

# MASTER IN CHEMISTRY

MAJORS: MOLECULAR AND MACROMOLECULAR DESIGN • MATERIALS CHEMISTRY • ANALYSIS AND CHARACTERISATION • ENVIRONMENTAL CHEMISTRY (VUB)

MINORS: RESEARCH AND DEVELOPMENT • EDUCATION • INDUSTRY AND MANAGEMENT

120 ECTS CREDITS – LANGUAGE: ENGLISH – DEGREE: MASTER OF SCIENCE

This course is offered jointly by Ghent University (UGent) and the Vrije Universiteit Brussel (VUB). Their expertise is combined and the students have a more elaborate choice of majors, elective courses, thesis subjects, etc. An equivalent programme taught in Dutch is available at the Vrije Universiteit Brussel.

## COURSE CONTENT

We owe a great part of our quality of life to the development of sciences, chemistry in particular. Its influence can be found in numerous different branches, such as medicine, biology, agriculture, etc. The chemical impact is also omnipresent in the industrial world. Almost every branch has to do with chemistry at some level: in the production process, in quality control, in product improvement, waste processing ...

It can be assumed that chemistry will continue to play an essential role in future developments of society. Indeed, innovation and the development of new products and processes with an added value are simply impossible without a fundamental knowledge of sciences, the structure of molecules and insight into molecular processes and reactions.

## COURSE STRUCTURE

The two-year master's programme (120 credits) consists of four modules, of 30 credits each. Each module comprises

- general courses (incl. elective courses),
- a major,
- a master's dissertation,
- a minor.

The general courses (incl. elective courses) are, on the one hand, general chemistry courses on an advanced level or, on the other hand, general courses that are considered as essential for a master in chemistry.

There are four different majors to be chosen from: Molecular and Macromolecular Design, Materials Chemistry, Analysis and Characterisation, Environmental Chemistry (VUB). Each major is related with a specific subbranch of chemistry.

In the second year, a research project (master's dissertation) is scheduled. The topic of the master's dissertation is in accordance with the chosen major. The master's dissertation is an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promotor or supervisor. The master's dissertation consists of a literature review part, practical research and an original analysis of the topic. Students have the possibility to do a part of their master's dissertation abroad.

The minor is a reflection of a specific career branch (Research and Development, Education, Industry and Management). The minor you choose has no impact on the final degree. Regardless of the minor, an equivalent master degree is obtained. The minor in research and development is particularly interesting for English speaking students.

## CAREER PERSPECTIVES

It is a fact that chemistry is involved in several industrial branches, important for the economy and employment, such as chemical industry, pharmaceutical industry, agriculture ... Thanks to the broadness of the scientific programme, master graduates in chemistry are fit to apply for jobs in different sectors of industry and their possibilities on the job market are very diverse. Masters in chemistry can for instance be involved in scientific research, product development, quality control ... or they can take on managerial functions, and this in companies as well as in government institutions. Besides that, they are also well prepared for a career in the public sector (including education). The most important assets of university graduated chemists are that they are research minded, have good problem solving capacities and that they are polyvalent.

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## TOELATINGSVOORWAARDEN VOOR HOUDERS VAN EEN VLAAMS DIPLOMA

### Rechtstreeks:

- Ba chemie

*Onderstaande diploma's komen in aanmerking voor het aanvragen van vrijstellingen binnen de opleiding Bachelor in de chemie, die rechtstreeks toegang verleent tot de masteropleiding. Neem hiervoor contact op met de trajectbegeleider.*

### Via verkorte bachelor (na aanvraag):

- (professionele) Ba chemie
- Ba biochemie en biotechnologie
- Ba bio-ingenieurswetenschappen
- Ba biomedische wetenschappen
- Ba diergeneeskunde
- Ba farmaceutische wetenschappen
- Ba ingenieurswetenschappen: chemische technologie en materiaalkunde
- Ba industriële wetenschappen: biochemie
- Ba industriële wetenschappen: chemie
- Ba industriële wetenschappen: milieukunde

### TAAL

Je voldoet aan de taalvoorwaarden op basis van je Vlaams diploma.

## ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

The course is open to students with at least a bachelor's degree in the field of chemistry with minimum 180 credits.

### LANGUAGE

More information regarding the required knowledge of English:  
[www.ugent.be/specificlanguag](http://www.ugent.be/specificlanguag)

## PRAKTISCHE INFORMATIE

### Studieprogramma:

<https://studiegids.ugent.be>

> faculteiten > opleidingstypes > ga naar de opleiding van je keuze

### Infomomenten

#### Masterbeurs

[www.ugent.be/masterbeurs](http://www.ugent.be/masterbeurs)

## PRACTICAL INFORMATION

### Study programme:

[www.ugent.be/coursecatalogue](http://www.ugent.be/coursecatalogue)

> by Faculty > Programme types > select your programme

### Application deadline for international degree students

- for students who need a visa: 1st of March
- for students who do not need a visa: 1st of June

[www.ugent.be/deadline](http://www.ugent.be/deadline)

### Enrolling institution

Ghent University

### Tuition fee

More information is to be found on:

[www.ugent.be/tuitionfee](http://www.ugent.be/tuitionfee)

### Trajectbegeleiding

Beata De Vliegheer

T 09 264 50 53 - [beata.devliegheer@ugent.be](mailto:beata.devliegheer@ugent.be)

### Meer info

Afdeling Studieadvies – Campus Ufo, Ufo,  
Sint-Pietersnieuwstraat 33, 9000 Gent, T 09 331 00 31  
[studieadvies@ugent.be](mailto:studieadvies@ugent.be) – [www.ugent.be/studieadvies](http://www.ugent.be/studieadvies)

### Contact

Ghent University – Faculty of Sciences

Student Administration Office

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