

SCIENCES, TECHNOLOGIES AND HEALTH Organic synthesis 2nd year

Master in Chemistry

Target level

+5

Baccalaureate

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ECTS 60 credits



Duration 1 year



Component UFR Chimie-Biologie



Presentation

Students are gradually educated in organic synthesis of molecules, from the first year of the master's degree, learning the fundamental principles of organic chemistry, to the second year of the master's degree in Organic synthesis, during which students will learn retrosynthesis of complex molecules, the latest methodological developments in asymmetric organic synthesis, as well as the real implementation of syntheses, analysis, identification and characterization of the obtained products.

This program of the master's degree in synthetic Chemistry aims at training research and development executives for laboratories and industries involved in fine chemicals (for example flavourings and fragrances) and the pharmaceutical and agrochemical industries.

This 2nd year's program aims at educating in synthetic chemistry, by putting emphasis both on the experimental aspect of this scientific field (a lot of experimental training and internship in academic or industrial laboratories) and on theoretical aspects with teaching based on the most up-todate methods and concepts, coming from research in this field.

International education Internationally-oriented programmes

International dimension

Internationally oriented courses - Internationally oriented classes both through the teaching in English and the fact that internships can be carried out abroad (Switzerland, Belgium, Spain, Canada and the USA). Students taking this 2nd year's program will attend courses all taught in English (30 ECTS)

Admission

Access conditions

Second year master's degree : To be eligible to apply you should have completed, or be enrolled in a first year of a master program in Science, and totalize 60 ETCS

Public continuing education : You are in charge of continuing education :

- if you resume your studies after 2 years of interruption of studies
- or if you followed training under the continuous training regime one of the previous 2 years
- or if you are an employee, job seeker, self-employed

If you do not have the diploma required to integrate the training, you can undertake a 🗹 validation of personal and professional achievements (VAPP)

Candidature / Application





Opening period : from 4th of march to 27th of march 2024 included with e-candidat

You want to apply and sign up for a course master ? Please be aware that the procedure differs depending on the diploma you want to take, the diploma you have already obtained and, for foreign students, your place of residence. Let us be your guide – simply follow this **Z** link

Fees

UGA Registration fees: 243€ + 100€ CVEC

And after

Further studies

Generally, students who want to (in particular those who have chosen the research option of the Organic synthesis program) can continue their studies with PhD study in order to become doctors in organic chemistry. Students who do not want to do a PhD (professional option of the Organic synthesis program) can either directly work or can apply for an additional master's degree, often in a school of management or business administration.

Sector(s)

- Fine chemicals (flavourings, fragrant active principles for cosmetics) and pure compound synthesis
- Pharmaceutical industries
- · Agrochemical industries
- · Research and teaching

The 2nd year's master in Organic Synthesis leads to the following careers : Graduates can apply for jobs such as **technical manager** or **research and development manager** in the public sphere (research bodies, universities) or in private companies. Following a doctoral degree, students can become researchers (in public bodies or private companies) or research professors.

- Following the 2nd year's master : design engineer, process engineer (R&D, monitoring / optimisation of processes), chemist / advanced research technician, careers in scientific leadership, communications and education
- Following a doctoral degree : researcher (bodies such as CNRS, INSERM, etc), research professor (universities and higher education establishments), chemical engineer or researcher (private companies) in research and development
- Other potential careers (after additional training) : purchasing manager, quality manager, HSE manager, specialist in regulatory affairs, specialist in intellectual property, product manager, documentalist, product flow manager, technical sales representative, physics/ chemistry professor or school teacher

Useful info

Contacts

Program director

Sebastien Carret
Sebastien.Carret@univ-grenoble-alpes.fr

Administrative contact

Scolarité Master Chimie

Continuing education manager

Muriel Lascar • 04 76 01 26 28 • fc-chimiebio@univ-grenoble-alpes.fr

Course location(s) - City

Grenoble





Campus

😭 Grenoble - University campus



Program

Master 2nd year

Semester 9 P

	Nature	CM	TD	TP	Crédits
UE Asymmetric synthesis	Teaching Unit (UE)	36h	4,5h		6 credits
UE Synthetic strategies	Teaching Unit (UE)	36h	4,5h		6 credits
UE Heterocyclic chemistry	Teaching Unit (UE)	27h	3h		3 credits
UE Développement chimique	Teaching Unit (UE)	18h	15h		3 credits
UE Green chemistry	Teaching Unit (UE)	36h	4,5h		3 credits
UE Chimie médicinale et Médicaments	Teaching Unit (UE)	22,5h	4,5h		3 credits
UE Entrepreneurship and Sciences	Teaching Unit (UE)	36h			3 credits
UE Molecular modelling	Teaching Unit (UE)	12h		9h	3 credits
UE Outils pour l'ingénieur	Teaching Unit (UE)	38h			3 credits
UE Entrepreneurship and Sciences	Teaching Unit (UE)	14h	10h		3 credits

Semester 9 R

	Nature	СМ	TD	TP	Crédits
UE Asymmetric synthesis	Teaching Unit (UE)	36h	4,5h		6 credits
UE Synthetic strategies	Teaching Unit (UE)	36h	4,5h		6 credits
UE Heterocyclic chemistry	Teaching Unit (UE)	27h	3h		3 credits





UE Green chemistry	Teaching Unit (UE)	36h	4,5h		3 credits
UE Molecular modelling	Teaching Unit (UE)	12h		9h	3 credits
UE Chimie médicinale et Médicaments	Teaching Unit (UE)	22,5h	4,5h		3 credits
UE Développement chimique	Teaching Unit (UE)	18h	15h		3 credits
UE Bio-targeted chemistry 1	Teaching Unit (UE)	20h			3 credits
UE Outils pour l'ingénieur	Teaching Unit (UE)	38h			3 credits
UE Entrepreneurship and Sciences	Teaching Unit (UE)	14h	10h		3 credits

Semester 10 P

Nature	СМ	TD	TP	Crédits
Teaching				27 credits
		24h		2 crodite
Unit (UE)		2411		5 crears
Teaching Unit (UE)				3 credits
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Semester 10 R

	Nature	СМ	TD	TP	Crédits
UE Internship	Teaching Unit (UE)				27 credits
UE English	Teaching Unit (UE)		24h		3 credits
UE ETC	Teaching Unit (UE)				3 credits
UE Internship	Teaching Unit (UE)				24 credits
UE Ecole d'été - Graduate school EUR CBS	Teaching Unit (UE)				3 credits







