Master in Chemistry & Processing

Speciality

Polymers for Advanced Technologies (PTA) – R & P

A 2-Year Postgraduate degree at the European Master level

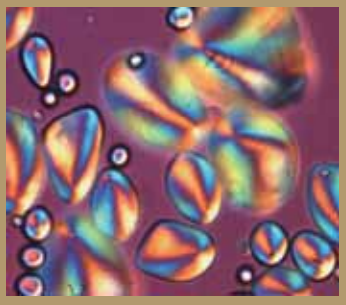
This Master is oriented towards innovation, with specialisations giving openings towards dynamic sectors of activity and high technology:

- materials for flexible electronics
- polymers for medical and pharmaceutical applications
- polymers for storage media and energy conversion (fuel cells, solar power,..)
- nanomaterials

This Master offers vocational specialisation by Research or Profession and is based on the competences of local and regional research laboratories of international repute. It is co-habilitated with the University of Savoie.

Target competences :

- A sound basis in advanced methods of macromolecular synthesis
- A knowledge of the various methods for characterizing polymer materials
- A good grounding in structure/property relationships
- An understanding of the different classes of functional polymers for the energy, biomedical, and micro- & nanotechnology sectors.



Career openings :

This speciality is designed to prepare you for careers either in the private or public sectors. In the private sector the Professionnel option allows you to enter directly after graduation into such sectors as research & development, production, quality control, etc. in various companies which either supply or use polymers or polymer-based products.

The Research option is designed to prepare you for continuing your education to the doctorate level. After a Ph.D. thesis there is again the possibility of entering directly into the private sector in the R&D laboratories of polymer manufacturers or in the industries which use polymers, such as the cosmetic, biomedical, pharmaceutical, tyre, paint, surface coating, textile, microelectronics, energy, transport, building, nd sport & leisure sectors. In the public sector there is the possibility of becoming a researcher in various organisations in France (CNRS, INRA, CEA,…) or abroad or becoming a university lecturer.

ADMISSION CONDITIONS & CANDIDATURE

Master Year 1 (M1)

Admission into M1 is possible for all students having an undergraduate degree (180 ECTS) in a CHEMISTRY or PHYSICAL SCIENCES related subject.

Master Year 2 (M2)

Direct admission into M2 is possible for all students having validated 60 ECTS in the first year of a Master in Chemistry, Physical Chemistry, Physics, or related subjects and final-year Engineer School students wishing to strengthen their understanding of functional polymers.

The admission of students having obtained other types of degrees or degrees from foreign institutions is perfectly possible and will be examined on a case-by-case basis.

How to apply

Applications can be made on-line at the following web site http://www.ujf-grenoble.fr

»Accueil »Formation »Admission et inscription »Comment candidater ?

FURTHER INFORMATION AND INSCRIPTIONS

Rachel.auzely@cermav.cnrs.fr

http://www-chimie.ujf-grenoble.fr

Service Scolarité de l'UFR de Chimie

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4 semesters of courses adapted to your future career

- Semesters 1 & 2 (M1) are based around a common set of core modules and options of which two are specializing in polymers
- Semesters 3 & 4 (M2) offer a PROFESSIONAL specialization, in direct contact with the industrial sector of advanced technologies and aimed at an immediate insertion into a professional life, and a RESEARCH specialization, where the aim is to continue your education up to the doctorate level.

RESEARCH route (Year M2)

SEMESTER 3 (30 ECTS)

1 foundation UE :

Mini-project

6 speciality UEs :

Polymers for flexible electronics

Nanostructured materials

Biomaterials

Polymers for new energies

Tools for investigating polymers

Functional analysis, Formulation and Coatings

2 optional UEs chosen from :

Polymer degradation & durability

Rheometry, structure, & processing of polymers

Biobased polymers

SEMESTER 4 (30 ECTS)

Laboratory placement

1 UE: Transversal or language
(3 ECTS) followed in semester 3

PROFESSIONAL route (Year M2)

SEMESTRE 3 (30 ECTS)

1 foundation UE (Professionnal) :

Quality, project management, experiment planning…

6 speciality UEs :

Polymers for flexible electronics

Nanostructured materials

Biomaterials

Polymers for new energies

Tools for investigating polymers

Functional analysis, Formulation and Coatings

2 optional UEs chosen from :

Polymer degradation & durability

Rheometry, structure, & processing of polymers

Biobased polymers

SEMESTRE 4 (30 ECTS)

Industrial placement

1 UE: Transversal or language
(3 ECTS) followed in semester 3

A Master programme at the cutting edge of Research and Technology which will prepare you for working in the microelectronics, energy storage, cosmetics, food, parapharmacy, and biomédical sectors.

The 2nd Year of this Master is also part of franco-italian teaching programme. This programme allows the exchange of students and teachers with the Universities of Turin and Genoa, and the Politecnico of Turin.

A TRULY EXCEPTIONAL ENVIRONMENT

Research laboratories of reknown recognized by the national agencies (CNRS, INSERM, CEA…)
DCM, CERMAV, DPM, LMB, LCIB…

A network of industrial aboratories in France and abroad for « Professionnal » placements

International openings

Possibilities of laboratory or industrial placements abroad

Availability of specific facilities for practical work, projects & placements
Various characterization techniques, access to specialist research instruments, computer and project rooms,…

A lively and dynamic working environment
The campus at Gières-Saint Martin d'Hères-Grenoble and the region offer many possibilities for sporting and cultural activities.