

Basic Mathematics (E001142)

Course size *(nominal values; actual values may depend on programme)*

Credits 3.0

Study time 90 h

Course offerings and teaching methods in academic year 2025-2026

A (semester 1)

Dutch

Gent

lecture

seminar

Lecturers in academic year 2025-2026

De Schepper, Hennie

TW06

lecturer-in-charge

Offered in the following programmes in 2025-2026

	crdts	offering
Bachelor of Science in Engineering(main subject Biomedical Engineering)	3	A
Bachelor of Science in Engineering(main subject Chemical Engineering and Materials Science)	3	A
Bachelor of Science in Engineering(main subject Civil Engineering)	3	A
Bachelor of Science in Engineering(main subject Computer Science Engineering)	3	A
Bachelor of Science in Engineering(main subject Electrical Engineering)	3	A
Bachelor of Science in Engineering(main subject Electromechanical Engineering)	3	A
Bachelor of Science in Engineering(main subject Engineering Physics)	3	A
Bachelor of Science in Engineering (Joint Section)	3	A

Teaching languages

Dutch

Keywords

Complex number, vector, projection, matrix, system of equations, elementary function, function behaviour

Position of the course

This course aims to: (1) rehearse and deepen the fundamental mathematics knowledge, (2) complete this knowledge with some important additional basic concepts and methods, and (3) establish the desired starting level for all mathematics courses.

Contents

- Complex numbers
- Vectors and projection
- Matrices and systems of equations
- Elementary functions, function behaviour, integration techniques

Initial competences

Secondary school

Final competences

- 1 To have a thorough knowledge of the topics matrices, complex numbers, elementary functions and vectors.
- 2 Being able to perform basic calculations quickly and efficiently by hand.
- 3 Being able to make a correct reasoning and to write it down in a structured way.
- 4 Being able to formulate in a mathematically correct way and with precision.

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Seminar, Lecture

Extra information on the teaching methods

Students are divided into groups and make exercises under supervision. It is strongly recommended to prepare the exercises before class, and to finish them afterwards.

Study material

Type: Syllabus

Name: Syllabus

Indicative price: € 8

Optional: no

Language : Dutch

Number of Pages : 130

Available on Ufora : Yes

Available through Student Association : Yes

Type: Other

Name: Additional material

Indicative price: Free or paid by faculty

Optional: no

Available on Ufora : Yes

Additional information: Available electronically via the electronic learning platform, free of charge

References

Course content-related study coaching

Intensive study coaching during the classroom problem solving sessions. Additionally, students will be encouraged to make use of the available tutoring services for extra help. Interactive support (forum on the electronic learning platform) is available.

Assessment moments

end-of-term and continuous assessment

Examination methods in case of periodic assessment during the first examination period

Written assessment

Examination methods in case of periodic assessment during the second examination period

Written assessment

Examination methods in case of permanent assessment

Written assessment

Possibilities of retake in case of permanent assessment

examination during the second examination period is not possible

Extra information on the examination methods

- Permanent evaluation (test) at the end of the third week. Disclosure of marks and feedback by the beginning of the fifth week.
- End-of-term assessment for those who didn't pass the test.
- Both the test and the end-of-term assessment are written closed-book assessments.

Calculation of the examination mark

- Test 40%, exam 60%.
- When absent for a motivated reason at the test, the exam counts for 100% of the finals score.
- Each student who passed the test can ask to be dispensed from the exam, in which case the marks of the test will account for 100% of the final score.
- Resit examination period: final examination only (for 100%).

