

SCIENCES, TECHNOLOGIES, SANTÉ, INGÉNIERIE

Parcours Engineering of functional materials

Master Sciences et génie des matériaux



Niveau d'étude
visé
Bac +5



ECTS
120 crédits



Durée
2 ans

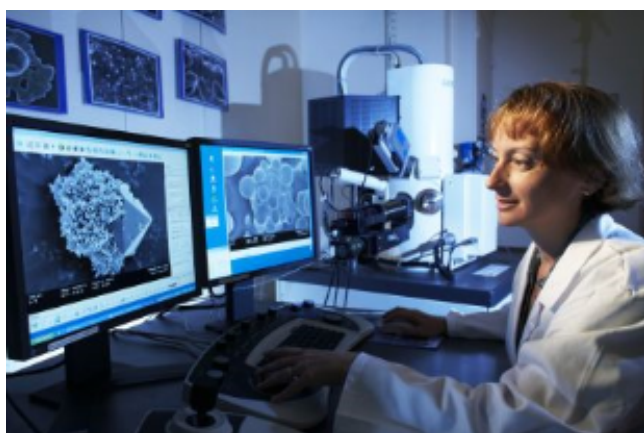


Composante
Grenoble
INP - Phelma
(Physique,
électronique
et matériaux),
UGA



Langue(s)
d'enseignement
Anglais

Présentation



This master program is offered within Grenoble Institute of Technology (Grenoble INP) Phelma. Additionally, it can be followed partly within the framework of international masters in partnership with other European universities. These master programs have dedicated admission procedures:

- Master FAME+ (Functional advanced materials engineering)
- Master AMIS (Advanced materials for innovation and sustainability)

This course, entirely in English, has a specific registration fee of 5 000 € / year.

This master program aims at educating researchers for industry and academia in all sectors of materials engineering (structural and functional materials). In the framework of the Engineering school Phelma of Grenoble Institute of Technology, it delivers a high-level curriculum on the fundamentals of materials science and on applied materials engineering. The two second-year programs offer specialization respectively in the area of microelectronics and microsystems, in relation with the very active industrial sector in this area in Grenoble, and in the area of materials for nuclear engineering, in relation with the largest French industrial actors.


The master diploma can lead to a career in industry or to continuation with a PhD. Many PhD opportunities are offered in the many labs of the Grenoble area.

Compétences

Elaboration of materials / Electrochemical and physicochemical characterization methods / Unit separation operations / Exchange of matter and heat / Experimental design / Simulation and modeling of electrochemical processes / Electrochemical and electrocatalytic kinetics / Electrochemistry of materials and materials for electrochemistry (semiconductor, metals, oxides....)

Formation internationale : Formation tournée vers l'international

Dimension internationale

This international course serves as a host structure for the FAME master (Functional advanced materials engineering), which is an  Erasmus Mundus-type master in partnership with other European institutions.

In this context, the course welcomes both 1st year FAME master students, who then go to one of the other establishments in the network for their 2nd year, and 2nd year master students, who completed their 1st year in Germany, as part of FAME. In addition, this course is open to Grenoble INP in the 1st and 2nd years under the same conditions as for students of the Erasmus Mundus master's degree, as well as in a double course for students of Grenoble INP Phelma.

Organisation

Admission

Conditions d'admission

Admission is possible after a curriculum in the fields of materials chemistry, physical chemistry, process engineering and electrochemistry. Admission is made at level master (after validation of a license 3) or at level master 2nd year (after validation of an master 1st year).

Candidature

See  Grenoble INP website

Et après

Poursuite d'études

- Doctorate in Electrochemistry
- Doctorate in Process engineering
- Doctorate in Materials science and engineering
- The master program can be followed by a PhD. The following doctoral school in Grenoble is particularly suited : doctoral school of engineering, materials, mechanics, energetics, environment, processing, production (IMEP2). Links exist with the International doctoral school IDS FunMat within the EMMI (European Multifunctional Materials Institute)

Secteur(s) d'activité(s)

- Materials elaboration
- Microelectronics and advanced materials

Métiers visés


- Academic research
- Research engineer in industry
- Technical counselling

Infos pratiques

Contacts

Responsable pédagogique

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Lieu(x) ville

 Grenoble

Campus

 Grenoble - Domaine universitaire

Programme

Spécificités du programme

Awaiting update