



# CHEMICAL ENGINEERING FOR A SUSTAINABLE WORLD

Since 1894, over 4,000 have graduated from the École Nationale Supérieure de Chimie de Lille (ENSCL), which provides a multidisciplinary chemistry education.

ENSCL engineering studies cover the major fields of chemistry to equip you with the scientific and technical skills essential to the work of a chemical engineer.

The school's partnership with internationally renowned research laboratories keeps students abreast of scientific and technological innovation.

This broad education makes an ENSCL graduate a responsible engineer and a perfect fit in today's industrial world.

You will discover the **French-style academic excellence** which includes top lecturers in their fields and research laboratories with top-notch infrastructure.

#### ENSCL, a School of Centrale Lille Institute

The institution primarily trains engineers through its **four in-house schools** among which ENSCL for chemical engineers. With more than 2,200 students and more than 250 research professors, Centrale Lille is a leader in engineering education in the north of France.

Centrale Lille also plays an important role in innovation and research. Its seven research laboratories carry out innovative projects, adding to scientific knowledge and contributing to business innovation.

#### Centrale Lille Research Laboratories

**CRISTAL**, Research Centre in Computer Science, Signal and Automatics of Lille **IEMN**, IResearch Institute in Electronics, Microelectronics and Nanotechnology LMFL, Lille Fluid Mechanics Laboratory **L2EP**, Lille Electrotechnics and Power Electronics Laboratory LaMCUBE, Multiphysic and Multiscale Mechanics Laboratory **UCCS**, Catalysis and Solid-State Chemistry Research Unit **UMET**, Materials and Transformation Research Unit













#### Centrale Lille's four research themes

Cross-disciplinary subjects with an international scope and a societal dimension.



**Energy** 



**Environment** 



Health



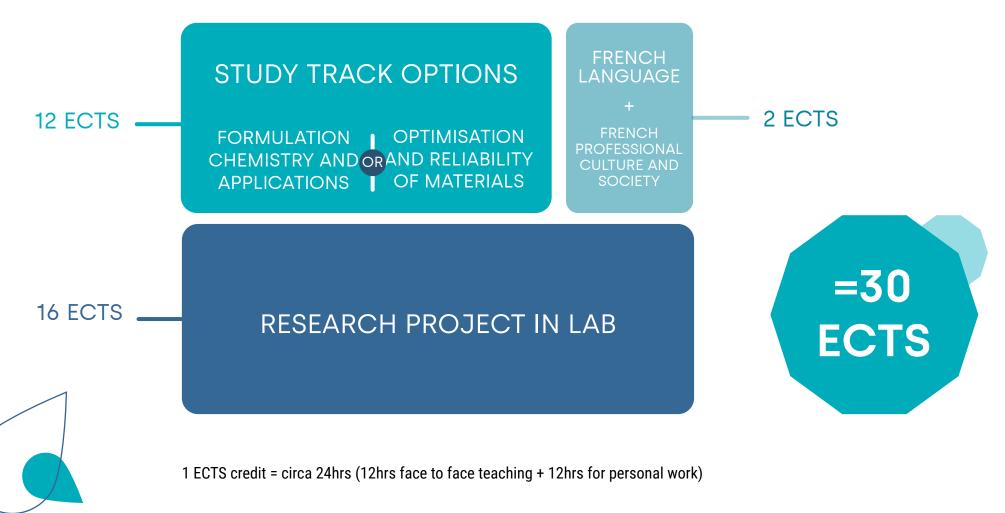
**Digital Technology** 



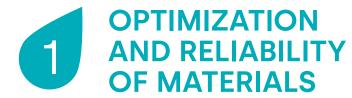


## The exchange programme in a nutshell...





### Overview of the study tracks



#### **Designing the materials of tomorrow**

Materials surround us: metals, glasses, ceramics, plastics, and composites.

These materials must have certain properties—they must be tough or light, for example—and hold up under harsh conditions, e.g., rain, cold, heat, temperature variations, or fire.

The study track *Optimization and Reliabity of Materials* teaches how to develop solutions for problems that arise in the industrial use and manufacture of materials. You will discover and optimize their properties and behaviour using cutting-edge digital and analytic tools.









