

STA 304H1F / 1003HF - Surveys, Sampling and Observational Data
Summer 2015

- Lectures:** Tuesdays and Thursdays 6-9pm in **SS 2117**
- Course website:** Available through <https://portal.utoronto.ca> (UT Blackboard)
- Instructor:** Dr. Shivon Sue-Chee (**E-mail:** shivon@utstat.utoronto.ca)
Office hours: T and R 4-5pm in **SS 6026**
- Teaching Assistants:** Reihaneh, David, and Jinyoung
Office hours: T, W and R 5-6pm in **SS 1091**

Course content

This course teaches mathematical and statistical reasoning behind sampling, aspects of inference from surveys, and the interplay with observational studies. In addition to the topics listed in the calendar description, I will include discussion of current studies reported in the news.

The undergraduate calendar description is:

- Design of surveys, sources of bias, randomized response surveys.
- Techniques of sampling; stratification, clustering, unequal probability selection.
- Sampling inference, estimates of population mean and variances, ratio estimation.
- Observational data; correlation vs. causation, missing data, sources of bias.

Pre-requisite

ECO220Y1/ECO227Y1/GGR270Y1/PSY201H1/SOC300Y1/STA220H1/STA255H1/STA261H1/
STA248H1/EEB225H1
Exclusion: STA322H1

Textbooks

- *Elementary Survey Sampling, 7th edition* by Scheaffer, Mendenhall, Ott and Gerow (Brooks/Cole)
We will cover most of Chapters 1 through 5, and selected parts of Chapters 6 through 10.
- *Sampling: Design and Analysis, 2nd edition* by Sharon Lohr (Duxbury)
This will be a useful reference.

Evaluation

	Weight	Date	Time	Location
Assignment 1	10%	TBA	due at 6:10pm	In class
Term Test	30%	Tuesday, June 2	6:10-8:10pm	TBA
Assignment 2	10%	TBA	due at 6:10pm	In class
Final Exam	50%	Between June 22-26	(2 hrs)	TBA

Non-programmable calculators are permitted on the test and exam. A one-sided, handwritten 8-1/2" x 11" aid sheet is allowed in the test (two-sided on the final exam).

If the test is missed for a valid reason, you must submit appropriate documentation within one week of the test. If documentation is not received in time, your test mark will be zero. If the test is missed for a valid reason, its weight will be shifted to the final exam. Requests for test remarking must be submitted at the time the test is returned back to you. The request must contain a justification and will only be considered

for tests which were written in ink.

Homework

Regular homework will be posted in the lecture notes and discussed in class, but not to be handed in.

Computing

This course does not require extensive computing, but there will be some calculations needed. You are welcome to use a programmable calculator, or the statistical computing package of your choice. The textbook web site provides some Excel macros for the examples in the text, and Appendix B gives SAS macros as well. I will use the R computing package, and will refer to it from time to time. Additional help with R will be provided during the latter part of classes.

Course website

The course website is available through portal and will be regularly updated with lecture notes, practice problems, assignments, and readings. Blackboard will also be used for announcements and your grades.

The discussion board will be open to all and you are encouraged to use it for course-related questions. Myself, TAs and fellow students will join the discussion.

Communication

In general, I am not able to answer questions about the course material by e-mail. Students are encouraged to attend lectures, Instructor and/or TA office hours, or post questions about the course material on the discussion board on Blackboard. E-mail is appropriate for personal matters only. Use your utoronto.ca or mail.utoronto.ca account. I will generally answer e-mail within one business day.

Students in 1003

I will add you as a guest to STA304, so you can access announcements, notes, handouts and so on. Please send me an email if this is not working. Your grades will be posted to the STA1003 page.

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.

