

A.Y. 2017/2018

Preliminary course of **Mathematics**

**Lecturer:** Antonio Veredice

**Period:** from 28 August to 6 September 2017

**Contents:**

- **Linear Algebra:** Vectors and operations, Vector spaces and Bases, Matrix Algebra, Determinants, Rank, Linear Independence, Linear Systems.

- **Calculus one variable:** Topology in  $\mathbb{R}$ , Domains, Limits, Derivatives, Graph of a function.

- **Series and Integrals:** Summation notation, Geometric, Harmonic, Telescopic Series and other examples, Fundamentals of Integration, Integration by parts and by substitution, Integration of a ratio.

Suggested reference reading material: "Mathematics for Economists" Simon & Blume. NORTON