

## Master of Science in Chemistry -- Analytical and Environmental Chemistry

Language of instruction: English

Programme version 1

### 1 Courses Related to the Main Subject 108 credits

#### 1.1 General Courses 30 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C004153 Chemometrics <i>Laszlo Vincze -- Department of Chemistry</i>	3		1	A:1	85
2	C004155 Analytical Methods for Material Characterization <i>Mieke Adriaens -- Department of Chemistry</i>	9		1	A:1	270
3	C004156 Environmental Analysis <i>Yue Gao -- Vrije Universiteit Brussel</i>	6		1	A:1	180
4	C004127 Molecular Structure Analysis <i>Niels Geudens -- Department of Organic Chemistry</i>	6		1	A:1	150
5	C004154 Applications in Analytical and Environmental Sciences <i>Anna Kaczmarek -- Department of Chemistry</i>	6		1	A:1	170

#### 1.2 Specialization Courses 12 credits

Subscribe to 12 credit units from the following list, distributed over the first standard learning path as follows: 12 credit units in year 1.  
Subject to approval by the faculty.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C004157 Principle and Applications of Stable Isotope Analysis <i>Pascal Boeckx -- Department of Green Chemistry and Technology</i>	3		1	A:2	90
2	C004158 Archaeometry [nl] <i>Mieke Adriaens -- Department of Chemistry</i>	3		1	A:2	75
3	C004159 Advanced X-ray Spectroscopy <i>Laszlo Vincze -- Department of Chemistry</i>	3		1	A:2	90
4	C004160 Analytical Raman Spectroscopy <i>Anastasia Rousaki -- Department of Chemistry</i>	3		1	A:2	75
5	C004161 Field Sampling and Analysis <i>Martine Leermakers -- Vrije Universiteit Brussel</i>	3		1	A:2	90
6	C004162 Cosmochemistry <i>Steven Goderis -- Department of Chemistry</i>	3		1	A:2	90
7	C004163 Metal Biogeochemical Cycle <i>Yue Gao -- Vrije Universiteit Brussel</i>	3		1	A:2 <sup>a</sup>	90
8	C004164 Chemical Risk Assessment <i>Marc Elskens -- Vrije Universiteit Brussel</i>	3		1	A:2	90
9	C004130 Foundations of NMR and XRD for Structure Analysis <i>Kristof Van Hecke -- Department of Chemistry</i>	4		1	A:2	120
10	C004131 Organic Separation Techniques and Mass Spectrometry <i>Frederic Lynen -- Department of Organic Chemistry</i>	4		1	A:2	120
11	C004149 Light and Matter <i>Pieter Geiregat -- Department of Chemistry</i>	4		1	A:2	120
12	C004152 Structure Analysis by X-ray Diffraction <i>Jolien Dendooven -- Department of Solid State Sciences</i>	4		1	A:2	120

#### 1.3 Scientific and Professional Skills 66 credits

Subscribe to 66 credit units from the following list, with 30 credit units with reference a.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C004165 Professional Skills of the Sustainable Chemist <i>Catherine Cazin -- Department of Chemistry</i>	6		1	A:J	150
2	C004166 Master Thesis, Research Plan <i>Laszlo Vincze -- Department of Chemistry</i>	9		1	A:2	270
3	C004167 Master Thesis, Research Project <i>Laszlo Vincze -- Department of Chemistry</i>	21		2	A:1	630
4	C004168 Industrial Internship <i>Richard Hoogenboom -- Department of Organic Chemistry</i>	30	a	2	A:2	900
5	C004191 Academic Internship <i>Steven Nolan -- Department of Chemistry</i>	30	a	2	A:2	900

## 2 Elective Courses

12 credits

Subscribe to 12 credit units from no less than 1 and no more than 4 modules from the following list. Subject to approval by the faculty.

### 2.1 In-depth Chemistry

Subscribe to no more than 4 credit units from the specialization courses of the different main subject of the Master in Chemistry.

