Course: 計量經濟學  Section: M5187
Time: Wed./2-4  Place: C2F03 (資訊大樓)
Instructor: Jenn-Shyong Kuo  Telephone: 886-2-8674-6672
Office Hours: Appointment by e-mail  E-Mail: jennkuo@mail.ntpu.edu.tw

Course objective
The primary objective of this subject is to provide an introduction to the theory and application of econometric methods. The subject provides the foundation for further studies in Econometrics as well as serving the need of students undertaking further studies in Commerce.

On completion of this subject, students should be able to:
1. Apply the principle of least-squares estimation to data sets drawn from Economics and Commerce using single regression techniques.
2. Formulate and test hypotheses about the relationship between variables.
3. Understand the nature and consequences of violating any of the classical assumptions and test for violations.
4. Estimate models in the presence of heteroskedastic and autocorrelated disturbances.
5. Use Software to manipulate data, and to estimate and test hypotheses in the context of the linear regression model.

Course outline
Introduction to techniques used in quantifying economic relationships. Topics include estimation and testing of hypotheses, forecasting and construction of prediction intervals, use of appropriate functional forms, detection and correction of measurement problems, model specification, and use of statistical software programs for single equation regression analysis (STATA, Excel, SAS).

Course Text (Required)
Hill, Griffiths, Lim: Principles of Econometrics, 3rd Edition
管中閔。統計學: 観念與方法 二版。華泰書局 2004。 (K)

Supporting Texts
Kmenta, Jen, Elements of Econometrics, 2nd.ed, MacMillan Publishing Company, N.Y.,1986. (See the first 6 chapters for Stats reviews)  

Class schedules (might change due to progress)

<table>
<thead>
<tr>
<th>Date</th>
<th>Contents</th>
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| 1 9/16 | • Chapter 1 An Introduction to Econometrics (HGL)  
• Chapter 17 Writing an Empirical Research Report, and  
• Sources of Economic Data (HGL)  
• Introduction & term paper format (HGJ) |
| 2 9/23 | • Appendix A-C Review of Math Essential; Basic Statistics; Statistical Inference (GHL)  
• Ch. 1 and 2 some basic probability concepts (HGJ)  
• Ch. 1-6 敘述統計、機率概念、統計分配(K) |
| 3 9/30 | • Chapter 2 The Simple Linear Regression Model (HGL)  
• Ch. 3: Simple linear regression (SLR) model: specification and estimation (HGJ)  
• Ch. 10. 簡單線性迴歸: 最小平方法 (K) |
| 4 10/7 | • Chapter 3 Interval Estimation and Hypothesis Testing (HGL)  
• Ch. 4: properties of the least squares estimators (LSE) (HGJ)  
• Ch. 11. 簡單線性迴歸: 統計分析 (K) |
| 5 10/14| • Chapter 4 Prediction, Goodness of Fit and Modeling Issues (HGL)  
• Ch. 5: Inference in the SLR model: interval estimation, hypothesis testing, and prediction. (HGJ)  
• Ch. 6 SLR model: reporting the results and choosing the functional from (HGJ)  
• Ch. 7-8 & 11 參數估計、假設檢定、簡單線性迴歸: 統計分析 (K) |
| 6 10/21| • Chapter 5 The Multiple Regression Model (HGL)  
• Ch. 7: The multiple regression model (HGJ)  
• Ch. 12. 多重線性迴歸 (K) |
| 7 10/28| • Chapter 6 Further Inference in the Multiple Regression Model (HGL)  
• Ch. 8: Inference in the multiple regression (GHJ) |
Course policies:

1. Book chapters are assigned each week. Reading each chapter and doing the problems will help you understand the material. I will assume you have read each chapter PRIOR to discussion question and explanation. I am very happy to help any student to learn the material. But before you discussion a question with me, I expect that you do your part of the bargain. That is, you are to read the text, work the problems before hand, and discuss with classmates concepts and problems first. Then you are more than welcome to ask questions anytime! Written Material and your colleagues are valuable resources that are instrumental in any career!!!!

2. Examinations must be taken at the scheduled time. No makeup exam is allowed unless you are involved in an emergency under certain circumstances. If it happens to you, official affidavits and your written petition must be presented to the instructor in order to file for an official decision and record.

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4. The Exercises and Practice problems from the text are assigned for you to do on your own. You are encourage to discus the home works with your classmates but don’t plagiarize. They will be collected randomly and graded for credit.

**Term paper guidelines:**

The paper should be at least 10 pages double spaced and not more that 20 pages double spaced. The paper is due on or before Jan. 13, 2007 at 12:00 p.m. Please print the names and student I.D. of all group participants clearly on the cover page of the paper. Appendix analyses are to be considered as part of the maximum of 10 pages.

**Grades**

Students are evaluated based on their class attendance, problem sets, and one final exam according to the following distribution.

<table>
<thead>
<tr>
<th>Class attendance and Assignments</th>
<th>20%</th>
<th>Final exam</th>
<th>40%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term paper</td>
<td>40%</td>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

1. Your final grade will be based solely on your exam scores. *No extra-credit work* will be provided or accepted.

2. *No make-up for quizzes* because rationale for the quizzes is to reward you for being class and studying on time.

3. *No telephone confirmation* to the Dept. of Accounting for your final grade.

4. If you cannot take a midterm/final exam by any *sensible* reason (e.g. serious illness, traffic accident, family emergency, etc), please inform me *immediately* to arrange a make-up for you.

5. The format of exams will be announced at least 4 days prior to the dates.

6. Calculators are allowed in exams.

**Rules in classroom**

Adult behavior is expected. In order to avoid interruption, please turn off your cell phone and no food in the class time.