

Business

# **Entrance Qualifications in Mathematics** (Module ALMAT01.18, Introduction to Mathematics for Business and Economics)

Students applying for admission to one of the Bachelor programs at the Lucerne School of Business (Lucerne University of Applied Sciences and Arts) need qualifications in mathematics covering the following items:

## 1. Set theory

- elements, sets, subsets
- unions, intersections, complements, Cartesian products

### 2. Arithmetic

- natural numbers, integers and rational numbers
- variables and terms
- addition, subtraction, multiplication, division
- binomial formulae
- decomposition of summands into factors (factorization)
- exponentiation: calculation with integer and rational exponents
- calculation of roots
- logarithms

## 3. Functions

- definition of functions
- constant and linear functions
- quadratic functions (graphs, vertices, x-intercepts)

### 4. Equations and Systems of Equations

- equations in one variable, properties governing the transformation of equations
- systems of equations with 2 or 3 variables
- quadratic equations

For persons not meeting the standard or feeling challenged by mathematics, the **refresher course** in mathematics is recommended: https://www.hslu.ch/en/lucerne-school-of-business/degree-programmes/admission-criteria/#prerequisites

On this same website, an **entry-level test** for a self-assessment is available.

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