

SCIENCES, TECHNOLOGIES AND HEALTH

Chemistry for life sciences 2nd year

Master in Chemistry



Target level
Baccalaureate
+5



ECTS
60 credits



Duration
1 year



Component
UFR Chimie-
Biologie



Language(s) of instruction
English

Presentation

This program provides students with the skills and knowledge of research issues in the chemistry for life sciences field, in order to be able to successfully carry out research projects at this interface (by continuing in doctoral education).

In the 2nd year in Chemistry for life sciences, classes will focus on chemistry at the interface with biology and its applications, with, in particular, courses on bioorganic and bioinorganic chemistry. The teaching units in bioorganic chemistry focuses on the synthesis, engineering and modification of biomolecules (proteins, nucleic acids and sugars) in order to obtain bioactive molecules as research tools for biology. As for the UE in Bioinorganic chemistry, its aim is to understand the role of metals in living systems in order to best imitate the way in which they work and anticipate how they interact with biomolecules. A course of biology specific to the 2nd year's CLS program raises students' awareness about the different innovative biological targets which have significant therapeutic and diagnostic interest. This cross-disciplinary specialisation will broaden the students scientific culture at the chemistry-biology interface and enable a better understanding of the biological mechanisms and pathways that can be targeted. In parallel, students must also take a course of either biology or chemistry, within those proposed among the other programs of the chemistry or biology degree, to personalize their own formation.

International education : Internationally-oriented programmes

International dimension

Students have the possibility to follow courses all taught in English in S9 (30 ECTS) as well as in the master 1st year (60 ECTS).

Organisation

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 ECTS

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 [link](#)

Fees

UGA registration fees : 243€ + 100€ CVEC

And after

Further studies

After the 2nd year in Chemistry for life sciences :

- Continue with a Ph D
- Additional training in management, sales or quality

Sector(s)

The 2nd year's master in Chemistry for life sciences leads to the following careers :

- Design engineer, laboratory manager (upon completion of the master's degree)
- Higher education research professor
- Researcher in academic or industrial laboratories (following a doctoral degree)

Useful info

Contacts

Program director

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Administrative contact

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Course location(s) - City

📍 Grenoble

Campus

🏠 Grenoble - University campus

Program

Master 2nd year

Semester 9 P

	Nature	CM	TD	TP	Crédits
UE Bio-targeted chemistry 1	Teaching Unit (UE)	20h			3 credits
UE Bionorganic chemistry	Teaching Unit (UE)	26h	14h		6 credits
UE Topics in biological chemistry	Teaching Unit (UE)	15h	5h		3 credits
UE Bio-targeted chemistry 2	Teaching Unit (UE)	20h			3 credits
UE Green chemistry	Teaching Unit (UE)	36h	4,5h		3 credits
UE Outils pour l'ingénieur	Teaching Unit (UE)	38h			3 credits
UE Entrepreneurship and Sciences	Teaching Unit (UE)	36h			3 credits
UE Heterocyclic chemistry	Teaching Unit (UE)	27h	3h		3 credits
UE Développement chimique	Teaching Unit (UE)	18h	15h		3 credits
UE Chimie médicinale et Médicaments	Teaching Unit (UE)	22,5h	4,5h		3 credits
UE Entrepreneurship and Sciences	Teaching Unit (UE)	14h	10h		3 credits

Semester 9 R

	Nature	CM	TD	TP	Crédits
UE Bio-targeted chemistry 1	Teaching Unit (UE)	20h			3 credits
UE Bionorganic chemistry	Teaching Unit (UE)	26h	14h		6 credits

UE Topics in biological chemistry	Teaching Unit (UE)	15h	5h		3 credits
UE Bio-targeted chemistry 2	Teaching Unit (UE)	20h			3 credits
UE Bibliography project	Teaching Unit (UE)		15h		3 credits
UE High throughput biology	Teaching Unit (UE)	30h	10h		6 credits
UE Structure determination of biological macromolecules	Teaching Unit (UE)	19h	12h	10h	6 credits
UE Heterocyclic chemistry	Teaching Unit (UE)	27h	3h		3 credits
UE Molecular modelling	Teaching Unit (UE)	12h		9h	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 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	CM	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

Semester 10 R

	Nature	CM	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 Stage	Teaching Unit (UE)		27 credits