

## 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 <i>Pascal Van Der Voort -- Department of Chemistry</i> <a href="#">Indicative price: € 100</a>	6		1	A:1	180
2	C004141 Materials Physics <i>Zeger Hens -- Department of Chemistry</i> <a href="#">Indicative price: € 0</a>	6		1	A:1	180
3	C004142 Surface Topology, Internal Structure and Composition <i>Mieke Adriaens -- Department of Chemistry</i> <a href="#">Indicative price: € 0</a>	6		1	A:1	180
4	C004128 Molecular Physical Chemistry <i>Zeger Hens -- Department of Chemistry</i> <a href="#">Indicative price: € 15</a>	6		1	A:1	180
5	C004143 Integrated Problems in Materials and Nanochemistry <i>Iwan Moreels -- Department of Chemistry</i> <a href="#">Indicative price: € 0</a>	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 <i>Pieter Geiregat -- Department of Chemistry</i> <a href="#">Indicative price: € 0</a>	4		1	A:2	120
2	C004145 Functional Ceramics <i>Klaartje De Buysser -- Department of Chemistry</i> <a href="#">Indicative price: € 7</a>	4		1	A:2	110
3	C004146 The f-Elements <i>Rik Van Deun -- Department of Chemistry</i> <a href="#">Indicative price: € 10</a>	4		1		100
4	C004139 Polymer Materials: Biomedical and Sustainable Aspects <i>Peter Dubruel -- Department of Organic Chemistry</i> <a href="#">Indicative price: € 0</a>	4		1	A:2	100
5	C004147 Advanced Quantum Chemistry <i>Patrick Bultinck -- Department of Chemistry</i> <a href="#">Indicative price: € 0</a>	4		1	A:2	115
6	C004148 Computational Quantum Chemistry <i>Patrick Bultinck -- Department of Chemistry</i> <a href="#">Indicative price: € 0</a>	8		1	A:2	210
7	C004149 Light and Matter <i>Pieter Geiregat -- Department of Chemistry</i> <a href="#">Indicative price: € 15</a>	4		1	A:2	120

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

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