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.

Curriculum

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

<table>
<thead>
<tr>
<th>Course Title</th>
<th>ECTS Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Marketing</td>
<td>8</td>
</tr>
<tr>
<td>Entrepreneurship and Innovation</td>
<td>8</td>
</tr>
<tr>
<td>Finance</td>
<td>8</td>
</tr>
<tr>
<td>Audit and control</td>
<td>8</td>
</tr>
</tbody>
</table>

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 offering covering economics and business from the bachelor to in-company training.
Solvay Brussels School of Economics and Management  
academic programmes 2019–2020

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 services [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 23,000 members in 100 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 130 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 [https://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 130 partner universities. For more information, visit 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.

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 23 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.
Master in Business engineering

Bloc 1
Specialisée

Cours obligatoires

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Coordinator(s)</th>
<th>Credits</th>
<th>Lecture Time</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEST-S403</td>
<td>Advanced Marketing</td>
<td>Sandra ROTHENBERGER (Coordinator)</td>
<td>5</td>
<td>36h</td>
<td>English</td>
</tr>
<tr>
<td>GEST-S406</td>
<td>Strategy</td>
<td>Paul VERDIN (Coordinator) and François FAELLI</td>
<td>5</td>
<td>36h</td>
<td>English</td>
</tr>
<tr>
<td>GEST-S408</td>
<td>Corporate valuation and financing</td>
<td>Hugues PIROTTE (Coordinator)</td>
<td>5</td>
<td>36h, 24h</td>
<td>English</td>
</tr>
<tr>
<td>GEST-S409</td>
<td>Advanced accounting</td>
<td>Jean-Paul LOOZEN (Coordinator) and Pierre-Hugues BONNEFOY</td>
<td>5</td>
<td>36h, 24h</td>
<td>English</td>
</tr>
<tr>
<td>GEST-S414</td>
<td>Banking and asset management</td>
<td>Mathias SCHMIT (Coordinator) and Griselda DEELSTRA</td>
<td>5</td>
<td>36h</td>
<td>English</td>
</tr>
<tr>
<td>GEST-S482</td>
<td>Operations and digital business</td>
<td>Nicolas VAN ZEEBROECK (Coordinator) and Alassane NDIAYE</td>
<td>5</td>
<td>48h, 12h</td>
<td>English</td>
</tr>
</tbody>
</table>

One course chosen from the following

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Coordinator(s)</th>
<th>Credits</th>
<th>Lecture Time</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEST-S430</td>
<td>Business intelligence and data science (Chaire Solvay Alumni)</td>
<td>Thierry VAN DE MERCKT (Coordinator)</td>
<td>5</td>
<td>36h, 12h</td>
<td>English</td>
</tr>
<tr>
<td>STAT-S401</td>
<td>Analyse statistique multivariée</td>
<td>Catherine DEHON (Coordinator)</td>
<td>5</td>
<td>24h, 12h</td>
<td>French</td>
</tr>
</tbody>
</table>

An alternative chosen from the two following

Programme de 2e quadrimestre

Programme d'échange international

A total of 25 credits chosen from the following

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HULB-0000</td>
<td>Cours externe à l'Université</td>
<td>25</td>
</tr>
</tbody>
</table>
Corporate governance (Chaire Léo Goldschmidt)  Marco BECHT (Coordinator)
5 credits [lecture: 24h]  English

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

Module d'options "gestion"

