Econ 0005: Statistical Methods in Economics

Lecturer information

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What will you learn about?

This course will provide an introduction to probability and statistics for first year economics students, and is compulsory for first year single-honours Economics (L100 & L101), ECON/GEOG (LL17), ECON/PHIL (VL51), and ESPS Economics Specialist students only. The course will equip students with fundamentals in probability and statistics which are essential for studying economics.
You will learn to use the STATA software for statistical data analysis, and you will use it to analyse real-world datasets that Dr. Tincani uses in her research on the economics of education.

Is this course right for you?

A course prerequisite is that ECON0002 must be taken concurrently. Assumed knowledge for this course is calculus at high-school level. No prior knowledge of statistics or probability is required. The lecturer will explain all concepts from the basics.

What will you know (better) by the end of the course?

By the end of the course, you will have acquired statistical knowledge that will give you the foundations to understand the technical material in the econometrics courses that are part of the Economics degree, and to succeed in those courses. What you will learn in this course will provide you also with crucial skills that are required in any data analytics profession. Moreover, you will have developed critical skills that will allow you to better interpret statistics in the media and in everyday life.

What have students thought of the course in the past?

The lecturer uses pen and paper to explain key formulae for the course – this is something that students in the past have found very useful. Moreover, students typically find tutorials and problem sets very useful for their understanding of the course material. Finally, students have requested and appreciated the opportunity of taking a midterm exam in addition to the final exam. This has helped them to better manage their study time.

How do you learn on this course?

You will learn in this course through a combination of synchronous and asynchronous activities. You will have the opportunity to practice with weekly practice problem sets and you will submit four problem sets for individualised feedback.

Asynchronous activities are pre-recorded videos and resources that will deliver the core course content. Asynchronous activities for each week will be made available to you on Moodle by Friday 8am of the previous week.

Synchronous practicals are live sessions led by the Module Leader (Dr. Michela Tincani) and the Lead Tutor (Mr. David Goll) which will be recorded. They will revise some of the core course content, with a more hands-on, practical approach. During some of the practicals we may use the STATA software, which you can access through Desktop@UCL Anywhere (instructions on Moodle). Live sessions will be on Mondays 10:00-11:00.

There will be **5 synchronous tutorial sessions** throughout the term. **The tutorials will take place in module weeks 3, 4, 5, 7 and 9** (corresponding to weeks 8,9,10, 13 and 15 in the UCL academic year calendar).

There will be regular written assignments. You will submit four problem sets on Moodle for individualised feedback. Submission of problem sets for feedback is compulsory. You will also have the opportunity to practice with regular practice problem sets which will be made available to you on Moodle. You will be provided with suggested solutions, and you will have an opportunity to go over suggested solutions during tutorial sessions.

The material taught in lectures, practicals and tutorial sessions, and the assignments are intended to help you master the material at the level required for the midterm and final exams.

Textbook

The course textbook is Statistics for Business and Economics, by Newbold, Carlson, and Thorne, published by Pearson. Any edition between the 5th and the 9th is acceptable. The "plan for the term" on Moodle indicates the chapter numbers that we will cover each week,

for each of these five editions. We will cover methods for describing data, probability, discrete random variables, continuous random variables, sampling distributions, estimation, hypothesis testing, and simple linear regression.

Assessment

Assessment will be based on a final exam to be held on Moodle, which will count for 50% of the grade, and on a midterm to be held on Moodle, counting for 50% of the grade. The **Midterm** will be held on **Monday November 16th at 10.00-11.30**, and the **Final** on **Monday December 21st at 11.00-12.30**. You will be provided with a sample Moodle quiz. The Midterm will assess material from weeks 1-5 (included), the Final will assess material from weeks 1-10 (included).

On Moodle you can also find examples of past final exam scripts with solution. Notice that the *format* of these past exams is different from the format of the Moodle exams, but the *content* is very similar to what you can expect to see in your Moodle exams. You can use these exam questions and solutions for additional individual practice.