

## Economics 420 Econometrics

Fall 2008

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**Instructor:** Marshall Gramm  
**Prerequisites:** Calculus (Math 115 or Math 121), Statistics (Econ 290, Math 111)  
**Classroom:** 033 Barret Library  
**Classes:** Section 1 TuTh 12:30-1:45 (CRN 19476)  
Section 2 TuTh 2:00-3:15 (CRN 19477)  
**Office:** 322 Buckman Hall  
**Phone:** 843-3122  
**e-mail:** [gramm@rhodes.edu](mailto:gramm@rhodes.edu)  
**Office Hours:** M 9:30-11:00, W 1:00-2:30, or by appointment  
Feel free to call or email at anytime (except an hour before assignments are due)

**Course Objective:** Economics is the study of relationships among variables. Econometrics is the study of estimating these relationships, testing economic theories, and evaluating and implementing government and business policy. Students are expected to (1) develop an understanding of the single and multivariate linear regression method of estimation--applied to both cross-sectional and time-series data, (2) make inferences and test economic theories based on real-world data and (3) learn and implement the methods for addressing heteroskedasticity, autocorrelation, multicollinearity. I expect that at the end of this course you will be able to read and interpret scholarly Economics journals. Furthermore, you will have the tools to design and complete a research project for your senior seminar.

**Text:** Wooldridge, Jeffrey M., *Introductory Econometrics: A Modern Approach*, South-Western College Publishing

**Exams:**

Exam #1	Thursday, October 2 <sup>nd</sup>	(25%)
Exam #2	Thursday, November 13 <sup>th</sup>	(25%)
Final	Monday, December 15 <sup>th</sup> 1pm	
	Tuesday, December 16 <sup>th</sup> 8:30am	(25%)

**Homework:** Problems will be assigned and collected at random. Please do each problem on a separate sheet of paper. I will only collect a small subset of the problems you do and will allow at least one week for completion. All homework must look professional. Some problems will be done in STATA and should be printed out in a neat and orderly manner. Problems must be turned in when asked for. If you fail to attend class (without prior notification) or are late and miss the collection, you will receive a zero. Discussion between students about homework is permissible and encouraged. Quizzes may be given at random. If you fail to attend class (without prior notification) when there is a quiz, you will receive a zero. Homework and Quizzes account for 20% of your grade.

**Attendance Policy:** While I do not require attendance, I do expect you to come to class on time and forbid you from leaving early without notifying me in advance.

**Course Outline:**

Weeks 1-3	Probability and Statistics (Appendix)
Weeks 4-5	Simple Regression Model (Ch 2)
Week 6-7	Multiple Regression Model (Ch 3)
Week 8-9	Statistical Inference (Ch 4)
Week 10-11	Model Specification (Ch 6, 7, 9)
Week 12	Heteroskedasticity (Ch 8)
Week 13	Binary Dependent Variables (Ch 17)
Week 14	Time Series (Ch 10, 11)

**Stata:** Stata 10 is available in all the labs, but If you would like a personal copy you can order it directly from Stata Corp:

[http://www.stata.com/order/new/edu/gradplans/gp2-order\\_p1.html](http://www.stata.com/order/new/edu/gradplans/gp2-order_p1.html)

You can choose from a number of options:

- A 1 year license of Small Stata for \$45
- A 1 year license of Intercooled Stata for \$89
- A perpetual license of Intercooled Stata for \$155
- A perpetual license of Stata/SE for \$335

I would recommend Intercooled Stata. Small Stata has too many limitations and Stata /SE is overkill. If you plan to go to graduate school, you may want to consider the perpetual license (Stata normally cost over \$500). Once again, Stata is available in the labs, so you do not have to buy the software if you don't want.

Enter **MG42RC** when prompted for Course ID