

# MASTER OF SCIENCE IN BUSINESS ENGINEERING (FINANCE)

120 ECTS CREDITS - LANGUAGE: ENGLISH

## WHAT

The Master of Science in Business Engineering is a multidisciplinary programme that focuses on (data-driven) management science, business processes and technology. These three disciplines are educated throughout the two-year master programme through theoretical lectures, practical case studies and business games as well as guest speakers and company projects. The master's programme teaches these disciplines both in a theoretical and a practice-oriented way.

While the Bachelor of Science in Business Engineering mainly focuses on providing a (quantitative) foundation, the Master's programme studies different aspects of the subdisciplines mentioned above in a more applied manner. The specific content of the study that links business analytics and business processes with technology helps to translate processes into business models, and organisational structures into information systems. By means of data analysis techniques, conceptual or mathematical modelling techniques and decision-making techniques, we study the business operations within a single company and between companies in a supply chain thoroughly. Such business operations include the processes and the logistical flow of products, services and/or information. These techniques support the efficient organisation of resources in companies for them to work towards their common goals and objectives. By way of specialisation, students can choose one of three main subjects: Data Analytics, Finance, or Operations Management.

The **Finance** main subject analyses the financial decisions of businesses, as well as of investment managers who may invest in shares or derived financial instruments. A business engineer's quantitative background enables them to draw up complex financial models, for example with regard to risk management in businesses, the planning of financial requirements, optimal investment portfolios, etc.

## STRUCTURE

The link between management science, business processes and technology is a recurring feature throughout the Master's curriculum. In this respect, the focus is on the management of an organisation, its resources and its business processes in the form of course units like Strategic Management, Human Resource Management, Business Process Management, etc.

Our programme's technology component is widened by course units such as Technology for the Circular Economy and System Dynamics. The interrelation between these technology course units and business management is treated in the course units such as Financing High Tech Entrepreneurial Companies, Technology Entrepreneurship, Innovation Management and Enterprise Architecture. Different principles from management science are discussed and maintained throughout these course units, including mathematical modelling, simulation, statistics and numerical algorithms to improve an organisation's ability to pursue rational and meaningful management decisions. In addition to the (domain) Master's programme described above, you can also choose a Master's Programme in Teaching (in Dutch: Educatieve Master). Find out more at [www.ugent.be/educatievemaster](http://www.ugent.be/educatievemaster) (in Dutch).

*It is possible to participate in a **double degree programme** with the Université de Liège or the University of Porto or the University of Tartu (Estonia). In a double degree programme students receive a degree of both the home and the host university.*

## LABOUR MARKET

A Business Engineering diploma leads to various career paths. With their strong foundation in business economics, their broad knowledge of new technologies and their strong focus on quantitative analytics in production, services, logistics, marketing and finance, business engineers understand how to improve the efficiency in the various parts of a company's logistic chain better than anyone else. Our graduates end up in jobs where they deal with managing production processes and services, with analytical and quantitative tasks to improve it's a company's overall efficiency. As a bridge builder between business economists and engineers, they are able to optimise the decision-making process at various levels of the company, ranging from operational decisions on the work floor to strategic decisions at board level. As economic agents, they are familiar with the company processes in order to perform cost price calculations, but as engineers they also have a much wider view of the company's logistic processes and its potential for improvement. With their essential knowledge of the latest technologies and their strong background in business analytics, business engineers rely on the state-of-the-art ICT concepts to optimise the

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business processes. This essential skill is embedded in almost every course unit in the Business Engineering curriculum and will be key in today's modern international business strategy.

Some specific examples of jobs our graduates in Business Engineering pursue: production manager, logistics director, production planning expert, business consultant, business analyst, process engineer, research & development manager and customer relations manager.

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## TOELATINGSVOORWAARDEN VOOR HOUDERS VAN EEN VLAAMS DIPLOMA

### 1 Rechtstreeks:

- Bachelor handelsingenieur
- Bachelor handelsingenieur in de beleidsinformatica
- Bachelor in de toegepaste economische wetenschappen: handelsingenieur
- Bachelor in de toegepaste economische wetenschappen: handelsingenieur in de beleidsinformatica
- Master handelsingenieur
- Master handelsingenieur in de beleidsinformatica
- Master in de toegepaste economische wetenschappen: handelsingenieur in de beleidsinformatica
- Master of Business and Information Systems Engineering
- Master of Business Engineering: Business and Technology

