Economic Statistics EC 305
Boston University
Syllabus
Summer I, 2009

Instructor: Vladimir Yankov
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Lectures: Mon-Tue-Wed, 6 pm - 8:30 pm, CAS B14
Office hours: Mon and Thu 11:30 am - 12:30 am, 270 Bay State Road, SSW building, room 408

1 Description

This course will provide a solid foundation in Probability and Statistics for economists and other social scientists. We will emphasize topics needed in the further study of Econometrics as well as higher level courses in Finance and Economics. No prior preparation in probability and statistics is required, but familiarity with basic algebra and calculus is assumed.

Textbook The textbook for the course is *"Statistics for Business and Economics and Student CD" (6th Edition) (Hardcover) Paul Newbold (Author), William L. Carlson (Author), Betty Thorne (Author)*

Grading The evaluation for the course will be coming from the following components. I am going to give 5 assignments which will add to a total of 30 % percent of the final grade (6 % each). These will be due and discussed on Monday. You are allowed to work in groups on the assignments but everyone has to submit his or her own copy.

There is going to be a midterm exam given on 3 June which counts for 25 % of the grade. There is going to be a final exam in the last day of class (24 June) which counts for 40 % of the final grade. Class participation is encouraged and accounts for 5 % of the grade plus a bonus 5 % for extra participation. Class participation points are earned during the discussion on Monday when I will call on people to solve problems from the homework. In fairness to students who complete assignments on time, late homework sets will be given 0 % credit but will be graded, nevertheless. Since the course is very intense, I encourage you to start working on the problem sets as soon as possible. Also make use of the office hours where I will discuss homeworks and give hints on how to solve problems.

Software Many of the problem sets will require data manipulation. For that we will be using programs like Excel and Matlab as well as the software used in the textbook - Minitab.

No prior knowledge or purchase of this software is required but you need to make effort to have access to a computer with the required software. Matlab and Excel are available at the computer labs on Cummington St. If you have problems with software and data manipulation please contact me immediately. I will distribute materials and have a tutorial on how to handle data with Excel and Matlab. Each assignment will contain all necessary instructions on how to do things on the computer. Not having access to a computer is NOT a valid excuse for not submitting a homework assignment. Learning how to use a software to manipulate data is part of the course and part of your evaluation.

2 Lectures

This is a tentative schedule of the topics and corresponding chapters of the book we are going to cover. There might be slight variations as we progress but the dates of the exams and the due dates of the assignments are fixed.

1. Lecture 1 (19 May) Introduction - Ch. 1 - 3

2. Lecture 2 (20 May) Probability theory- Ch. 4

3. Lecture 3 (26 May) Discrete random variables and probability distributions - Ch. 5, (A1 due)

4. Lecture 4 (27 May) Continous random variables and probability distributions - Ch. 6

5. Lecture 5 (29 May)[1] Sampling and Sampling Distributions - Ch. 7

6. Lecture 6 (1 June) Estimation, estimators and estimates - Ch. 8 - (A2 due)

7. Lecture 7 (2 June) Confidence intervals - Ch. 9

8. Lecture 8 (3 June) - MIDTERM EXAM [2] -

9. Lecture 9 (8 June) Hypothesis testing - Ch. 10 (A3 due)

10. Lecture 10 (9 June) Hypothesis testing - Ch. 11

11. Lecture 11 (10 June) Analysis of variance - Ch. 17

12. Lecture 12 (15 June) Regression analysis - Ch. 12 - A4 due

13. Lecture 13 (16 June) Regression analysis - Ch. 13

14. Lecture 14 (17 June) Regression analysis - Ch. 13

15. Lecture 15 (22 June) Regression analysis - Ch. 14

16. Lecture 16 (23 June) Review A5 Due

17. Lecture 17 (24 June) - FINAL EXAM -

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[1]Substitute for Monday 25
[2]Last day to drop the class with W grade June 15, 2009

3   Academic conduct

Students should familiarize themselves with the University Code of Conduct:

`http://www.bu.edu/cas/students/undergrad-resources/code/`

as it will be strictly enforced. Taking any of the exams on dates other that the one specified should be arranged with me in advance and should have a valid excuse for doing so.