

Faculty of Economics and Business Administration

Master of Science in Business Engineering -- Data Analytics

Language of instruction: English

Programme version 8

1 General Courses 50 credits

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|---------------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|---------|-------|
| 1 | F000442 Strategic Management <i>Johan Verrue -- Department of Marketing, Innovation and Organisation</i> | 6 | | 1 | A:1 | 180 |
| 2 | F000896 Technology for the Circular Economy <i>Ramon Ganigüé -- Department of Biotechnology</i> | 5 | | 1 | A:2 | 150 |
| 3 | F000671 Human Resources Management <i>Dirk Buyens -- Department of Marketing, Innovation and Organisation</i> | 5 | | 1 | A:2 | 150 |
| 4 | F000124 System Dynamics <i>Mia Loccuffier -- Department of Electromechanical, Systems and Metal Engineering</i> | 5 | | 1 | A:1 | 150 |
| 5 | F000699 Business-to-business Marketing <i>Steve Muylle -- Department of Marketing, Innovation and Organisation</i> | 6 | | 1 | A:1 | 180 |
| 6 | F000700 Managing Service Organisations <i>Paul Gemmel -- Department of Marketing, Innovation and Organisation</i> | 4 | | 1 | A:1 | 120 |
| 7 | F000897 Enterprise Architecture <i>Geert Poels -- Department of Business Informatics and Operations Management</i> | 4 | | 2 | A:1 | 120 |
| 8 | F000892 Innovation Management <i>Katrien Verleye -- Department of Marketing, Innovation and Organisation</i> | 3 | | 2 | A:2 | 90 |
| 9 | F000778 Business Process Management <i>Frederik Gailly -- Department of Business Informatics and Operations Management</i> | 4 | | 2 | A:2 | 120 |
| 10 | F000704 Financing High Tech Entrepreneurial Companies <i>Miguel Meuleman -- Department of Accounting, Corporate Finance and Taxation</i> | 4 | | 2 | B:1 | 120 |
| 11 | F000891 Technology Entrepreneurship <i>Johan Verrue -- Department of Marketing, Innovation and Organisation</i> | 4 | | 2 | A:1 | 120 |

2 Courses Related to the Main Subject 34 credits

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|-----------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|---------|-------|
| 1 | F000799 Social Media and Web Analytics <i>Matthias Bogaert -- Department of Marketing, Innovation and Organisation</i> | 6 | | 1 | A:2 | 180 |
| 2 | F000712 Analytical Customer Relationship Management <i>Dirk Van den Poel -- Department of Marketing, Innovation and Organisation</i> | 6 | | 1 | A:1 | 180 |
| 3 | F000942 Machine Learning <i>Dries Benoit -- Department of Marketing, Innovation and Organisation</i> | 6 | | 1 | A:1 | 180 |
| 4 | F000941 Simulation Modelling and Analysis <i>Broos Maenhout -- Department of Business Informatics and Operations Management</i> | 4 | | 1 | A:2 | 120 |
| 5 | F000801 Predictive and Prescriptive Analytics <i>Matthias Bogaert -- Department of Marketing, Innovation and Organisation</i> | 6 | | 2 | A:2 | 180 |
| 6 | F000802 Big Data <i>Dirk Van den Poel -- Department of Marketing, Innovation and Organisation</i> | 6 | | 2 | A:1 | 180 |

3 Elective Courses 12 credits

Subscribe to 12 credit units from no less than 1 and no more than 3 modules from the following list. Subject to approval by the faculty. Distributed over the first standard learning path as 6 credit units in year 1 and 6 credit units in year 2, over the second standard learning path as 6 credit units in year 2 and 6 credit units in year 3.

3.1 Elective Advanced Courses

Subscribe to no more than 12 credit units from the following list.

