SPRING 2023 - STAT 604 G100

ANALYSIS OF EXPERIMENTAL AND OBSERVATIONAL DATA (3)

Class Number: 5927 Delivery Method: In Person

COURSE TIMES + LOCATION:

Mo 12:30 PM – 2:20 PM
SSCB 9200, Burnaby

We 12:30 PM – 1:20 PM
SSCB 9200, Burnaby

EXAM TIMES + LOCATION:

Apr 20, 2023
12:00 PM – 3:00 PM
AQ 3181, Burnaby

INSTRUCTOR:

Owen Ward
oward@sfu.ca

PREREQUISITES:

Any course in Statistics. Open only to students in departments other than Statistics and Actuarial Science.

Description

CALENDAR DESCRIPTION:

The standard techniques of multiple regression analysis, analysis of variance, and analysis of covariance, and their role in experimental research. Students with credit for STAT 302 may not take this course for further credit.

COURSE DETAILS:

STAT Workshop Coordinators: Marie Loughin/Harsha Perera

Outline:

Review: Important concepts from the irst course in statistics will be reviewed.
Simple linear regression: models summarizing the relationship between two quantitative variables. This unit includes the estimation and interpretation of model parameters, assessment of the model's it, inference, and prediction.
Multiple regression: models in which several explanatory variables combine to help explain the variability in a quantitative response variable. This unit includes model assessment, comparison of two regression lines, interactions between explanatory variables, and multicollinearity. Additional topics may include identifying unusual points, variable selection, and/or coding categorical predictors.
Analysis of variance (ANOVA): models that allow the comparison of means of a quantitative response variable across groups de ined by a categorical explanatory variable. This unit includes model assessment, inference methods for comparison of means, and tests for homogeneity of variances.
Other topics may include analysis of covariance, the problem of multiple testing, and/or block designs.

Grading