Master in Business engineering

This programme is taught in french.

Job opportunities

The comprehensive and multivalent nature of our programme lets graduates access a wide range of careers, from consulting and auditing to executive positions. Essentially, ULB’s business engineers are ready to carry out any mission fostering collaborative work and innovation, which means jobs that require management and decision making skills:

- Executive positions in any type of organisation (public, private, or NGO) and industry
- Management, strategy, and IT consulting
- Entrepreneurship
- Auditing or management control
- Financial analysis and mergers and acquisitions (M&A)
- Brand management

Notable alumni include:
- Hadi Kamouh, Group Chief Marketing Officer, Banque Degroof Petercam
- Dominique Leroy, Chief Executive Officer, Proximus
- Jean-Michel Paul, Founder & CEO, Acheron capital Ltd.
- Nicolas Steisel, Co-founder, Exki
- Jean Van Wetter, Chief Executive Officer, Handicap International Belgique

Programme objectives

This very intensive and demanding programme, prepares future executives, leaders, and entrepreneurs who can work in any type of industry and organisation—for-profit, non-profit, or public. Students in this programme develop the ability to understand and engage in all areas of business administration. A business engineer is able to integrate all main functions and departments of an organisation and to arbitrate between them. Students develop their knowledge and know-how in all fields of management (strategy, finance, marketing, human resources and leadership, operations and supply-chain, innovation, information systems, and digital business), while also learning key skills involved in defining a strategy, enacting changes, or creating a business: information analysis, problem solving, project leadership, personnel management, communication, ethics in business, critical thinking, entrepreneurial drive, team work, and self-management.

profil d’enseignement [http://sam-docs.ulb.ac.be/referentiels/201819/S/M-INGEF.pdf]

Curriculum

The following table provides an overview of the programme’s structure.

<table>
<thead>
<tr>
<th>Course Area</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Administration</td>
<td>Business Administration I, Business Administration II</td>
</tr>
<tr>
<td>Entrepreneurship</td>
<td>Entrepreneurship I, Entrepreneurship II</td>
</tr>
<tr>
<td>Finance</td>
<td>Finance I, Finance II</td>
</tr>
<tr>
<td>Management</td>
<td>Management I, Management II</td>
</tr>
<tr>
<td>Marketing</td>
<td>Marketing I, Marketing II</td>
</tr>
<tr>
<td>Operations</td>
<td>Operations I, Operations II</td>
</tr>
<tr>
<td>Supply Chain</td>
<td>Supply Chain I, Supply Chain II</td>
</tr>
<tr>
<td>Information Systems</td>
<td>Information Systems I, Information Systems II</td>
</tr>
<tr>
<td>Digital Business</td>
<td>Digital Business I, Digital Business II</td>
</tr>
</tbody>
</table>

The programme offers four specialization tracks:

- Strategic marketing
- Entrepreneurship and innovation
- Finance
- Audit and control

Benefits of the training

What the Solvay Brussels School has to offer

- A location at the heart of Europe, within a comprehensive research university: the Université libre de Bruxelles.
- An international faculty with a staff of high-level researchers and accomplished practitioners, who work together to ensure that the training they provide is both relevant for business and policy practice and corresponds to the state of art.
- A tradition of rigorous and demanding curricula based on solid multidisciplinary and analytical training, promoting critical thinking and problem-solving skills.
- A diversity of teaching methods that are constantly revised to ensure teaching effectiveness.
- A diverse and international student body (up to 80% in some Master programmes).
- A comprehensive educational offering covering economics and business from the bachelor to in-company training.
Accreditation from EQUIS (European Foundation for Management Development) and AMBA (Association of Masters of Business Administration). AACSB (Association to Advance Collegiate Schools of Business) accreditation is underway.

Career services
SBS-EM offers its students a number of resources for career development:

- Credited work placements [http://www.solvay.edu/credited-internship-programme] (full-time, 3-month minimum – 6-month maximum) allow participating students to gain work experience, apply their academic training, and develop their professional network before graduation.

- Career service [http://www.solvay.edu/career-services] provide practical guidance and preparation for the job market (workshops, writing a CV and a cover letter, simulated interviews, LinkedIn profile management, etc.) and organise events (lectures and seminars) with prominent business figures, presenting companies and their employment opportunities. Over the years, the SBS-EM has developed a wide network of recruiters and alumni and has established contacts with companies throughout Belgium and around the world.

- From their graduation onwards, students benefit from a strong and active alumni network [http://www.solvay.edu/alumni] with about 21,500 members in 65 countries.

