

**Economics 205**  
**Basic Econometrics**

**Dr. David Martin**  
**Fall 2009**

Meetings: Sections A & B: 9:30-10:20 MWF in Chambers 3155  
Section A: 10:00-11:15 Th in Chambers 3130 (TA: Emily Mesimer)  
Section B: 11:30-12:45 Th in Chambers 3130 (TA: Emily Mesimer)

Office Hours: M 11-12, T 1:30-3:30 (except when in Eco 105 lab), Th 2:30-4, F 11-12  
and by appointment

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This course will introduce you to econometric modeling with an emphasis on applied econometrics. We will explore the various elements of sound economic modeling, and you will learn to identify testable hypotheses, gain a facility with regression analysis as a tool of economic research, and improve your ability to understand and assess empirical papers in academic journals. I assume that you understand economic analysis from an *Introductory Economics* course, from a *Statistics* course you understand hypothesis testing and basic regression analysis, and you have some facility with *Excel*. If your *Statistics* background does not include an empirical research project, then I encourage you to read the *Independent Project* assignment sheet carefully and to ask plenty of questions early.

**Textbook**

- Studenmund, A.H. 2006. *Using Econometrics: A Practical Guide, Fifth Edition*. Boston: Pearson Education, Inc. ISBN-13: 978-0-321-31649-3.
- If you have a *Windows* computer or an *Apple* computer that can run *Windows* software, you'll be able to load *SAS* to your computer for the semester.

**Grading**

*Laboratory Work (10% of the course grade)*

You will attend the lab session for which you are registered. Typically, each session will involve the presentation of new material followed by an in-lab assignment. Before leaving that session, you and the TA will agree on a grade for the assignment based on the following scale.

- 0 .....Absent.
- 1 .....Tried the assignment, failed miserably, and will ask Dr. Martin or TA questions about it.
- 2 .....Tried the assignment, completed it mostly correctly, and will ask Dr. Martin or TA questions about it.
- 3 .....Completed the assignment correctly but still have questions about it for Dr. Martin or TA.
- 4 .....Completed the assignment correctly and can work the material on my own.

*Three Reviews (45% of the course grade)*

Each review will consist of three roughly equally-weighted components: questions very similar to the end-of-chapter problems in the textbook, questions about a professional econometric analysis distributed in advance, and questions based upon a *SAS* analysis completed prior to the review.

Review 1 (*10% of course grade*): Friday, September 18

Review 2 (*15% of course grade*): Friday, October 23

Review 3 (*20% of course grade*): Self-scheduled during final exams

*Homework (not graded)*

As noted above, each review will consist of questions very similar to the end-of-chapter problems in the textbook. The answers to the even-numbered questions are in *Appendix A* of the textbook. The answers to the odd-number questions as well as some *Excel* data sets mentioned by Studenmund are in the network folder:

*P:\Economics\Eco 205 (Basic Econometrics)\Studenmund Data Sets.*

You may use those materials only for your work in this class, and you may not save them at the end of this semester or distribute them to anyone. Doing so would be a violation of the copyright restrictions and an honor code violation.

*Independent Project Deadlines (45% of the course grade)...*

- 2 points .....Initial proposal: In class on Friday, September 4
- 2 points .....Final proposal: In class on Monday, September 14
- 5 points .....Model Development: In class on Friday, September 25
- 10 points .....First Analysis: In class on Wednesday, October 7
- 10 points .....Second Analysis as an oral presentation: In lab on Thursday, November 5
- 5 points .....Rough Draft for Peer Review: In class on Monday, November 16
- 6 points .....Completion of Peer Review: Tuesday, November 17 by 17:00.00
- 60 points .....Final Draft: Tuesday, November 24 by 17:00.00

