OBJECTIVE

Eco 362 is an introductory course to the statistical analysis of economic relationships. Topics include review of basic statistical analysis, simple and multiple regression analyses, practices with regression models, and problems in regression analysis. Eco 261 or its equivalent is the prerequisite. The course will emphasize the use of software statistical package such as Excel to introduce modeling techniques in regression analysis. Students will be familiarized with applied statistical and regression literature as evidenced in the reading list.

TEXT


ADDITIONAL READINGS


GRADING POLICY

Final grades will weight two mid-term exam grades by 20% each, a final exam grade by 20%, a term paper by 20% and a set of computer homework by 20%. The term paper involves aspects of specification and estimation in regression analysis. Guideline to the term paper will be provided after the first mid-term. The paper is due before or on Friday, May 9, 2003.
Approximate Grade Distribution:

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<th>Percent</th>
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<tbody>
<tr>
<td>90%</td>
<td>Borderline A-</td>
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<tr>
<td>80%</td>
<td>Borderline B-</td>
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<td>70%</td>
<td>Borderline C-</td>
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<td>60%</td>
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TENTATIVE COURSE OUTLINE

Part I: Review of Basic Statistical Theory, chapter 3 and notes

1. Descriptive Relationships
   a. Mean and standard deviation
   b. Scatter Plots
   c. Covariance and correlation

2. Discrete Random Variables
   a. Discrete random variables and probability distributions
   b. Expected value, variance and standard deviation
   c. Joint random variables and probability distributions
   d. Covariance and correlation

3. Continuous Random Variable and Normal Distribution
   a. Continuous random variables
   b. Normal and standard normal distributions

4. Estimation
   a. Point and interval estimation
   b. Sampling and non sampling errors
   c. Estimating the population mean when the variance is known
   d. Estimating the population mean when the variance is unknown

5. Hypothesis Testing
   a. Choosing between alternatives
   b. Decision making: Steps and process
   c. Hypothesis tests about a population mean
   d. Hypothesis test about the difference between two population means

EXAM I: Monday, February 19

Part II: Regression Analysis, chapters 3, 4, 6, and 7

1. Simple Regression Analysis
   a. Nature and scope
   b. Least Squares method
   c. Inferences about intercept and slope coefficients
   d. Confidence interval for the slope and coefficients
   e. Analysis of variance (ANOVA) Table
   f. Assessing the fit of the regression line
g. Prediction with a simple regression equation
h. Interpreting computer output

2. Multiple Regression Analysis
   a. Using multiple regression to describe a linear relationship
   b. Interpreting regression coefficients
   c. Inferences about regression coefficients
   d. Coefficient of determination and good of fit of the regression line
   e. Prediction with a multiple regression equation
   f. Comparing two regressions

3. Qualitative independent (Dummy) Variables
   a. The nature of dummy variables
   b. Interpreting dummy variables
   c. Interaction variables
   d. Testing seasonal and regional effects

EXAM II: Monday, April 3

Part 3: Advanced Regression Analysis, chapters 5, 8, and notes

1. Functional Forms
   a. The double log linear model
   b. The semi-log model
   c. The quadratic model

2. Regression in Practice
   a. Demand equation and elasticity
   b. Wage equation model
   c. Linear and quadratic trend models
   d. Discrete Choice model: The linear probability model

3. Problems in Regression model
   a. Multicollinearity
   b. Serial Correlation
   c. Heteroscedasticity

PAPER DUE: Friday, May 10 by 5:00 p.m.

FINAL EXAM: Monday, May 12, 10:10 a.m.

NOTE: There is nothing random about mid-term and final exam dates. Plan accordingly, as no make-ups will be given except under extreme circumstances (accident, illness). I reserve the right to verify all evidences before a make-up exam is scheduled.