The purpose of this course is to provide students with a solid understanding of applied econometric analysis. Since this course is primarily designed as a capstone course for economics and applied mathematical majors, it attempts to encourage students to synthesize the knowledge acquired in the mathematics and economics courses that are an integral part of these programs. The primary emphasis will be on applied econometrics and forecasting. The material covered in this course will provide the student with training in topics that are extremely useful both in graduate study and in many careers.

Since this is a seminar course, each student is expected to actively participate in the course. This participation will include:

- presenting a paper on an applied economic topic. The results of this study will be presented to the class in two stages. A first draft of the paper is due in the middle of the semester. This draft will contain a review of the relevant literature dealing with the selected topic. A presentation of this literature review will be delivered to the class at this time. The final results of the project will be presented at the end of the semester.

- actively participating in class discussions. Obviously, this requires that all readings must be completed prior to their discussion in class.

- presenting course material to the class and serving as discussion leader.

In addition to the above requirements, one exam will be given before the start of the final student presentations. The final grade in the course will be determined according to the following formula:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>homework</td>
<td>10%</td>
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<tr>
<td>class participation</td>
<td>10%</td>
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<tr>
<td>project</td>
<td>40%</td>
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<tr>
<td>midterm</td>
<td>40%</td>
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</tbody>
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Topics:

I. Introduction / Review of statistics - Chapters 1-3

II. The Multiple Regression Model - Chapters 4 - 7

III. Nonlinearity and Qualitative Independent Variables - Chapters 8 - 9

IV. Specification and Measurement Error - Chapter 10

V. Multicollinearity - Chapter 11

VI. Autocorrelation and Heteroskedasticity - Chapters 12 and 13

VII. Limited Dependent Variable Models - Chapter 14

VIII. Simultaneous equation models: 2SLS, SURE, and 3SLS - Chapter 15

IX. Distributed lag models - Chapter 16

X. Random walks, unit roots, and cointegration - Chapter 17

XI. ARIMA and VAR models - Chapter 18

XII. Further topics (as time permits)

Tentative schedule:

Preliminary student presentations - March 27, April 3
Exam - April 24
Final presentations - May 8, 15