Bachelor : Business Engineering

**At Mons - 180 credits - 3 years - Day schedule - In French**

INGM1BA -  **Introduction**

## Introduction

### Introduction

The Bachelor in Business Engineering programme combines management studies with quantitative methods and business informatics. It also provides students with a broad knowledge base in economics, human science, law and two foreign languages.

This Bachelor's degree aims to facilitate the acquisition of transferable skills specific to the university, such as rigorous, methodical and critical analysis, the ability to work independently and as part of a team, and communication and creativity skills.

This Bachelor's programme fully embraces a long-term vision of our society, in terms of both sustainable development and digital transformation.

By the end of the first cycle, you will have acquired:

- a multidisciplinary background, with a cross-disciplinary approach to management functions;
- skills geared towards quantitative methods and business informatics but also data analysis and technologies, with a vision of a sustainable society;
- a scientific approach and a socially responsible mindset.

### Your profile

When you embark on a business engineering course, it is most important that you have had a good general education. Having opted for a strong mathematics bias in the last two years of secondary school could be an advantage. An interest in project management, IT systems design, data management, logistics or sustainable development are excellent reasons to take up the challenge.

### Your future job

Business Engineering graduates make a career for themselves in many sectors, including industry, banking and insurance, auditing and large-scale retail, in private companies, public organisations, SMEs, multinationals and consultancy firms.

They hold positions of responsibility, such as project manager, data analyst/scientist, IT consultant, sales manager, purchasing manager, logistics manager, management controller or financial analyst.

### Your programme

The Bachelor's programme offers you:

- gradual acquisition of the knowledge you need to take up a "decision-maker" role in a company;
- courses focused on quantitative methods and business informatics, and also on data analysis and technologies;
- the ability to work independently and as part of a team;
- communication and creativity skills;
- language training (English and Dutch/Spanish) throughout the degree course as well as support (in English or Dutch) linked to the internship.

From the second year onwards, students can undertake a student mobility programme with the Haute Ecole Louvain en Hainaut (HELHa) and, during the second and third year, can opt for a technology course in electromechanics or biochemistry. Access to this mobility programme, called i², is by application.

### Your parcours

This Bachelor's degree gives access to various Master's programmes, including the Master in Business Engineering.

Students who have taken the electromechanics or biochemistry technology option will be able to pursue their studies and obtain 25 extra credits at HELHa during their Master's degree in Business Engineering.

Once they have completed this specific study path, they will have access to a tailored Master's degree in Industrial Engineering, which they can obtain in one year after their Master in Business Engineering. It is there991  ca cs mextra09dl Tm [Businers to 0s8 Tcthe knowledge you need2

## INGM1BA -  Teaching profile

## Learning outcomes

On successful completion of this programme, each student is able to :

The profile of Bachelor in Business Engineering graduates is set out in the **Louvain School of Management (LSM) competency framework**. This framework centres around the following three skills: acquiring a knowledge base, applying a scientific approach and adopting a socially responsible mindset.

1.

Adopt a socially responsible mindset
Think and take decisions responsibly, taking account of ethical and civic values.

1.1 Demonstrate the ability to reason independently and adopt a considered and critical approach to knowledge (academic and common sense).
1.2 Consider ethical and humanistic values, integrity, the laws and conventions, civic solidarity and sustainable development in all interactions with the community.
1.3 Analyse a situation responsibly, taking into account the economic, social and environmental impact on the various stakeholders.

2.

Acquire a knowledge base

Actively acquire a knowledge base in different subjects (management, human science, economics, law, quantitative methods) that are essential for analysing issues in the various fields of management.

2.1 Understand the basic concepts and theories in each of the fields of management and economics.
2.2 Acquire a knowledge base in human science and law.
2.3 Acquire a knowledge base in quantitative, IT and digital methods.
2.4 Apply knowledge gained from different subjects to solve a simple but concrete management problem.

3.

