

Mathematics for Political and Social Scientists

Dates: 21 September - 25 September 2026

Time: 9:00-11:00

Location: Sala del Capitolo, Badia Fiesolana

Instructor: Charlotte Grupp, SPS Researcher

Register [online](#)

Contact: Monika.Rzemieniecka@eui.eu

Overview

The objective of this 10-hour workshop is to provide a refresher of mathematical basics that underpin quantitative political and social science. Knowledge of algebra and calculus is increasingly important in quantitatively-oriented political and social science, and allows researchers to better understand, manipulate and develop statistical methods as well as formal theory. The course is designed for participants with little or no background in mathematics and aims to help them follow quantitative methods courses and better understand quantitative publications.

The workshop is not mathematically intensive. The focus is on building intuition and conceptual understanding rather than on calculation and procedure. Throughout the sessions, we discuss examples of how these mathematical concepts are used in political and social science research. Each topic is paired with exercises so participants can apply what they have learned.

Topics covered

- Notation conventions
- Basic algebra
- Sets and functions
- Probability
- Derivatives
- Optimization
- Integrals
- Matrices

Prerequisites

None. The workshop is designed to be an accessible refresher.

Materials

Slides, exercises, and links to additional resources for further self-study will be shared with all registered participants.