Revised

STA 303H1S / 1002HS - DATA ANALYSIS II

Winter 2015

Lectures: Tuesdays and Thursdays 10:10-12:00 in **WB 116**
No lectures on February 17 and 19 (during Reading Week)

Course website: Available through `https://portal.utoronto.ca` (UT Blackboard)
Includes discussion forum. Use the forum for course questions.

Instructor: Dr. Shivon Sue-Chee
E-mail: shivon@utstat.utoronto.ca
Use e-mail communication sparingly for personal matters only.

Office hours: Tuesdays 12:30-13:30 and Thursdays 12:00-13:00 in **SS 6026**
More TA office/lab hours will be scheduled before assignments and tests due dates.

Course content

The overall theme of this course is the use of linear models in situations where the assumptions of the multiple regression model developed in STA 302/1001 may not apply. The topics fall into two main categories:

I. Categorical and count variables- including analysis of variance, logistic regression, Poisson regression, and log-linear models for contingency tables, and

II. Correlated observations- including time series and repeated measures analysis.

If time permits, we will also look at non-linear regression and non-parametric data smoothing techniques. Emphasis will be on methodology and interpretation of the results of data analysis, rather than the underlying theory.

Pre-requisite

STA 302H1 / STA 1001H. I am assuming that you have used SAS previously, at the level used in STA 302/1001.

Textbooks

- *Categorical Data Analysis, 3rd edition* by Alan Agresti (Wiley)
  Includes material on contingency tables, Poisson regression, log-linear models, and logistic regression. Chapters 2, 4, 5, and 6 contain material relevant to this course. (Will be on reserve at the Mathematics Library.)

- *A Modern Approach to Regression with R* by Simon J. Sheather (Springer)
  Chapter 8 (logistic regression), Chapter 9 (time series) and Chapter 10 (repeated measures). Available as an electronic resource through the University of Toronto library website.

Course website

The course website is available through portal and will be used to post lecture notes, practice problems, SAS examples used in lecture, assignments, and previous exams. When looking at previous exams, resist the temptation to look at the solutions until you have tried the questions and spent at least a day thinking about solutions to problems of which you are unsure. Blackboard will be used for announcements and your grades will be posted there. You are also encouraged to use the discussion board on Blackboard for all course-related questions.

I will provide you with the SAS syntax for all of the examples in lecture, which should be sufficient for you to do your assignments.

Accessibility Needs
The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom, or course materials, please contact Accessibility Services as soon as possible at
accessibility.services@utoronto.ca or `http://www.accessibility.utoronto.ca`.

Academic Integrity
You are responsible for knowing the content of the University of Toronto's Code of Behaviour on Academic Matters at `http://www.artsci.utoronto.ca/osai/students`. If you have any questions about what is or is not permitted in this course, please do not hesitate to contact me. It is legitimate to discuss assignment problems with other students in the class. However, assignments must be written up completely by yourself. Do not let other students read your completed assignment solutions as this can lead to copying. Failure to comply with this is a **serious** academic offence.