

**EC305: Economic Statistics (2nd Half)**  
Boston University  
Department of Economics  
Spring 2014

**Instructor**

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Office hours: Tue, Thu 9:00-10:30am  
Lecture: Mon, Wed 3:30-5:00pm, CAS 235

**Teaching Assistant**

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**Objectives**

The aim of this course is to familiarize the students with fundamental concepts in modern statistics and to build their skills to numerically analyze data. This second half of the course will cover three types of inference: estimation, hypothesis testing, and regression analysis. We will study how to estimate a population characteristic by a point or an interval using a sample of data. We will also study how to test a statistical hypothesis about population characteristics. Finally, we will cover how to analyze relationships between two or more economic variables. The emphasis of this class will be on how to apply these statistical inference methods to economic data. After completing this course, the students are expected to be ready for analyzing economic and business data such as GDP, firm profits, and stock returns.

**Course website:**

Blackboard Learn site ID: 14sprgcasec305\_a1

Announcements will be made through the course website. Please check it periodically.

**Prerequisites**

EC101 or EC111  
EC102 or EC112

No prior preparation in statistics is required, but familiarity with basic algebra and calculus is assumed.

## **Textbook**

Paul Newbold, William Carlson, and Betty Thorne (2009) “Statistics for Business and Economics (8th Edition with CD),” Pearson. This book is available at Barnes & Noble at Boston University.

## **Grading and Exam policies**

The final grade will be determined based on problem sets (10% of final grade) and a final exam (40% of final grade). This will account for 50% of the grade for the full course.

-Problem sets:

There will be three Problem Sets in this half of the course. The due dates will be announced in class. You will have one week to solve each problem set. You are encouraged to work in groups on problem sets, but you must turn in your own copy. Late problem sets will not be accepted as the answer key will be posted on the course website immediately. There will be some questions that require a spreadsheet software such as Microsoft Excel and OpenOffice.org. I will demonstrate in class how to use these softwares for analyzing data. When you report graphs or tables created by them, you must make sure that they have meaningful titles and labels.

-Exams:

The final exam will be held on Saturday, May 10, 12:30-2:30. You should periodically check the exam schedule on the Student Link: [http://www.bu.edu/link/bin/uiscgi\\_studentlink.pl](http://www.bu.edu/link/bin/uiscgi_studentlink.pl) for any variations and location changes.

The exam will be closed-book, but you are allowed to bring a two-sided hand-written cheat sheet. You may use a calculator during exams. A simple one is enough. If you have questions on grading (both problem sets and exams), you must contact the TA within a week after you receive your homework or exams. There will be no regarding of exams written in pencil. Makeup exams will only be given if absence is due to medical reasons (Doctors certificate required).

## **Academic conduct**

Students should know and understand the CAS Academic Conduct Code. Copies of the CAS Academic Conduct Code are available in room CAS 105 and on the website <http://www.bu.edu/cas/academics/programs/conductcode.html>. Any suspected academic misconduct will be reported to the Dean’s Office.

## **Office hours**

You are encouraged to come to our office hours if you have any questions on the course material. If you are unable to come to our regular office hours, please make an appointment by sending us an email. If you have questions that need brief answers, you can also ask me or Henry by sending an email, but please be aware that we may not be able to answer questions that need lengthy explanations. If you have such questions, please come to our office hours.

## Course outline

The following is a tentative schedule of the topics we will cover. Corresponding sections in the textbook (NCT) are listed below. Please note that there might be slight variations as we progress.

- Statistical Inference, NCT 6-10
  - Sampling and Sampling distributions, NCT 6.1-6.4
  - Point estimation, NCT 7.1
  - Interval estimation, NCT 7.2-7.4
  - Hypothesis tests, NCT 9.1-9.6
- Regression Analysis
  - Simple Regression, NCT 11
  - Multiple Regression, NCT 12