Economics 301: Econometrics I
Syllabus

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Class Time: Mondays and Wednesdays 12:00PM-1:15PM / 4:00PM-5:15PM / 5:30PM -6:45PM
Office Hours: Mondays and Wednesdays 2:45PM - 3:45PM (or by appointment)

Objectives:

The purpose of this course is to help students understand how to interpret economic data. To that end, you will learn how to do basic empirical research. To do empirical research means using statistical techniques to manage and analyze data. The main goal is to quantify how one economic variable (such as someone's education) affects another variable (for instance his wage). These techniques are used by both academic economists (professors) and professional economists (i.e. those working for business, government and NGOs). Academic economists use them, in large part, to test theories and models; professional economists do empirical work to help management with decision making. You will gain practical experience by solving the problems sets where you will be analyzing actual economic data.

Prerequisites:

ECON 211 (Economics Statistics) or PLS 211 (Quantitative Methods).

If you have a profound understanding of the following terms, you are on good foot:

- ✓ Population, Sample, Data
- ✓ Random Variable, Probability Distribution
- ✓ Correlation, Independence
- ✓ Moments of a Distribution: Expected Value, Variance, Covariance, Correlation
- ✓ Point Estimator, Interval Estimator (Confidence Interval)
- ✓ Sampling Distribution of an Estimator
- ✓ Properties of Estimators: Unbiasedness, Consistency, Efficiency

Otherwise, I would recommend you to go over the pre-requisite course you have taken in order to benefit the most from and succeed in this course.

Textbook:

Jeffrey Wooldridge, Introductory Econometrics, 5th edition

or

Jeffrey Wooldridge, Introduction to Econometrics, 2014 EMEA Edition.

These textbooks are exactly the same except the EMEA edition does not have the end-of-chapter questions. You need only one of these textbooks which contain the required reading for the class.

Computer Requirement:

Stata is the recommended software package and is available on all the machines in SHSS computer labs. You are expected to familiarize yourself with this package without losing your focus on the main material in the course. If there is another software package you are already familiar with or more interested in learning (EVIEWS, R, SAS and etc.), you might use that package for your homework assignments.

Course Grade:

There will be attendance (pop-up), homework assignments, a midterm exam and a final exam.

The attendance will be taken randomly a total of seven times in the semester. You will get full points from attendance if you are present five times out of seven times I take the attendance. If you are absent more than two times, you will lose one percentage point for each additional absence.

There will be eight or nine homework assignments. The overall homework percentage will be calculated after dropping your lowest homework grade. Late submissions will **NOT** be accepted.

The midterm exam will take place between 7:30pm-9:00pm on **Wednesday, September 28.** The final exam will be between 8:00pm-9:30pm on **Thursday, November 24**.

The final grade will be based on the following weights:

Attendance: 5%
Homework: 20%
Midterm: 35%
Final Exam: 40%

The numeric grade will be curved to obtain the letter grade.

Each student is expected to take all exams at the designated time and place. Make-up exams and assignments will **NOT** be given. If you miss the midterm due to serious illness, or injury of yourself or a close family member, its weight will be shifted to the final.

Academic Dishonesty:

Plagiarism or cheating will not be tolerated and sanctioned according to the procedures in the Student Code of Conduct for Nazarbayev University. Students should familiarize themselves with this code. Starting with this year, if you are found guilty of a category B or C misconduct will lose your **stipend** until the end of the next semester.

Please note than I have filed more than 30 academic misconduct cases in the last year. I also do not discuss plagiarism cases unless a student makes an appeal to the disciplinary committee where my original penalty might be decreased or increased.

You can find the university's official statement on plagiarism below:

Plagiarism is intentionally or carelessly presenting the work of another as one's own. It includes submitting an assignment purporting to be the student's original work which has wholly or in part been created by another person. It also includes the presentation of the work, ideas, representations, or words of another person without customary and proper acknowledgement of sources. Plagiarism occurs when a person:

1. Directly copies one or more sentences of another person's written work without proper citation. If another writer's words are used, you must place quotation marks around the quoted material and include a footnote or other indication of the source of the quotation. This includes cut and paste from the internet or other electronic sources;

2. Changes words but copies the sentence structure of a source without giving credit to the original source, or closely paraphrases one or more paragraphs without acknowledgement of the source of the ideas, or uses graphs, figures, drawings, charts or other visual/audio materials without acknowledging the source or the permission of the author;

3. Submits false or altered information in any academic exercise. This may include making up data for an experiment, altering data, citing nonexistent articles, contriving sources, etc.;

4. Turns in all or part of assignment done by another student and claims it as their own;

5. Uses a paper writing service, has another student write a paper, or uses a foreign language translation and submits it as their own original work.

Students with Disabilities:

Please meet me in person so that I can take the necessary measures to accommodate your needs.

Course Outline:

1. Introduction: What is Econometrics?
    - Chapter 1 & Appendix A
2. Simple Regression Model
    - Chapter 2 & Appendix B
3. Multiple Regression Analysis: Estimation
    - Chapters 3
4. Inference
    - Chapters 4
5. OLS Asymptotics
    - Chapter 5
6. Further Issues
    - Chapter 6
7. Binary (or Dummy) Variables
    - Chapter 7
8. Heteroskedasticity
    - Chapter 8
9. More on Specification and Issues
    - Chapter 9
10. Time Series (if time permits)
    - Chapter 10, 11 and 12