



**Universiteit  
Leiden**

Leiden University College  
The Hague

# LUC Mathematics sheet

## Liberal Arts and Sciences: Global Challenges

### Admission 2023

If you do not have the required mathematics results or mathematics at the required level after you graduate, you are required to take a Mathematics Diagnostic Exam at the start of the academic year.

#### Mathematics diagnostic exam

This exam is meant to assess your mathematics level. The use of a calculator is not allowed. The exam provides an indication whether more training is needed in order to be able to successfully complete the compulsory mathematics course in the second semester of the first year. The Mathematics Diagnostic Exam is free of charge for LUC students and can only be taken by LUC students.

#### Exam preparation

In order to successfully complete LUC's Mathematics course, students must be able to comprehend the following skills, as well as being able to combine those:

Quadratic functions	Linear equations
Solutions by factorisation	Polynomial functions
Solutions by using quadratic formula	Exponential functions
Solving systems of linear equations	Logarithmic functions
Two linear equations/two unknown variables	Powers and roots
Trigonometry (solving simple trigonometric equations)	Special products
Asymptotes (horizontal, vertical and slant via long division)	Fractions with letters
Calculations with integers/fractions	Derivatives
Power and fractional exponents/roots	Extrema
Derivatives logarithmic/exponential/trigonometric functions, product rule/chain rule	

These are the skills that will be assessed in the Mathematics Diagnostic exam and further trained in the Remedial Mathematics course. In the [LUC e-prospectus](#) you can find more information regarding the mathematics courses offered at LUC.

#### Remedial Mathematics course at LUC

For those students who need more training, a Remedial Mathematics course is scheduled for January 2024. Following the Remedial Mathematics course is not compulsory. It is the student's own responsibility and decision to follow the advice given at the end of the Mathematics Diagnostic Exam or not. The Remedial Mathematics course is at the student's own expenses.

#### Other mathematics courses and additional preparation

For students who would like to prepare well before they start at LUC, there are several options.

- Free online training at the [Khan Academy](#)
- Book "All you need in Maths!" by Jan van de Caats (available in English and Dutch)
- Book "All the math you'll ever need: A self-teaching guide" by Stephen L. Slavin
- Refresher course Mathematics Basis B, [Boswell-Bèta Institute](#)
- Summer course mathematics A, [Boswell-Bèta Institute](#)
- Online Mathematics Placement Test A ([OMPT-A](#))