Apply a scientific approach

Use a scientific approach to analyse concrete management problems and situations.

3.1 Understand and selectively use scientific texts and works in French and English.
3.2 Apply clear and structured analytical reasoning, conceptual frameworks and science-based models to describe and analyse a simple but concrete problem and offer a solution.
3.3 With the help of dedicated software tools, collate, select and analyse relevant information using basic statistical and data analysis methods.
3.4 Analyse and interpret results or proposals, and provide a well-argued critique, for a simple but concrete management problem.
3.5

Demonstrate rigour and discernment (validity and relevance) in the collation of information sources, and precision in their referencing.

4.

Embrace change

Adopt a positive approach to change in assignments and projects carried out individually or in groups.

4.1 Identify opportunities for innovation and be creative in putting forward useful and original ideas.
4.2 Identify situations of resistance to change and overcome them.
4.3 Be part of a collective change dynamic.
4.4

Identify opportunities linked to the digital transformation of companies, sustainable development and organisational changes in the workplace and suggest solutions to management problems based on ESG criteria.

5.

Adopt a multidisciplinary and professional mindset

Compare different motives and rationales for action to understand a concrete problem a company is facing.

5.1 Understand the internal workings of a company of limited size and complexity.
5.2 Understand these workings, place them in their socio-economic context and identify the interdisciplinary issues.
5.3 Combine different areas of knowledge (apply concepts from different fields and compare different rationales for action) to understand a concrete problem of a company or organisation of limited size and complexity.
5.4 Use software from different fields to solve a management problem.

6.

Become a team player

Become a team member and player.

6.1 Know and understand the principles of collaborative learning.
6.2 Recognize and take into account the different points of view of team members.
6.3 Manage group relations in a joint project.

7.

Manage a project

Organise and complete a project, taking into account the pre-defined objectives and the constraints of the project environment.

7.1 Organise the process: working as a team, and with consideration for the pre-defined objectives, plan and develop all the stages of a project and commit to it collectively, having allocated the tasks.
7.2 Share information and expertise to help progress the project and contribute to the team's success with a view to effectively achieving the objective set.

8.

Communicate

Communicate and interact effectively in French and two foreign languages.

*  *For English (all language skills), Level B2 of the Common European Framework of Reference (CEFR). For Dutch 3, Level B1+/B2 of the CEFR. For Spanish 3, Level A2+/B1 of the CEFR.*

8.3 Engage effectively and respectfully with peers and teachers, demonstrating listening skills, empathy and assertiveness.
8.4 Using computer tools, create graphs and tables that meet scientific standards.
8.5

Master basic software for effective communication.

9.

Develop

Demonstrate self-awareness and autonomy, the ability to adapt quickly to new situations and progress in your learning journey.

9.1 Self-management: define your priorities, plan ahead and organise all aspects of your work over time, be rigorous and structured in your approach.
9.2 Self-awareness and self-control: be aware of, and control, your own feelings and emotions, manage stress, stand back and cast a critical eye over your own output and actions to identify your strengths and weaknesses.
9.3 Self-motivation: design your own training plan and define its direction in line with your own values and aspirations.
9.4 Adapt to, and take advantage of, a variety of learning situations.
9.5 Independently assimilate new knowledge and skills to enable you to solve concrete, well-defined management problems.


# Programme structure

Year

| 1 | 2 | 3 |

## o Social Science

| | | | | | 1 | 2 | 3 |
|---|---|---|---|---|---|---|---|
| o MSHUM1118 | Study Skills Seminar | Jean-Luc Depotte | FR [q1+q2] [15h+30h] [5 Credits] ⊕ | | x | | |
| o MSHUM1122 | Ethics and CSR | Vincent Truyens | FR [q2] [30h+10h] [5 Credits] ⊕ | | x | | |
| o MSHUM1301 | Questions de sciences religieuses | Stanislas Deprez | FR [q1] [15h] [2 Credits] ⊕ | | | | x |

