SCIENCES, TECHNOLOGIES AND HEALTH

Polymers for advanced technologies 2nd year

Master in Chemistry

Duration
1 year

Component
UFR Chimie-Biologie

Language(s) of instruction
English

Presentation

The course is devoted to functional polymers used in biomedical applications and fields linked to renewable energies, environment and sustainable development. This master program involves training in and through research in polymers and gives students possibility to work within a company through additional professional training.

Professionally speaking, the jobs available to students after the master programs lie in research and development laboratories of polymer producers (chemical industry) and in industries using polymers such as microelectronics, optoelectronics, fuel cells and batteries, biomedicine, cosmetics, energy storage and conversion and coatings.

The first year of the master in Chemistry leads to four master 2nd year's program : ChemTechCo, CLS, PTA and SOIPA. The different first semester courses offer a scientific knowledge in chemistry and its interfaces with life sciences and polymeric materials. During the course, the students will acquire the disciplinary skills vital for any type of chemist (in particular analytical methods, spectroscopy, experimental and bibliographic techniques, amongst others). By choosing the polymers courses, students inclined towards the functional polymers 2nd year program will also acquire knowledge in the synthesis of polymers with controlled architecture, and in the conformational and configurational analysis of polymers. These classes are supplemented by cross-disciplinary classes focused on languages and graduate employment and by a mandatory internship (from 2 to 5 months) which enables students to get to grips with working in a team, in an academic or industrial setting, in France or abroad.

This program's aims at giving students the necessary knowledge in polymer science, and at teaching them the novel methods of synthesis, design and characterization of polymer materials with specific properties.

International education : Internationally-oriented programmes

International dimension

Internationally oriented courses - Students can follow the master with course entirely taught in English, in master 1st and 2nd years.

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

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 yourself be guided by following this link

- 2 application campaigns are organized for the 2nd year's PTA
- 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

The proposed studies are of two types. Students who do not wish to do doctoral dissertations enter either directly into the labor market or follow a second master's degree in order to acquire transversal skills, often in a business school. Students from the training who wish to continue their studies with a thesis find thesis funding.

Professional integration statistics

162/5000 In the 2014-2015 survey, 5 graduates are in the labor market (job + research). Of these, 80% are employed 30 months after graduation.

Sector(s)

Professions targeted :
> The graduate of can aspire to jobs of technical frame or frame of research and development in the public domain (research laboratories) or private (companies producing or using polymers) :

- Manufacturing and production
- Basic or applied research, laboratory or field experimentation
- Development of techniques, installation, maintenance and sale of equipment
- Monitoring and quality control
- Analyzes
- Transmission of knowledge, dissemination of knowledge, scientific communication and animation, teaching.

Useful info

Contacts

Program director

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Administrative contact

Chemistry-Biology Course Services
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Course location(s) - City

Grenoble

Campus

Grenoble - University campus

Program

Master 2nd year

Semester 9

	Nature	CM	TD	TP	Crédits
UE Polymers for renewable energy sources and for flexible electronics	Teaching Unit (UE)	40h	8h		6 credits
UE Biomaterials and biobased polymers	Teaching Unit (UE)	40h	8h		6 credits
UE Nanostructured materials	Teaching Unit (UE)	20h	4h		3 credits
UE Degradation and sustainability	Teaching Unit (UE)	20h	4h		3 credits
UE Analysis, formulation and coatings	Teaching Unit (UE)	22h	2h	16h	3 credits
UE Tools for investigating polymers	Teaching Unit (UE)	20h	4h		3 credits
UE Tools for business	Teaching Unit (UE)				3 credits
UE Literature project	Teaching Unit (UE)				3 credits
UE Molecular modelling	Teaching Unit (UE)	30h			3 credits
UE Green chemistry	Teaching Unit (UE)				

Semester 10

	Nature	CM	TD	TP	Crédits
UE Tools for engineers	Teaching Unit (UE)	18h	21h		3 credits
UE Internship	Teaching Unit (UE)				24 credits
UE Languages	Teaching Unit (UE)				