### 2 Na het met succes voltooien van een voorbereidingsprogramma:

#### MIN 29 SP - MAX 61 SP

- a Engelstalig programma
  - Bachelor in de economische wetenschappen
  - Bachelor in de handelswetenschappen
  - Bachelor in de sociaal-economische wetenschappen
  - Bachelor in de toegepaste economische wetenschappen
  - Bachelor in de toegepaste economische wetenschappen: bedrijfskunde
  - Bachelor in de toegepaste economische wetenschappen: economisch beleid
  - Bachelor of Business Administration
  - Master in de economische wetenschappen
  - Master in de handelswetenschappen
  - Master in de sociaal-economische wetenschappen
  - Master in de toegepaste economische wetenschappen
  - Master in de toegepaste economische wetenschappen: bedrijfskunde
  - Master in de toegepaste economische wetenschappen: economisch beleid
  - Master of Business Administration
  - Master of Business Economics

- Master of Economics

#### MIN 40 SP - MAX 69 SP

- a Engelstalig programma
  - Bachelor in de bio-ingenieurswetenschappen
  - Bachelor in de computerwetenschappen
  - Bachelor in de informatica
  - Bachelor in de wiskunde
  - Bachelor of Environmental Technology
  - Bachelor of Food Technology
  - Bachelor of Molecular Biotechnology
  - Een diploma van een opleiding 'Bachelor of Science in de industriële wetenschappen'
  - Een diploma van een opleiding 'Bachelor of Science in de ingenieurswetenschappen' (met inbegrip van 'architectuur')
  - Een diploma van een opleiding 'Master of Bioscience Engineering' leidend tot de titel van 'bio-ingenieur'
  - Een diploma van een opleiding 'Master of Science in de bio-ingenieurswetenschappen' leidend tot de titel van 'bio-ingenieur'
  - Een diploma van een opleiding 'Master of Science in de industriële wetenschappen'
  - Een diploma van een opleiding 'Master of Science in de ingenieurswetenschappen' leidend tot de titel van 'burgerlijk ingenieur' (incl. architectuur)
  - Master in de informatica
  - Master in de ingenieurswetenschappen: architectuur
  - Master in de wiskunde

## ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

- The course is open to students with a least a bachelor degree.
- The Business Engineering programme consists of five learning trajectories. These trajectories should be present in the candidates' educational background in order to be eligible for the master programme:
  - 1 economics and business economics trajectory: microeconomics, macroeconomics, accounting,

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marketing, etc.

- 2 quantitative trajectory: mathematics, calculus, algebra, etc.
- 3 methodological trajectory: statistics, econometrics, operations research, etc.
- 4 technical and technological trajectory: electrical and electronics engineering, materials science, mechanical and civil engineering, etc.
- 5 trajectory operations and information management: production technology, business information systems, etc.

For more information about the required student profile, check the faculty's website:

<https://www.ugent.be/eb/en/degree-students/overview-prospective-students.htm>

Information on admission requirements and the administrative procedure for admission on the basis of a diploma obtained abroad, can be found on the following page: [www.ugent.be/prospect/en/administration/enrolment-or-registration](http://www.ugent.be/prospect/en/administration/enrolment-or-registration).

## Open Days

Each spring there is a Graduation Fair. It consists of a job fair (with more than 200 different companies) and a postgrad/master fair.

There is also a specific Open Day that offers the opportunity to visit the campus, talk to professors and students, discover the course material and ask questions. Registration will open on May 1st.

24 June 2023

06 September 2023

## Enrolling institution

Information on enrolment at Ghent University.

## Application Deadline (for International degree students)

For students who **need a visa**: before 1st of April

For students who **do not need a visa**: before 1st of June

Read more

## Tuition fee

More information is to be found on: [www.ugent.be/tuitionfee](http://www.ugent.be/tuitionfee)

## LANGUAGE REQUIREMENTS

Language requirements Dutch: no language requirements  
English: CEFR level B2

The language requirements for this study programme can be found on: [www.ugent.be/languagerequirements](http://www.ugent.be/languagerequirements)

## Contact

For students who wish to enroll in this master based on a **Flemish degree**: contact Frauke Cuelenaere via [traject.eb@ugent.be](mailto:traject.eb@ugent.be)

For students who wish to enroll in this master based on a **non-Flemish degree**: contact Laura Haek via [degree.eb@ugent.be](mailto:degree.eb@ugent.be)

For students who wish to enroll in this master based on a **Flemish degree**: [www.ugent.be/eb/nl](http://www.ugent.be/eb/nl)

For students who wish to enroll in this master based on a **non-Flemish degree**: [www.ugent.be/eb/en](http://www.ugent.be/eb/en)

## PRACTICAL INFORMATION

### Study programme

[studiekiezer.ugent.be/master-of-science-in-business-engineering-finance-en/programma](http://studiekiezer.ugent.be/master-of-science-in-business-engineering-finance-en/programma)

### Information sessions

#### Graduation Fair

[afstudeerbeurs.gent/en/students/further-studies](http://afstudeerbeurs.gent/en/students/further-studies)