## o Science and Technology

*Three tracks are available: the computer management track, the technological track in biochemistry and the technological track in electromechanics. These last 2 tracks, organized in partnership with the HELHa, are accessible upon application and confirmed after achievement of the 1st annual unit in one academic year (application form: https://intranet.uclouvain.be/fr/myucl/ sites/mons/parcours-i %26sup2%2m q 6 0.be/fr/myucl/ sites/mons/parcours-i*

## The programme's courses and learning outcomes

For each UCLouvain training programme, a reference framework of learning outcomes specifies the the skills expected of every graduate on completion of the programme. Course unit descriptions specify targeted learning outcomes, as well as the unit's contribution to reference framework of learning outcomes.

## Detailed programme per annual block

### INGM1BA - 1ST ANNUAL UNIT

&#9678; Mandatory
&#9447; Optional
&#9651; Not offered in 2024-2025
&#8709; Not offered in 2024-2025 but offered the following year
&#8853; Offered in 2024-2025 but not the following year
&#9651; &#8853; Not offered in 2024-2025 or the following year
&#9632; Activity with requisites
&#127760; Open to incoming exchange students
&#127760; Not open to incoming exchange students
[FR] Teaching language (FR, EN, ES, NL, DE, ...)

Click on the course title to see detailed informations (objectives, methods, evaluation...)

&#9678; *Content:*

#### &#9678; Law

| | | | |
|---|---|---|---|
| &#9678; MDROI1105 | Sources and Principles of Law | Ignacio De La Serna | [FR] [q1] [45h +0h] [5 Credits] &#127760; |

#### &#9678; Economics

| | | | |
|---|---|---|---|
| &#9678; MECON1104 | Economics | Nathalie Gilson | [FR] [q1] [45h +20h] [5 Credits] &#127760; |

#### &#9678; Management

| | | | |
|---|---|---|---|
| &#9678; MGEST1103 | Accounting and Financial Diagnosis | Anne-Catherine Provost | [FR] [q1] [45h +20h] [5 Credits] &#127760; |
| &#9678; MGEST1107 | Management Seminar | Isabelle Platten Ingrid Poncin | [FR] [q2] [30h +30h] [5 Credits] &#127760; |

## Social Science

| | | | |
|---|---|---|---|
| **O** MSHUM1118 | Study Skills Seminar | Jean-Luc Depotte | FR [q1+q2] [15h +30h] [5 Credits] 🌐 |
| **O** MSHUM1122 | Ethics and CSR | Vincent Truyens | FR [q2] [30h +10h] [5 Credits] 🌐 |

## Languages

| | | | |
|---|---|---|---|
| **O** MANGL1120 | English 1 | Erika Copriau<br>Bruno Michiels<br>Guy Monfort (coord.)<br>Daniel Schoemans<br>Sabine Vandersmissen (compensates Guy Monfort)<br>Marine Volpe (coord.) | EN [q1+q2] [30h +30h] [5 Credits] 🌐 |

### **O** Second Language

*The student chooses and keeps the same second language for the entire bachelor cycle.*

#### ⊗ Dutch

*In the first annual block, the default learning unit is MNEER1121 Dutch 1.*

*At the end of a placement test, the teacher will decide whether or not to register for the learning unit MNEER1119 Dutch 1 LSM beginner.*

| | | | |
|---|---|---|---|
| **O** MNEER1121 | | Erika Copriau<br>Bruno Michiels (coord.)<br>Daniel Schoemans | NL [q1+q2] [30h +30h] [5 Credits] 🌐 |
| ⊗ MNEER1119 | | | |

## INGM1BA - 2ND ANNUAL UNIT

O Mandatory
⊠ Optional
△ Not offered in 2024-2025
⊘ Not offered in 2024-2025 but offered the following year
⊕ Offered in 2024-2025 but not the following year
△ ⊕ Not offered in 2024-2025 or the following year
🟨 Activity with requisites
🌐 Open to incoming exchange students
🌐 Not open to incoming exchange students
[FR] Teaching language (FR, EN, ES, NL, DE, ...)

