University of Toronto

STA 303/1002 H5S: *Data Analysis II*

Winter 2014

LECTURES

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Office Hours: Tuesdays 12-1pm, Thursdays 12-1pm.
(Office hours may change or be increased before tests and assignment due dates)

Lecture Times:
Tuesdays 10am-12pm in ES 1050
Thursdays 10am-11am in MC 102

On some weeks, Thursday 11am-12pm will be used for extra office hours, lab/tutorial sessions conducted by teaching assistants, and for tests.

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: 1. categorical and count variables including analysis of variance, logistic regression, Poisson regression, and log-linear models for contingency tables, and 2. 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 'R' previously, at the level used in STA 302/1001.

References:
1. *An Introduction to Categorical Data Analysis* by Alan Agresti.
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. (On reserve at the Mathematics Library.)

2. *A Modern Approach to Regression with R* by Simon J. Sheather.
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.

Website & Portal

The website for this course is accessible via http://portal.utoronto.ca. To access course materials you must log on to Blackboard. The website is regularly updated with readings, practice problems, examples, lecture notes, and marks. Be sure to check the site regularly, it's your responsibility to know what's been posted.

Mark Calculation

Term Test	Thur Feb 27th	30%
Assignment 1	Thur Feb 6th	10%
Assignment 2	Thur Mar 27th	10%
Final Exam	April - Date TBA	50%

Statistical Computing

This course uses the statistical package *R. R* is free statistical software and it can be downloaded from http//cran.r-project.org/. An introduction to *R* is posted on the course website.

Term Test

The term test begins at 10:10am and may take place in a room other than the lecture room (location to be announced). There is no extra time given for late entrants. Note: your test solutions might be photocopied before being returned to you. The final exam covers material from the entire course.

Homework Problems

Homework problems are assigned for each topic and posted on portal. These are for practice only and do not need to be handed in.

Data Analysis Assignments

Data Analysis Assignments must be completed individually. Some questions require you to use 'R'. **You must relabel the required variable name with your surname. You may not alter the output (by typing or handwriting anything).** If you do not follow these rules, your assignment will not be accepted. Assignments are due on the due date at 10:10am sharp and **late assignments are not accepted.**

Missed Test Policy

If you miss the term test for a valid reason, you must submit documentation to the instructor within one week of the missed test. If you're absent for medical reasons, then submit a U of T medical certificate indicating that that you saw the doctor on the date of the missed test. If you're absent for any other reason, then submit appropriate official documentation. The instructor determines if your absence is legitimate. If your absence is classified as legitimate, the missing score will be substituted with your exam. A makeup test will not be scheduled. If your documentation is not received on time, your test mark will be zero.

Test Re-Mark Policy

Requests for test remarking must be made in writing. Submit a note explaining why you believe your solutions deserve more marks and attach it to the marked test. You must submit this at the time the test is returned back to you. Tests that are taken home cannot be resubmitted for remarks. Note: original test solutions may be photocopied before being returned to you.

Assignment Re-Mark Policy

Requests for remarking must be made in writing and submitted within one week of when the assignments was handed back to the class. Your request should contain justification.

Email Policy

Email is most appropriate for personal questions. In general, I am not able to answer technical 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 web site, 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. Questions about the course material can also be posted on the discussion board on Blackboard, which will allow other students to join the discussion. This will be monitored by TAs and checked every 2 days. If your question is conceptual and does not require calculations or an elaborate answer, you can ask me by email.

Please email me using your *@utoronto.ca address. You will not get a response if you email from other email addresses. The **subject line should contain your full name, student number, and the course number, and a subject**. Emails will be answered within two business days.

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

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: disability.services@utoronto.ca or http://studentlife.utoronto.ca/accessibility.

Academic Integrity

You are responsible for knowing the content of the University of Toronto's Code of Behaviour on Academic Matters at: http://www.governingcouncil.utoronto.ca/policies/behaveac.htm.

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 defense.