



**Syllabus**  
**ECO 402 – 11**  
**Adv. Top. Econ.: Econometrics**  
**Fall 2007**  
**Prof., Dr. Abdulrazzak Charbaji**

10:00 am	10:50 am	MWF	Sep 27, 2007	Thru Feb 05, 2008
Computer Center				

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Office Hours: 10:45am – 11:15am MWF

**Course Description:**

The course focuses on important applications and empirical implementations of econometric techniques. The course structure follows the philosophy of hands-on training. Every lecture is followed by a tutorial session in which students would use the computer software packages to solve the real world problems discussed in the lecture. The course covers a wide variety of applied problems often faced by economists in both public and private sectors. At the end of the course, students must be able to use a standard computer package to carry out empirical studies.

**Course Prerequisite(s):**

Implementing econometric procedures involve messy calculations. In today's computerized environment, the optimal strategy in teaching econometrics places less emphasis on mathematical derivation and more on concepts and model building. For this reason, computer application is an integral part of this course and we will use three different computer software:

- Econometrics Views, or Eviews,
- SPSS, Advanced SPSS, and
- Excel

Prior programming experience is not required or expected. These computer software packages are made available to LAU business students through the School of Business Computer Center.

**Required Text:**

A.H. Studenmund, (2001), Using Econometrics: A Practical Guide, 4<sup>th</sup> edition, Addison Wesley Longman.

## Course Objectives:

The subject of **econometrics** deals with **the measurement of business and economic relationships**. Econometrics can be studied at the **applied** or **theory** level. This course will introduce you to econometric modeling and techniques with *emphasis* on **applied econometrics**. Econometric theory will also be examined with minimal emphasis on proofs and derivations. This course will provide LAU business and economic students with a variety of computer and real life applications so that they can carry out empirical work successfully in the real world in addition to theoretical background needed for taking advanced econometrics courses. To achieve a sufficient balance between applied econometrics and theoretical econometrics, the material will therefore be presented without resorting to serious calculus. As you will soon discover, econometrics is a mixture of theory, matrix manipulation, multivariate statistics, and proficiency in computer application (Eviews, Excel and/or SPSS). Using applied econometrics, LAU students can accomplish the following objectives: (1) **perform structural analysis** of the effects of exogenous factors on the endogenous variable whose behavior we seek to explain; (2) **test hypotheses** about new and existing theories; and (3) **evaluate and implement policy** in government and business using the estimated econometric model. Keeping in mind that **regression analysis** is indeed the '**heart**' of econometrics.

## Means to Accomplish Objectives:

The student will be required to:

1. Participate in class discussion,
2. Attend the Business Computer Center,
3. Take final exam, and
4. Take six exams in the business computer center.

Each exam in the business computer center is worth 10 points and the final exam is worth 35 points. There are no make-ups for the exams and 5 points will be given for class participation.

## Attendance & Cheating Policies :

Any student absence for more than three business computer sessions will have his/her grade lowered by one letter grade.

Anyone caught plagiarizing will receive an "F" in the course.

## Course Outline:

### **Lectures and Computing Exercises**

**Textbook: A.H. Studenmund, (2001), Using Econometrics: A Practical Guide, 4<sup>th</sup> edition, Addison Wesley Longman.**

<b>Table of Contents:</b>	<b>Date</b>
<p><b>Lectures:</b></p> <ul style="list-style-type: none"> <li>• Syllabus</li> <li>• Book</li> <li>• Course requirements</li> </ul>	<p>Friday, Sept., 28<sup>th</sup></p> <p>Business Building 1006</p>
<p><b>Lectures:</b> Introduction:       The Nature of Regression Analysis</p> <p><b>Studenmund (2001): Ch. 1 &amp; Appendix C)</b></p>	<p>Monday, Oct., 1<sup>st</sup></p> <p>Meet in computer lab</p>
<p><b>Lectures:</b> Starting EVIEWS, SPSS , Excel and running simple regression using:</p> <ol style="list-style-type: none"> <li>1. Raw Data</li> <li>2. Standardized Scores</li> <li>3. Matrix</li> </ol> <p><b>Studenmund (2001): Chapter 1: Exercise 2, 10</b></p>	<p>WFM Oct., 3<sup>rd</sup> Thru Oct., 8<sup>th</sup></p> <p>Meet in computer lab</p>
<p><b>Lectures:</b></p> <p>Quantitative variable and Multiple Regression (Normal Equations)</p> <p><b>Studenmund (2001): Chapter 2: Exercise 4, 13</b></p>	<p>WFM Oct., 10<sup>th</sup> Thru Oct., 15<sup>th</sup></p> <p>Meet in computer lab</p>
<p><b>Lectures:</b></p> <p>Quantitative variable and Multiple Regression (Matrix of Correlation Coefficients Approach)</p> <p><b>Studenmund (2001): Chapter 2: Exercise 4, 13</b></p>	<p>WFM Oct., 17<sup>th</sup> Thru Oct., 22<sup>nd</sup></p> <p>Meet in computer lab</p>
<p><b>Lectures:</b></p> <p>Learning how to interpret and analyze the regression</p> <p><b>Studenmund (2001): Chapter 3: Exercise 1, 7</b></p>	<p>WFM Oct., 24<sup>th</sup> Thru Oct., 29<sup>th</sup></p> <p>Meet in computer lab</p>

