DEREE COLLEGE SYLLABUS FOR:

EC 4636 APPLIED METHODS IN ECONOMICS –LEVEL 6   UK CREDITS: 15
3/1/3
(Updated Fall 2017)

PREREQUISITES:	EC 1000 Principles of Microeconomics EC 1101 Principles of Macroeconomics MA1009 Mathematics for Business Economics and Sciences MA1105 Applied Calculus MA 2010 Statistics I MA 3111 Statistics II
CATALOG **DESCRIPTION**:	Data categories. Databases. Applications of descriptive and inferential statistics in economics and finance. Model building and use in economics and finance. Model estimation.
RATIONALE:	This course is a natural extension of the courses in mathematics/ statistics/ economics/ finance that the student has taken. In this course the student will learn how to work with some of the most popular data bases that professionals are using, and apply statistical techniques for forecasting and/ or hypothesis testing purposes. The student will also learn how to design and estimate models in economics and finance.

LEARNING OUTCOMES: As a result of taking this course, a student should be able to:

1. Demonstrate detailed knowledge of different data categories.
2. Construct data sets from typical data bases
3. Summarize complex data sets using the appropriate descriptive statistics.
4. Identify and apply the appropriate inferential statistics methodology for hypothesis testing (means, proportions, standard deviations) for cross section and time series data.
5. Formulate fairly complex economic / financial relations by building the appropriate models.
6. Utilize regression techniques to estimate the parameters of economic/financial models

METHOD OF TEACHING
AND LEARNING: In congruence with the learning and teaching strategy of the college, the following tools are used:

➢ Classes consist of lectures, question-answer periods, homework solution and practice sessions through software that enhance understanding the material through real world empirical problems and self- testing assignments.

- ➢ Office hours: students are encouraged to make full use of the office hours of their instructor, where they can ask questions and go over lecture material.
- ➢ Use of a blackboard site, where instructors post lecture notes, assignment instructions, timely announcements, as well as additional resources.

ASSESSMENT: Student performance is assessed via:

Coursework - **formative**	0	Numerical problems/simulations/interpretation of results
Assignments summative	70	**Data collection/ statistical analysis/ interpretation**
Final examination (2-hour, comprehensive) - **summative**	30	Numerical problems/essay-type questions combination

Assignments test Learning Outcomes 2, 3, 4, 6 (applications)
The final examination tests Learning Outcomes 1, 4, 5, 6 (theory).

READING LIST: **Required reading**:
C Brooks. Introductory Financial Econometrics, CUP, 2017

Further reading:
Guazarati, Damodar, Basic Econometrics, McGraw Hill, Latest edition
Johnston Jack and John Dinardo. Econometric Methods. McGraw Hill, latest edition
Stock James and Mark Watson**.** Introduction to Econometrics, Prentice Hall, latest edition

RECOMMENDED MATERIAL   Journal of Applied Econometrics
Journal of Financial and Quantitative Analysis

WWW RESOURSES: www.SSRN.com/ (economics research institute papers)
www.ssrn.com/link/Yale-ICF.html
(Yale International center for finance working papers- abstracts)
www.ssrn.com/link/CCESifo.html (Center for Economic Studies & Ifo Institute for economic research-paper abstracts)
www.ssrn.com/link/econometrics.html
(econometrics abstracts. working paper series)

SOFTWARE REQUIREMENTS: Word, EXCEL, Eviews

COMMUNICATION REQUIREMENTS: Project submitted in Word and EXCEL

INDICATIVE CONTENT: 1. Data categories
2. Data bases
3. Applications of descriptive statistics
4. Applications of inferential statistics
5. Model design and building
6. Model estimation