Econ 4818--Intro to Econometrics  

SYLLABUS  

Fall 1992

Prof. Yordon  
Office EB 107, Hours: MWF 10-11 or by appt.  
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Prerequisite --Econ 3818 (or see instructor about acceptable equivalents)  
Grading policy: Final exam counts 40%, 2 quizzes count 14% each, last regression project counts 12%, class participation counts 8%, 3 PC miniprojects count 4% each. Make-ups for missed quizzes may be arranged but there will be a five point penalty (2% of term grade). A missed final exam may be made up only if prior work and attendance have been satisfactory and only if the cause is something like hospitalization or incarceration. Individualized assignments for the PC miniprojects will be distributed; please allow for possible illness or technical difficulties by aiming to turn them in 48 hours before the due date specified; -20% for each day late.

Texts: The basic textbook is A.H.Studenmund, Using Econometrics 2nd ed. (Harper Collins, 1992). A book which will be a helpful supplement for further study or research is Peter Kennedy, A Guide to Econometrics (MIT Press, 1985). For reference I have listed the relevant sections of this book, abbreviated as "K", in [brackets] below, but you are not expected to read these for this course.

Dates  
Topics, Assignments & Exercises
Review of regression analysis as treated in Econ 3818 and intro to Econ 4818.

Aug 26-31  
CH 1; Exercises 1-7, 9, 11 on pp. 25-30.  
Sep 2-4  
CH 2; Exercises 1,2,5,8,9 on pp. 56-9  
Sep 9-11  
CH 3; Exercises 1-6, 9 on pp. 87-9  
(You will not be asked to turn in answers to exercises, but you must work on them and be prepared to be called on for discussion in class. Questions on quizzes and exam will generally resemble the exercises.) [Ref K 1.1-1.4, 2.1-2.9]

Sep 14-21  
The classical regression model  
CH 4; Exercises 1-7, 9, 10 on pp. 119-123. [Ref K Ch. 3]

Sep 23-30  
Hypothesis testing  
CH 5 (incl. App. 5.8); Exer. 1-12 on pp. 165-8 (for #12 get ESS, RSS, and TSS from bottom of p.39). [Ref K 4.1-4.3, 4.5]

FRIDAY, OCT 2: QUIZ #1 on CH 1-5. (If it snows so badly that either the Univ. or Boulder Valley Public Schools are closed the quiz will be Monday.)

Oct 5-9  
Specifying independent variables  
CH 6 (omit App. 6.7); Exercises 1-4, 6,7,10 on pp. 201-8 [Ref K 5.1, 5.2]

Oct 12-14  
Functional forms  
CH 7; Exercises 1-4 on pp. 243-8. [Ref K 5.3, 5.4]

Oct 16-18  
Collinearity  
CH 8; Exercises 1-4, 6-10 on pp. 292-6. [Ref K Ch. 10]
Oct 21-28  Serial correlation
          CH 9; Exerc. 1, 2abcd, 4-8, 10-12 on pp.358-360.  
          [Ref K 7.1, 7.2, 7.4]

Oct 30-Nov 4  Heteroskedasticity
             CH 10; Exercises 1,2, 10-12 on pp. 399-404. [Ref K 7.3]

FRIDAY, NOV 6: QUIZ #2 on CH 6-10 (see snow policy above)

FRIDAY, NOV 13: PROJECT PROPOSAL DUE (see note below)

Nov 9-18  Simultaneous equations
             CH 14; Exercises 1-3, 6-8 on pp. 563-4. [Ref K 9.1-9.3]
            (Minor error on p. 553--Eq. 14.25 reflects J.M. Clark’s theory of the accelerator, not the multiplier.)

Nov 20-25  Distributed Lags
             CH 12; Exerc. 1 on p. 504

Nov 30-Dec 4  Binary Dependent Variable Techniques
             CH 13; Exercise 1 on p. 530

MONDAY, DEC 7: REGRESSION PROJECT DUE BY 2PM (4 pts off for each day late)

Dec 7-9  Forecasting; Review
             CH 15 sec. 1 & 2; Ch.11 pp. 407-415.

SATURDAY, DEC. 12, 7:30-9:30 PM: FINAL EXAM

GUIDE FOR REGRESSION PROJECT -- (30 pts.)--Choose a random economic variable whose behavior you
hope to explain on the basis of three or more predictor variables. The problem should concern an economic
(or similar) issue which interests you and you should devote thought to the underlying theory and selection of
data. Your PROPOSAL (due Nov. 13) must include a clear description of the nature and the sources of the
data you plan to use, and a description of your regression model with hypothesized signs to the extent that a
priori reasoning permits. When your proposal is returned (possibly with suggestions), run the regression and
modify it to the extent that flaws are revealed (but avoiding changes which have no logic other than to raise
R-square). If there is a need to apply two-stage least squares you will lose credit if you do not attempt to apply
it, but you will not be penalized if your bona fide attempt is unsuccessful. After your regression is satisfactory
(in terms of the criteria covered in this course) write a summary report on it. Include t-values and their
significance, R-square, overall F and its significance, Durbin-Watson test for serial correlation, Park (or
Goldfield-Quandt) test for heteroskedasticity, and an examination for collinearity by comparing r^2's with R^2
and examining the correlation matrix. [Note the importance of including tests for serial correlation and
heteroskedasticity even if you are not worried about their presence, and reread assignments as needed if you’ve
forgotten the meaning of the work "test" in this context.] Discuss also the possibility of specification error and
simultaneity bias, but remember that low values of R-square may provide good information (e.g., it’s nice to
know that some substance does not cause cancer). Also be sure to provide good descriptions of the data used.