Study-abroad programmes
The Master in Business Engineering offers several opportunities to study abroad:

- The international exchange programme [http://www.solvay.edu/outgoing-students], with more than 110 partner universities in 40 countries

- The double degree [http://www.solvay.edu/credited-internship-programme] specialised in Operations Management, with the Politecnico di Milano

- The Master with the QTEM network [http://www.qtem.org/]

Teaching methods
SBS-EM programmes emphasise the acquisition of both analytical and problem-solving skills. They combine conceptual courses—where students learn techniques and their theoretical underpinnings—with practical workshops and individual and team-based projects—where students can test their understanding of the theory and develop their ability to apply it creatively to real problems. Critical, creative, and independent thinking is required.

SBS-EM leverages its wide-ranging international exchange programmes to offer students training opportunities abroad during their studies. This Master also gives students the possibility to include a credited work placement in their curriculum.

International/Openness
SBS-EM prepares its graduates for careers in multicultural and international environments. The curriculum includes language courses, which enable students to work in multilingual environments. Most courses cover the international dimensions of policy and management decision-making. Lastly, students can avail themselves of a rich offering of study-abroad and joint degree programmes. These international experiences offer them an opportunity to enrich their curriculum and broaden their horizons, and are an essential element of professional life in a globalised world.

International Exchange Programme
Students may spend one semester abroad in one of our 110 partner universities. For more information, visit www.solvay.edu/outgoing-students. [http://www.solvay.edu/outgoing-students]

Double Degree with the Politecnico di Milano, specialised in Operations Management
The Master in Business Engineering offers a double degree (1st year at ULB, 2nd year at the partner institution) with the Politecnico di Milano [https://www.polimi.it/en/], Italy. This programme includes a credited work placement. For more information, visit www.solvay.edu/double-degrees [http://www.solvay.edu/double-degrees].

The QTEM networked master
Qualified students in the Master in Business Engineering can enrol in the Quantitative Techniques for Economics and Management (QTEM) Master programme. The QTEM master gives participants enhanced training in quantitative and analytical skills and two international experiences (two exchange periods or one exchange period and one long-term work placement). The QTEM network currently includes 12 partners. For more information, visit www.qtem.org.

Progression per curriculum unit
The concept of a year of studies gives way to a system of accumulation of credits based on the student’s individual programme. The cycle programme is offered in units of 60 credits. The units of 60 credits are proposed as an “ideal” course of study for students enrolled in this programme.

Programme title: Master in Business engineering
Programme mnemonic: MA-INGE
Studies level: Masters 120 credits
Learning language:
Schedule:
Campus: Solbosch
Master in Business engineering

Bloc 1
Spécialisée

Cours obligatoires

GEST-S403  Advanced Marketing (Chaire Invev-Baillet Latour)  Sandra ROTHENBERGER (Coordinator)
  5 credits [lecture: 36h]  English

GEST-S406  Strategy  Paul VERDIN (Coordinator) and François FAELLI
  5 credits [lecture: 36h]  English

GEST-S408  Corporate valuation and financing  Hugues PIROTTE (Coordinator)
  5 credits [tutorial classes: 24h]  English

GEST-S409  Advanced accounting  Jean-Paul LOOZEN (Coordinator) and Pierre-Hugues BONNEFOY
  5 credits [tutorial classes: 24h]  English

GEST-S414  Banking and asset management  Mathias SCHMIT (Coordinator) and Griselda DEELSTRA
  5 credits [lecture: 36h]  English

GEST-S482  Operations and digital business  Nicolas VAN ZEEBROECK (Coordinator) and Alassane NDIAYE
  5 credits [lecture: 48h, tutorial classes: 12h]  English

One course chosen from the following

GEST-S430  Business intelligence and data science  Thierry VAN DE MERCKT (Coordinator)
  5 credits [lecture: 36h, tutorial classes: 12h]  English

STAT-S401  Analyse statistique multivariée  Catherine DEHON (Coordinator)
  5 credits [lecture: 24h, tutorial classes: 12h]  French

An alternative chosen from the two following

Programme de 2e quadrimestre

Programme d'échange international

A total of 25 credits chosen from the following

HULB-0000  Cours exterieur à l'Université
  25 credits

or

Complément de tronc commun

One course chosen from the following
Module d'options "gestion"

10 to 20 credits chosen from the following

An alternative chosen from the four following

**Filière strategic marketing**

- **GEST-S440** Marketing Analytics  
  Philippe MAUCHARD (Coordinator), Sandra ROTHENBERGER and Stéphanie TOUSSAINT  
  5 credits [lecture: 48h]  
  English

- **GEST-S441** International Marketing  
  Sandra ROTHENBERGER (Coordinator) and Virginie BRUNEAU  
  5 credits [lecture: 48h]  
  English

