# Mathematics for Business I-B (F710220)

**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 2) | Dutch | Gent | seminar |
| | | | lecture |

**Lecturers in academic year 2025-2026**

| Carette, Philippe | EB21 | lecturer-in-charge |
| Van der Stricht, Geert | EB21 | co-lecturer |
| Van Ooteghem, Saskia | EB21 | co-lecturer |

| **Offered in the following programmes in 2025-2026** | **crdts** | **offering** |
| --- | --- | --- |
| Bachelor of Science in Business Administration | 3 | A |

**Teaching languages**

Dutch

**Keywords**

Mathematics, functions.

**Position of the course**

To provide students with a basic education in differential and integral calculus that is often used in business economics. 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 applications in business economics.

**Contents**

### Functions of one variable

- Differentiation, de l'Hospital's rule, curve sketching, optimization.
- Applications in economics: marginal rate of change and elasticity.
- Integration: 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.
- To have knowledge and understanding of the basic concepts, limits and continuity of functions.

**Final competences**

1 To have knowledge and understanding of the foundations of differential and integral calculus, and their applications in business and economics.
2 To solve business economics problems in the field of marginal analysis using mathematical methods of single-variable differential and integral 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.
    Part of the course is offered through a learning path and instructor-made video
    clips.

**Study material**

    Type: Handbook

        Name: Wiskunde voor bedrijfskundigen 1
        Indicative price: € 45
        Optional: no
        Language : Dutch
        Author : Philippe Carette
        Available through Student Association : Yes
        Additional information: Also used in course unit "F710219 - Wiskunde voor bedrijfskundigen I-A".

    Type: Syllabus

        Name: Oefeningenbundel Wiskunde voor bedrijfskundigen I-B
        Indicative price: € 4
        Optional: no
        Language : Dutch
        Available through Student Association : No

**References**

**Course content-related study coaching**

- A one week refresher course in basic mathematical techniques is offered in
  September.
- The instructors are always available at the end of the class to answer questions
  about the course.
- Electronic discussion forum.
- Tutorial: Extra classroom sessions are organised in which difficult topics of the
  course are revisited. Students can also make individual appointments to discuss
  specific problems in this course.
- A simulation exam is organized with the aim of testing the study method.

**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%)