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|---------|-------|
| 1 | F000683 Investment Analysis <i>Michael Frömmel -- Department of Economics</i> | 6 | | | A:1 | 180 |
| 2 | F000898 Business Valuation <i>Leentje Moortgat -- Department of Accounting, Corporate Finance and Taxation</i> | 4 | | | A:1 | 120 |
| 3 | F000020 Management Accounting [nl] <i>Sophie Hoozée -- Department of Accounting, Corporate Finance and Taxation</i> | 4 | | | A:1 | 120 |
| 4 | F000717 Financial Risk Management <i>Frank De Jonghe -- Department of Economics</i> | 6 | | | A:1 | 180 |
| 5 | F000706 Advanced Production Management <i>Tarik Aouam -- Department of Business Informatics and Operations Management</i> | 6 | | | A:2 | 180 |
| 6 | F000899 Quality Management <i>Dries Goossens -- Department of Business Informatics and Operations Management</i> | 6 | | | A:2 | 180 |
| 7 | F000836 Decision Making for Business <i>Mario Vanhoucke -- Department of Business Informatics and Operations Management</i> | 6 | | | A:1 | 180 |
| 8 | F000710 Supply Chain Management <i>Tarik Aouam -- Department of Business Informatics and Operations Management</i> | 6 | | | A:2 | 180 |
| 9 | F000676 Econometrics: Time Series Analysis <i>Gerdié Everaert -- Department of Economics</i> | 6 | | | A:1 | 180 |
| 10 | F000920 Networks in Socio-Economic Systems <i>Luis Enrique Correa da Rocha -- Department of Economics</i> | 6 | | | A:2 | 180 |
| 11 | F000707 Project Management <i>Mario Vanhoucke -- Department of Business Informatics and Operations Management</i> | 6 | | | A:1 | 180 |
| 12 | F000918 Deep Learning <i>Joni Dambre -- Department of Electronics and Information Systems</i> | 6 | | | A:2 | 180 |
| 13 | F000889 Internship [nl, en] <i>Ignace De Beelde</i> | 6 | | | A:J | 180 |
| 14 | E016330 Artificial Intelligence <i>Aleksandra Pizurica -- Department of Telecommunications and Information Processing</i> | 6 | | | A:1 | 180 |
| 15 | I002700 Clean Technology <i>Sophie Huysveld -- Department of Green Chemistry and Technology</i> | 5 | | | A:1 | 150 |
| 16 | E065460 Rational Use of Materials <i>Tom Depover -- Department of Materials, Textiles and Chemical Engineering</i> | 5 | | | A:1 | 150 |
| 17 | E004152 Heuristics and Search Methods <i>Sidharta Gautama -- Department of Industrial Systems Engineering and Product Design</i> | 4 | | | A:1 | 120 |
| 18 | E076380 Methods Engineering and Work Measurement <i>Dieter Claeys -- Department of Industrial Systems Engineering and Product Design</i> | 6 | | | A:1 | 180 |
| 19 | E018441 Advanced Databases [nl] <i>Antoon Bronselaer -- Department of Telecommunications and Information Processing</i> | 6 | | | A:1 | 180 |
| 20 | E076340 Information Technology and Data Processing <i>Jan Aelterman -- Department of Telecommunications and Information Processing</i> | 6 | | | B:2 | 180 |
| 21 | E004720 Network Modelling and Design <i>Mario Pickavet -- Department of Information Technology</i> | 4 | | | B:2 | 120 |
| 22 | E076820 Project Management <i>Mario Vanhoucke -- Department of Business Informatics and Operations Management</i> | 6 | | | A:2 | 180 |
| 23 | E060240 Quality Engineering and Industrial Statistics <i>Stijn De Vuyst -- Department of Industrial Systems Engineering and Product Design</i> | 6 | | | A:2 | 180 |
| 24 | E011320 Queueing Theory <i>Joris Walraevens -- Department of Telecommunications and Information Processing</i> | 6 | | | B:1 | 180 |
| 25 | E005770 Total Plant Automation <i>Johannes Cottyn -- Department of Industrial Systems Engineering and Product Design</i> | 6 | | | A:2 | 180 |

3.2 Elective General Courses

Subscribe to no more than 12 credit units from the following list.

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|--------|------|-----|-----|---------|-------|
|----|--------|------|-----|-----|---------|-------|

