

Integrated research for advanced chemistry and materials

Master Chimie



Durée
2 ans



Composante
Faculté des
sciences et
technologies



**Langue(s)
d'enseignement**
Anglais

Présentation

The **Master degree IRACM (Integrated Research for Advanced Chemistry and Materials)**, co-accredited by Lille University and Centrale Lille, provides an advanced 2-year programme dealing mainly with physical chemistry, sustainable chemistry and molecular chemistry, which are representative of present research interests in 5 laboratories of Lille University (LASIRE, UCCS, UMET, PC2A and IEMN). The main objective of IRACM is to prepare undergraduate students to PhD programs, in particular within research laboratories of our university. The originality of IRACM relies on the pedagogical approach to research training: apart from classical classes devoted to the main fields of chemistry, the student will be gradually immersed in our laboratories, and will select optional courses in line with their own future research project. From S1 to S4, students will have « integrated research classes » with special focuses on: Smart Macromolecular Systems, Physical Chemistry for Nanosciences, Chemical Strategies for Sustainability and Photosciences. The student's autonomy and initiative will be encouraged through MOOC classes, discussions around current trends in chemistry ("Hot Topics"), and challenge projects (bibliographic and lab activities). Two common threads will be followed from S1 to S3: one on the different applications of photosciences; and one around theoretical and technical skills necessary for 21st century chemistry, such as Scientific Programming, Computational Chemistry,

and Artificial Intelligence for Chemistry. Participation to local congresses or symposia will be encouraged.

Savoir-faire et compétences

Students will acquire specific skills in specialization courses in connection with the excellence of the academic research laboratories of our department. Besides, students will have the opportunity to develop the necessary skills for training in research: Acquiring experimental skills in laboratories, connecting knowledge from different fields and formulating rigorous reasoning, working in autonomy, setting priorities, managing time and self-evaluating. Searching bibliography and producing a summary note from bibliographical documents. Assessing the quality (reliability and validity) of the information and its source. Developing language skills for scientific communication (written report, oral communication).

Les + de la formation

High-level educational and research environment, proposed by 5 internationally renowned laboratories of the chemistry department. An international recruitment, an interdisciplinary programme encompassing organic chemistry, inorganic chemistry, physical chemistry and analytical chemistry. 12 months of experimental teaching and laboratory internships during the master degree, which will facilitate integration within both academic and industrial domains. Master

students will also acquire project management skills. An interdisciplinary training from the master to the doctorate including an international environment, mobility and thematic summer schools.

Organisation

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The courses are organized around four blocks of competences (BCC):

BCC1 - Define and Predict the Properties of Molecules and Materials

BCC2 - Synthesize and Transform the Molecule or Material

BCC3 - Analyze and Characterize the Molecule or Material

BCC4 - Define a Personal and Professional Project

Stages

Stage : Obligatoire

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

Admission

Conditions d'admission

Year of admission : M1, possibly M2

For more than 70 countries (without EU), registration procedure proceed through ETUDE EN FRANCE (EEF) website :

<https://pastel.diplomatie.gouv.fr/etudesenfrance/dyn/public/authentication/login.html#>

For French citizens, Student already in France, EU citizens and other countries that are not concern by EEF procedure, the registration proceed through MONMASTER website:

<https://monmaster.gouv.fr>

Et après

Poursuite d'études

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

Insertion professionnelle

In addition to career opportunities in the academic sector, the present master can offer various attractive opportunities in the industry and in the public sector. Excellent employment opportunities are also available in developing and emerging countries. The training is largely dominated by research at high level with access to world-class instrumentation and research facilities hosted in 5 laboratories of the department. IRACM is then an excellent training for the students interested in pursuing their studies by a PhD program in one of the topics of our graduate program "Materials for a sustainable future". Find the studies and surveys conducted by the ODIF (Observatoire de la Direction des Formations) on the professional integration of Master's graduates at: <https://odif.univ-lille.fr>.

Infos pratiques

Autres contacts


Contact administratif :

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Contact pédagogique :

FST-master-chimie-iracm@univ-lille.fr

Lieu(x)

 Villeneuve d'Ascq - FST

Campus

 Campus Cité scientifique

En savoir plus

Faculté des Sciences et Technologies - FST

 <https://sciences-technologies.univ-lille.fr/>