



REFRESHER COURSE SYLLABUS 2026

MATHEMATICS | PROFESSOR GUILLAUME POMMEY

DESCRIPTION

The mathematics preparatory course aims to review the fundamental concepts of set theory, calculus, optimization, and linear algebra needed to study formal economic models.

OUTLINE

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

LECTURES

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: matrices 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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