FALL 2019 - STAT 305 D100

INTRODUCTION TO BIOSTATISTICAL METHODS FOR HEALTH SCIENCES (3)

Class Number: 4558 ***Delivery Method: In Person***

Overview

COURSE TIMES + LOCATION:

Fr 12:30 PM – 2:20 PM
RCB IMAGTH, Burnaby

We 1:30 PM – 2:20 PM
RCB IMAGTH, Burnaby

EXAM TIME + LOCATION:

Oct 15, 2019
Tue 4:30 PM – 6:20 PM

Nov 19, 2019
Tue 4:30 PM – 6:20 PM

Dec 13, 2019
Fri 8:30 AM – 11:30 AM
Location: SSCC 9001, Burnaby

INSTRUCTOR:

Rodriguez, Jorge
jer3@sfu.ca

PREREQUISITES:
One of STAT 201, STAT 203, STAT 205, STAT 270, or BUEC 232.

Description

CALENDAR DESCRIPTION:
Intermediate statistical techniques for the health sciences. Review of introductory concepts in statistics and probability including hypothesis testing, estimation and confidence intervals for means and proportions. Contingency tables and the analysis of multiple 2x2 tables. Correlation and regression. Multiple regression and model selection. Logistic regression and odds ratios. Basic concepts in survival analysis. This course may not be used to satisfy the upper division requirements of the Statistics major or honours program. Quantitative

COURSE TOPICS:

The scheduling of the following topics is approximate:

1. Review of introductory statistics from the pre-requisite course: Hypothesis testing, estimation and confidence intervals for means and proportions.
2. Review of basic concepts of probability with applications including diagnostic testing, sensitivity and specificity, the relative risk and the odds ratio.
3. Contingency Tables: The Chi-square test, r x c tables, multiple 2x2 tables, Simpson's paradox, Mantel- Haenszel method.
4. Correlation and simple linear regression: Regression concepts, estimation and testing for regression coefficients, evaluation of the model.
5. Multiple linear regression: Inference for regression coefficients, confounding and interaction, indicator variables, model selection, prediction, model assumptions and checking.
6. Logistic regression: Odds ratios, inference for regression coefficients, model assumptions, case-control studies.
7. Time permitting: Survival analysis including life tables, cens[illegible]

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.