# Syllabus "Introduction to Econometrics" ECON-255, Spring 2011

Instructor: Tobias Pfutze
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Office hours: Wed, Thu 11:00am-12:30pm or by appointment.

**Lecture:**
Time: Tue, Thu 9:30-10:50am
Location: King 101
**Lab:**
Time: Wed 10:00-10:50am
Location:  King 137

**Course Objectives:** This course is an introduction to the basic regression techniques used in economics. It will emphasize parameter estimation and hypothesis testing in economic applications. In the course we will make intensive use of algebra to illustrate when and how we can improve estimation with knowledge of the underlying economic interactions or flaws in data.

**Course requirements and grading schemes:** There will be six problem sets, to be handed in the week after they have been assigned. Problem sets will be graded based on the effort exerted to solve every single problem. Your total score on problem sets will be based on the highest five grades received. There will also be two midterms and one accumulative final exam, all of them in class. The material covered in the second midterm will necessarily build upon previous material; in that sense it might also be considered accumulative. The composition of your final grade will look like this:

Problem Sets:        20%
$1^{st}$ Midterm:        20%
$2^{nd}$ Midterm:        20%
Final Exam:          40%

**Textbook:** The only required textbook for the course is:

Jeffrey M. Wooldridge; "*Introductory Econometrics: A Modern Approach*"; $4^{th}$ Edition; Cengage Learning; ISBN: 978-0-324-58162-1

**Computer Program:** The computer package we will be using, Stata, is available on all machines in King 137. There is considerable online help for the package and our almost weekly lab will introduce you to most important commands

**Honor code:** The Oberlin College Honor Code applies to all assignments for this course. You can access complete information on the Honor Code via Blackboard (go to the tab Lookup/Directories>Honor Code). Before turning in each of your exams and your problem sets, you need to write the honor pledge and sign it. The pledge is as follows:*"I affirm that I have adhered to the Honor Code in this assignment."* The exams are all closed book and closed notes. For the exams signing the honor pledge signifies that you have abided by those restrictions and neither given nor received aid during the exams.

You are encouraged to work on your problem sets in groups of 2-5 persons. However, if you do so each of you is required to clearly state with who you worked on that particular problem set. A failure to do son will be considered a violation of the Honor Code.

**Students with Disabilities:** If you have specific physical, psychiatric or learning disabilities that require accommodations (such as a note taker or special testing arrangements), please let the instructor know early in the semester so your learning needs can be appropriately met. You will need to provide documentation of your disability to Ms. Jane Boomer, Coordinator for Services for Students with Disabilities. Her office is in Peters G-38A and her phone number is x58464.

## <u>Course Outline:</u>

Week 1: Introduction: What is Econometrics? & Review of Basic Statistical Concepts
   Chapter 1
   Appendices B.3 & B.4

Week 2: Simple Regression Model
   Chapter 2

Week 3: Multiple Regression Analysis
   Chapter 3

   *First problem set*

Week 4: Inference
   Chapter 4

   *Second problem set*

Week 5: Review & Midterm

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**1<sup>st</sup> Midterm: Thu March 10 (up to chapter 4).**

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Week 6: OLS Asymptotics
    Chapter 5


Week 7: Further Issues
    Chapter 6

    *Third problem set*

# **Spring Recess**

Week 8: Binary Variables
    Chapter 7

Week 9: Heteroskedasticity
    Chapter 8

    *Fourth problem set*

Week 10: Review & Midterm

**2$^{nd}$ Midterm: Thu April 14 (up to chapter 8).**

Week 11: Introduction to Time Series Methods
    Chapter 10

Week 12: Specification Issues
    Chapter 9.1-9.3

    *Fifth problem set*

Week 13: Data Issues & Other forms of Endogeneity
    Chapters 9.4-9.5 & 15.1 & 16.1-16.2

    *Sixth problem set*

Week 14: Buffer Week, Review