

Faculty of Sciences

Master of Science in Computer Science

Language of instruction: Dutch

Programme version 9

## 1 General Courses 60 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C003241 Fundamentals of Programming Languages <i>Christophe Scholliers -- Department of Mathematics, Computer Science and Statistics</i>	6		1	A:1	165
2	C003758 Machine Learning [en] <i>Yvan Saeys -- Department of Mathematics, Computer Science and Statistics</i>	6		1	A:1	180
3	E017930 Parallel and Distributed Software Systems [en] <i>Jan Fostier -- Department of Information Technology</i>	6		1	A:1	180
4	C003349 Discrete Algorithms <i>Veerle Fack -- Department of Mathematics, Computer Science and Statistics</i>	6		1	A:2	165
5	C004072 Software Engineering Lab 3 <i>Sofie Van Gassen -- Department of Mathematics, Computer Science and Statistics</i>	6		1	A:2	180
6	E018520 Compilers [en] <i>Bjorn De Sutter -- Department of Electronics and Information Systems</i>	6		1	A:2	180
7	C004041 Data Visualization <i>Bart Mesuere -- Department of Mathematics, Computer Science and Statistics</i>	3		1	A:2	90
8	C000957 Intellectual Property Rights <i>Hendrik Vanhees -- Department of Interdisciplinary Study of Law, Private Law and Business Law</i>	3		1	A:2	90
9	C004073 Computer Graphics <i>Peter Lambert -- Department of Electronics and Information Systems</i>	6		2	A:1	180
10	C004074 Big Data Science <i>Bart Mesuere -- Department of Mathematics, Computer Science and Statistics</i>	6		2	A:2	165
11	C004075 Internship <i>Peter Dawyndt -- Department of Mathematics, Computer Science and Statistics</i>	6		2	A:J	180

## 2 Minors 30 credits

Subscribe to 1 minor from the following list.

### 2.1 Minor Research

30 credits

Subscribe to 30 credit units from no less than 1 and no more than 2 modules from the following list. Subject to approval by the faculty.  
Of which at least 18 credits from the field of computer science.

#### 2.1.1 Elective Course List

Subscribe to no more than 30 credit units from the following list.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E010310 Image Processing <i>Bart Goossens -- Department of Telecommunications and Information Processing</i>	6			A:1	180
2	C000627 Computability and Complexity <i>Giovanni Solda -- Department of Mathematics: Analysis, Logic and Discrete Mathematics</i>	6				165
3	C004011 Advanced Numerical Methods [en] <i>Julian Köllermeier -- Department of Mathematics, Computer Science and Statistics</i>	6			A:2	180
4	E019170 Internet of Things [en] <i>Jeroen Hoebeke -- Department of Information Technology</i>	6			A:1	180
5	E019370 Robotics [en] <i>Tony Belpaeme -- Department of Electronics and Information Systems</i>	6			A:1	180

6	C000145	Algorithmic Graph Theory	6		165
7	C004552	Soft Computing <i>Chris Cornelis -- Department of Mathematics, Computer Science and Statistics</i>	6	A:2 <sup>a</sup>	165
8	C003711	Computational Challenges in Bioinformatics [en] <i>Jan Fostier -- Department of Information Technology</i>	6	A:2	180
9	C001026	Computer Algebra <i>Andreas Weiermann -- Department of Mathematics: Analysis, Logic and Discrete Mathematics</i>	6	A:2	165
10	E061460	Computer Vision: Theory and Applications <i>Hiep Luong -- Department of Telecommunications and Information Processing</i>	6	A:2	180
11	E003600	Information Theory [en] <i>Heidi Steendam -- Department of Telecommunications and Information Processing</i>	6	B:2	180
12	E017920	Design of Multimedia Applications [en] <i>Glenn Van Wallendael -- Department of Electronics and Information Systems</i>	6	A:2	180
13	E010220	Speech Processing [en] <i>Kris Demuyne -- Department of Electronics and Information Systems</i>	4	A:2	120
14	C004413	Causal Machine Learning [en] <i>Stijn Vansteelandt -- Department of Mathematics, Computer Science and Statistics</i>	5	A:2	150
15	E031800	AI Research Seminar [en] <i>Tijl De Bie -- Department of Electronics and Information Systems</i>	3	A:1	90
16	E061350	Deep Generative Models [en] <i>Bart Dhoedt -- Department of Information Technology</i>	4	A:2	120
17	E034500	Sustainable Computing [en] <i>Lieven Eeckhout -- Department of Electronics and Information Systems</i>	3	A:2	90
18	E061341	Natural Language Processing [en] <i>Thomas Demeester -- Department of Information Technology</i>	6	A:2	180
19	E017942	Software Hacking and Protection [en] <i>Bjorn De Sutter -- Department of Electronics and Information Systems</i>	6	A:1	180
20	E017950	Secure Software and Systems [en] <i>Bart Coppens -- Department of Electronics and Information Systems</i>	6	A:2	180
21	E008711	Network Hacking and Protection [en] <i>Bruno Volckaert -- Department of Information Technology</i>	6	A:1	180
22	E018610	Database Design <i>Guy De Tré -- Department of Telecommunications and Information Processing</i>	4		120
23	E018130	NoSQL Databases [en] <i>Antoon Bronselaer -- Department of Telecommunications and Information Processing</i>	3	A:2	90
24	E018700	Data Quality [en] <i>Antoon Bronselaer -- Department of Telecommunications and Information Processing</i>	3	A:1	90
25	E017310	Cloud Storage and Computing [en] <i>Bruno Volckaert -- Department of Information Technology</i>	4	A:2	120
26	C004623	Meta Programming and Reflection [en] <i>Elisa Gonzalez Boix -- Vrije Universiteit Brussel</i>	6	A:2	150

