Econ 327
Introduction to Empirical Methods
Term 1, 2016-2017

Instructor: Hiro Kasahara

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Course webpage: http://faculty.arts.ubc.ca/hkasahara/econ327.html
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Time and Location: Tuesday and Thursday 14:00-15:30, Iona 301

Office Hours: Monday 10:30-11:30 or by appointment

Teaching Assistant: Neil Lloyd (email: neil.lloyd@alumni.ubc.ca)

Lab Sessions: Tues/Wed/Thurs 17:00-18:00 at Iona 301 (Lecture) and BIE Computer Lab (Computer)

Textbook:

Main Textbook: Newbold, Carloson, and Thorne, *Statistics for Business and Economics, 8th edition* **(required)** [The older edition is also fine.]

Other Reference: Hogg, Tanis, and Zimmerman, *Probability and Statistical Inference* **(not required)**

Course Description:

This course is an introduction to probability and statistics and covers some basic tools for the statistical analysis of economic data. Topics include descriptive statistics, random variables and probability distributions, confidence interval estimation and hypothesis testing.

The prerequisites for Economics 327 are: All of ECON 101, ECON 102, MATH 105 and one of MATH 104, MATH 184. Students are expected to be familiar with basic concepts in calculus.

Assignments:

There will be assignments. No work will be accepted after the lecture on the due date, unless a written proof of the emergency situation that causes the delay is provided. If a student finds a problem in grading of a problem set, she/he should immediately talk to the TA.

When you submit your homework assignments, you can submit as a group of two or three (but not four, i.e., the maximum number of each group is three). If you like, you can do

your assignment by yourself and submit it as an individual rather than as a group. When you submit your assignment as a group, please make sure that the names and student IDs of all members of your group are written on the assignment. Everyone in the same group will get the same score for each assignment. Please don't be a free rider. Asking your classmates to put your name on an assignment when you do not do anything on the assignment is prohibited. All members of the group must work together to complete an assignment if you submit your assignment as a group.

Many of the assignment questions are from textbook as well as past assignments/exams. Please do not copy and paste the answer you find over internet. If you copy and paste without understanding the content, this is often obvious to me and the TA, and you may fail the course.

In addition to analytical exercises, the students will receive practical questions requiring handling and analyzing data using statistical software package Stata. In this case, please see me. Stata training will be provided during the TA sessions.

Stata:

Stata is available on the computers in Buchanan B101, B125, and B126. These rooms are often booked for other classes. Please check the lab schedule at

http://isit.arts.ubc.ca/support/the-arts-computer-labs/

Buchannan B125 and B126 are reserved for this class on Tuesday between 17:00 and 18:30.

The Stata is also available for purchase at special GradPlan pricing:

http://www.stata.com/order/new/edu/gradplans/campus-gradplan/

If you do not have any prior experience in statistical software like Stata, you might feel that learning Stata is difficult. While there is no easy way to learn statistical softwares other than trials and errors, and a bit of help from Stata help search and Google search, doing some online tutorials will give you a good start. Many excellent Stata tutorials can be found online.

- Stata tutorial at Princeton. Visit

  http://data.princeton.edu/stata/

  I strongly recommend going through this online tutorial; sit down in front of computer, open Stata, and type Stata commands on command window or do-file to replicate the results while read through the document on the webpage.

- Stata website at UCLA. Visit http://www.ats.ucla.edu/stat/stata/. This website gives a lot of resources for Stata. For beginners, the following site is especially useful:

  http://www.ats.ucla.edu/stat/stata/modules/

  By the time you finish this course, I recommend you to spend enough time on replicating the results for "Fundamentals of Using Stata (part I)", "Fundamentals of Using Stata (part II)", "Graphics", "Reading Data in Stata", and "Basic Data Management in Stata."

No Laptop Use in Classrooms:

You are not allowed to use laptop in classroom. There is empirical evidence against laptop use in classrooms—students with laptop computers often perform unrelated task and "the level of laptop use was negatively related to several measures of student learning" (Carrie, 2008). More importantly, evidence also suggests that the use of laptop computers has negative externality to nearby peers (Sana, Weston, and Cepeda, 2013) because your fellow students will be destructed when you are searching over internet. The exception is the use of tablet: you may use tablet on flat surface for note-taking by writing directly with stylus. No typing via keyboards, though.[1]

Midterm Exam:

The **midterm exam** will be held from 14:00-15:30 on Tuesday, October 18 (Location: Iona 301).

Grading: Assignments (10% of the final grade), a midterm exam (30%), and a final exam (60%). In computing the final grade, the worst homework assignment will be ignored. While assignments receive relatively low weights, completing assignments is very important. In the past year, the average final percent grade among students who did not regularly submit assignments was 43 percent, and the majority of them received F. This suggests that, if you do not complete assignments, you are likely to fail this course.

Topics:

1. **Describing Data: Graphical**(Ch 1).
2. **Describing Data: Numerical** (Ch 2).
3. **Probability**(Ch 3).

[1]There is evidence that writing leads to better learning than typing. See http://pss.sagepub.com/content/early/2014/04/22/0956797614524581.abstract.

4. **Discrete Random Variables and Probability Distributions**(Ch 4).

5. **Continuous Random Variables and Probability Distributions**(Ch 5).

6. **Sampling and Sampling Distributions**(Ch 6).

7. **Estimation**(Ch 7 and 8).

8. **Hypothesis Testing**(Ch 9 and 10).