

Parcours Polymers for advanced technologies 2e année

Présentation



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 1st year's master in Chemistry leads to four master 2nd year programs : 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's 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.

Admission

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.

Continuous education : Students fall under the continuous education scheme if they :

- go back to studies after an interruption of two years or more
- did follow a continuous education program during one of the two previous years
- are employees, independent entrepreneurs or registered as job seekers

In case you do not have the required diploma, you might initiate the accreditation of [personal and professional experience \(VAPP\)](#).

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 PTA master 2nd year
- Campaign 1 : Open campaign on e-candidate from 28 March to 15 April 2022
- Campaign 2 : Open campaign on e-candidate from 25 April to 13 May 2022

Poursuites d'études

Les poursuites d'études envisagées sont de deux types. Les étudiants qui ne souhaitent pas faire de thèse de doctorat entrent soit directement sur le marché du travail, soit suivent un deuxième master pour acquérir des compétences transverses, souvent dans une école de commerce. Les étudiants issus de la formation qui souhaitent poursuivre leurs études par une thèse trouvent un financement de thèse.

Infos pratiques :

- > Composante : UFR Chimie-Biologie
- > Niveau : Bac +5
- > Durée : 1 an
- > Type de formation : Formation initiale / continue
- > Lieu : Grenoble - Domaine universitaire

Contacts

Responsable pédagogique

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Programme

Master 2e année

Semestre 9 P

UE Polymers for flexible electronics	3 ECTS
UE Nanostructured materials	3 ECTS
UE Degradation and sustainability	3 ECTS
UE Analysis, formulation and coatings	3 ECTS
UE Tools for investigating polymers	3 ECTS
UE Polymers for renewable energy sources	3 ECTS

UE Biomaterials	3 ECTS
UE Biobased polymers	3 ECTS
UE Outils de l'entreprise	3 ECTS
UE Outils pour l'ingénieur	3 ECTS

Semestre 9 R

UE Polymers for flexible electronics	3 ECTS
UE Nanostructured materials	3 ECTS

UE Analysis, formulation and coatings	3 ECTS
UE Tools for investigating polymers	3 ECTS
UE Polymers for renewable energy sources	3 ECTS
UE Biobased polymers	3 ECTS
UE Bibliography project	3 ECTS
UE Biomaterials	3 ECTS
1 option(s) au choix parmi 2	
UE Outils pour l'ingénieur	3 ECTS
UE Entrepreneurship and Sciences	3 ECTS
1 option(s) au choix parmi 3	
UE Green chemistry	3 ECTS
UE Molecular modelling	3 ECTS
UE Degradation and sustainability	3 ECTS

Semestre 10 P

UE Internship	27 ECTS
1 option(s) au choix parmi 2	
UE Communication in scientific english (part II)	3 ECTS
UE ETC	3 ECTS

Semestre 10 R

UE Internship	27 ECTS
UE Stage	24 ECTS
UE Ecole d'été - graduate school	3 ECTS
1 option(s) au choix parmi 2	
UE Communication in scientific english (part II)	3 ECTS
UE ETC	3 ECTS