Objectives

The aim of the course is to provide a review of a variety of mathematical and statistical methods commonly applied in economic analysis.

Evaluation

Registration in this course is mandatory for all incoming M.A. economics students.

Two final grades will be generated for each student: a "math" mark to be used in the determination of the final course grade for ECON 5020 (Microeconomic Theory), and a "stats" mark to be used in the determination of the final course grade for ECON 5027 (Econometrics I). Each of these marks will be calculated as a weighted average of scores for two of four assignments (10% each) and one of two parts of a final examination (80%).

One assignment is due in class at 1 p.m. on the day of each tutorial (23, 25, 29 and 31 August). The final examination will take place on 1 September from 10 a.m. to 1 p.m. at a location to be announced by the university.

Students who earn a mark above 70% on the math/stats part of the course on the basis of the assignments and the final examination will receive a positive adjustment to their final course grade in ECON 5020/27; those who earn a mark below 70% will receive no adjustment.

Tutorials

The tutorials are an integral part of the course and are important to its successful completion. In each tutorial, the assignment collected in class earlier that day will be discussed and the solutions will be provided. Additional questions and problems that are relevant to the topics covered in the lectures will also be discussed in the tutorials.
Recommended texts


Course outline and coverage

The topics will be covered as time permits and the order is subject to change. The instructor will indicate in class which topics will be subject to testing on the final examination.

Mathematical methods

1. Linear algebra, calculus, and differential equations
2. Static optimisation
3. Dynamic optimisation

Statistical methods

4. Probability, random variables, and distributions
5. Estimation, hypothesis testing, and inference
6. Linear regression

Plagiarism

Please be aware that plagiarism is a serious offence at Carleton and should be recognised and avoided. For information on how to do so, please see "Pammett on Plagiarism and Paraphrasing" at [www.carleton.ca/economics/courses/writing-preliminaries/](http://www.carleton.ca/economics/courses/writing-preliminaries/).

Students with disabilities

Students with disabilities requiring academic accommodations in this course must contact a coordinator at the Paul Menton Centre for Students with Disabilities (PMC) to complete the necessary Letters of Accommodation. After registering with the PMC, students must make an appointment to meet and discuss their needs with the instructor in order to make the necessary arrangements as early in the intersession as possible.