## FORMULATION CHEMISTRY AND APPLICATIONS

#### **Learn to develop and optimize**

**formulations** for cosmetics, paints, inks, detergents, fragrances, fuels, glues, and concretes.

Apply your theoretical knowledge and understanding of complex physicochemical phenomena to mix raw materials that are often otherwise incompatible in order to obtain stable, macroscopically homogeneous finished products with defined end-use properties.

Master the selection of product ingredients based on your understanding of their physicochemical and functional properties as well as mechanism of action, while adhering to the **technical**, **regulatory**, **financial**, **safety**, **and environmental constraints** set by the specifications.









#### **Semester-long Research Project**



The research projects may be hosted by one of the following laboratories:











Students will produce a research report on their project and defend it in front of a jury



#### Live in Lille, Discover France

**Welcoming and cheerful,** Lille is a vivid city and a great place to live. The city boasts a rich architectural, industrial and cultural heritage with a great abundance of peculiar places and plenty of activities of all kinds.

Cultural animations, artistic and sporting events come in succession all year long, allowing people to discover the various aspects of the city and its vicinity.

The well-earned reputation of friendliness granted to people in Northern France makes Lille a very festive place where you can enjoy a richness of pubs, restaurants, theatres and concert halls.

The whole Hauts-de-France region enjoys a remarkable diversity of beautiful landscapes: farmland, sand dunes, endless beaches, white chalk cliffs, forests, former coal mines sites, industrial cities, state-of-the-art buildings, you name it! And, as those who live here know very well, we do have beautiful weather in North of France too!

Lille is well connected with the rest of France and Europe with two train stations, an airport and numerous highways. Paris is just one hour away by train and it will only take you one hour driving to reach the coastline. The French Riviera and South of France are also a stone's throw from Lille by plane.











#### **Welcoming International Students**

Providing the best possible experience to our International Students is one of our priorities. This is why we have set up a comprehensive onboarding and integration period for them.

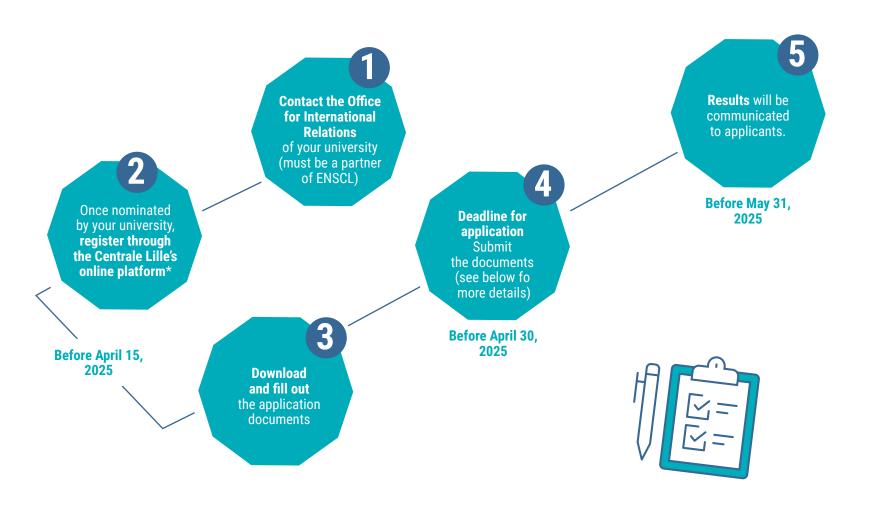
Our Office for International and Academic Relations organises their arrival, their pick-up at the train station and offers them permanent administrative support during their stay at Centrale Lille.

Moreover, students joining this semester-long programme will have **the possibility to stay in halls of residence in the heart of the Villeneuve d'Ascq university campus** (a more affordable solution than the private housing sector or short-term flat rentals).

Special Arrival Kit available for a fee, with kitchenware, duvet, linen, basic hygiene and food products.



#### Apply to the exchange programme



\*link to be communicated to each candidate individually

