EEBL

PREP-COURSE SYLLABUS 2025
MATHEMATICS | PROFESSOR GUILLAUME POMMEY

DESCRIPTION

The mathematics preparatory course aims to review the basic concepts of calculus and linear algebra and to provide students with the necessary tools to understand the notions of Economics where a quantitative approach is needed.

OUTLINE

- Set theory
- Real valued functions
- Limits, differential and integrals
- Systems of equations
- Optimization methods

LECTURE CONTENT

Lecture 1. Set theory: definitions and basic operations.

Lecture 2. Functions: foundations and limits.

Lecture 3. Functions: differential and integral calculus.

Lecture 4. Linear algebra: <u>matrices</u> and systems of equations.

Lecture 5. Optimization: Lagrangian and Kuhn-Tucker conditions.

REFERENCES

[1] Simon, Carl P., and Lawrence Blume. *Mathematics for economists*. Vol. 7. New York: Norton, 1994.

[2] Carter, Michael. *Foundations of mathematical economics*. MIT press, 2001.

PROFESSOR'S OFFICE HOURS

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