SYLLABUS

Econ 481--Intro to Econometrics  Fall 1988
Prof. Yordon  Office EB 107 Hours  MWF 10:30-11:30 or by appt. 492-6270

Prequisite--Econ 381 (or see instructor about acceptable equivalents)

Grading policy: Final exam counts 40%, 3 quizzes count 10% each, research project counts 15%, 3 PC miniprojects count 5% each. There will be no make-ups for missed quizzes except for emergencies such as hospitalization (not for sports events, weddings, or minor illness.) No excuses will be accepted for late submission of projects, so aim to turn the in at least one week ahead of the due date specified below. Final exam is Dec. 22, and since this date cannot be changed be sure you make travel plans well in advance.

Texts: The basic textbook is Studenmund & Cassidy, Using Econometrics (Little, Brown & Co., 1987); assignments and exercises listed below refer to this text. (The exercises should be done as if they would be turned in--you'll see why at quiz time.) Each student must also have access to a regression software package—I recommend Micro TSP (student version) which is for sale at Univ. Bookstore, but RATS is also acceptable (program is on harddisks in EB 10, abridged guide available at Kinko's). Other packages may be used but it is student's responsibility to ascertain if and how they generate the needed procedures. A book which is a helpful supplement, especially for further study or research in econometrics, is Peter Kennedy, A Guide to Econometrics (MIT Press, 1985). For your convenience I have listed the relevant sections of this book, abbreviated as "K", in [brackets] below, but these are generally at a slightly higher level than the text.

Dates  Topics, Assignments & Exercises
Aug 31  Review of regression analysis as treated in Econ 381 and intro to Econ 481.
- Sep 9  CH 1-3; Excerises 1-6 on pp. 18-19, 1-8 on pp. 35-6, and 1-6, 8, 9 on pp. 56-9. [Ref K 1.1-1.4, 2.1-2.9]

Sep 12-16  The classical regression model
           CH 4; Exercices 1-7 on pp. 79-81. [Ref K Ch. 3]

Sep 19-26  Hypothesis testing
           CH 5; Exercices 1-10 pp. 111-3 [Ref K 4.1-4.3, 4.5]

WED. SEP. 28: QUIZ #1 on CH 1-4; PART 1 of PC MINIPROJECT A IS DUE AT 1PM

Sep 30  Specifying independent variables
- Oct 5  CH 6 (you may omit pp. 141-3); Exercices 1-4, 6-10 on pp. 136-140. [Ref K 5.1, 5.2]

REST OF PC MINIPROJECT A DUE 1 PM OCT 12 (20% off for each day late)

Oct 7-12  Functional forms
           CH 7; Exercices 1-4, 7, 8, 10, 11 on pp. 166-170. [Ref K 5.3, 5.4]

Oct 14-19  Multicollinearity
           CH 8; Exercices 1-7,9,10 on pp. 203-7. [Ref K Ch. 10]

FRI. OCT. 21: QUIZ #2 on CH 5-8
Choose a random economic variable whose behavior you hope to explain on the basis of three or more predictor variables. The problem should concern something which interests you and you should devote thought to the underlying theory and selection of data. Be sure to study the definitions and warnings associated with your data, and turn in your summary of them and a photocopy of the details both in your initial proposal and in the final report. DUE DATE FOR THE PROPOSAL IS WEDNESDAY, NOV 9.

Carefully specify a regression model, hypothesizing signs where you can and ?? where you can't, and run the regression. Report t values, R-square, F and its significance. Report test for serial correlation with Durbin-Watson, tests for heteroscedasticity, and examination for collinearity (at least by comparing r^2's with R^2 and examining the correlation matrix). 

Since heteroskedasticity was not covered in an earlier exercise let me emphasize the importance of testing for it whether or not it is actually a problem in your particular case. You may use the Park test when predictor variables are strictly positive--i.e., examine correlations between log of squared residuals and logs of predictor variables, and run regression where appropriate to estimate the needed corrections. Discuss also the possibility of specification error and simultaneity bias. Change specification as needed to correct any significant faults. If there is a need to apply two-stage least squares you will lose credit if you fail to point out this need, but successful application of 2SLS is worth only a few points more than identifying the problem. Still, you should try 2SLS for the learning experience.

Remember that there is no particular virtue in high values of R-square (e.g., it's of value to know that some substance does not cause cancer) and that it borders on fraud to manipulate regression analysis to increase the value of R-square. But after finishing your scholarly work you may try an exercise in data mining by changing the functional form in search of a higher R^2.

Turn in your written report and supporting documentation by 1PM, MONDAY, DEC. 12 (10% off for each day late).