10 to 20 credits chosen from the following

An alternative chosen from the four following

Filière strategic marketing

Marketing Analytics  Philippe MAUCHARD (Coordinator) and Sandra ROTHENBERGER
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 BILTIAU (Coordinator) and Hugues REY
5 credits [lecture: 24h]  French

or

Filière Entrepreneurship and innovation

IP Management and Technology Transfer (Chaire Solvay)  Bruno VAN POTTELSBERGHE (Coordinator)
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 BEHRENS (Coordinator)
5 credits [lecture: 24h]  English

or

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
<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Coordinator(s)</th>
<th>Credits</th>
<th>Lecture Hours</th>
<th>Tutorial Hours</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEST-S503</td>
<td>Financial econometrics</td>
<td>Olivier SCAILLET (Coordinator)</td>
<td>5</td>
<td>24</td>
<td>12</td>
<td>English</td>
</tr>
<tr>
<td>GEST-S504</td>
<td>Corporate restructuring</td>
<td>Marco BECHT (Coordinator)</td>
<td>5</td>
<td>24</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>GEST-S506</td>
<td>Capital markets &amp; investment banking</td>
<td>CHRISTIAN DE HAAIJ (Coordinator)</td>
<td>5</td>
<td>24</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>GEST-S531</td>
<td>Financial history</td>
<td>Kim OOSTERLINCK (Coordinator)</td>
<td>5</td>
<td>24</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>GEST-S569</td>
<td>Derivatives, Financial risk management &amp; Governance</td>
<td>Hugues PIROTTE (Coordinator) and Frédéric VAN DER SCHUEREN</td>
<td>5</td>
<td>48</td>
<td>24</td>
<td>English</td>
</tr>
</tbody>
</table>

**Filière Audit and contrôle**

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Coordinator(s)</th>
<th>Credits</th>
<th>Lecture Hours</th>
<th>Tutorial Hours</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEST-S400</td>
<td>Market and Corporate Accounting</td>
<td>BRUNO COLMANT (Coordinator)</td>
<td>5</td>
<td>36</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>GEST-S446</td>
<td>Comptabilité des coûts</td>
<td>OLIVIER CHRISTOPHE (Coordinator)</td>
<td>5</td>
<td>24</td>
<td>24</td>
<td>French</td>
</tr>
<tr>
<td>GEST-S485</td>
<td>Advanced management control</td>
<td>Fouad ELOUCH (Coordinator)</td>
<td>5</td>
<td>24</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>GEST-S486</td>
<td>Topics in corporate risk management, control and governance</td>
<td>Christophe QUIEVREUX (Coordinator)</td>
<td>5</td>
<td>24</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>GEST-S499</td>
<td>Real Estate finance and development</td>
<td>Gaëtan PIRET (Coordinator)</td>
<td>5</td>
<td>36</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>GEST-S501</td>
<td>Audit</td>
<td>Romuald BILEM (Coordinator)</td>
<td>5</td>
<td>24</td>
<td></td>
<td>French</td>
</tr>
</tbody>
</table>

**Module d'options "CEO Agenda"**

*Up to ten credits chosen from the following*

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Coordinator(s)</th>
<th>Credits</th>
<th>Lecture Hours</th>
<th>Tutorial Hours</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON-S452</td>
<td>Environmental economics</td>
<td>Estelle CANTILLON (Coordinator)</td>
<td>5</td>
<td>24</td>
<td>12</td>
<td>English</td>
</tr>
<tr>
<td>GEST-S471</td>
<td>Management and sustainable development : constraints and opportunities</td>
<td>Nicolas Denis (Coordinator)</td>
<td>5</td>
<td>36</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>GEST-S492</td>
<td>The digital firm</td>
<td>Bernard DE CANNIERE (Coordinator)</td>
<td>5</td>
<td>36</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>GEST-S493</td>
<td>The CEO Perspective</td>
<td>Pierre GURDJIAN (Coordinator)</td>
<td>5</td>
<td>48</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>GEST-S494</td>
<td>Managing errors in organisations (Chaire InBev Baillet Latour)</td>
<td>Paul VERDIN (Coordinator)</td>
<td>5</td>
<td>48</td>
<td></td>
<td>English</td>
</tr>
</tbody>
</table>
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
Master in Business engineering

Bloc 2
Spécialisée

**Cours obligatoire - Mémoire**

GEST-S488  Comportement organisationnel et leadership  
Michel VERSTRAETEN (Coordinator)
5 credits [lecture: 24h, tutorial classes: 24h]  
French