- **GEST-S491** Sales and distribution management  
  Claude BOFFA (Coordinator)  
  5 credits [lecture: 48h]  
  English

- **GEST-S508** Communication intégrée : concepts et travaux pratiques  
  Philippe BILTIAU (Coordinator) and Hugues REY  
  5 credits [lecture: 48h]  
  French

**Filière Entrepreneurship and innovation**

- **GEST-S423** IP Management and Technology Transfer (Chaire Solvay)  
  Bruno VAN POTTELSBERGHE (Coordinator) and Frédéric DE CONINCK  
  5 credits [lecture: 24h, tutorial classes: 12h]  
  English

- **GEST-S424** Entrepreneurial finance  
  Olivier WITMEUR (Coordinator) and Omar MOHOUT  
  5 credits [lecture: 36h, tutorial classes: 12h]  
  English

- **GEST-S484** Innovation strategy  
  Manuel HENSMANS (Coordinator)  
  5 credits [lecture: 36h]  
  English

- **GEST-S516** Seminar of emerging technologies  
  Marc BECQUET (Coordinator)  
  5 credits [seminars: 24h]  
  English

- **GEST-S568** Social entrepreneurship  
  Judith BEHRENS (Coordinator) and Patrick Reichert  
  5 credits [lecture: 24h]  
  English

**Filière Finance**

10 to 20 credits chosen from the following

- **GEST-S400** Market and Corporate Accounting  
  BRUNO COLMANT (Coordinator)  
  5 credits [lecture: 36h]  
  English

- **GEST-S497** Modélisation mathématique en finance  
  Ariane SZAFARZ (Coordinator)  
  5 credits [lecture: 24h]  
  French
<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Coordinator</th>
<th>Credits</th>
<th>Lecture</th>
<th>Tutorial</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEST-S503</td>
<td>Financial econometrics</td>
<td>Olivier SCAILLET</td>
<td>5</td>
<td>24</td>
<td>12</td>
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<tr>
<td>GEST-S504</td>
<td>Corporate restructuring</td>
<td>Marco BECHT</td>
<td>5</td>
<td>24</td>
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</tr>
<tr>
<td>GEST-S506</td>
<td>Capital markets &amp; investment banking</td>
<td>CHRISTIAN DE HAAIJ</td>
<td>5</td>
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<tr>
<td>GEST-S531</td>
<td>Financial history</td>
<td>Kim OOSTERLINCK</td>
<td>5</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>GEST-S569</td>
<td>Derivatives, Financial risk management &amp; Governance</td>
<td>Hugues PIROTTE, Frédéric VAN DER SCHUEREN</td>
<td>5</td>
<td>48</td>
<td>24</td>
</tr>
<tr>
<td>GEST-S400</td>
<td>Market and Corporate Accounting</td>
<td>BRUNO COLMANT</td>
<td>5</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>GEST-S446</td>
<td>Comptabilité des coûts</td>
<td>OLIVIER CHRISTOPHE</td>
<td>5</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>GEST-S485</td>
<td>Advanced management control</td>
<td>Fouad ELOUCH</td>
<td>5</td>
<td>24</td>
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</tr>
<tr>
<td>GEST-S486</td>
<td>Topics in corporate risk management, control and governance</td>
<td>Christophe QUIEVREUX</td>
<td>5</td>
<td>24</td>
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<tr>
<td>GEST-S499</td>
<td>Real Estate finance and development</td>
<td>Gaëtan PIRET</td>
<td>5</td>
<td>36</td>
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<tr>
<td>GEST-S501</td>
<td>Audit</td>
<td>Romuald BILEM</td>
<td>5</td>
<td>24</td>
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<tr>
<td>ECON-S452</td>
<td>Environmental economics</td>
<td>Estelle CANTILLON</td>
<td>5</td>
<td>24</td>
<td>12</td>
</tr>
<tr>
<td>GEST-S471</td>
<td>Management and sustainable development: constraints and opportunities</td>
<td>Nicolas Denis, Eric MONAMI</td>
<td>5</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>GEST-S492</td>
<td>The digital firm</td>
<td>Bernard DE CANNIERE</td>
<td>5</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>GEST-S493</td>
<td>The CEO Perspective</td>
<td>Pierre GURDJIAN</td>
<td>5</td>
<td>48</td>
<td></td>
</tr>
</tbody>
</table>

**Module d’options "CEO Agenda"**

Up to ten credits chosen from the following:

