

Master of Science in Chemistry -- Analytical and Environmental Chemistry

Language of instruction: English

Programme version 3

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 Laszlo Vincze -- Department of Chemistry	3		1	A:1	85
2	C004155 Analytical Methods for Material Characterization Mieke Adriaens -- Department of Chemistry	9		1	A:1	270
3	C004156 Environmental Analysis Vrije Universiteit Brussel, Yue Gao	6		1	A:1	180
4	C004127 Molecular Structure Analysis N. N.	6		1	A:1	150
5	C004154 Applications in Analytical and Environmental Sciences Anna Kaczmarek -- Department of Chemistry	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 Pascal Boeckx -- Department of Green Chemistry and Technology	3		1	A:2	90
2	C004158 Archaeometry [nl] Mieke Adriaens -- Department of Chemistry	3		1	A:2	75
3	C004159 Advanced X-ray Spectroscopy Laszlo Vincze -- Department of Chemistry	3		1	A:2	90
4	C004160 Analytical Raman Spectroscopy Peter Vandenabeele -- Department of Chemistry	3		1	A:2	75
5	C004161 Field Sampling and Analysis Vrije Universiteit Brussel, Martine Leermakers	3		1	A:2	90
6	C004162 Cosmochemistry Vrije Universiteit Brussel, Steven Goderis -- Department of Chemistry	3		1	A:2	90
7	C004163 Metal Biogeochemical Cycle Vrije Universiteit Brussel, Yue Gao	3		1	A:2 ^a	90
8	C004164 Chemical Risk Assessment Vrije Universiteit Brussel, Marc Elskens	3		1	A:2	90
9	C004131 Organic Separation Techniques and Mass Spectrometry Frederic Lynen -- Department of Organic Chemistry	4		1	A:2	120
10	C004149 Light and Matter Pieter Geiregat -- Department of Chemistry	4		1	A:2	120
11	C004152 Structure Analysis by X-ray Diffraction Klaartje De Buysser -- Department of Chemistry	4		1	A:2	120
12	C004457 Atmospheric Chemistry and Global Change Crist Amelynck -- Department of Chemistry	3		1	(A:2) ^d	90

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 Catherine Cazin -- Department of Chemistry	6		1	A:J	150
2	C004166 Master Thesis, Research Plan Laszlo Vincze -- Department of Chemistry	9		1	A:2	270
3	C004167 Master Thesis, Research Project Filip Du Prez -- Department of Organic Chemistry	21		2	A:1	630
4	C004168 Industrial Internship Richard Hoogenboom -- Department of Organic Chemistry	30	a	2	A:2	900
5	C004191 Academic Internship Steven Nolan -- Department of Chemistry	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 Johan Verrue -- Department of Marketing, Innovation and Organisation	4		1	A:2	120
2	E076471 Dare to Start Frank Gielen -- Department of Information Technology	3		1	A:2	90
3	F000845 Business Administration [nl] Mirjam Knockaert -- Department of Marketing, Innovation and Organisation	4		1	A:2	120
4	F000551 Business Skills Mieke Audenaert -- Department of Marketing, Innovation and Organisation	4		1	C:2	120
5	C000833 Project Management [nl] Mario Vanhoucke -- Department of Business Informatics and Operations Management	4		1	A:2	120
6	F000855 Organization Theory Gosia Kozusznik -- Department of Marketing, Innovation and Organisation	4		1	A:2	120
7	F001010 Financial Markets and Institutions [nl] Rudi Vander Vennet -- Department of Economics	5		1	A:2	150
8	F000752 Environmental Economics and Policy [nl] Brent Bleys -- Department of Economics	4		1	B:2	120
9	F000859 Corporate Social Responsibility [nl] Saskia Crucke -- Department of Marketing, Innovation and Organisation	3		1	A:2	90
10	F000892 Innovation Management Katrien Verleye -- Department of Marketing, Innovation and Organisation	3		1	A:2	90
11	E039060 Sustainable Energy and Rational Use of Energy Jeroen Beeckman -- Department of Electronics and Information Systems	4		1	A:2	120
12	F000758 Economics [nl] Bruno Merlevede -- Department of Economics	5		2	A:1	150
13	E076431 Introduction to Entrepreneurship Petra Andries -- Department of Marketing, Innovation and Organisation	3		2	A:1	90
14	F000768 Marketing Management [nl] Maggie Geuens -- Department of Marketing, Innovation and Organisation	6		2	A:1	180
15	F001009 Business Cycles and Growth [nl] Freddy Heylen -- Department of Economics	5		2	A:1	150
16	F001008 Markets and Prices [nl] Dirk Van de gaer -- Department of Economics	5		2	A:1	150
17	E065460 Rational Use of Materials Tom Depover -- Department of Materials, Textiles and Chemical Engineering	5		2	A:1	150
18	C002275 Environmental Law [nl] Hendrik Schoukens -- Department of European, Public and International Law	5		2	A:1	125
19	I001571 Environmental Legislation Hendrik Schoukens -- Department of European, Public and International Law	3		2	A:1	75

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 Klaartje De Buysser -- Department of Chemistry	3		2	A:1	90
2	C004192 Green Chemistry	3		2		75
3	C004193 History of Chemistry [nl] Mieke Adriaens -- Department of Chemistry	3		2	(A:2) ^d	75
4	C004009 History and Philosophy of Sciences [nl] Maarten Van Dyck -- Department of Philosophy and Moral Sciences	3		2	A:1	90
5	C004194 Chemical Laboratory Skills [nl] Katrien Strubbe -- Department of Chemistry	4		2	A:J	115
6	C004089 International Course	3		2	A:J	90

2.4 Elective Courses UGent and other Universities

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, or (online) courses from [Erasmus+ partner universities](#).

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 2025-2026	f: annually, from 2026-2027	i: annually, from 2027-2028
b: tri-annually	d: bi-annually, from 2025-2026	g: bi-annually, from 2026-2027	j: bi-annually, from 2027-2028
	e: tri-annually, from 2025-2026	h: tri-annually, from 2026-2027	k: tri-annually, from 2027-2028