

Boston College
Department of Economics

Econ115008/9 Spring 2017 Syllabus

Statistics Lab
Econ115005/9
Spring 2017
Class Schedule: Fridays at 10/11am
Location: McGuinn 029/030

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Office Hours: Thursday 3:30 – 5:00 pm
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Course Summary

Important! This lab is NOT directly linked to your statistics class, despite of the course description. For example, we will not talk about the conditional probability, the Law of large numbers, or the Central Limit Theorem.

We will spend much of the time learning how to deal with data using Stata. You will learn practical skills, which includes downloading, importing, cleaning, combining, rearranging, and/or summarizing data. Having equipped with Stata, this course will be your first step to try to link the real world data to the theory you've learned (or you will learn) in the Statistics class.

As a bridge of theory into data, you will try to follow a research process in the form of assignments. Specifically, when I assign a problem sets, they will try to answer a specific research question, so that answering those questions should guide you how to conduct a data analysis.

Textbooks:

No textbooks required.

"The Workflow of Data Analysis Using Stata," by J. Scott Long is a good source if who want more.

The following is from one of my colleagues; "although you will be able to learn most of the additional Stata commands you need from internet searches and by reading the Stata help files, such searches will not teach you habits to make your work replicable, organized, well-documented, and efficient. Long's book is about developing those good research habits, particular for researchers using Stata."

Software:

Stata 14 (via BC Server)

Because you can use Stata via the BC server, you do not need to purchase a copy. To learn how to access Stata at BC, visit http://www.bc.edu/offices/help/teaching/app_server.html

You should also learn to access and use the BC appsstorage server, which hosts a drive on which you can save files. To learn how to access the appsstorage server, visit https://www.bc.edu/offices/help/teaching/app_server/apps-files/saving.html

Grading

You will not get a separate grade for this lab. Instead, I will submit your grade for this lab to your statistics professor, and it will be incorporated into your grade in the statistics class. The professor will decide the proportion of this lab in grading statistics class.

Your grade for this lab will consist of three categories:

1. Attendance (20%)

You can freely miss 2 classes without any penalty. After that, 1 miss means 1% loss in attendance grade.

2. Quizzes (30%)

There will be 3 in-class quizzes, which will ask you Stata skills that are developed in the previous sections. The purpose of this is to make you review the course materials so that you could be used to playing with data on Stata.

3. Homework (50%)

There will be four assignments. These assignments are the primary method by which you will learn and practice the Stata skills that are a significant focus of this lab.

Late homework will lose points as follows. For each day that an assignment is late it will be worth 20 percentage points less than homework submitted on time. For example, an assignment submitted 1 day late is worth at most 80%, and an assignment submitted 4 days late is worth at most 20%, of the total points for the assignment.

Group Work Policy

You are free to help each other with the homework exercises, but all of the work (that is, all of the typing) that you submit should be your own. Collaboration is **not** permitted on quizzes.

Academic Integrity

A breach of academic integrity will result in failure of the entire lab (i.e., a grade of zero). For more information on the Boston College academic integrity policies and procedures, visit <http://www.bc.edu/offices/stserv/academic/integrity.html>

Schedule

| Lab #: | Planned Topic | Quiz and Homework |
|--------------|--|-----------------------------------|
| 1 (Jan.20) | Course Intro; BC Resources; | |
| 2 (Jan.27) | Introduction: course overview; Stata interface; managing folder in L drive; current working directory; opening a sample data set; | |
| 3 (Feb.3) | Data works: Data Browse; observations and variables; using Data Editor; using commands; basic statistics, creating and changing variables; | |
| 4 (Feb.10) | Do file and log file: why and how to use do files and log files; template do file; saving and managing do files for each project; repeating data works using a template do file | |
| 5 (Feb.17) | Review and Quiz | Quiz 1 in class |
| | | Assignment 1 (due Feb.24) |
| 6 (Feb. 24) | More data works: sorting observations; list command; drop and keep commands; if conditions | |
| 7 (Mar.3) | Even more data works: importing data into Stata; changing variable names; labeling the variables; saving data file | |
| Mar.10 | Spring vacation—no class | |
| 8 (Mar.17) | Graphs: drawing two-way graphs; combining graphs; saving and displaying graphs | |
| 9 (Mar.24) | Review and Quiz | Quiz 2 in class |
| | | Assignment 2 (due Mar. 31) |
| 10 (Mar.31) | Hypothesis testing: test of means | |
| 11 (Apr. 7) | Regression: correlation and causation; dependent variable and independent variables; | |
| 12 (Apr. 14) | Easter break –no class | |
| 13 (Apr. 21) | Multiple regression and interpretation | |
| | | Assignment 3 (due Apr.28) |
| 14 (Apr. 28) | Review and Quiz | Quiz 3 in class |
| May. 5 | Study day—no class | |
| | | Assignment 4 (due May.12) |