

ECON 633

Mathematics for Economists

Department of Economics
McGill University
Summer 2023

Instructor: Julia Koh

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Regular classes: Daily from August 14th to August 29th, 10.00am - 1.00pm, LEA 424.

TA: Raphaël Langevin, raphael.langevin@mail.mcgill.ca

Course Overview and Learning Outcomes

The course is aimed at bringing students' knowledge of calculus and linear algebra up to levels required by the graduate macroeconomics, microeconomics courses and other courses.

Course Materials

The lectures will be based on material from the following textbooks. The main textbook is SB.

“Mathematics for Economists”, by Simon and Blume (*SB*)

“Mathematics for Economics”, by Hoy et al (*HOY*)

Assignments & Evaluation

This course is not a mandatory course, hence there is no evaluation and no assignment. However, if you are not familiar with the content, it is highly recommended that you review the materials.

Course Schedule

- August 14th: Introduction.
- August 15th: One-variable calculus (SB - CH2).
- August 16th: One-variable calculus review & applications (SB - CH3).
- August 17th: One-variable calculus - Chain Rule (SB - CH4).
- August 18th: Exponents & Logarithms (SB - CH5).

- August 21st: Introduction to Linear Algebra & System of Linear Equations (SB - CH 6 & 7).
- August 22nd: Matrix Algebra & Determinants (SB - CH 8 & 9).
- August 23rd: Euclidean Spaces (SB - CH10).
- August 24th: Linear Independence & Limits and Open Sets (SB - CH 11 & 12).
- August 25th: Functions of Several Variables (SB - CH 13).
- August 28th: Calculus of Several Variables (SB - CH 14).
- August 29th: Implicit Functions and their Derivatives (SB - CH 15).

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