

Master of Science in Chemistry -- Materials and Nano 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	C004140 Nanomaterials Chemistry Pascal Van Der Voort -- Department of Chemistry Indicative price: € 100	6		1	A:1	180
2	C004141 Materials Physics Zeger Hens -- Department of Chemistry Indicative price: € 0	6		1	A:1	180
3	C004142 Surface Topology, Internal Structure and Composition Mieke Adriaens -- Department of Chemistry Indicative price: € 0	6		1	A:1	180
4	C004128 Molecular Physical Chemistry Zeger Hens -- Department of Chemistry Indicative price: € 15	6		1	A:1	180
5	C004143 Integrated Problems in Materials and Nanochemistry Iwan Moreels -- Department of Chemistry Indicative price: € 0	6		1	A:1	180

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	C004144 Topics in Nanoscience Pieter Geiregat -- Department of Chemistry Indicative price: € 0	4		1	A:2	120
2	C004145 Functional Ceramics Klaartje De Buysser -- Department of Chemistry Indicative price: € 7	4		1	A:2	110
3	C004146 The f-Elements Rik Van Deun -- Department of Chemistry Indicative price: € 10	4		1		100
4	C004139 Polymer Materials: Biomedical and Sustainable Aspects Peter Dubrueel -- Department of Organic Chemistry Indicative price: € 0	4		1	A:2	100
5	C004147 Advanced Quantum Chemistry Patrick Bultinck -- Department of Chemistry Indicative price: € 0	4		1	A:2	115
6	C004148 Computational Quantum Chemistry Patrick Bultinck -- Department of Chemistry Indicative price: € 0	8		1	A:2	210
7	C004149 Light and Matter Pieter Geiregat -- Department of Chemistry Indicative price: € 15	4		1	A:2	120

8	C004150	Bioinorganic Chemistry Kristof Van Hecke -- Department of Chemistry Indicative price: € 0	4	1	A:2	120
9	C004151	Heterogeneous Catalysis Pascal Van Der Voort -- Department of Chemistry Indicative price: € 100	4	1	A:2	120
10	C004152	Structure Analysis by X-ray Diffraction Klaartje De Buysser -- Department of Chemistry Indicative price: € 0	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 Catherine Cazin -- Department of Chemistry Indicative price: € 0	6		1	A:J	150
2	C004166 Master Thesis, Research Plan Laszlo Vincze -- Department of Chemistry Indicative price: unknown	9		1	A:2	270
3	C004167 Master Thesis, Research Project Filip Du Prez -- Department of Organic Chemistry Indicative price: unknown	21		2	A:1	630
4	C004168 Industrial Internship Richard Hoogenboom -- Department of Organic Chemistry Indicative price: unknown	30	a	2	A:2	900
5	C004191 Academic Internship Steven Nolan -- Department of Chemistry Indicative price: unknown	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 Indicative price: unknown	4		1	A:2	120
2	E076471 Dare to Start Frank Gielen -- Department of Information Technology Indicative price: unknown	3		1	A:2	90
3	F000845 Business Administration [nl] Mirjam Knockaert -- Department of Marketing, Innovation and Organisation Indicative price: € 35	4		1	A:2	120
4	F000551 Business Skills Mieke Audenaert -- Department of Marketing, Innovation and Organisation Indicative price: € 46	4		1	C:2	120
5	C000833 Project Management [nl] Mario Vanhoucke -- Department of Business Informatics and Operations Management Indicative price: € 75	4		1	A:2	120
6	F000855 Organization Theory Gosia Kozusznik -- Department of Marketing, Innovation and Organisation Indicative price: € 46	4		1	A:2	120
7	F001010 Financial Markets and Institutions [nl] Rudi Vander Vennet -- Department of Economics Indicative price: € 0	5		1	A:2	150
8	F000752 Environmental Economics and Policy [nl] Brent Bleys -- Department of Economics Indicative price: € 55	4		1	B:2	120

9	F000859	Corporate Social Responsibility [nl] Saskia Crucke -- Department of Marketing, Innovation and Organisation Indicative price: € 0	3	1	A:2	90
10	F000892	Innovation Management Katrien Verleye -- Department of Marketing, Innovation and Organisation Indicative price: € 55	3	1	A:2	90
11	E039060	Sustainable Energy and Rational Use of Energy Jeroen Beeckman -- Department of Electronics and Information Systems Indicative price: € 7	4	1	A:2	120
12	F000758	Economics [nl] Bruno Merlevede -- Department of Economics Indicative price: € 50	5	2	A:1	150
13	E076431	Introduction to Entrepreneurship Petra Andries -- Department of Marketing, Innovation and Organisation Indicative price: € 33	3	2	A:1	90
14	F000768	Marketing Management [nl] Maggie Geuens -- Department of Marketing, Innovation and Organisation Indicative price: € 40	6	2	A:1	180
15	F001009	Business Cycles and Growth [nl] Freddy Heylen -- Department of Economics Indicative price: € 65	5	2	A:1	150
16	F001008	Markets and Prices [nl] Dirk Van de gaer -- Department of Economics Indicative price: € 50	5	2	A:1	150
17	E065460	Rational Use of Materials Tom Depover -- Department of Materials, Textiles and Chemical Engineering Indicative price: unknown	5	2	A:1	150
18	C002275	Environmental Law [nl] Hendrik Schoukens -- Department of European, Public and International Law Indicative price: € 0	5	2	A:1	125
19	I001571	Environmental Legislation Hendrik Schoukens -- Department of European, Public and International Law Indicative price: unknown	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 Indicative price: unknown	3		2	A:1	90
2	C004192 Green Chemistry Indicative price: € 0	3		2		75
3	C004193 History of Chemistry [nl] Mieke Adriaens -- Department of Chemistry Indicative price: € 0	3		2	(A:2) ^d	75
4	C004009 History and Philosophy of Sciences [nl] Maarten Van Dyck -- Department of Philosophy and Moral Sciences Indicative price: € 0	3		2	A:1	90
5	C004194 Chemical Laboratory Skills [nl] Katrien Strubbe -- Department of Chemistry Indicative price: unknown	4		2	A:J	115
6	C004089 International Course Indicative price: unknown	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 \[Erasmus+ partner universities\]\(#\).](#)

Programme related study costs

Type: Laptop

Name: laptop
Indicative price: € 750
Optional: No
Fulltime standard learning track year: 1
Available through Student Association : No
Usability and Lifetime within the Course Unit : intensive
Usability and Lifetime within the Study Programme : intensive
Usability and Lifetime after the Study Programme : regularly

Type: Lab Material

Name: labcoat + safety goggles
Indicative price: € 55
Optional: No
Fulltime standard learning track year: 1
Available through Student Association : No
Usability and Lifetime within the Course Unit : intensive
Usability and Lifetime within the Study Programme : intensive
Usability and Lifetime after the Study Programme : intensive

Type: Excursion

Name: travel cost to VUB
Indicative price: € 120
Optional: No
Fulltime standard learning track year: 1
Additional information: Because this program is an alliance with the VUB, travel costs to the VUB need to be taken in consideration

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

Learning materials

The prices stated are indicative and subject to fluctuations.
The list of learning materials per course unit can be found in the course sheets.