ECON0019 (ECON0020)
QUANTITATIVE ECONOMICS AND ECONOMETRICS
SYLLABUS FOR TERM 1

AUTUMN 2021

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STUDENT SUPPORT HOURS: Thu 11 00-12 00 (Zoom) and 16 00-17 00 (F2F, Room 225, Drayton House).

PREREQUISITES
ECON0002 Economics; ECON0005 Statistical Methods in Economics; ECON0004 Applied Economics (or equivalents).

COURSE DESCRIPTION
The goal of this course is to provide students with a thorough understanding of core techniques used in quantitative economics and econometrics and their applications to testing economic theories and measuring magnitudes relevant for economic policy. The course serves as a foundation for subsequent studies of econometric methods. The main focus of Term 1 will be the analysis of cross sectional data using OLS regression techniques.

Incoming students will already have seen how regression models can be used to analyse and answer economic questions. Term 1 of this course will provide them with a more rigorous understanding of regression models and statistical inference for these. A good grasp of the underlying theory will help the students understand the strengths and weaknesses of models and methods. The students will furthermore be taught more advanced tools and concepts of regression analysis that are useful in carrying out independent empirical research. It will also prepare them for the introduction of more advanced econometric models and techniques in Term 2.

OBJECTIVES
At the end of Term 1, students should

- Understand the main techniques (most importantly, OLS regression) of quantitative economics and econometrics, including their theoretical properties.

- Understand how these techniques can be applied to test economic theories and measure economic magnitudes.

- Gained practical experience through empirical applications of the techniques using the software package STATA.

INSTRUCTION

- The instruction will be a mix of video recordings, quizzes, problem sets and live sessions. Each week's instruction will proceed as follows

    - 1-2 videos will be posted at the beginning of the week. Students are expected to watch these and read the corresponding material in the text book before the lecture.
    - A small quiz will be posted giving students the opportunity to see how well they understood the contents of the videos.
    - Each Friday there will be a lecture that follows up on the videos and goes into more details.
    - After the lecture a problem set will be posted. The problem set will be covered in subsequent tutorials or in a video recording.

- There will 8 problem sets of which 4 will have to be turned in for marking. The problem sets will include both theoretical and empirical exercises, the latter will require usage of an econometric software package such as STATA. The assignments will be not count towards the final mark.

- Moodle quizzes will be posted regularly. These will not count towards the final mark.

- Course materials (slides, problem sets, answer keys, video recordings, etc.) will be uploaded onto the Moodle course page.

ASSESSMENT

- Students taking the full course (ECON0019, Terms 1-2) will have to complete

    - An empirical project at the end of Term 2 (20% of final mark).
    - A written final examination in Term 3 (80% of final mark)

- Affiliate students (ECON0020, Term 1 only) will have to complete a 2 hours written examination at the end of Term 1. Their final marks will be solely based on this exam.

READING LIST

The course will be based on the following textbook

Jeffrey Wooldridge "Introductory Econometrics".

There are multiple editions of this textbook. You can, for example, obtain the EMEA edition which is an inexpensive version of Wooldridge's original textbook which does not have technical appendices.

Alternatively, you can use any of Editions 4-7 of the full version of Wooldridge's textbook. They cover the same material as the EMEA edition but come with additional material, including technical appendices. The latest full edition can be accessed for free at https://bibliu.com/app/#/view/books/9781337671330/ when using your UCL credentials to log in.