A. **Course Objective:**

To provide students with a basic introduction to the theory, methods, and applications of statistical techniques for fitting linear econometric models. Most of the course will focus on single equation models but a little time will be allocated to multiple equation models. Students will gain experience in fitting models to economic data and interpreting the results. Fitting of equations will be by standard packages, i.e., SAS.

Students are expected to participate in a weekly computer lab session run by the TA.

B. **Grading:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tr>
<td>Homework</td>
<td>20%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>35%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>45%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

C. **Outline and Reading List:**


I. Introduction


Griffiths, Hill, and Judge, Ch. 3, pp. 72-107, Ch. 4, pp. 128-144.

II. Simple Regression Model

A. Estimator and Properties
   Wooldridge, Ch. 2, pp. 22-60.
   Griffiths, Hill, and Judge, Ch. 5, pp. 171-207.

B. Inference and Hypothesis Testing
   Griffiths, Hill, and Judge, Chs. 6 & 7, pp. 208-256.

III. Classical Multiple Regression Model

A. Estimator and Properties
   Wooldridge, Ch. 3, pp. 66-86; 101-102; Ch. 6, pp. 192-198.
   Griffiths, Hill, and Judge, Ch. 9, pp. 287-320.

B. Inference, Hypothesis Testing, Forecasting
   Wooldridge, Ch. 4, pp. 113-136; Ch. 6, pp. 197-203.
   Ruud, P.A. *An Introduction to Classical Econometric Theory*.
   Oxford University Press, 2000, pp. 222-238.
   Griffiths, Hill, and Judge, Ch. 10, pp. 321-368.

C. Restrictions: Nonsample Information
   Wooldridge, Ch. 4, pp. 136-154.
   Griffiths, Hill, and Judge, Ch. 11, pp. 369-406.
D. Extensions: Nonlinear Regressors, Dummy Regressors, Excluded Regressors
Woolridge, Ch. 3, pp. 87-100; Ch. 6, pp. 178-197; Ch. 7, pp. 211-241.
Griffiths, Hill, and Judge, Ch. 12, pp. 411-426; Ch. 13, pp. 431-444.

IV. General Linear Multiple Regression Model: The Covariance Matrix

A. General and Heteroscedastic
Woolridge, Ch. 8, pp. 248-273.
Griffiths, Hill, and Judge, Ch. 15; pp. 477-494; Ch. 17, pp. 542-563.

B. Time Series Data, Serial Correlated Disturbances, Forecasting
Woolridge, Ch. 10, pp. 311-342; Ch. 11, pp. 347-375; Ch. 12, pp. 376-403;
Ch. 18, pp. 593-608.
Griffiths, Hill, and Judge, Ch. 16, pp. 514-540; Ch. 20, pp. 39-677.
Woolridge, Ch. 12, pp. 376-404.

V. Endogenous Regressors, Measurement Error, and Multiple Equation Models
Woolridge, Ch. 5, pp. 162-176; Ch. 9, pp. 278-305; Ch. 15, pp. 461-491.
Griffiths, Hill, and Judge, Ch. 14, pp. 445-466; Ch. 16, pp. 501-520.