Click on the course title to see detailed informations (objectives, methods, evaluation...)

## INGM1BA - 3RD ANNUAL UNIT

O Mandatory

| | | | |
|---|---|---|---|
| O MINFO1301 | Data Management | François Fouss | FR [q1] [30h +15h] [5 Credits] 🌐 |
| O MINFO1302 | Coding Project 📙 | Daniele Catanzaro | EN [q1] [30h +15h] [6 Credits] 🌐 |
| O MQANT1328 | Operational Research 📙 | Jean-Sébastien Tancrez | FR [q2] [30h +15h] [5 Credits] 🌐 |
| O MSHUM1303 | Organization and Social Change Seminar | Julie Solbreux | FR [q2] [15h +0h] [2 Credits] 🌐 |

### ⚹ Parcours technologique biochimie

| | | | |
|---|---|---|---|
| O MHELH1301 | De la molécule au vivant | | FR [q2] [64h] [5 Credits] 🌐 |
| O MHELH1302 | Fondamentaux de chimie analytique | | FR [q1+q2] [45h] [7 Credits] 🌐 |
| O MHELH1303 | Approfondissement des connaissances de la matière | | FR [q2] [102h] [8 Credits] 🌐 |
| O MINFO1201 | Programming and Algorithms 📙 | François Fouss | FR [q2] [45h +20h] [5 Credits] 🌐 |

### ⚹ Parcours technologique électromécanique

| | | | |
|---|---|---|---|
| O MHELH1311 | Mécatronique | | FR [q1] [54h] [5 Credits] 🌐 |
| O MHELH1312 | Fluide<br>*Avant 2024-2025 : Mécanique thermo appliquée* | | FR [q2] [80h] [8 Credits] 🌐 |
| O MHELH1313 | Automatique | | FR [q2] [75h] [7 Credits] 🌐 |
| O MINFO1201 | Programming and Algorithms 📙 | François Fouss | FR [q2] [45h +20h] [5 Credits] 🌐 |

## o Languages

| | | | |
|---|---|---|---|
| O MANGL1339 | English 3 📙 | Jessica Degroote (coord.)<br>Quentin Zèques | EN [q1+q2] [0h +45h] [4 Credits] 🌐 |

### O Second Language
*The student chooses and keeps the same second language for the entire bachelor cycle.*

#### ⚹ Dutch
*In the first annual block, the default learning unit is MNEER1121 Dutch 1.*

*At the end of a placement test, the teacher will decide whether or not to register for the learning unit MNEER1119 Dutch 1 LSM beginner.*

| | | | |
|---|---|---|---|
| O MNEER1341 | Dutch 3 📙 | Erika Copriau (coord.)<br>Bruno Michiels | NL [q1+q2] [0h +45h] [4 Credits] 🌐 |

#### ⚹ Spanish

| | | | |
|---|---|---|---|
| O MESPA1340 | Spanish 3 📙 | Juan Francisco Hernandez Rodriguez (coord.)<br>Fernando Juan San Basilio Pardo | |

## INGM1BA -  Information

## Teaching method

Moving from secondary school to university involves change, with new subjects, new demands, a new environment and meeting new people. To ease this transition to UCLouvain FUCaM Mons, the educational support team offers a range of measures for students **before the start of the academic year, during the year and during the university holidays**; individual support is also available.

Before the start of the academic year, students are invited to take part in **preparatory courses** to get to know the university, the teaching staff, the other students and all members of the university community. These courses are also a good way to practise note-taking, get to grips with the working method and update your subject knowledge (maths, Dutch, etc.).

