Mathematics for Business I (F710373)

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

Credits 6.0　　　　　　　　**Study time　180 h**

Course offerings and teaching methods in academic year 2025-2026

A (semester 1)	Dutch	Gent	seminar
			lecture

Lecturers in academic year 2025-2026

Vandenboer, Kristine	EB21	staff member
Carette, Philippe	EB21	lecturer-in-charge
Neyt, Yannick	EB21	co-lecturer

Offered in the following programmes in 2025-2026	**crdts**	**offering**
Linking Course Master of Science in Business Administration	6	A
Preparatory Course Master of Science in Business Administration	6	A

Teaching languages

Dutch

Keywords

Mathematics, functions

Position of the course

To provide students with a basic education in mathematics that is often used in economic analysis.
The mathematical concepts and techniques are presented in a rigorous way, with emphasis on the logic and coherence of the various concepts.
The concepts are well illustrated with economic applications.

Contents

Functions of one variable

- General concepts: domain, image, injective function, inverse function, periodicity and symmetry.
- Special functions: polynomial functions, rational and irrational functions, exponential and logarithmic functions, trigonometric and cyclometric functions.
- Applications in business and economics: demand and supply, costs and revenues, market equilibrium, break-even point.
- Limits and continuity, asymptotes.
- Differentiation, de l'Hospital's rule, curve sketching, optimization.
- Applications in economics: marginal rate of change and elasticity.
- Integration: general techniques, method of substitution and partial integration.

Initial competences

- To have thorough knowledge of the fundamental mathematical principles taught in high school: real numbers, algebra and geometry.
- To be proficient in symbolic calculation and solving equations.

Final competences

1　To know and understand the foundations of differential and integral calculus of a single variable and their economic applications.
2　To analyze and solve problems in business economics using mathematical techniques of single variable calculus.
3　To be able to clarify quantitative results and solutions, both graphically and in words.

4 To assess the correctness of quantitative results and mathematical propositions.

Conditions for credit contract

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

Conditions for exam contract

Access to this course unit via an exam contract is unrestricted

Teaching methods

Seminar, Lecture

Extra information on the teaching methods

Interactive plenary lectures: Discussion of the theoretical concepts, with the option
of using the chat box to ask questions.
Guided exercises in groups: practicing the concepts covered in the lectures.

Study material

Type: Handbook

Name: Wiskunde voor bedrijfskundigen 1
Indicative price: € 45
Optional: no
Language : Dutch
Author : Philippe Carette
Available through Student Association : Yes

Type: Syllabus

Name: Oefeningenbundel Wiskunde voor bedrijfskundigen I-B
Indicative price: € 5
Optional: no
Language : Dutch
Available through Student Association : No

References

Course content-related study coaching

- A refresher course in basic mathematical techniques can be followed in
  September.
- Teachers are available for additional oral explanations after class.
- Electronic discussion forum.
- Sample exam questions with detailed solutions.

Assessment moments

end-of-term 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

Possibilities of retake in case of permanent assessment

not applicable

Extra information on the examination methods

Written exam.

Calculation of the examination mark

periodic evaluation (100%)