<p><b>Lectures:</b></p> <p>Understand the Classical regression model</p> <p><b>Studenmund (2001): Chapter 4: Exercise 2, 3</b></p>	<p>WFM Oct., 31<sup>th</sup> Thru Nov., 5<sup>th</sup></p> <p>Meet in computer lab</p>
<p><b>Lectures:</b></p> <p>Partial Effect Significant t-test and Overall F-test</p> <p><b>Studenmund (2001): Chapter 5: Exercise 1, 16</b></p>	<p>WFM Nov., 7<sup>th</sup> Thru Nov., 12<sup>th</sup></p> <p>Meet in computer lab</p>
<p><b>Lectures:</b></p> <p>Different Functional forms and its interpretations</p> <p><b>Studenmund (2001): Chapter 7: Exercise 9</b></p>	<p>WFM Nov., 14<sup>th</sup> Thru Nov., 19<sup>th</sup></p> <p>Meet in computer lab</p>
<p><b>Independence Day –Holiday- No Classes</b></p>	<p>Thursday, Nov., 22<sup>nd</sup></p>
<p><b>Lectures: General Review</b></p>	<p>WFM Nov., 21<sup>st</sup> Thru Nov., 26<sup>th</sup></p> <p>Meet in computer lab</p>
<p><b>Lectures:</b></p> <p>Dummy variables Techniques</p> <ol style="list-style-type: none"> <li>1. Testing Structural Shift (Intercept)</li> <li>2. Testing Change in Rate of Change</li> <li>3. Testing Seasonal Variation</li> </ol> <p><b>Studenmund (2001): Chapter 8: Table 8.3</b></p>	<p>WFM Nov., 28<sup>th</sup> Thru Dec., 3<sup>rd</sup></p> <p>Meet in computer lab</p>
<p><b>Lectures:</b></p> <p>Multicollinearity and Remedy</p> <p><b>Studenmund (2001): Chapter 8: Exercise 1, 16</b></p>	<p>WFM Dec., 5<sup>th</sup> Thru Dec., 10<sup>th</sup></p> <p>Meet in computer lab</p>
<p><b>Lectures:</b></p> <p>Autocorrelation Test and Cochrane-Orcutt method</p> <p><b>Studenmund (2001): Chapter 9: Exercise 16 , Table 1.2</b></p>	<p>WFW Dec., 12<sup>th</sup> Thru Dec., 19<sup>th</sup></p> <p>Meet in computer lab</p>

<b>Christmas and New Year vacation</b>	Saturday, 12/22/07 - Wednesday, 1/2/08
<b>Lectures:</b>  Dummy Dependent Variable and Discriminant Function Techniques  <b>Studenmund (2001): Chapter 13: Table 13.2</b>	WFM Jan., 2 <sup>nd</sup> Thru Dec., 7 <sup>th</sup> Meet in computer lab
<b>Lectures:</b>  Time Series Models  1. Forecasting and ARIMA Models 2. Granger Causality  <b>Studenmund (2001): Chapter 12</b>	WFM Jan., 9 <sup>th</sup> Thru Jan., 14 <sup>th</sup> Meet in computer lab
<b>Last day for withdrawing from courses for fall 2007</b>	<b>Friday, January 18, 2008</b>
<b>Fall 2007 classes end on Thursday, 1/24</b>	
Friday, January 25 - Sunday, January 27, 2008 Reading period	
<b>FINAL EXAM (35 points)</b> <b>Monday, 1/28 - Wednesday, 2/6</b>	

**Course Requirements:**

- **Six Exams (60 points)** In the business computer center, you will be asked to present results from some simple related empirical exercises (There are various assignments that are done in business computer) .
- **Final Exam (35 points)**
- **Class Participation (5 points)**