**The Honor Code is a critical component of life at Davidson. Let's keep it that way!**

## Course Timeline

<u>Days</u>	<u>Dates</u>	<u>Topic</u>
1 M	8-24	Introduction to the course (review Chapter 16: Statistical Principles)
2 W	8-26	Chapter 1: Overview of Regression Analysis
Th	8-27	<i>Lab 1: Introduction to SAS</i>
3 F	8-28	Chapter 2: Ordinary Least Squares
4 M	8-31	OLS continued
5 W	9-2	Chapter 3: Learning to Use Regression Analysis
Th	9-3	<i>Lab 2: Introduction to Regression Analysis 1</i>
6 F	9-4	Discuss a professional paper <b>Initial Proposal due in class</b>
7 M	9-7	Chapter 7: Choosing a Functional Form
8 W	9-9	Functional Form continued
Th	9-10	<i>Lab 3: Introduction to Regression Analysis 2</i>
9 F	9-11	Functional Form continued
10 M	9-14	Discuss a professional paper <b>Final Proposal due in class</b>
11 W	9-16	Buffer
Th	9-17	<i>Lab 4: Preparation for Review 1</i>
12 F	9-18	<b>Review 1 in class</b>
13 M	9-21	Chapter 4: The Classical Model
14 W	9-23	Classical Model continued
Th	9-24	<i>Lab 5: Regression Learning Exercise (Appendix 8.7)</i>
15 F	9-25	Chapter 5: Hypothesis Testing <b>Model Development due in class</b>
16 M	9-28	Hypothesis Testing continued
17 W	9-30	Discuss a professional paper
Th	10-1	<i>Lab 6: Hypothesis Testing</i>
18 F	10-2	Chapter 6: Choosing the Independent Variables
19 M	10-5	Chapter 8: Multicollinearity
20 W	10-7	Multicollinearity continued and leverage, outliers, and influential observations <b>First Analysis due in class</b>
Th	10-8	<i>Lab 7: Multicollinearity and the t and F tests</i>
21 F	10-10	Chapter 9: Serial Correlation
M	10-12	Fall Break
22 W	10-14	Serial Correlation continued
Th	10-15	<i>Lab 8: Serial Correlation</i>
23 F	10-16	Discuss a professional paper
24 M	10-19	Chapter 10: Heteroskedasticity

25	W	10-21	Buffer
	Th	10-22	<i>Lab 9: Preparation for Review 2</i>
26	F	10-23	<b>Review 2 in class</b>
27	M	10-26	Heteroskedasticity continued
28	W	10-28	Discuss a professional paper
	Th	10-29	<i>Lab 10: Heteroskedasticity</i>
29	F	10-30	Chapter 11: Regression User's Handbook
30	M	11-2	Chapter 12: Time-Series Models
31	W	11-4	Discuss projects in class
	Th	11-5	<b>Lab 11: Second Analysis due as an oral presentation</b>
32	F	11-6	Time-Series Models continued
33	M	11-9	Discuss a professional paper
	W	11-11	No Class
	Th	11-12	<i>Lab 12: Time-Series Models</i>
34	F	11-13	Sections 13.1,2: Logit Models
35	M	11-16	<b>Rough draft due for Peer Review in class</b> and workshop a paper or two
	T	11-17	<b>Peer Review due by 17:00.00</b>
36	W	11-18	Logit Models continued
	Th	11-19	<i>Lab 13: Logit Models</i>
37	F	11-20	Chapter 14: Endogeneity
38	M	11-23	Questions and Answers for Independent Project
	T	11-24	<b>Final Draft due by 17:00.00</b>
	W	11-25	Thanksgiving Break
	Th	11-26	Thanksgiving Break
	F	11-27	Thanksgiving Break
39	M	11-30	Endogeneity continued
40	W	12-2	Discuss a professional paper
	Th	12-3	<i>Lab 14: Endogeneity</i>
41	F	12-4	Sections 15.1,2: Forecasting
42	M	12-7	Forecasting continued
43	W	12-9	Preparation for Review 3
Exam period		<b>Self-scheduled Review 3</b>	