| | | | | | | |
|----|---------|-----------------------------------------------------------------------------------------------------------------------------------|---|-----|-----|-----|
| 1 | F000681 | Economics of Banking <i>Rudi Vander Vennet -- Department of Economics</i> | 6 | | A:1 | 180 |
| 2 | F000764 | Economics of Financial Markets <i>William De Vijlder -- Department of Economics</i> | 6 | | A:1 | 180 |
| 3 | F000687 | Advanced Econometrics: Non-Linear Methods <i>Gerdie Everaert -- Department of Economics</i> | 6 | | A:2 | 180 |
| 4 | F000118 | Advanced Microeconomics: Game Theory and Asymmetric Information <i>Dirk Van de gaer -- Department of Economics</i> | 6 | | A:1 | 180 |
| 5 | F000628 | Microeconomics: Decision Theory <i>Dirk Van de gaer -- Department of Economics</i> | 6 | | B:1 | 180 |
| 6 | F000196 | Monetary Economics [nl] <i>Gert Peersman -- Department of Economics</i> | 5 | | A:1 | 150 |
| 7 | F000935 | Ecological Economics <i>Brent Bleys -- Department of Economics</i> | 6 | | A:2 | 180 |
| 8 | F000653 | Insurances [nl] <i>Kristiaan Bernauw -- Department of Interdisciplinary Study of Law, Private Law and Business Law</i> | 6 | | A:1 | 180 |
| 9 | F000640 | Audit <i>Ignace De Beelde -- Department of Accounting, Corporate Finance and Taxation</i> | 6 | | A:1 | 180 |
| 10 | F000688 | Management Control <i>Sophie Hoozée -- Department of Accounting, Corporate Finance and Taxation</i> | 6 | | A:2 | 180 |
| 11 | F000852 | Taxation [nl] <i>Annelies Roggeman -- Department of Accounting, Corporate Finance and Taxation</i> | 5 | | A:2 | 150 |
| 12 | F000694 | Advanced Financial Statement Analysis <i>Heidi Vander Bauwhede -- Department of Accounting, Corporate Finance and Taxation</i> | 6 | | A:1 | 180 |
| 13 | F000696 | Market Research Methods <i>Hendrik Slabbinck -- Department of Marketing, Innovation and Organisation</i> | 6 | | A:1 | 180 |
| 14 | F000859 | Corporate Social Responsibility [nl] <i>Saskia Crucke -- Department of Marketing, Innovation and Organisation</i> | 3 | | A:2 | 90 |
| 15 | B001339 | Law and Economics [nl] <i>Ben Depoorter -- Department of Interdisciplinary Study of Law, Private Law and Business Law</i> | 3 | | A:2 | 90 |
| 16 | F000933 | Environmental Economics [nl] <i>Johan Albrecht -- Department of Economics</i> | 4 | | A:1 | 120 |
| 17 | E075310 | Ethics, Engineering and Society [nl] <i>Guido Pennings -- Department of Philosophy and Moral Sciences</i> | 3 | | A:2 | 90 |
| 18 | D012535 | Health Economics [nl] <i>Dominique Vandijck -- Department of Public Health and Primary Care</i> | 5 | | A:1 | 150 |
| 19 | H001977 | Coaching and Diversity [nl] <i>Elisabeth De Schauwer -- Department of Special Education</i> | 3 | UKV | A:J | 90 |
| 20 | D002354 | Movement and Sports: Now and Later [nl] <i>Veerle Segers -- Department of Movement and Sports Sciences</i> | 3 | UKV | A:2 | 90 |
| 21 | K001339 | Sustainability Thinking [nl] <i>Thomas Block -- Department of Political Sciences</i> | 5 | UKV | A:J | 150 |

3.3 Elective Courses Academic Teacher Education

[Subscribe to no more than 12 credit units from the following list.](#)

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|-------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|---------|-------|
| 1 | H002169 Powerful Learning Environments [nl] <i>Bram De Wever -- Department of Educational Studies</i> | 6 | | | A:1 | 180 |
| 2 | H002196 Classroom Management and Reflection [nl] <i>Melissa Tuytens -- Department of Educational Studies</i> | 4 | | | A:2 | 120 |
| 3 | H002197 The Teacher within School and Society [nl] <i>Melissa Tuytens -- Department of Educational Studies</i> | 4 | | | A:1 | 120 |
| 4 | H002198 Psychology of Adolescence [nl] <i>Wim Beyers -- Department of Developmental, Personality and Social Psychology</i> | 4 | | | A:1 | 120 |

4 Master's Dissertation

24 credits

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|--------|------|-----|-----|---------|-------|
|----|--------|------|-----|-----|---------|-------|

Teaching

When a course is not taught (solely) in the programme's language of instruction, the effectively used languages are indicated in square brackets following the cours name, using the following ISO codes:

| | | | | | | |
|---------------|-------------|-------------|---------------|----------------|----------------------|-------------|
| bg: Bulgarian | de: German | es: Spanish | ja: Japanese | pl: Polish | sh: Kroatian/Serbian | zh: Chinese |
| cs: Czech | el: Greek | fr: French | nl: Dutch | pt: Portuguese | sl: Slovene | |
| da: Danish | en: English | it: Italian | no: Norwegian | ru: Russian | sv: Swedish | |

Semester

Semesters are indicated by their number (1 or 2); semester 3 represents the summer period and J indicates a course spanning semesters 1 and 2. When a capital letter precedes a semester number, the course has multiple offerings. The letter indicates the offering concerned. When a semester is shown in brackets, the course in not offered this year in the specific offering. The offering frequency and first year of offering are indicated by the following codes:

| | | | |
|-----------------|---------------------------------|---------------------------------|---------------------------------|
| a: bi-annually | c: annually, from 2023-2024 | f: annually, from 2024-2025 | i: annually, from 2025-2026 |
| b: tri-annually | d: bi-annually, from 2023-2024 | g: bi-annually, from 2024-2025 | j: bi-annually, from 2025-2026 |
| | e: tri-annually, from 2023-2024 | h: tri-annually, from 2024-2025 | k: tri-annually, from 2025-2026 |