wishing an intuitive appreciation of a broad range of statistical strategies may wish to take STAT 100 first.

Description

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 the histogram, boxplot, scatterplot, sample mean, sample median, sample standard deviation, and sample correlation coefficient.
2. Elementary probability rules, basic combinatorial formulae, conditional probability, Bayes' Theorem, and independence.
3. Introduction to discrete distributions including the probability mass functions, expectation, the binomial distribution, and the Poisson distribution.
4. Introduction to continuous distributions including the probability density function, expectation, variance, coefficient of variation, the 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, the Central Limit Theorem.
5. Single sample inference including estimation and testing of proportions and means.
6. Two sample inference including estimation and testing of differences in proportions and differences in means (paired and non-paired data).

Grading

Quiz 1	12%
Quiz 2	12%

Quiz 3	12%
Quiz 4	12%
Final Exam	52%

NOTES:

There will be no make-up midterms.
*** You must pass the final exam in order to pass the course.**

Above grading is subject to change.

Materials

MATERIALS + SUPPLIES:

R can be accessed via Jupyter, an online platform, at https://sfu.syzygy.ca/. Alternatively, R Studio and R statistical software can be downloaded free of charge from https://www.rstudio.com/ and https://cran.r-project.org/, respectively.

REQUIRED READING:

Required Textbook:

Introduction to Probability and Statistics, 2nd ed. by Tim Swartz. Publisher: Pearson.
ISBN: 978-1-269-73721-0

DEPARTMENT UNDERGRADUATE NOTES:

Students with Disabilites:
Students requiring accommodations as a result of disability must contact the Centre for Accessible Learning 778-782-3112 or 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.

REGISTRAR NOTES:

SFU's Academic Integrity web site http://www.sfu.ca/students/academicintegrity.html is filled with information on what is meant by academic dishonesty, where you can find resources to help with your studies and the consequences of cheating. Check out the site for more information and videos that help explain the issues in plain English.

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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