## 2.1.2 Elective Courses UGent or other Universities

Subscribe to no more than 30 credit units to be chosen from the study programmes of:

- UGent including the [Ghent University elective courses](#).
- Other higher education of the Flemish Community
- [Erasmus+ partner universities](#) including the [ENLIGHT \(online\) elective courses](#).

## 2.2 Minor Economics and Business Administration

30 credits

Subscribe to 30 credit units from no less than 1 and no more than 2 modules from the following list.

### 2.2.1 General Courses

Subscribe to no less than 24 and no more than 30 credit units from the following list, distributed over the first standard learning path as follows: no more than 24 credit units in year 1.

Dare to Venture can be chosen if you have already subscribed to Introduction to Entrepreneurship.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	F001019 Economics <i>Bruno Merlevede -- Department of Economics</i>	5			B:1	150
2	F001020 Introduction to Entrepreneurship [en] <i>Petra Andries -- Department of Marketing, Innovation and Organisation</i>	3			A:1	90

3	F001022	Dare to Venture [en] <i>Johan Verrue -- Department of Marketing, Innovation and Organisation</i>	4	A:2	120
4	F000845	Business Administration <i>Mirjam Knockaert -- Department of Marketing, Innovation and Organisation</i>	4	A:2	120
5	F000551	Business Skills [en] <i>Mieke Audenaert -- Department of Marketing, Innovation and Organisation</i>	4	C:2	120
6	F000768	Marketing Management <i>Maggie Geuens -- Department of Marketing, Innovation and Organisation</i>	6	A:1	180
7	F000855	Organization Theory [en] <i>Gosia Kozusznik -- Department of Marketing, Innovation and Organisation</i>	4	A:2	120
8	F001009	Business Cycles and Growth <i>Freddy Heylen -- Department of Economics</i>	5	A:1	150
9	F001008	Markets and Prices <i>Dirk Van de gaer -- Department of Economics</i>	5	A:1	150
10	F001010	Financial Markets and Institutions <i>Rudi Vander Venet -- Department of Economics</i>	5	A:2	150
11	F000752	Environmental Economics and Policy <i>Brent Bleys -- Department of Economics</i>	4	B:2	120
12	F000859	Corporate Social Responsibility <i>Saskia Crucke -- Department of Marketing, Innovation and Organisation</i>	3	A:2	90

### 2.2.2 Elective Courses UGent or other Universities

Subscribe to no more than 6 credit units to be chosen from the study programmes of:

- UGent including the [Ghent University elective courses](#).
- Other higher education of the Flemish Community,
- Erasmus+ partner universities including the [ENLIGHT \(online\) elective courses](#).

## 3 Master's Dissertation

30 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C002309 Master's Dissertation	30		2	A:J	825

#### 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 course name, using the following ISO codes:

bg: Bulgarian	de: German	es: Spanish	ja: Japanese	pl: Polish	sh: Croatian/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 is 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 2027-2028	f: annually, from 2028-2029	i: annually, from 2029-2030
b: tri-annually	d: bi-annually, from 2027-2028	g: bi-annually, from 2028-2029	j: bi-annually, from 2029-2030
	e: tri-annually, from 2027-2028	h: tri-annually, from 2028-2029	k: tri-annually, from 2029-2030