

Faculty of Economics and Business Administration

Master of Science in Business Engineering -- Data Analytics

Language of instruction: English

Programme version 7

## 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>Pieter Nachtergaele -- 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	E017822 Software Architecture <i>Frank Gielen -- Department of Information Technology</i>	4				120
26	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>Patrick Van Kenhove -- 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
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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 2022-2023	f: annually, from 2023-2024	i: annually, from 2024-2025
b: tri-annually	d: bi-annually, from 2022-2023	g: bi-annually, from 2023-2024	j: bi-annually, from 2024-2025
	e: tri-annually, from 2022-2023	h: tri-annually, from 2023-2024	k: tri-annually, from 2024-2025