

Introduction to Econometrics

Fall 2009
Time: TBD
Room: TBD

James E.T. Moncur
Saunders 530
Office Hours: TR 12:00 - 1:00 pm & by appt
Phone 956-7143

Text: Hill, R. Carter, William E. Griffiths and Guay C. Lim, 2008. *Principles of Econometrics* (3rd ed.) John Wiley & Sons, Inc. (\$outrageous)
Eviews Econometrics software (student edition) Bookstore (\$39.95) or at eviews.com (\$39.95 + \$15 shipping)
[Optional] *Using EViews for Principles of Econometrics*, 3rd Edition, William E. Griffiths, R. Carter Hill, Guay C. Lim (\$69.95 from the publisher. *Eviews* software is bundled with this book. If you buy a used copy, be sure the CD is included.)

Prerequisites: Introductory statistics and basic calculus.

Course Content: This course will develop a broad facility in using tools of statistics, particularly regression analysis, to estimate economic relationships and test hypotheses generated by economic theory. The course begins with a review of basic statistics: probability distributions, sampling distributions, hypothesis testing and least squares estimation. Economic data often violate least squares assumptions, however, so we turn to diagnosis and correction of autocorrelation, heteroskedasticity, multicollinearity and simultaneity. Although we forego most formal proofs, we use algebra extensively. We will use the econometrics software noted above, which is available only for Windows machines, as well as Excel (or comparable spreadsheet program.)

Grading: Your grade in the course will depend on performance in homework assignments, two midterms a final exam, and class participation. Class participation will account for 5% of your grade—so make yourself known. Homework will be assigned nearly every class meeting. Several homework assignments will be collected, *unannounced* before the due date. Each collected assignment will be worth a potential 25 points. After dropping the lowest score, the assignments will account for 25% of your final grade. Assignments are due at the beginning of the specified class period. ***No late papers will be accepted.***

The remaining 70% of your grade will come from
two 100-point midterms and
one 100-point final.

Exams will cover assigned reading material as well as handouts and lectures.

Be prepared each day to ask and to answer questions and engage in discussion about the material assigned for that day.

While I will not take attendance nor grade on attendance, students are responsible for understanding the material presented in each class meeting and for getting the assignments and any announcements made in class. You are responsible for material taken from the textbook as well as other material discussed in class.

Students are also responsible for submitting papers and taking quizzes and exams *on time*. *Deadlines and submission dates may be modified from the schedule given below in class announcements or e-mail messages.*

Policies on submitted work:

1. Once we get beyond the review of statistics, most of our homework assignments will involve two parts: numerical results from a computer statistical package and a narrative interpretation of the raw numbers in the context of economic analysis. Your papers should include a computer printout as well as a narrative description of the substantive results, with references to the printout.

A computer printout with scribbling in the margin is not adequate; points will be subtracted.

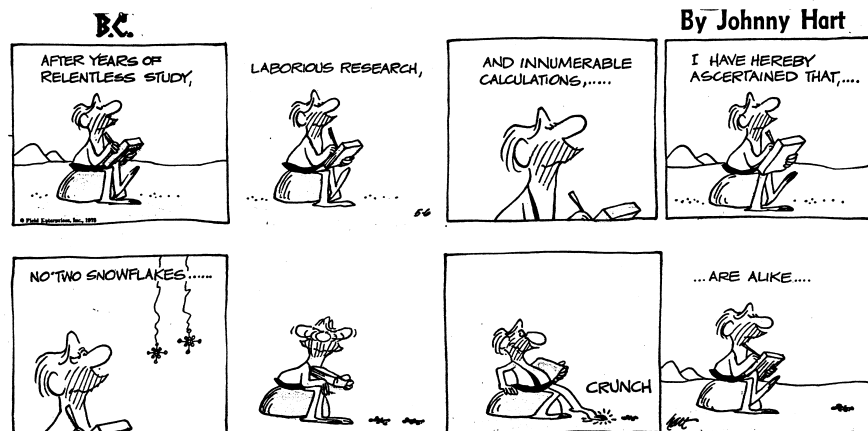
2. On homework assignments, students are encouraged to work together to obtain the numerical results and to discuss the meaning of the raw numbers. Groups may submit copies of computer printouts. The written narrative submission, however, should be your individual work, and it is this narrative that will form the basis of your grade.

3. Exams, whether in class or take-home, are to reflect *individual* work. Any copied submission will result in a semester grade of *F*.

Computer Use We will make frequent use of computers, though mostly confined to a few programs: e-mail; a spreadsheet like Excel, Lotus or Quattro Pro; and the econometrics package *Eviews*. Excel is loaded on most of the public computers on campus.

I will use email occasionally, through *MyUH*, to provide data sets and to make other announcements. Check your e-mail before beginning each assignment.

Disability Access: If you feel you need reasonable accommodations because of the impact of a disability, please: (1) contact the KOKUA Program (V/T) at 956-7511 or 956-7612 in room 013 of the QLCSS; (2) speak with me privately to discuss your specific needs. I will be happy to work with you and the KOKUA Program to meet access needs related to a documented disability. Unhappily, missing one's habitual lunch hour or mid-day nap due to the class meeting schedule is not considered to generate a documentable disability.



Course Outline

Dates are tentative and probably will be modified as we go along. Under the heading “Reading Assignments,” “Gx” means Gujarati, *Essentials of Econometrics*, chapter x.

Date	Reading Assignments	Topic
Week 1 Aug 25, 27	G1 G2, G3	Introduction Probability, probability distributions and their characteristics
Week 2 Sept 1, 3	G4	Specific probability distributions: Normal, t , χ^2 , F
Week 3 Sept 8,11	G5	Inference and hypothesis testing: estimating the parameters (<i>Sept 3 – Labor Day – Holiday</i>)
Week 4 Sep 15, 17	G6	Linear regression: estimating the bivariate model $Y_i = \beta_1 + \beta_2 X_i + \epsilon_i$
Week 5 Sep 22,24	G7	Testing the bivariate model: t , R^2
Week 6 Sep 29, Oct 1	G8 Midterm #1	Multiple regression: $Y_i = \beta_1 + \beta_2 X_{2i} + \dots + \beta_k X_{ki} + \epsilon_i$ estimation & testing Midterm #1: Friday September 28
Week 7 Oct 6,8	G9	Functional form: elasticity, growth rates,
Week 8 Oct 13, 15	G10	Regression involving dummy (0-1) variables
Week 9 Oct 20, 22	G11, G12	Model Selection; multicollinearity
Week 10 Oct 27, 29	G13	Heteroscedasticity (non-constant ϵ_i)
Week 11 Nov 3, 5	G13 Midterm #2	More heteroscedasticity; review Midterm #2: Friday November 2
Week 12 Nov 10, 12	G14	Autocorrelation (correlated observations on error term)
Week 13 Nov 17, 19	G14	More autocorrelation (<i>Holiday – Veterans’ Day – Mon Nov 12</i>)
Week 14 Nov 24	G15	Simultaneous equation models (<i>Holiday – Thanksgiving – Thu/Fri Nov 22, 23</i>)
Week 15 Dec 1, 3	G16	Dichotomous and limited dependent variables
Week 16 Dec 8, 10		Catch up; review
Dec xx	Exam	Final Exam:

“An economist is a trained professional paid to guess wrong about the economy. An econometrician is a trained professional paid to use computers to guess wrong about the economy.”

— Anonymous cynic