

# Organic synthesis 2nd year

Master in Chemistry



**Duration**  
1 year



**Component**  
UFR Chimie-  
Biologie



**Language(s) of  
instruction**  
English

## 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-to-date 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

Would you like to apply and register ? Be aware that the procedure differs depending on the diploma, the degree obtained, or the place of residence for foreign students. Let us guide you simply by following this [link](#)

- 2 application campaigns are organized for the master 2nd year Organic synthesis :
- Campaign 1 : Open campaign on e-candidate from March 30 to April 17 2020 included
- Campaign 2 : Open campaign on e-candidate from April 27 to May 15, 2020 included

## Fees

- Tution fees : 243 €
- CVEC fees : 91 €

## 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.

### Professional integration statistics

According to the 2014-2015 survey, 6 responding graduates are on the labour market (in employment and job seekers). Among them, 83% are in employment 30 months after their degree.

### 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, documentalst, 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](mailto:Sebastien.Carret@univ-grenoble-alpes.fr)

#### Administrative contact

Chemistry-Biology Course Services

✉ [ufrchimiebiologie-formation@univ-grenoble-alpes.fr](mailto:ufrchimiebiologie-formation@univ-grenoble-alpes.fr)

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## Course location(s) - City

 Grenoble

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## Campus

 Grenoble - University campus

# Program

## Master 2nd year

### Semester 9

	Nature	CM	TD	TP	Crédits
UE Asymmetric synthesis	Teaching Unit (UE)				
UE Retrosynthetic strategies	Teaching Unit (UE)				
UE Green chemistry	Teaching Unit (UE)				
UE Heterocyclic chemistry	Teaching Unit (UE)				
UE Molecular modelling	Teaching Unit (UE)	30h			3 credits
UE Main classes of drugs	Teaching Unit (UE)	30h			3 credits
UE Chemical development, industrial processes	Teaching Unit (UE)	40h			3 credits
UE Tools for business	Teaching Unit (UE)				3 credits
UE Supervised practical work	Teaching Unit (UE)			80h	6 credits

### Semester 10

	Nature	CM	TD	TP	Crédits
UE Tools for engineers	Teaching Unit (UE)	18h	21h		3 credits
UE Internship	Teaching Unit (UE)				
UE Languages	Teaching Unit (UE)				