MEMO-S504  Mémoire  
15 credits [personal assignments: 360h]  
French

**New Business Seminar**

One course chosen from the following

GEST-S560  New Business Seminar  
Benjamin BEECKMANS (Coordinator) and Bruno WATTENBERGH
5 credits [seminars: 24h]  
French

GEST-S561  New Business Seminar  
Benjamin BEECKMANS (Coordinator) and Bruno WATTENBERGH
5 credits [seminars: 24h]  
French

**Séminaires obligatoires**

One course chosen from the following

GEST-S500  Seminar of Business strategy  
STEFAN DAB (Coordinator)
5 credits [seminars: 12h]  
French

GEST-S524  Seminar of Business strategy  
Jean Pierre BIZET (Coordinator)
5 credits [seminars: 12h]  
English

GEST-S525  Seminar of Business strategy  
STEFAN DESCHEEMAEKER (Coordinator)
5 credits [seminars: 12h]  
English

GEST-S548  Seminar of Business Strategy  
Olivier HAMOIR (Coordinator)
5 credits [seminars: 12h]  
English

GEST-S549  Seminar of Business Strategy  
Bruno VAN LIERDE (Coordinator)
5 credits [seminars: 12h]  
English

**Séminaires obligatoires 1**

One course chosen from the following

GEST-S522  Field project: Finance  
STEFAN DAB (Coordinator)
5 credits [seminars: 12h]  
English
GEST-S523  Field project: Marketing  Marianne CLAES (Coordinator)
0 5 credits [seminars: 12h]  English

GEST-S526  Field project: Triaxe  Olivier WITMEUR (Coordinator)
0 5 credits [seminars: 12h]  English

GEST-S527  Field project: Organisation  Denis HERBAUX (Coordinator)
0 5 credits [seminars: 12h]  English

GEST-S528  Field project: Healthcare  Philippe VAN WILDER (Coordinator)
0 5 credits [seminars: 12h]  English

GEST-S529  Field project: Human Resources  Lucy VAN HOVE (Coordinator)
0 5 credits [seminars: 12h]  English

GEST-S530  Field project: IT governance  Georges ATAYA (Coordinator)
0 5 credits [seminars: 12h]  English

GEST-S562  Field project: Finance  BRUNO COLMANT (Coordinator)
0 5 credits [seminars: 12h]  English

GEST-S563  Field project: Non profit  Nicolas JANSSEN (Coordinator)
0 5 credits [seminars: 12h]  English

An alternative chosen from the two following

Programme d'échange international

HULB-0000  Cours externe à l'Université
0 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)
0 5 credits [lecture: 24h]  English

GEST-S454  Business and economics ethics  Marek HUDON (Coordinator)
0 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) and Sandra ROTHENBERGER
0 5 credits [lecture: 48h]  English
GEST-S441  International Marketing  
Sandra ROTHENBERGER (Coordinator) and Virginie BRUNEAU
5 credits [lecture: 24h]  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: 24h]  French

Filère Entrepreneurship and innovation

GEST-S423  IP Management and Technology Transfer (Chaire Solvay)  
Bruno VAN POTTELSBERGHE (Coordinator)
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 BECHET (Coordinator)
5 credits [seminars: 24h]  English

GEST-S568  Social entrepreneurship  
Judith BEHREN (Coordinator)
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

GEST-S503  Financial econometrics  
Olivier SCAILLET (Coordinator)
5 credits [lecture: 24h, tutorial classes: 12h]  English

GEST-S504  Corporate restructuring  
Marco BECHT (Coordinator)
5 credits [lecture: 24h]  English

GEST-S506  Capital markets & investment banking  
CHRISTIAN DE HAAJ (Coordinator)
5 credits [lecture: 48h]  English

GEST-S531  Financial history  
Kim OOSTERLINCK (Coordinator)
5 credits [lecture: 24h]  English

GEST-S569  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*  
OLIVIER 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

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**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)  
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