

UNIVERSITY OF TORONTO
STA221H1S-The Practice of Statistics II
 Summer 2016

Instructor: Bo Chen	Email	broad.chen@utoronto.ca
	Telephone	NA
	Office	6027, Sidney Smith Hall
	Office Hour	Thursdays 3:00 - 5:00pm
Lectures	Day and time	Tuesdays, Thursdays 7:00 - 10:00pm
	Location	SS1070
Tutorials	Day and time	Tuesdays, Thursdays 6:00 - 7:00pm
	Location	SS1070
Course website	http://portal.utoronto.ca	

Course Objectives

This course is a continuation of STA220H, with emphasis on the basic statistical methodologies needed in a broad variety of fields: simple and multiple regression, experimental design, analysis of variance and non-parametric procedures. The emphasis is on understanding the concepts and careful application of the basic techniques, using realistic data sets and R software.

Course webpage/Blackboard

The link to the course Blackboard is <http://portal.utoronto.ca>. Relevant course material will be made available on the Blackboard. Announcements, dates, problem sets, assignments, tutorials and aid centre information, and etc. will be posted on the Blackboard. So visit the Blackboard regularly.

Required Textbook

Stats: Data and Models, 2nd Canadian Edition, by DeVeaux, Velleman, Brock, Vukov and Wong (Pearson).

Computing Software

We will use R for computing examples. R is freely available for download at <http://cran.r-project.org> for Windows, Mac, and Linux operating systems. For the test and exam, you may be asked to interpret outputs from R.

Calculators

You will need a calculator in the test and exam. Any calculator that has logarithmic functions will be sufficient. Programmable calculators are not permitted on the test or exam. Calculators on phones or other devices equipped to communicate with the outside world will not be permitted during the term test and the final exam.

Tutorials

Tutorial begins on June 30. The major purpose of tutorial is discussion and review of course material. Bring to tutorial your solutions for the current tutorial assignment (posted on the course blackboard). Assignment #1 is due at your first tutorial, and similarly for Assignment #2 and so forth. These assignments will be discussed in tutorials.

There will be some assessment grade at each tutorial (0 - 2 scale) based on either a short quiz or submission of part of the current assignment. If you miss a tutorial/quiz for any reason, please discuss with your TA, and not the instructor. Your TA has full responsibility for their respective tutorial section.

Additional Sources of Help

Your primary source of help with difficulties is your TA in the scheduled tutorial, but additional assistance will be available at the Statistics Aid Centre, Room 1091, in Sidney Smith Hall. The scheduled TA office hours are: Tuesday 5-6pm, Thursday 5-6pm and Friday 10am-noon. TAs will be available for help starting from the second week (Jul 4), and feel free to drop in.

Evaluation

Type	Weight	Tentative Due Date	Location
Tutorial	10%	Tuesdays, Thursdays 6:00 - 7:00pm (Starting from Jun 30 to Aug 4 except Jul 19)	SS1070
Midterm	30%	6:10 - 7:40pm Tuesday, July 19 (followed by lecture starting from 8:00pm)	SS1070 & SS1086
Final exam	60%	TBA (Aug 9 - 15)	TBA

Important Date

The last day to drop S section code courses from academic record and GPA (without academic penalty, i.e. drop date) is July 25, 2016.

Missed Test

There are no make-up tests. Should you miss the term test due to illness, you are required to submit, within one week the proper University of Toronto "Verification of Student Illness or Injury" form.

For more information, go to <http://www.illnessverification.utoronto.ca>.

The test's weight will then be shifted to the exam. If this documentation is not received, your term test grade will be zero.

Lecture Schedule – Tentative

Week	Topics
Week 1 (Chapter 24)	Review of regression model (Chapter 7 & 8), regression parameter estimates, standard errors and confidence intervals, predicted values
Week 2 (Chapter 25)	One-way ANOVA, experimental design and ANOVA model, F-test, comparing means
Week 3 (Chapter 26)	Two-way ANOVA model, two-way ANOVA with interactions
Week 4 (Chapter 27)	Multiple regression model, inferences and tests, ANOVA table for multiple regression
Week 5 (Chapter 28)	Use of indicator variables, diagnosing regression models, model selection
Week 6 (Chapter 29)	Nonparametric tests: Wilcoxon rank sum test, Kruskal-Wallis test, Wilcoxon signed rank test, Friedman test, rank correlation

Academic Offences

Academic offences are unacceptable and harm everyone. E.g., some students have been known to alter a test paper after it is graded, and then re-submit it hoping for more marks! But, offenders are caught, and sanctions can be severe - zero in the course with annotation on the transcript for several years; suspension for a year; even expulsion. Various measures, announced and unannounced, will be taken throughout the year to reduce their incidence and to ensure successful prosecution (photocopying of graded tests, multiple versions of multiple choice exams, etc.). And please carefully note the following:

- Requests for a written test remark may only be considered if you write your test in ink.
- Grading oversights such as addition errors and overlooked work must be reported to your TA immediately upon receiving your test paper at class. So check it over as soon as you get it back.

Feel free to discuss weekly assignments with others, but in the end, be sure to do all the computations, work and final write-up by yourself (i.e. plagiarism is unacceptable).

Accessibility Needs

The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns, please contact Accessibility Services as soon as possible at: disability.services@utoronto.ca or <http://studentlife.utoronto.ca/accessibility>