

# Department of Economics Course Outline

		Term:	Fall 2006
Course:	Economics 495 [Econometrics I]	Section:	01
Time:	TR 11:00 - 12:15	Place:	SA 147 (subject to change)
Instructor:	Eugene Beaulieu		
Office:	SS 423	Telephone:	220-5862
Office Hours:	TR 10P00 - 11:00 and by appointment	E-Mail:	beaulieu@ucalgary.ca

## **Textbook(s):**

Wooldridge, Jeffrey M., Introductory Econometrics: A Modern Approach Thomson. [Required]

### **Book(s) on Reserve:**

n/a

#### **Course Outline:**

Introduction to the techniques used in quantifying economic relationships. Econometric principles of estimation and hypothesis testing will be applied to the various economic models. The use of a standard econometric software package is emphasized.

This is an introductory course in Econometrics building on the Statistical methods developed in Economics 395. I plan on covering most of the material in Chapters 1 through 8 and parts of Chapter 9. Chapters 1-8 focus on analysing cross-section data and Chapter 9 discusses the important practical topics of proxy variables, measurement error, outlying observations, and stratified sampling. Chapter 9 will be covered mostly through examples. I will also cover Chapters 10 through 12. Chapters 10-12 deal with time series data. I do not typically cover all sections or subsections within each chapter.

Chapter 1	The Nature of Econometrics and Economic Data	1	
Chapter 2	The Simple Regression Model	5	
Chapter 3	Multiple Regression Analysis: Estimation	15	
Chapter 4	Multiple Regression Analysis: Inference	28	
Chapter 5	Multiple Regression Analysis: OLS Asymptotics	39	
Chapter 6	Multiple Regression Analysis: Further Issues	44	
Chapter 7	Multiple Regression Analysis With Qualitative Information: Binary (or Dummy) 59		
	Variables		
Chapter 8	Heteroskedasticity	75	
Chapter 9	More on Specification and Data Problems	86	
Chapter 10	Basic Regression Analysis With Time Series Data	95	
Chapter 11	Further Issues in Using OLS With Time Series Data	106	
Chapter 12	Serial Correlation and Heteroskedasticity in Time Series Regressions	117	

I will NOT begin with a review of basic algebra, probability, or statistics. In my experience, this takes too long and the payoff is minimal. Instead, when I need a tool (such as the summation or expectations operator), I will briefly review the necessary definitions and key properties. I will briefly review the principles of statistical inference during multiple regression analysis. These topics were covered in Economics 395. The textbook includes Appendices A, B, and C that are fairly extensive.

This is a quantitative course and will involve data analysis using software packages such as Excel and STATA.

Prerequisites: Economics 301 and 303 and 395; and Mathematics 249 or 251; or consent of the Department.

GAssigDependent in and Final Examination Details:	
Midterm Examination I	20%
Midterm Examination II	20%
Final Examination	40%

Students will be evaluated in accordance with the above grading scheme. Any work that is not submitted will be assigned a grade of zero. Students are reminded that they must comply with the regulations published in the University Calendar concerning "Intellectual Honesty," "Examinations," etc.

- There will be a Registrar scheduled **final examination**, lasting 2 hours. The FULL COURSE will be covered. The final exam will consist of problems and various types of short answer questions. There WILL NOT be any multiple choice questions.
- The **midterm exams** will be held during regular class session. Deferred midterm tests will NOT be given.

Students who are unable to write a midterm because of a DOCUMENTED illness, family emergency or religious observance will have the midterm weight shifted to the final. The midterm exam will consist of problems and various types of short answer questions. There WILL NOT be any multiple choice questions.

• Four (4) **assignments** will be assigned. The main purpose of the assignments will be to teach and test skills in using econometric software and conducting empirical analysis using data.

Assignments, tests and final exams will be assigned a numerical mark which will be compiled into a final percentage mark using weights given in the marking scheme. Course percentages will be converted into the University's letter grades. As a guide to determining standing, these letter grade equivalences will generally apply:

<b>A</b> +	95 - 100	<b>B</b> +	77 - 81	C+	67 ? 69	D+	56 - 59
Α	87 - 94	В	74 - 76	С	64 ? 66	D	50 - 55
А-	82 - 86	B-	70 - 73	C-	60 ? 63	F	0 - 49

If, for some reason, the distribution of grades determined using the aforementioned conversion chart appears to be abnormal the instructor reserves the right to change the grade conversion chart if the instructor, *at the instructor's discretion*, feels it is necessary to more fairly represent student achievement.

A passing grade on any particular component of the course is not required for a student to pass the course as a whole.

Non-programmable calculators will be allowed during the writing of tests or final examinations.

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Society of Undergraduates in Economics (S.U.E.) <u>www.fp.ucalgary.ca/econ</u>

### Notes:

- Contacting the Instructor: You are asked to observe and respect my office hours. If you wish to meet me outside of these times, please make an appointment with me beforehand. You are welcome to write me via e-mail to ask questions about the course materials. I will respond as soon as I can.
- Students seeking reappraisal of a piece of graded term work (term paper, essay, etc.) should discuss their work with the Instructor *within* fifteen days of the work being returned to the class.
- This course will make use of Blackboard ? students who are registered in this course can log in at <a href="http://blackboard.ucalgary.ca/webapps/login">http://blackboard.ucalgary.ca/webapps/login</a> Please note that Blackboard features a class e-mail list that I will use. It is your responsibility to ensure that Blackboard uses the e-mail address of your choice. The default is your University of Calgary e-mail address.

- It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 220-8237. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course.
- Safewalk / Campus Security: 220-5333

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