

Economics 425
Introduction to Econometrics

Tentative, as of April 2007

Fall 2007

James E.T. Moncur
Saunders 530 or Holmes 283
Office Hours: TBA& by appt.
Phone 956-7143, -7847

Texts: Gujarati, Damodar, *Essentials of Econometrics*, New York: McGraw-Hill, Inc., 2006.
White, K.J., *Shazam User's Reference Manual Version 8.0*, New York: McGraw-Hill Book Company, 1997.

Course Content: This course will develop a broad facility in using tools of statistics, particularly regression analysis, to estimate economic relationships and test hypotheses posed by economic theory. The course begins with a review of basic statistics: probability distributions, sampling distributions, hypothesis testing and least squares estimation. We then turn to diagnosis and correction of basic econometric problems: autocorrelation, heteroskedasticity, multicollinearity, simultaneity. We will cover and use several computer programs including Excel or Quattro Pro and SHAZAM, available in the Social Sciences Computing Lab, Port 635. Although we forego most formal proofs, we use algebra extensively.

Grading: Your grade in the course will depend on performance in homework assignments, several mini-quizzes, three exams and class participation. The latter will be worth 5% of your grade. Homework will be assigned nearly every class meeting, and will be collected as announced in class. Each collected assignment will be graded on a 25 point basis. After dropping the lowest score, the assignments will count 25% of your final grade. Assignments are due at the beginning of the specified class period. **No late papers will be accepted.**

Several brief quizzes will be administered, unannounced, mainly to check your understanding of that day's lecture/discussion material. These will be worth 10 points if everything is correct; 8 points if you made a serious attempt to answer the questions but made significant error(s). There will be at least five such quizzes. The lowest score will be dropped and the remaining scores will make up 10% of your semester grade. **No make-ups will be given.**

The remaining 60% of your grade will come from two midterms and a final, each to be evaluated at 100 points possible. 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, you are responsible for knowing the material presented in each class meeting, whether it is taken from the textbook or other sources, as well as for assignments made in class. You are also responsible for submitting papers and taking quizzes and exams *on time*, whether deadlines and submission dates remain as stated in the course outline or are modified in class announcements or e-mail messages.

Some 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. Papers submitted 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 SHAZAM. Students in Econ 425 may download a copy of SHAZAM at no charge (instructions below.) Excel and SHAZAM are available on the PC's in the College of Social Sciences PC lab, Social Sciences Building Room 635.

I will use e-mail frequently, through *MyUH*, to provide data sets and to make other announcements. If you haven't done so already, please establish a UH/ITS account and obtain your login ID and password as soon as possible. It would be a good practice to check your e-mail before beginning each assignment.

If you do not yet have a UH/ITS login ID, either (1) call 956-8883 (the ITS help desk) for instructions or (2) use a temporary ID or other internet account to go to www.hawaii.edu, click on "Info Tech" and then on "Request New ITS Username."

If you wish to use the CSS PC Lab, or to download a copy of SHAZAM, you will need another ID and password. For this, you need a valid UH login ID. Once you have this ID, go to www2.soc.hawaii.edu, click on "Request/Renew a CSS Lab user ID here" and follow instructions. For the first week or so of the semester, you may use CSS PC lab (SocSci 635) machines by logging on as a "guest."

For students to obtain a copy of SHAZAM, I must first submit a list of e-mail addresses to the CSS computer manager. He will then notify you by e-mail of the availability of SHAZAM, instructions on licensing restrictions and instructions for downloading the program.

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. "G1" means Gujarati, chapter 1, and so on.

Date	Reading Assignments *	Topic
Week 1	G1 G2	Introduction Basics of Probability & Statistics
Week 2	G3	Prob. distributions: Normal, Chi-square, t , F ; Sampling dist's.
Week 3	G4	Estimating the mean, variance and other parameters
Week 4	(cont.)	Testing the estimates
Week 5	G5 G6	Linear regression: bivariate ($Y_i = \beta_1 + \beta_2 X_i + \epsilon_i$) and multiple ($Y_i = \beta_1 + \beta_2 X_{2i} + \dots + \beta_k X_{ki} + \epsilon_i$). Testing the bivariate model: F tests, R^2 and corrected R^2
Week 6	G7 Midterm #1	Multiple regression: estimation & testing Friday 18 February: 1 st Midterm Quiz
Week 7	Holiday G8	(President's Day) Functional form: elasticity, growth rates,
Week 8	G9	Regression involving dummy (0-1) variables
Week 9	G10	Multicollinearity: correlated explanatory variables
Week 10	G11	Heteroscedasticity (non-constant ϵ_i)
Week 11	Midterm #2 G11	Wednesday March 22: 2 nd Midterm Quiz (G11 continued)
Week 12	G12	Autocorrelation (correlated observations on error term)
Week 13	G13	Model selection: specifying the variables
Week 14	G14 Holiday	Miscellaneous Topics: Distributed Lags (Good Friday)
Week 15	G 14; handout	Dichotomous and limited dependent variables
Week 16	handout	Simultaneous equations
	Final Exam	