



**Econometrics & Quantitative Analysis, MDEC 6301**  
**Spring Semester, 2013**

*Course Syllabus*

**Instructor:** Dr. Samir Safi

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**Time & location:** (101): 15:00-18:00, S, K107  
: (201): 15:00-18:00, W, L219

**Office hours:** 10:00-11:00 & 12:00-14:00 SMW

*Course Overview*

Decision making for planning, policy, and management relies mainly on the collection, analysis, and interpretation of *quantitative* data. These tasks are performed through statistical methods and model building using economic theory to formulate an economic/business model that can be estimated with relevant data using appropriate statistical techniques. Econometrics & Quantitative Analysis deals with quantitative data analysis and as such it will familiarize you with the use of standard statistical computing software such as Eviews and Stata. The course is designed to introduce students to principles and techniques of empirical research and to the application of these results to development economics or deriving conclusions.

A basic knowledge of statistics, ECON 1323 or Statistical Analysis ECON 3341 is one of the prerequisites of this course. If you need a quick refresher in basic statistical concepts and terminology, please visit the following website: <http://www.mrs.umn.edu/~sungurea/introstat/>.

**Text:**

- 1- Using Econometrics: A Practical Guide, Studenmund, A.H., 6th Edition, 2011, Prentice Hall.

**Book Website:** [www.pearsonhighered.com/studenmund](http://www.pearsonhighered.com/studenmund)

ISBN-10: 0131367730 • ISBN-13: 9780131367739

- 2- Introduction to Econometrics: Stock, J. H. and Watson, M. W., 3rd Edition, 2011, Prentice Hall.

ISBN-10: 0138009007 • ISBN-13: 9780138009007

- 3- *Additional Readings* will be handed out in the class.

***Statistical Software Packages:*** Eviews and Stata.

***Course Objectives***

This course should expand your ability to achieve the following objectives that reflect the broader objectives of the economics discipline:

- Identify types of problems that lend themselves to quantitative analysis, ask
- "researchable" questions, and formulate hypotheses;
- Apply economic theory to formulate statistical models that can be estimated;
- Identify the procedures to test hypotheses (logic, procedure, data);
- Carry out the analysis, understand the meaning of results and their policy implications;
- Present the results to an audiences made up of your peers;
- Evaluate results of research carried out and reported by others; and
- Apply the knowledge acquired to develop and conduct a service learning research project and other research projects.

***Course Method:***

The course consists of:

- Lectures and discussions on research methods and econometric procedures;
- Computer Lab sessions which may be held outside of class hours. The times for these labs will be announced a week in advance;
- Creatively solving assigned questions and group exercises;
- Discussions of the service learning project design/research project, its implementation, progress and results.

***Homework:***

All class periods will have readings and problems assigned in advance. It is your responsibility to ask questions about the readings and problems you do not understand.

***Exams:***

There will be three midterm exams and a final exam for this course. The final exam will be cumulative, with emphasis on the material covered after the midterm exams.

***Project:***

There will be two computer projects. You may work in groups of up to 2 on the computer project and turn in one paper with everyone's name on it.

***Attendance:***

Students are expected to attend all classes. It is your responsibility to keep informed of any announcements; e.g., exams dates, and syllabus adjustments.

***Evaluation Procedure***

Your grade will be determined by your Exams and projects as shown and described below:

***Exams***

Midterm Exam #1	15%	<b>23/2/2013</b>
Midterm Exam #2	15%	<b>23/3/2013</b>
Midterm Exam #3	15%	<b>20/4/2013</b>
Final Exam	45%	<b>20/5/2013</b>

***Projects***

Project #1	5%	<b>27/3/2013</b>
Project #2	5%	<b>15/5/2013</b>

***Class Schedule:***

We will cover the following topics; any changes will be announced in class.

<b>Week and Date</b>	<b>Read:</b>	<b>Subject</b>
Week #1: 2/2 – 6/2	Chapter 1	An Overview of Regression Analysis
Week #2: 9/2 – 13/2	Chapter 2 & 3	Ordinary Least Squares & Learning to Use Regression Analysis
Week #3: 16/2 – 20/2	Chapter 4 & 5	The Classical Model & Hypothesis Testing
Week #4: 23/2 – 27/2	<i>Reading Material</i>	<i>Computer Session #1: Using E-Views</i>
<b>Midterm Exam #1</b>		<b>23/2/2013</b>
Week #5: 2/3 – 6/3	Chapter 6 & 7	Model Specification: Choosing the Independent Variables & Choosing a Functional Form
Week #6: 9/3 – 13/3	Chapter 8	Multicollinearity
Week #7: 16/3 – 20/3	Chapter 9	Serial Correlation
Week #8: 23/3 – 27/3	<i>Reading Material</i>	<i>Computer Session #2: Using E-Views</i>
<b>Midterm Exam #2</b>		<b>23/3/2013</b>
Week #9: 30/3 – 3/4	Chapter 10	Heteroskedasticity
Week #10: 6/4 – 10/4	Chapter 12	Time-Series Models
Week #11: 13/4 – 17/4	Chapter 13	Dummy Dependent Variable Techniques
Week #12: 20/4 – 24/4	<i>Reading Material</i>	<i>Computer Session #3: Using E-Views</i>
<b>Midterm Exam #3</b>		<b>20/4/2013</b>
Week #13: 27/4 – 1/5	Chapter 8	Nonlinear Regression Functions
Week #14: 4/5 – 8/5	Chapter 10	Regression with Panel Data
Week #15: 11/5 – 15/5	<i>Reading Material</i>	<i>Computer Session #4: Using E-Views</i>

***Good Luck***