**Makeup work:** No makeup will be accepted.

**Grading Scale:**

≥ 90	A	77-79	B-	63-66	D+
87-89	A-	73-76	C+	60-62	D
83-86	B+	70-72	C	60-62	D
80-82	B	67-69	C-	≤ 59	F

## Internet Sources

Association of Banks in Lebanon	<a href="http://www.abl.org.lb">http://www.abl.org.lb</a>
Ministry of Economy	<a href="http://www.economy.gov.lb/MOETEN/index.htm">http://www.economy.gov.lb/MOETEN/index.htm</a> <a href="http://www.economy.gov.lb/MOETEN/MOET-statistics.html">http://www.economy.gov.lb/MOETEN/MOET-statistics.html</a>
Association of Lebanese Industrialists	<a href="http://www.abi.org.lb">http://www.abi.org.lb</a>
Banque du Liban	<a href="http://www.bdl.gov.lb/index.html">http://www.bdl.gov.lb/index.html</a>
Beirut Stock Exchange	<a href="http://www.bse.com.lb">http://www.bse.com.lb</a>
CDR Council of Development and Reconstruction - Lebanon	<a href="http://www.cdr.gov.lb">http://www.cdr.gov.lb</a>
Central Administration of Statistics	<a href="http://www.cas.gov.lb">http://www.cas.gov.lb</a>
Chamber of Commerce & Industry in Sidon & South Lebanon	<a href="http://www.ccias.org.lb">http://www.ccias.org.lb</a>
Chamber of Commerce, Industry & Agriculture of Tripoli & North Lebanon	<a href="http://www.cciat.org.lb">http://www.cciat.org.lb</a>
Chamber of Commerce, Industry & Agriculture of Zahle & Bekaa	<a href="http://www.cciaz.org.lb">http://www.cciaz.org.lb</a>
Court of Audit	<a href="http://www.coa.gov.lb/english.html">http://www.coa.gov.lb/english.html</a>
Directorate General of Customs	<a href="http://www.customs.gov.lb/customs/English">http://www.customs.gov.lb/customs/English</a>
IDAL	<a href="http://www.idal.com.lb">http://www.idal.com.lb</a>
Industrial Research Institut	<a href="http://www.iri.org.lb">http://www.iri.org.lb</a>
Lebanese Parliament	<a href="http://www.lp.gov.lb">http://www.lp.gov.lb</a>
LIBNOR, Lebanese Standards Institution	<a href="http://www.libnor.com">http://www.libnor.com</a>
Middle East Airlines	<a href="http://www.mea.com.lb">http://www.mea.com.lb</a>
Ministry of Agriculture	<a href="http://www.agriculture.gov.lb">http://www.agriculture.gov.lb</a>
Ministry of Environment	<a href="http://www.moe.gov.lb">http://www.moe.gov.lb</a>
Ministry of Finance	<a href="http://www.finance.gov.lb">http://www.finance.gov.lb</a>
Ministry of Foreign Affairs and Emigrants	<a href="http://www.emigrants.gov.lb">http://www.emigrants.gov.lb</a>
Ministry of Industry	<a href="http://www.industry.gov.lb">http://www.industry.gov.lb</a>
Ministry of Interior	<a href="http://www.interior.gov.lb">http://www.interior.gov.lb</a>
Ministry of Justice	<a href="http://www.justice.gov.lb">http://www.justice.gov.lb</a>
Ministry of Posts & Telecommunications	<a href="http://www.mpt.gov.lb">http://www.mpt.gov.lb</a>
Ministry of Public Health	<a href="http://www.public-health.gov.lb">http://www.public-health.gov.lb</a>
Ministry of Public Works	<a href="http://www.public-works.gov.lb">http://www.public-works.gov.lb</a>
Ministry of Tourism	<a href="http://www.lebanon-tourism.gov.lb">http://www.lebanon-tourism.gov.lb</a>
Office of the Minister of State for Administrative Reform OMSAR	<a href="http://www.omsar.gov.lb">http://www.omsar.gov.lb</a>
Solidere	<a href="http://www.solidere-online.com">http://www.solidere-online.com</a>
Special Investment Community - Money Laundering	<a href="http://www.sic.gov.lb">http://www.sic.gov.lb</a>
Syndicate of Lebanese Food Industries	<a href="http://www.slfi.org.lb/index1.html">http://www.slfi.org.lb/index1.html</a>
World Trade Center, Beirut	<a href="http://www.wtcbeirut.com/">http://www.wtcbeirut.com/</a>