

Parcours Engineering of functional materials 2e année

Master Sciences et génie des matériaux



Durée
2 ans

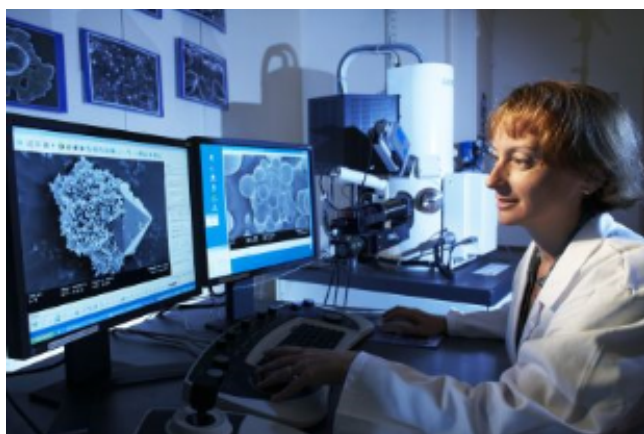


Composante
Grenoble
INP, Institut
d'ingénierie et
de management
- UGA



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 4000 € / 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

Ce parcours, à caractère international, sert de structure d'accueil au master FAME (Functional advanced materials engineering), qui est un master de type Erasmus Mundus en partenariat avec d'autres établissements européens (<http://www.emmi-materials.eu/-FAME-Master-Programme-.html>).

Dans ce cadre, le parcours accueille à la fois des étudiants du master FAME en 1^{re} année, qui partent ensuite dans un des autres établissements du réseau pour leur 2^e année, et des étudiants en master 2^e année, qui ont réalisé leur 1^{re} année en Allemagne dans le cadre de FAME. Par ailleurs, ce parcours est ouvert en propre à Grenoble INP en 1^{re} et 2^e années dans les mêmes conditions que pour les étudiants du master Erasmus Mundus, ainsi qu'en double cursus pour les étudiants de 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 : <http://www.grenoble-inp.fr/fr/formation/les-admissions>

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