During the year there are other collective activities available, such as **tutorials, supervised exam revision** and methodology seminars (e.g. time management) on offer. The educational advisers are also available to **meet with students individually** and assess their situation in order to offer them **personalised assistance** (e.g. methodological supervision, a listening ear and support).

In the summer, the educational support team continues to **keep an eye on students** and offers tutorials on subjects that students had difficulty with during the academic year… another little helping hand on your path to success!

For more information about all the support measures available at UCLouvain FUCaM Mons, visit our web page: https://uclouvain.be/fr/sites/mons/accompagnement-pedagogique.html.

## Evaluation

*The evaluation methods comply with the regulations concerning studies and exams. More detailed explanation of the modalities specific to each learning unit are available on their description sheets under the heading "Learning outcomes evaluation method".*

**Written and oral exams** are designed to check the extent to which students have mastered and understood concepts, theories, basic information and skills in the various subjects.

Some teaching activities (exercises) are subject to **continuous assessment**.

To obtain a student's average, the grades awarded for each course unit are weighted by the number of credits allocated to each unit.

## Mobility and/or Internationalisation outlook

Each year, a growing number of young Europeans undertake an exchange at a foreign university for several reasons, including cultural enrichment, the opportunity to become proficient in other languages and internationalisation of the job market. UCLouvain FUCaM Mons has always appreciated the usefulness of international exchanges in university education. **In the third year of the Bachelor's programme, students have the opportunity to spend one term at one of our partner universities outside Belgium.** To further facilitate the mobility of all students, regardless of their socio-economic situation, financial aid is available to cover part of the cost of their trip abroad.

**Europe or further afield**

Students enrolled on a daytime course at UCLouvain FUCaM Mons have the opportunity to take part in exchange programmes at the end of their Bachelor's (and Master's) cycle. They can spend time at one of several renowned universities, including the Università Commerciale Luigi Bocconi in Milan (Italy), Maastricht University (Netherlands), the University of Glasgow (UK), the CEU San Pablo (Spain), the Norwegian School of Economics (Norway) and Laval University (Quebec).

**Belgium**

Various study options (e.g. at Antwerp University or Ghent University) are available through the Erasmus Belgica programme.

## Possible trainings at the end of the programme

**Position in the degree programme**

The Bachelor in Business Engineering offers direct, unconditional access with no additional studies, to the Master's degree of the same name available at:

- UCLouvain: Master [120] : Business Engineering (Mons campus) and Master [120] : Business Engineering (Louvain-la-Neuve campus)
- any other university in the Wallonia-Brussels Federation.

Students who have taken the electromechanics or biochemistry technology option will be able to pursue their studies and obtain 25 extra credits at HELHa during their Master's degree in Business Engineering. Once they have completed this specific study path during their business engineering studies, they will have access to a tailored Master's degree in Industrial Engineering, which they can obtain in one year after their Master in Business Engineering. It is therefore possible to obtain two degrees (Master in Business Engineering and Master in Industrial Engineering) after six years of study.

**Other courses available at the end of the programme**

Bachelor in Business Engineering graduates have direct access to the following Master's programmes at the same faculty:

- Master [120] in Management and Master [60] in Management (Mons campus)
- Master [120] in Management and Master [60] in Management (Louvain-la-Neuve campus)

Bachelor in Business Engineering graduates also have access to the Master's courses run by the Faculty of Economic, Social and Political Sciences and other faculties, provided they meet the programme requirements:

- Master [120] in Economics: General and Master [60] in Economics : General
- Master [120] in Economics: Econometrics

There are a number of UCLouvain Master's programmes (generally stand-alone) that are widely accessible to UCLouvain FUCaM Mons Bachelor's graduates, including:

- Master [120] in Population and Development Studies (direct access for all Bachelor's graduates),
- Master [120] in European Studies (open to all Bachelor's graduates with a minor in European Studies),
- Master [120] in Ethics (open to all Bachelor's graduates, subject to additional course requirements).

## Contacts

### Curriculum Management

Faculty