### 2.2 Industry and Management

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

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E076460 Dare to Venture <i>Johan Verrue -- Department of Marketing, Innovation and Organisation</i>	4		1	A:2	120
2	E076471 Dare to Start <i>Frank Gielen -- Department of Information Technology</i>	3		1	A:2	90
3	F000845 Business Administration [nl] <i>Mirjam Knockaert -- Department of Marketing, Innovation and Organisation</i>	4		1	A:2	120
4	F000551 Business Skills <i>Mieke Audenaert -- Department of Marketing, Innovation and Organisation</i>	4		1	C:2	120
5	C000833 Project Management [nl] <i>Mario Vanhoucke -- Department of Business Informatics and Operations Management</i>	4		1	A:2	120
6	F000855 Organization Theory <i>Gosia Kozusznik -- Department of Marketing, Innovation and Organisation</i>	4		1	A:2	120
7	F000093 Financial Markets and Institutions [nl] <i>Rudi Vander Vennet -- Department of Economics</i>	5		1	A:2	150
8	F000752 Environmental Economics and Policy [nl] <i>Brent Bleys -- Department of Economics</i>	6		1	B:2	180
9	F000859 Corporate Social Responsibility [nl] <i>Saskia Crucke -- Department of Marketing, Innovation and Organisation</i>	3		1	A:2	90
10	F000892 Innovation Management <i>Katrien Verleye -- Department of Marketing, Innovation and Organisation</i>	3		1	A:2	90
11	E039060 Sustainable Energy and Rational Use of Energy <i>Jeroen Beeckman -- Department of Electronics and Information Systems</i>	4		1	A:2	120
12	F000758 Economics [nl] <i>Bruno Merlevede -- Department of Economics</i>	5		2	A:1	150
13	E076930 Financial and Cost Price Reporting in Companies [nl] <i>Sophie Maussen -- Department of Accounting, Corporate Finance and Taxation</i>	6		2	A:1	180
14	E076431 Introduction to Entrepreneurship <i>Petra Andries -- Department of Marketing, Innovation and Organisation</i>	3		2	A:1	90
15	F000768 Marketing Management [nl] <i>Maggie Geuens -- Department of Marketing, Innovation and Organisation</i>	6		2	A:1	180
16	F000596 Business Cycles and Growth [nl] <i>Freddy Heylen -- Department of Economics</i>	6		2	A:1	180
17	F000446 Markets and Prices [nl] <i>Dirk Van de gaer -- Department of Economics</i>	6		2	A:1	180
18	E065460 Rational Use of Materials <i>Tom Depover -- Department of Materials, Textiles and Chemical Engineering</i>	5		2	A:1	150
19	C002275 Environmental Law [nl] <i>Hendrik Schoukens -- Department of European, Public and International Law</i>	5		2	A:1	125

20	I001571	Environmental Legislation	3	2	A:1	75
<i>Frank Maes -- Department of European, Public and International Law</i>						

## 2.3 Scientific broadening

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

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C004169 Advanced Topics in Chemistry <i>Klaartje De Buysser -- Department of Chemistry</i>	3		2	A:1	90
2	C004192 Green Chemistry	3		2		75
3	C004193 History of Chemistry [nl] <i>Mieke Adriaens -- Department of Chemistry</i>	3		2	(A:2) <sup>d</sup>	75
4	C004009 History and Philosophy of Sciences [nl] <i>Johan Braeckman -- Department of Philosophy and Moral Sciences</i>	3		2	(A:1) <sup>g</sup>	90
5	C004194 Chemical Laboratory Skills [nl] <i>Katrien Strubbe -- Department of Chemistry</i>	4		2	A:J	115
6	C004089 International Course	3		2	A:J	90

## 2.4 Elective Courses Flemish Community

[Subscribe to no more than 12 credit units from the study programmes of UGent including the Ghent University elective courses or from other universities of the Flemish Community.](#)

### 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 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