I. **Catalog Description**

EC 421/EC 421A Introductory Econometric Methods (3/1)

Introductory course in econometric problem-solving techniques. Students required to do quantitative model-building, estimation, verification, and prediction of economic variables in class exercises. 3 lectures/problem-solving, 1 two-hour activity. Prerequisites: EC 322/EC 322A, EC 406; EC 401, EC 402 and EC 403 strongly recommended.

II. **Required Background or Experience**

EC 322/EC 322A. EC 406; EC 401, EC 402 and EC 403 strongly recommended.

III. **Expected Outcomes**

The student will:

a) identify and apply the basic techniques of simple economic model building,

b) perform econometric tests of economic relationships, and

c) forecast economic trends using regression and time series analysis.

IV. **Text and Readings**

Texts:


V. **Minimum Student Materials**

Textbook, notebooks, required reading materials, and access to personal computers (PCs) equipped with E-Views software.

VI. **Minimum College Facilities**

A library of readings and related publications. Classroom equipped for lecture/problem solving with workstations equipped with EViews software.

VII. **Course Outline**

A. **Overview of Quantitative Requirements**

1. Economic Models and Econometric Analysis
2. Introduction to EViews
3. Review of Statistical and Mathematical Requirements

B. **Single-Equation Regression Analysis**

1. Estimation and Hypothesis Testing -- Two Variable Model
2. Regression and Correlation
3. Estimation and Hypothesis testing -- Multi-Variable Model
4. Forecasting Using Regression Model

C. **Single Equation Estimation Problems**

1. Multicolinearity
2. Autocorrelation
3. Heteroscedasticity
4. Functional Form

D. Special Topics in Regression Analysis
1. Distributed Lag Models
2. Dummy Variables and Qualitative Analysis
3. Probability Limits and Maximum Likelihood Estimation
4. Introduction to Simultaneous Equations

VIII. Instructional Methods

Lecture/problem sessions and activity sessions using a computer lab and EViews software to apply course concepts.

IX. Evaluation of Outcomes

Weekly assignments and exercises, midterm and final examinations, and a written report on a regression analysis and forecasting applied economic topic.