

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 6025**
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.

Communication

In general, I am not able to answer questions about the course material by e-mail. Before you send an e-mail, make sure that you are not asking for information that is already on the course website, or questions about the course material or assignments that are more appropriately discussed during office hours. If you do not get a response, this may be why. Students are encouraged to post questions about the course material on the discussion board on Blackboard, which will allow other students to join the discussion. This will be monitored by TAs and checked every two days.

E-mail is appropriate for private communication. Use your utoronto.ca or mail.utoronto.ca account. I will generally answer e-mail within two business days.

Announcements will be posted on Blackboard. Please check there regularly. If an urgent matter arises, I may contact the entire class by e-mail. In order to receive these messages, please make sure that your ROSI account has your utoronto.ca e-mail.

The TAs and instructor are here to help you. Ask questions and let me know if there are any concerns.

Evaluation

	Weight	Date	Time	Location
Assignment 1	10%	Thursday, February 5	due at 11:00	In class
Term Test	30%	Tuesday, February 24	10:10-11:40	TBA
Assignment 2	10%	Thursday, March 26	due at 11:00	In class
Final Exam	50%	In April	TBA	scheduled by Faculty

Assignments are due at 11:00 sharp in class and late assignments will not be accepted. If your exam mark is better than your test mark, the exam weight will be 60% and the test weight will be 20%.

Practice problems will be posted on the web. The practice problems are to help you prepare for the test and exam and are not to be handed in.

The assignments will each be a data analysis project for which you will use SAS. You will not need to know SAS syntax on the tests and exam, but you will need to interpret output from SAS.

The test will be written in a room other than the lecture room (location to be announced (TBA)). If a test is missed for a valid reason, you must submit appropriate documentation within one week of the test. Print on it your name, student number, and date. If documentation is not received in time, your test mark will be zero. If a test is missed for a valid reason, its weight will be shifted to the final exam. Any requests to have marked work re-evaluated must be made in writing within one week of the date the work was returned to the class. The request must contain a justification for consideration.

Computing

We will be using SAS and I am assuming that students have used SAS before, for example in STA 302/1001. SAS is available on the CQUEST system. CQUEST computer labs are available in Ramsey Wright (RW) building. To get an account or renew your password, go to www.cquest.utoronto.ca. There you will also find information about using CQUEST, including a schedule showing when labs are booked by other courses. Students enrolled in STA 1002 should see me to get a CQUEST account. CQUEST is also accessible remotely by SSH; see CQUEST website for details.

A license for SAS for personal use can be purchased from the Information Commons Licensed Software Office on the first floor of Robarts Library. Go to www.utoronto.ca/ic/software for more information.

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.