COURSE DESCRIPTION.
This course has three objectives: (1) to solidify your understanding of what constitutes an economic model; (2) to expand and refine your ability to use regression analysis as a tool in economic research; (3) to give you hands on experience with real world, economic data and with the computer software packages available to manipulate it. At the end of the semester, you should be able to (1) use deductive reasoning to identify testable hypotheses; (2) use regression analysis to test these hypotheses; (3) use regression analysis to describe economic relationships and to make simple forecasts of future activity; and (4) read, with confidence, papers in academic journals that report the results of regression analyses.

COURSE WEB PAGE.
Updates on reading assignments, PowerPoint lecture slides, homework answers, and links to statistical sources are available on our web page: http://www.economics.pomona.edu/cconrad/regressf00.html.

TEXTBOOK.

OTHER READINGS
The articles listed on the syllabus are available electronically through Honnold Library.

SOFTWARE
For this course, you will need to use a statistical software package. We will introduce two: E-Views and STATA. E-Views is widely used in business. STATA is widely used in academia. STATA is accessible on the Pomona network. Student versions of E-Views are bundled with some versions of your textbook or may be purchased at low cost from www.eviews.com.

COURSE REQUIREMENTS.
Homework Assignments 15%; Quizzes 30% (Quiz One, 5%; Quiz Two, 10% and Quiz Three, 10%) Final Exam, 15%; Term Project 45%;
Homework due dates are listed on the syllabus. NO LATE HOMEWORK WILL BE ACCEPTED.

TERM PROJECT
Student can either work independently on the term project or as a member of a two-person team. The team members will collaborate on data collection and the empirical analysis; however, each team member must write and submit independently papers two and four.

Paper One (2-3 pages). Paper poses a research question from any field in economics and develops a strategy for answering that question using regression analysis. Strategy will define a dependent variable, a set of explanatory variables, and type of data required. Paper will also identify the relevant literature. Student will distribute proposal to classmates and to professor for feedback. Following class discussion, student will revise and resubmit the paper. This paper will serve as the student’s proposal for the semester project. Paper due September 23, 2005. (5%)

Paper Two (5-7 pages). Paper will identify at least two papers published in academic journals or as part of working paper series that use regression analysis to address the topic chosen in Paper One. Paper will review and critique these studies. In particular, paper will identify theoretical propositions tested in the papers, identify dependent variables and independent variables, discuss any econometric problems and possible solutions. Students will receive written comments from the faculty member on both content and style of paper. Paper due October 31, 2005. (5%)

Paper Three (2-3 pages) Paper will present summary tables describing the data to be used in the project. Paper Due November 7, 2005 (5%)

Paper Four (3-5 pages). This paper will report the results of the student’s regression analysis. The paper should identify a specific research question, describe the data used to answer that question, present results, describe empirical problems and methods used to correct those problems. Paper due November 28, 2005. (5%)

NBER Style Research Conference. Each student will be assigned the job of discussant for the paper of another student. The discussant will present the assigned paper and provide a brief critique. The discussant will have 15 minutes: 10 minutes to explain the assigned paper with at least 5 minutes devoted to the regression analysis and 5 minutes to provide a critique. The author then has 5 minutes to either respond, provide new or supplemental information, or to discuss what he/she would do differently in the future. (5%)

Final Paper (10-12 pages). This paper will have five components: (1) an introduction that clearly states the student’s research question; (2) a
review of other studies that have addressed the same question or related questions; (3) a description of the student’s research methodology (including a description of the data used); (4) the results of the student’s regression analysis; and (5) a conclusion. Ideally, this paper will incorporate edited material from the earlier papers. Paper due December 9, 2005. (20%)

ELECTRONIC SUBMISSION OF ASSIGNMENTS.

We encourage submission of paper assignments as e-mail attachments. Use your name and the number of assignment to name the file. For example, if Professor Conrad were to submit the first paper electronically, the name of the document would be: conradpap1.doc. We can read Microsoft Word and AppleWorks documents with ease. If you plan to submit a WordPerfect file, please send a sample soon for a trial run.

LECTURE OUTLINE

I. Regression Analysis and Economics as Field of Research
   August 31, 2005-September 5, 2005

   A. What is Econometrics?
      Studenmund, Chap. 1

   B. Learning to Use Regression Analysis
      Studenmund, Chap. 2 & 3

   C. Regression Analysis in Action

II. The Classical Model
    September 7-9, 2005

   A. Assumptions of the Classical Model
      Studenmund, Chap. 4

   HOMEWORK ONE – DUE SEPTEMBER 9, 2005

   B. The Gauss-Markov Theorem

III. Hypothesis Testing
    September 12-16, 2005

   A. Tests Involving a Single Coefficient
Studenmund, Chap. 5

HOMEWORK TWO – DUE SEPTEMBER 14, 2005

QUIZ ONE – SEPTEMBER 19, 2005

B. Tests Involving Multiple Coefficients
   Studenmund, Appendix to Chap. 5

C. Regression Analysis in Action – Application of Hypothesis Testing

   QUIZ ONE – SEPTEMBER 19, 2005

   HOMEWORK THREE – DUE SEPTEMBER 26, 2005

IV. Specification Issues
   September 21 – October 14, 2005

   PAPER ONE - SEPTEMBER 23, 2005

A. Specification - Choosing the Independent Variables
   Studenmund, Chap. 6

B. Regression Analysis in Action: Omitted Ability

C. Specification - Choosing the Functional Form
   Studenmund, Chap. 7

   HOMEWORK THREE – DUE OCTOBER 3, 2005

D. Multicollinearity
   Studenmund, Chap. 8

E. Regression Analysis in Action: SAT Interactive Exercise
   Studenmund, Chap. 8 Appendix

   Paper Topic Discussion (October 10, 2005)

   LIBRARY TALK – OCTOBER 12, 2005 (TENTATIVE)
QUIZ TWO - OCTOBER 14, 2005

FALL RECESS October 15-18, 2005

IV. More Violations of the Classical Model Assumptions
   October 19– 28, 2005

A. Autocorrelation
   Studenmund, Chap. 9

B. Regression Analysis in Action: Spatial Autocorrelation

   PAPER TWO – DUE OCTOBER 31, 2005

C. Heteroskedasticity
   Studenmund, Chap. 10

HOMEWORK FIVE – DUE NOVEMBER 4, 2005

V. The Regression User's Guide
   October 31 – November 11, 2005

A. The Regression User’s Handbook
   Studenmund, Chap. 11. (Housing Price Interactive Exercise or Guest Lecture)

   PAPER THREE - NOVEMBER 7, 2005

B. The Ethical Econometrician
   Leamer, Edward, “Let’s Take the Con Out of Econometrics,” The American

   QUIZ THREE – NOVEMBER 11, 2005

VI. More Applications of Regression Analysis and Other Topics
   November 14 – November 28, 2005

A. Discrete Choice Models
   Studenmund, Chap.13.
   Horowitz, Joel L. and N.E. Savin, “Binary Response Models: Logits, Probits and
B. Regression Analysis in Action: Discrete Choice Models

C. Simultaneous Equation Models
Studenmund, Chap. 14

**HOMEWORK FIVE – DUE NOVEMBER 18, 2005**

D. Regression Analysis in Action – Simultaneity

E. Geographical Information Systems

F. Difference in Difference Analysis (Schedule Permitting)

**PAPER FOUR – DUE November 28, 2005**

VI. Research Conference – November 30-December 7

*Asterisk indicates the dataset for the paper is available.*