Fall 2011
University of Maryland
Department of Economics

Lectures: 2110 Tydings Hall
W&F 11am-12.15pm

ECON422 Syllabus
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ECON422 Econometrics I
Syllabus

Class Website: Log on to Blackboard at https://www.elms.umd.edu

Course Objective: At the end of this class you will know how to do basic empirical research using economic data.
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.

Official Course Description: 3 credits. Emphasizes the interaction between economic problems and the assumptions employed in statistical theory. Formulation, estimation, and testing of economic models, including single variable and multiple variable regression techniques, theory of identification, and issues relating to inference.

Prerequisites: ECON200, ECON201, and ECON321; or permission of department. For ECON majors only.
A student is on a good footing for taking this class if he/she understands the following terms:

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

Textbook: Jeffrey Wooldridge, *Introductory Econometrics: A Modern Approach*, 4th Edition (Thompson South-Western 2008).
This textbook contains required reading. It can be purchased at the University Book Center. We cover ten chapters from this book.

Expectations: Prepare for class (i.e. read chapter before class), Attend class, Do the assigned work by the deadlines.

Grading: A student's final grade for the class is based on:

Ten Problem Sets (best seven count)[1]	15%
Three Computer Projects (all count)	15%
Midterm Exam	30%
Final Exam (cumulative)	40%
TOTAL:	100%

Letter Grades depend on the total points accumulated:

86-100%	As
66-85%	Bs
46-65%	Cs
26-45%	Ds
0-25%	F

Getting a Good Grade: This course contains technical material. The easiest way to stay on top of it is probably to keep up with the class weekly – otherwise later material will seem pretty hard. Also, look for meaning, not memorization.

Stata Labs: The statistical software used in this class is *Stata 11* (StataCorp 2010). Purchasing the software is not required – it's actually expensive. You have access to it in the OACS computer labs in LeFrak Hall.

Policy on Missed Assignments (Problem Sets/Computer Projects/Exams):
All assignments are due strictly on the deadline printed on this syllabus, at the beginning of class 11am. Problem sets and computer projects cannot be rescheduled. A student may be able to qualify for a midterm or final make-up. To reschedule a midterm or final a student must have taken care of ALL of the following:

- Inform the professor in advance by email that the exam will be missed.
- The excuse must conform to university policies (it must be based either on religious observances, medical emergencies or acts of nature). **No exceptions.**
- Provide the professor with a formal written excuse signed by a third party (such as medical staff, police officer, judge).

Letters of Recommendation: For a strong letter, apart from getting an A the requesting student must have shown good class participation (asking questions, giving examples etc).
Special Needs: Students with disabilities must inform the instructor of their special needs at the beginning of the semester.
Academic Integrity: The University of Maryland has a Code of Academic Integrity and an Honor Pledge. The Code will be strictly enforced. All students are expected to abide by its standards.

Course Evaluations: The online course evaluation system opens *Tuesday November 29* and closes *Wednesday December 14*. Please fill out the anonymous online survey at: https://www.courseevalum.umd.edu/.

[1] This also means you can get the full credit of 15% even if you do not turn in three of the problem sets, say because you were sick or had an unexpected absence due to other reasons.

CALENDAR OF CLASSES

Graded Assignments in bold font

W Aug 31	Introduction to Econometrics	Wooldridge Chapter 1
F Sep 2	Introduction to Econometrics	Wooldridge Chapter 1
W Sep 7	Review of Probability, **Problem Set 1** due	Wooldridge Appendix B
F Sep 9	Review of Probability	Wooldridge Appendix B
W Sep 14	Review of Statistics, **Problem Set 2** due	Wooldridge Appendix C
F Sep 16	Review of Statistics	Wooldridge Appendix C
W Sep 21	Stata Lab 1, **Problem Set 3** due	
F Sep 23	The Simple Regression Model	Wooldridge Chapter 2
W Sep 28	The Simple Regression Model, **Computer Project 1** due	Wooldridge Chapter 2
F Sep 30	The Simple Regression Model	Wooldridge Chapter 2
W Oct 5	Multiple Regression: Estimation, **Problem Set 4** due	Wooldridge Chapter 3
F Oct 7	Multiple Regression: Estimation	Wooldridge Chapter 3
W Oct 12	Multiple Regression: Estimation, **Problem Set 5** due	Wooldridge Chapter 3
F Oct 14	**Midterm Exam**	
W Oct 19	Stata Lab 2	
F Oct 21	Multiple Regression: Inference	Wooldridge Chapter 4
W Oct 26	Multiple Regression: Inference, **Computer Project 2** due	Wooldridge Chapter 4
F Oct 28	Multiple Regression: Inference	Wooldridge Chapter 4
W Nov 2	Multiple Regression: Inference, **Problem Set 6** due	Wooldridge Chapter 4
F Nov 4	Multiple Regression: Further Issues	Wooldridge Chapter 6
W Nov 9	Multiple Regression: Dummy Variables, **Problem Set 7** due	Wooldridge Chapter 7
F Nov 11	Multiple Regression: Dummy Variables	Wooldridge Chapter 7
W Nov 16	Stata Lab 3, **Problem Set 8** due	
F Nov 18	Heteroskedasticity	Wooldridge Chapter 8
W Nov 23	Heteroskedasticity, **Computer Project 3** due	Wooldridge Chapter 8
F Nov 25	THANKSGIVING BREAK	
Tu Nov 29	*Online Course Evaluations Open*	
W Nov 30	Heteroskedasticity	Wooldridge Chapter 8
F Dec 2	Basic Time Series Regression Analysis	Wooldridge Chapter 10
W Dec 7	Basic Time Series Regression Analysis, **Problem Set 9** due	Wooldridge Chapter 10
F Dec 9	Basic Time Series Regression Analysis,	Wooldridge Chapter 10
M Dec 12	NO CLASS, **Problem Set 10** due by 4pm in my mailbox in 3105 Tydings Hall.	
Wed Dec 14	Reading Day, *Online Course Evaluations Close*	
TBA	Review for Final Exam	
TBA	**Final Exam** (date set in mid-semester by the Registrar's Office)	