Syllabus

ECONOMETRICS A - 71989

Last update 12-09-2017

<u>HU Credits:</u> 4

<u>Responsible Department:</u> environmental economics & management

<u>Academic year:</u> 0

<u>Semester:</u> 1st Semester

<u>Teaching Languages:</u> Hebrew

<u>Campus:</u> Rehovot

<u>Course/Module Coordinator:</u> Prof Yacov Tsur

<u>Coordinator Email:</u> Yacov.Tsur@mail.huji.ac.il

<u>Coordinator Office Hours:</u> Tuesday 9:00 - 10:00

<u>Teaching Staff:</u>
 Prof Yacov Tsur

<u>Course/Module description:</u>
 The course intends to equip graduate students with basic econometric tools

needed to analyze economic data. First the standard regression model will be reviewed, including Least Squares estimation, its statistical properties, and testing statistical hypotheses. Then, the assumptions underlying the standard linear regression model will be relaxed, including models with heteroscedastic and serially correlated errors. Models with panel data (cross section and time series) will be studied. . Instrumental Variable estimation will be studied and used to deal with situations in which the assumption that the explanators are independent of the error term fail to hold. Large sample theory (Laws of Large Numbers and Central Limit Theorems) will be used to relax the normality assumption. Generalized Method of Moments and Maximum Likelihood estimation will be reviewed. Models with Limited dependent variables and models of simultaneous equations will be briefly reviewed. Each of the course's topics will be practiced with actual data via weekly homework assignments

Course/Module aims:
Impart knowledge in various methods for economic models data analysis and practice their applications

Learning outcomes - On successful completion of this module, students should be able to:
Perform standard and multiple regressions
Apply linear statistical models
identify errors in equations
Analyze economic models with serially correlated errors and panel data

Attendance requirements(%):
100

Teaching arrangement and method of instruction: Lectures and exercises

Course/Module Content:
1.Standard regression model
2.Relaxing assumptions
3.Introduction to statistics of large samples
4.Estimation method
5.Models of panel data
6.Formulation regression model
7.Introduction to models with limited dependent variables
8.Introduction multiplayer equations models

Required Reading:
 To be announced at the course site

 Additional Reading Material:
  Davidson, R. and J. G. MacKinnon (DM), Econometric Theory and Methods, Oxford University Press, Oxford, 2004

Greene, W.H. (WG), Econometric Analysis, (2nd ed.), Macmillan, New York, 1993

Mittelhammer, R. C., G. G. Judge and D. J. Miller (MJM), Econometric Foundations, Cambridge University Press, Cambridge, 2000.

Murray, Michael P. Econometrics: A modern introduction (MM), Addison Wesley, Boston,
2006.

Wooldridge, J. M. Introductory Econometrics (MW), Thomson, 2006

 Course/Module evaluation:
 End of year written/oral examination 90 %
 Presentation 0 %
 Participation in Tutorials 0 %
 Project work 0 %
 Assignments 10 %
 Reports 0 %
 Research project 0 %
 Quizzes 0 %
 Other 0 %

Additional information:
  All homework assignments must be submitted on time