

**Department of Economics  
Princeton University**

**Economics 302  
Econometrics**

Syllabus, Fall 2017

Lectures: MW 1:30-2:50PM, Frist Campus Center 302

Professor: Kirill Evdokimov, 279 JRRB

Office Hours: T 1:45-2:30PM and W 2:50-3:50PM  
(please schedule the meetings via <http://wass.princeton.edu>)

Email: [kevdokim@princeton.edu](mailto:kevdokim@princeton.edu)

Precepts: M7:30PM x2, T10:00AM x2, and T11:00AM

Preceptors: Dmitry Mukhin ([mukhin@princeton.edu](mailto:mukhin@princeton.edu), office hours TBA)  
Andrei Zeleneev ([zeleneev@princeton.edu](mailto:zeleneev@princeton.edu), office hours TBA)

Web-page: <http://blackboard.princeton.edu>

**Description/Objectives:**

This course is an introduction to econometrics. Econometrics is a sub-discipline of statistics that provides methods for inferring economic structure from data. This course has two goals. The first goal is to give you means to evaluate an econometric analysis critically and logically. Second, you should be able to analyze a data set methodically and comprehensively using the tools of econometrics.

**Prerequisites:**

- ECO 202 or ORF 245
- MAT 103

**Textbook:**

Stock and Watson, Introduction to Econometrics, “3<sup>rd</sup> edition” or “Update (3<sup>rd</sup> edition)”.

**Requirements/Grading:**Final Exam: 50%

There will be a three-hour final exam (to be scheduled by the Office of the Registrar).

Midterm: 25%

The midterm will take place in-class on Wednesday, October 25. The midterm test is required. If a student misses the midterm test with his/her Dean’s approval the final exam will be reweighted appropriately.

Problem Set(s): 25%

There will be a number of problem sets (approximately one per week), which will count toward 25% of your final grade. You may work with other students on the problem sets, but the answers you submit must represent your own understanding of the solutions. Direct copying is not permitted and will be treated as cheating. In any event, it is not in your own interest to rely heavily on others in doing the problems. As with mathematical or analytical subjects, econometrics can be understood only by working problems. If you do not do most of the problems yourself, understanding of the course will suffer. We will *not* accept late problem sets, but we will ignore the two lowest problem sets grades.

If circumstances arise which you feel warrant an exception to these rules, then you must either bring a letter from McCosh, or contact first your residential college dean about the reasons you have for requesting the exception, keeping them in the loop about your situation, and seeing if she or he has any concerns about my granting it. The Preceptors and I will not consider any exceptions for late homework and the like without such a written statement.

**Computer Work:**

Computer work is an integral part of econometrics and the problems that will be assigned assume general computer literacy. You will be given brief introduction to STATA in one of the first precepts.

**Timing of Events:**

- Problem sets will be posted Wednesdays and will be due by 1:25pm the following Wednesday in the mailbox of your Preceptor on level A of Julius Rabinowitz Building. Graded problem sets will be returned in the precept.
- Precepts will start on the second week of the term.
- The midterm will take place in-class on Wednesday, October 25.
- The final exam will be scheduled by the Office of the Registrar.

**Other information:**

Email communications should be used for administrative issues. Questions of substance should be raised in oral communications.

The questions regarding the lecture material should be addressed to the Professor. The questions regarding the problem sets should be addressed to your Preceptor.

**Course Outline:**

- Why should you care?
- Introduction and Regression with One Regressor (Stock and Watson, Chapter 4)
- The General Case (Stock and Watson, Chapters 5-9)
- Panel Data (Stock and Watson, Chapter 10)
- Binary Choice (Stock and Watson, Chapter 11)
- Instrumental Variables (Stock and Watson, Chapter 12)
- Experiments and Quasi-Experiments (Stock and Watson, Chapter 13)
- Introduction to Time Series (Stock and Watson, Chapters 14, 15 and 16)

We will briefly review probability and statistics (Stock and Watson, Chapters 2 and 3). The relevant topics include:

- Random variables, probability distributions and densities. Expectations. Multivariate distributions, conditional distributions and independence. Special distributions: Bernoulli, Normal, Chi-Squared, F and T.
- Large Sample Theory.
- Estimators and their properties. Confidence Intervals and Hypothesis Testing.