MASTER OF SCIENCE IN BUSINESS ENGINEERING (OPERATIONS MANAGEMENT)

120 ECTS CREDITS - LANGUAGE: ENGLISH

WHAT

The Master of Science in Business Engineering is a multidisciplinary programme with a focus on (data-driven) management science, business processes and technology. These three disciplines are offered throughout the two-year Master's curriculum in the form of theoretical lectures, practical case studies and business games, and by means of guest speakers and company projects. The Master's programme conveys 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, studends choose one of three main subjects: Data Analytics, - Finance, or - Operations Management.

The **Operations Management** main subject is a management discipline with a focus on overseeing, designing, controlling service or production processes and redesigning business operations. It includes the responsibility of ensuring that business operations use their reources efficiently, and meet their customer needs effectively. It also covers process management from the conversionof various types of input (raw materials, labor and energy) into various types of output (goods and/or services). Important business concepts concerning Project Management, Total Quality Management, Production and Supply Chain Management will be highlighted from various angles and perspectives.

STRUCTURE

The link between management science, business processes and technology returns throughout the master's programme. In this perspective, attention is spent to the management of an organisation, its resources and its business processes by means of courses like Strategic Management, Human Resource Management, Business Process Management, etc.

The technology component in the course is further widened by the topics of Technology for the Circular Economy and System Dynamics and the link between these technology courses and business management is further treated in the courses in Financing High Tech Entrepreneurial Companies, Technology Entrepreneurship, Innovation Management and Enterprise Architecture.

Different management science principles are discussed and maintained throughout these courses including mathematical modelling, simulation, statistics and numerical algorithms to improve an organisation's ability to enact rational and meaningful management decisions.

If you want to combine a master's degree with a teacher's degree, then there is the option of following an 'Educatieve master' instead of the above described master. The 'Educatieve master' however is a Dutch taught programme. More information can be found on www.ugent.be/educatievemaster.

*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 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.

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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
- Educatieve master in de economie, afstudeerrichting: economische wetenschappen
- Educatieve master in de economie, afstudeerrichting: handelswetenschappen
- Educatieve master in de economie, afstudeerrichting: toegepaste economische wetenschappen
- 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 programme is open to students with at least a bachelor degree that consists of the six learning trajectories that are present in Ghent University's bachelor in business engineering programme:

1 economics and business economics trajectory: microeconomics, macroeconomics, accounting, 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

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and civil engineering, etc.
5 operations and information management trajectory: production technology, business information systems, etc.
6 Informatics trajectory: informatics, object-oriented programming, algorithms and data structures, database systems, etc.

For more information about the required student profile, check the faculty's website: https://www.ugent.be/eb/en/study-programmes/master-in-business-engineering/overview.htm

- Non-EER students are required to additionally submit a GMAT or GRE test score, applications without a GMAT or GRE test score will not be processed. EER students are strongly advised to add a GMAT or GRE test score to their application since the faculty will be granting 8 scholarships to students with outstanding scores on the GMAT or GRE test.

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.

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

PRACTICAL INFORMATION

Study programme

studiekiezer.ugent.be/master-of-science-in-business-engineering-operations-management-en/programma

Information sessions

Graduation Fair

afstudeerbeurs.gent/en/students/further-studies

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.

29 June 2024

04 September 2024

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

Contact

For students who wish to enroll in this master based on a **Flemish degree**: contact Frauke Cuelenaere via 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

www.ugent.be/eb/enFor students who wish to enroll in this master based on a **Flemish degree**: 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