

SPRING 2016 - STAT 475 D100

**APPLIED DISCRETE DATA ANALYSIS (3)***Class Number: 2944 Delivery Method: In Person***COURSE TIMES + LOCATION:**

Mo 12:30 PM – 2:20 PM

AQ 3153, Burnaby

We 12:30 PM – 1:20 PM

AQ 3153, Burnaby

**EXAM TIMES + LOCATION:**

Apr 21, 2016

8:30 AM – 11:30 AM

AQ 3181, Burnaby

**INSTRUCTOR:****Thomas Loughin**

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Office: SC-K10549

**PREREQUISITES:**

STAT 302 or STAT 305 or STAT 350.

## Description

**CALENDAR DESCRIPTION:**

Introduction to standard methodology for analyzing categorical data including chi-squared tests for two- and multi-way contingency tables, logistic regression, and loglinear (Poisson) regression. Students with credit for the former STAT 402 or 602 may not take this course for further credit. Quantitative.

**COURSE DETAILS:****Course Outline:**

This course introduces students to the most important methods for analyzing categorical data. The primary focus of the course is on regression models for counts and proportions. It will also cover classical methods in categorical data analysis, such as inference for one or two proportions and chi-squared tests.

1. Introduction and review: likelihood methods and R
2. Analysis with binary variables
3. Analysis with multcategory variables
4. Analysis with count response
5. Model selection and evaluation
6. Further topics

**\*The first two weeks of tutorials will be in the following computing labs:**

D102 - Jan 18th and 25th - AQ3145

D103 - Jan 13th and 20th - AQ3145

D104 - Jan 13th and 20th - AQ3148.1

D105 - Jan 13th and 20th - AQ3145

## Grading

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Assignments	15%
Midterms	40%
Final	45%

### NOTES:

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

## Materials

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### REQUIRED READING:

#### Required Text:

***Analysis of Categorical Data with R*, by: Christopher R. Bilder and Thomas M. Loughin. Publisher: CRC Press**

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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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### REGISTRAR NOTES:

SFU's Academic Integrity web site <http://students.sfu.ca/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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