

SPRING 2016 - STAT 675 G100

**APPLIED DISCRETE DATA ANALYSIS (3)***Class Number: 5590 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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778-782-8037

Office: SC-K10549

**PREREQUISITES:**

STAT 302 or STAT 305 or STAT 650 or permission of instructor. Open only to graduate students in departments other than Statistics & Actuarial Science.

## 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 STAT 402 or 602 may not take this course for further credit.

**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

## Grading

Assignments	15%
Midterms	40%
Final	45%

**NOTES:**

***Graduate students in STAT 675 will be graded separately from students in STAT 475 using standards appropriate to graduate level course work.***

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

**Materials****REQUIRED READING:****Required Text:**

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

**GRADUATE STUDIES NOTES:**

Important dates and deadlines for graduate students are found here: [http://www.sfu.ca/dean-gradstudies/current/important\\_dates/guidelines.html](http://www.sfu.ca/dean-gradstudies/current/important_dates/guidelines.html). The deadline to drop a course with a 100% refund is the end of week 2. The deadline to drop with no notation on your transcript is the end of week 3.

**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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