<table>
<thead>
<tr>
<th>Code</th>
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<th>Coordinator</th>
<th>Credits</th>
<th>Lecture</th>
<th>Tutorial</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON-S452</td>
<td>Environmental economics</td>
<td>Estelle CANTILLON</td>
<td>5</td>
<td>24</td>
<td>12</td>
</tr>
<tr>
<td>GEST-S471</td>
<td>Management and sustainable development: constraints and opportunities</td>
<td>Nicolas Denis, Eric MONAMI</td>
<td>5</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>GEST-S492</td>
<td>The digital firm</td>
<td>Bernard DE CANNIERE</td>
<td>5</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>GEST-S493</td>
<td>The CEO Perspective</td>
<td>Pierre GURDJIAN</td>
<td>5</td>
<td>48</td>
<td></td>
</tr>
</tbody>
</table>
GEST-S494  Managing errors in organisations (Chaire InBev Baillet Latour)  Paul VERDIN (Coordinator)
  5 credits  [lecture: 48h]  English

GEST-S496  Research Seminar in Business History (Chaire Kurgan-van Hentenyk)  Kenneth BERTRAMS (Coordinator)
  5 credits  [lecture: 24h]  English

GEST-S498  Negotiation Skills  Claudia TOMA (Coordinator)
  5 credits  [lecture: 24h, seminars: 12h]  English
  50 étudiants maximum pour ce cours.

POLI-S428  Lobbying and political interests in the EU  Stephen BOUCHER (Coordinator)
  5 credits  [lecture: 24h]  English
Master in Business engineering

Bloc 2
Spécialisée

Cours obligatoire - Mémoire

GEST-5488 Comportement organisationnel et leadership Michel VERSTRAETEN (Coordinator)
5 credits [lecture: 24h, tutorial classes: 24h] French

MEMO-5504 Mémoire
15 credits [personal assignments: 360h] French

New Business Seminar

One course chosen from the following

GEST-5560 New Business Seminar Olivier WITMEUR (Coordinator), Benjamin BEECKMANS and Bruno WATTENBERGH
5 credits [seminars: 24h] French

GEST-5561 New Business Seminar Olivier WITMEUR (Coordinator), Benjamin BEECKMANS and Bruno WATTENBERGH
5 credits [seminars: 24h] French

Séminaires obligatoires

One course chosen from the following

GEST-5500 seminar of Business strategy STEFAN DAB (Coordinator)
5 credits [seminars: 12h]

GEST-5524 Seminar of Business strategy Jacques BUGHIN (Coordinator)
5 credits [seminars: 12h] English

GEST-5525 Seminar of Business strategy STEFAN DESCHEEMAEKER (Coordinator)
5 credits [seminars: 12h] English

GEST-5548 Seminar of Business Strategy Olivier HAMOIR (Coordinator)
5 credits [seminars: 12h] English

GEST-5549 Seminar of Business Strategy Bruno VAN LIERDE (Coordinator)
5 credits [seminars: 12h] English

Séminaires obligatoires 1

One course chosen from the following

GEST-5522 Field project: Finance STEFAN DAB (Coordinator)
5 credits [seminars: 12h] English
GEST-S523  Field project: Marketing  Marianne CLAES (Coordinator)  5 credits [seminars: 12h]  English

GEST-S526  Field project: Triaxe  Olivier WITMEUR (Coordinator) and Catherine BLONDIAU  5 credits [seminars: 12h]  English

GEST-S527  Field project: Organisation  Denis HERBAUX (Coordinator)  5 credits [seminars: 12h]  English

GEST-S528  Field project: Healthcare  Philippe VAN WILDER (Coordinator)  5 credits [seminars: 12h]  English

GEST-S529  Field project: Human Resources  Lucy VAN HOVE (Coordinator)  5 credits [seminars: 12h]  English

GEST-S530  Field project: IT governance  Georges ATAYA (Coordinator)  5 credits [seminars: 12h]  English

GEST-S562  Field project: Finance  BRUNO COLMANT (Coordinator)  5 credits [seminars: 12h]  English

GEST-S563  Field project: Non profit  Nicolas JANSSEN (Coordinator)  5 credits [seminars: 12h]  English

An alternative chosen from the two following
Programme d'échange international
HULB-0000  Cours externe à l'Université  25 credits

or

Cours de complément de tronc commun

One course chosen from the following

GEST-S428  Corporate governance (Chaire Léo Goldschmidt)  Marco BECHT (Coordinator)  5 credits [lecture: 24h]  English

GEST-S454  Business and economics ethics  Marek HUDON (Coordinator)  5 credits [lecture: 24h]  English

Module "Gestion"

