

Tell me more about **PHYSICS AND CHEMISTRY**

- I have a natural curiosity for science.
- I have a good capacity for analysis and abstraction.
- I know how to conduct logical reasoning.
- I like to manipulate and experiment with things.
- I'm interested in technological innovations.
- I would like to be able to use IT and modelling tools.
- I am willing to work hard at my studies.
- I have a solid grounding in scientific subjects.
- Candidates should ideally have a secondary-level background in science.

Most of the professions listed require master's level qualifications, but some of them can be accessed after 2 or 3 years' higher education.

Examples taken from the list of professions compiled by ODIF (Observatoire de la Direction des Formations), part of the University of Lille.

<https://odif.univ-lille.fr/>

WHICH PROFESSIONS?

ENERGY -ENVIRONMENT

- Air quality analysis engineer
- Nuclear safety research engineer
- Electron beam welding engineer
- Nuclear waste management engineer
- ...

TEACHING- RESEARCH

- University lecturer
- Research engineer
- Primary school teacher
- Secondary school teacher
- ...

SCIENTIFIC TRAINING - COMMUNICATION

- Head of scientific communication
- Scientific and technical journalist
- ...

PRODUCTION - MANUFACTURING - QUALITY

- Industrial quality control engineer
- Head of quality control and safety
- Research and development engineer
- Health and safety engineer
- Laser design engineer
- ...

METROLOGY

- Instructor/design engineer
- Metrology process engineer
- ...

HEALTHCARE

- Radiation protection consultant/instructor
- Radiotherapist
- ...

MATERIALS SCIENCE

- Materials engineer
- Chemical materials project manager
- ...

UNIVERSITY OF LILLE

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POST-SECONDARY COURSES AVAILABLE AT THE UNIVERSITY OF LILLE

PROFESSIONAL TRAINING IN 2 YEARS

Theory combined with apprenticeships in the field. Selective admission.

DUT **CHEMISTRY**   - also available as parallel student/employee programme.

Trains mid-level managers in all areas of chemistry and related sectors: research, development, production, analysis and control. The curriculum includes theoretical and practical knowledge of organic chemistry | analytical chemistry | general chemistry | mineral chemistry and chemical engineering.

DUT **PHYSICAL MEASUREMENTS**  
Also available as parallel student/employee programme.

Trains mid-level managers in physics, chemistry, materials, electronics and computer science, equipping students with skills focused on instrumentation (tests, trials, research and development, etc.), industrial control and metrology.

THE DEUST PROGRAMME IS AVAILABLE TO APPLICANTS WHO HAVE COMPLETED ONE SEMESTER OF UNIVERSITY STUDIES.

DEUST **ENVIRONMENT AND WASTE** 

Trains environmental technicians with two primary focuses: the management and processing of waste water, and the collection and reuse of waste.

3-YEAR BACHELOR'S DEGREES

Theoretical grounding to prepare for further study up to master's level and/or civil service examinations.

The "exact science and engineering" (SESI) programme offers gradual specialisation, with all first years taking the following 8 subjects: chemistry, EEEA1, civil engineering, computer science, mathematics, mechanics, physics, and combined physics & chemistry. In semester 2, students can choose a path that will lead into either the **Chemistry**, Physics or combined **Physics & Chemistry** degree programmes.

DIFFERENT OPTIONS ARE AVAILABLE.

DEGREE **PHYSICS** 
OPTION **PHYSICS**

2nd-year course covering all the disciplines of physics with teaching on the fundamentals of theory and practice.

DEGREE **PHYSICS** 
OPTION **PURE PHYSICS**

3rd-year course with teaching on the fundamentals and theory, as well as internships in research laboratories.

DEGREE **PHYSICS** 
OPTION **APPLIED PHYSICS**

3rd-year course with solid disciplinary and experimental training.

DEGREE **CHEMISTRY** 
OPTION **CHEMISTRY**

2nd-year course providing students with theoretical and experimental knowledge of general chemistry, inorganic chemistry, organic chemistry, analytical chemistry, spectroscopy, chemical risks, and the quality and environment of industrial production.

DEGREE **CHEMISTRY** 
OPTION **QEPI** ² SELECTIVE PROGRAMME

3rd-year course more specialized in health & safety, quality control and the environment.

DEGREE **PHYSICS & CHEMISTRY** 


Degree programme accessible in 2nd year, providing cross-disciplinary and experimental training in physics and chemistry. Particularly suited for students interested in teaching professions.

¹ Electronics, electrical energy and automation

² Quality and environment of industrial production

SPECIFIC BACHELOR'S DEGREE PROGRAMMES

OPTION RESEARCH FOCUS

SELECTIVE PROGRAMME 

Course intended for school leavers with a scientific background interested in working as a researcher, university lecturer or engineer, particularly in physics, chemistry or mathematics.

OPTION BILINGUAL SESI SELECTIVE PROGRAMME

Course providing specific competency in scientific English. Offered in 1st year; students can continue to 2nd year in mathematics and combined physics & chemistry.

OPTION TAILORED PARCOURS SÉLECTIF

Course intended for holders of a technological baccalaureate or equivalent to help them succeed and pursue their studies to bachelor's level in the following areas: chemistry, EEEA, civil engineering, computer science or combined physics & chemistry.

PRIMARY SCHOOL TEACHER TRAINING

DEGREE EDUCATIONAL SCIENCE

OPTION SCIENTIFIC TRAINING AND COMMUNICATION (FOCUS)

Option available to bachelor's students in semester 4. Generalist scientific modules and an initiation for instructors, moderators and communication roles in scientific fields. Particularly suited to graduates wishing to work as primary school teachers.

AFTER 2 YEARS OF HIGHER EDUCATION

Whatever your background, you have the option of completing professional training. This course lasts one year and allows you to specialise, obtain a dual qualification or enter the job market after 3 years in higher education. This professional diploma is designed to lead immediately to employment.

The information here is valid for the reference year 2018-2019. The academic programmes at ULille are subject to change in September 2020

More info: consult the catalogue of courses at <https://www.univ-lille.fr/formations> or contact SUAIO

PARCOURSUP

Find out about the requirements and terms of access for each course at: www.parcoursup.fr

CURSUS MASTER'S IN ENGINEERING (CMI)



SELECTIVE PROGRAMME

Course available from year 1. Taught over 5 years with graduates qualifying as engineers. Based on the coursework of the chemistry degree with additional modules.

Two CMI options are available under the DEGREE in **CHEMISTRY**

OPTION WASTEWATER TREATMENT






OPTION CONTROL AND OPTIMISATION OF INDUSTRIAL PROCESSES

AFTER A BACHELOR'S DEGREE

You can continue your studies to master's level (5 years in higher education) in fields such as physics and chemistry, but also networks and telecommunications, industrial engineering, environment, instrumentation and the life sciences.

Graduates can also apply for admission to engineering schools at the end of their 2nd or 3rd year (e.g. Polytech'Lille).

Main campuses:

-  Campus Cité scientifique (V. D'Ascq)
-  Campus Moulins-Ronchin
-  Campus Pont-de-Bois (V. D'Ascq)
-  Campus Roubaix-Tourcoing
-  Campus Santé (Lille ; Loos)

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