Université de Lille

Advanced spectroscopy in chemistry

Master Chimie physique et analytique

Durée
2 ans

Composante
Faculté des sciences et technologies

Langue(s) d'enseignement
Anglais

Présentation

Created in 2007, the **Erasmus Mundus Joint Master's Course in Advanced Spectroscopy in Chemistry** - **ASC Master** - has been jointly designed and is operated by 5 European partner universities (Lille - coordinating institution; Alma Mater in Bologna, Jagiellonian in Krakow, Leipzig and Helsinki). The **ASC master** is a program of excellence which has been awarded the Erasmus Mundus label and funding twice since 2008.It is a two-year (4 semesters, 30 ECTS each) Master program including mobility periods within the ASC network. Each partner university of the ASC network offers state of the art equipment and expertise covering applications of spectroscopic techniques to chemistry in a broad sense (from material sciences, environmental sciences, biomedical/health sciences etc.). Mobility within this network prepares students to become experts and develop intercultural skills towards doctoral studies, and/or professional industrial careers in chemical analysis and characterization of the structure of materials in the fields of molecular synthesis, biology, nanotechnologies, modeling, pharmacy, green chemistry, materials, and sustainable energies.

Savoir-faire et compétences

TARGETED SKILLS

ASC graduates are experts in chemical analysis, structural characterization, characterization of fast reactions, In Situ spectroscopy, imaging, are well prepared for careers in industry or in public research institutes; Develop high skills in project management, intercultural communication, and are at least bilingual.

Les + de la formation

A guarantee of quality: the **ASC master** is an accredited master's degree in all 5 partner institutions. The ASC master is supported by the European Union (Erasmus Mundus Joint Master Degree) and has been awarded the Euromaster label by the ECTNA (European Chemistry Thematic Network Association). The ASC master has developed a network of global industrial partners, competitiveness clusters and research institutes. The ASC master provides skills not only towards doctoral studies, but also towards professional activities in industry. Mobility within a network of research laboratories spread amongst 5 countries from a large area of Europe;A high level equipment available in the ASC network is unique. A high-level supervision and training. Graduates are awarded a multiple degree from the partner institutions where they have spent at least one semester (30 ECTS credits. Erasmus Mundus student scholarships including a living allowance of 1 000 euros per month and covering participation, installation and travel costs.

Organisation

Organisation

The **ASC master** is a 2-year master's course (120 ECTS credits). Three semesters (30 credits each) of integrated

courses: the first semester provides all students with a common platform in advanced spectroscopic methods, including magnetic resonance, mass spectrometry, optical spectroscopy and diffraction techniques. In the second and third semesters, more specialized instruction is provided with applications in molecular synthesis, material sciences, biology, nanotechnologies, modeling, "green chemistry", new energy sources. 10 credits are devoted to transferable skills (internship, bibliographical research, project management, norms and regulations in chemistry). One semester for the Master thesis (30 credits) in a res earch Laboratory the ASC network offers a broad range of opportunities for internships in research laboratories within the ASC institutions, and associated partners (industry, large scale research facilities or research institutions). The master thesis can be based on a collaborative project between two institutions. In addition, a winter school is organized each year in a different location on a chosen topic to deepen one specific field of spectroscopy. This joint social event gathers students, members of the ASC institutions as well as industrial and research associated partners, and ASC alumni. Over the years, the ASC network has developed links with global industrial partners producing spectrometers (Bruker, Magnetech) as well as with r regional competitiveness clusters (MATIKEM in Lille, NEU in Leipzig). A privileged partnership has also been established with great research facilities such as synchroton SOLEIL in France and ELETTRA in Italy.

Stages

Stage : Obligatoire

2 stages obligatoires : 1 stage au S2 et 1 stage au S4.

Admission

Conditions d'admission

For European students an no EEF students: Application: Submit your application by following this link: https://monmaster.gouv.fr

For EEF students: Etudes en France https://www.campusfrance.org/fr/candidature-procedure-etudes-en-france

For Erasmus Mundus : European platform

Et après

Poursuite d'études

After completing this master's degree, the student can continue his studies with a PhD.

Insertion professionnelle

Since it first opened, 222 students from 51 countries have enrolled the course. ASC graduates have acquired the ability to work in a multicultural environment and are at least bilingual. L'Oréal Paris, RetD, Paris and Shanghai, Merck KGaA – Milipore, Darmstadt, Germany, Reckitt Benckiser, Hull, UK, among others, chose to hire them, either directly after the Master or after a PhD. Nearly 80% of the ASC graduates have started a PhD, mainly in European universities.

Pour en savoir plus sur l'insertion professionnelle des diplômés de l'Université de Lille, consultez les répertoires d'emplois publiés par l'ODiF (Observatoire de la Direction de la Formation)

Les fiches emploi/métier du Répertoire Opérationnel des Métiers et des Emplois (ROME) permettent de mieux connaître les métiers et les compétences qui y sont associées.

Infos pratiques

Autres contacts

Contact administratif et pédagogique :
FST-master-cpa-asc@univ-lille.fr

Université de Lille

Lieu(x)

Villeneuve d'Ascq

Campus

Campus Cité scientifique

En savoir plus

Faculté des Sciences et Technologies - FST
https://sciences-technologies.univ-lille.fr/