Preparatory Course in Mathematics Syllabus

**Teaching language:** English

**Total lecture hours:** 30

**Lecturer:** Carola Schrage

**Course description:** Precalculus Mathematics is reviewed which prepares for the Mathematics for Economists course. The course is directed to freshmen who are going to attend the Mathematics for Economists course.

**List of topics covered:**

1. **Basic mathematical language:** Sets and logic.


4. **Functions - basics.** Real functions. Graph of a real function. Operations with real functions. Elementary functions: constant, linear, quadratic, polynomial function.

5. **Exponentials and logarithms.** Powers and exponentials: definition and properties. Roots and logarithms: definition and properties. Polynomial approximation to exponentials. The number e. Natural exponential and logarithms.


**Educational objectives:**
(1) Refresh mathematical knowledge taught in high school, fill gaps and add a few new insights.
(2) Motivate to experience and communicate (about) Mathematics.

**Format:** Lectures and exercises.

**Required reading** Will be announced at the beginning of the course.

**Further readings:** Will be announced at the beginning of the course.