10 to 20 credits chosen from the following

An alternative chosen from the four following

Filière Strategic marketing

GEST-S440  Marketing Analytics  Philippe MAUCHARD (Coordinator), Sandra ROTHENBERGER and Stéphanie TOUSSAINT  5 credits [lecture: 48h]  English
**International Marketing**  Sandra ROTHENBERGER (Coordinator) and Virginie BRUNEAU  
5 credits [lecture: 24h]  English

**Sales and distribution management**  Claude BOFFA (Coordinator)  
5 credits [lecture: 48h]  English

**Communication intégrée : concepts et travaux pratiques**  Philippe BILTIAYA (Coordinator) and Hugues REY  
5 credits [lecture: 24h]  French

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**Filière Entrepreneurship and innovation**

**IP Management and Technology Transfer (Chaire Solvay)**  Bruno VAN POTTELSBERGHE (Coordinator) and Frédéric DE CONINCK  
5 credits [lecture: 24h, tutorial classes: 12h]  English

**Entrepreneurial finance**  Olivier WITMEUR (Coordinator) and Omar MOHOUT  
5 credits [lecture: 36h, tutorial classes: 12h]  English

**Innovation strategy**  Manuel HENSMANS (Coordinator)  
5 credits [lecture: 36h]  English

**Seminar of emerging technologies**  Marc BECQUET (Coordinator)  
5 credits [seminars: 24h]  English

**Social entrepreneurship**  Judith BEHREN (Coordinator) and Patrick Reichert  
5 credits [lecture: 24h]  English

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**Filière finance**

10 to 20 credits chosen from the following

**Market and Corporate Accounting**  BRUNO COLMANT (Coordinator)  
5 credits [lecture: 36h]  English

**Modélisation mathématique en finance**  Ariane SZAFARZ (Coordinator)  
5 credits [lecture: 24h]  French

**Financial econometrics**  Olivier SCAILLET (Coordinator)  
5 credits [lecture: 24h, tutorial classes: 12h]  English

**Corporate restructuring**  Marco BECHT (Coordinator)  
5 credits [lecture: 24h]  English

**Capital markets & investment banking**  CHRISTIAN DE HAAIJ (Coordinator)  
5 credits [lecture: 48h]  English

**Financial history**  Kim OOSTERLINCK (Coordinator)  
5 credits [lecture: 24h]  English

**Derivatives, Financial risk management & Governance**  Hugues PIROTTE (Coordinator) and Frédéric VAN DER SCHUEREN  
5 credits [lecture: 48h, tutorial classes: 24h]  English
Filière Audit and Control

GEST-S400  Market and Corporate Accounting _BRUNO COLMANT (Coordinator)
5 credits [lecture: 36h]  English

GEST-S446  Comptabilité des coûts _OUVIER CHRISTOPHE (Coordinator)
5 credits [lecture: 24h, tutorial classes: 24h]  French

GEST-S485  Advanced management control _Fouad ELOUCH (Coordinator)
5 credits [lecture: 24h]  English

GEST-S486  Topics in corporate risk management, control and governance _Christophe QUIEVREUX (Coordinator)
5 credits [lecture: 24h]  English

GEST-S499  Real Estate finance and development _Gaëtan PIRET (Coordinator)
5 credits [lecture: 36h]  English

GEST-S501  Audit _Romuald BILEM (Coordinator)
5 credits [lecture: 24h]  French

Module "CEO Agenda"

Up to ten credits chosen from the following

ECON-S452  Environmental economics _Estelle CANTILLON (Coordinator)
5 credits [lecture: 24h, tutorial classes: 12h]  English

GEST-S471  Management and sustainable development : constraints and opportunities  Nicolas Denis (Coordinator) and Eric MONAMI
5 credits [lecture: 36h]  English

GEST-S492  The digital firm _Bernard DE CANNIERE (Coordinator)
5 credits [lecture: 36h]  English

GEST-S493  The CEO Perspective _Pierre GURDJIAN (Coordinator)
5 credits [lecture: 48h]  English

GEST-S494  Managing errors in organisations (Chaire InBev Baillet Latour)  _Paul VERDIN (Coordinator)
5 credits [lecture: 48h]  English

GEST-S496  Research Seminar in Business History (Chaire Kurgan-van Hentenryk)  _Kenneth BERTRAMS (Coordinator)
5 credits [lecture: 24h]  English

GEST-S498  Negotiation Skills  _Claudia TOMA (Coordinator)
5 credits [lecture: 24h, seminars: 12h]  English
50 étudiants maximum pour ce cours.

POLI-S428  Lobbying and political interests in the EU  _Stephen BOUCHER (Coordinator)
5 credits [lecture: 24h]  English