centralelille

Working towards the society of tomorrow

BE RESPONSIBLE !

centralelille

centralelille

OUR VISION

Values

Boldness
Be bold and fearless. Explore to progress

Excellence
Surpass yourself to give of your best

Respect
Show consideration and esteem for others

Mission

Train multidisciplinary engineers and PhD's, aiming to be a force for progress, through international awareness and innovation.

Vision

Work for the future by developing talents; contribute to a genuine well-being to make the world a better place in a responsible way; finding practical solutions to life's problems.

IMPORTANT DATES

1854	Inauguration of the École des Arts Industriels et des Mines
1872	Creation of the Institut Industriel du Nord (IDN)
1991	IDN becomes the Ecole Centrale de Lille
1992	Creation of IG2I
2003	Creation of ITEEM

KEY FIGURES

Activity report 2014

1550 engineering students

300 engineering graduates each year

100 PhD students

10 000 engineering graduates in a global network

35 % of engineering graduates follow a double degree program abroad

3 endowed professorial Chairs

5 research laboratories

1 PhD program

10 patent families

8 Master's degrees including 3 international programmes

100 privileged-partner companies

88 international higher education partners

TEACHING AND RESEARCH AT THE CORE OF CENTRALE LILLE MISSIONS

centralelille

Three engineering training programmes, eight master's degrees including three international programmes, 1 PhD programme, 5 research laboratories, 3 endowed Chairs. For more than 160 years, Centrale Lille has been training high-level engineers and researchers. The ambition of Centrale Lille is to develop skills and assist all students in cultivating their individual talents.

Our first mission is to train engineers through its 3 training programmes: generalist engineers at École Centrale de Lille, multi-task engineers at ITEEM, and specialist computer and industrial engineers at IG2I located in Lens.

These 3 programmes aim to allow students to build their professional career, in line with their own ambitions. Centrale Lille's core purpose is to meet companies' needs by training future engineers able to perform in a wide range of professional environments and by contributing to economic development.

Centrale Lille also has a core role in innovation and research. The School offers five master's programmes in research and one PhD programme. Its five research laboratories carry innovative projects, contributing every day to broaden the scientific knowledge and spread innovation within companies.

Its extensive and demanding training programmes as well as its ambition and strong involvement in innovation and research make Centrale Lille a key player in Higher Education and Research.

"Centrale Lille trains responsible engineers and doctoral students to be fully aware of the role they have to play in society, for the world of tomorrow"

Emmanuel Duflos,
Director of Centrale Lille

3 ENGINEERING TRAINING PROGRAMS

ÉCOLE CENTRALE DE LILLE
A general engineering program

- After intensive 2-year scientific studies followed by Centrale-Supélec competitive entrance examination
- 3-year program: 2-year common core + 1-year in-depth training (11 possible elective tracks+ 6 fields of study) - Students can enrol in a double degree (at EDHEC or in foreign university)
- Internships (total of 7 to 10 months France + abroad)
- Students can enrol in a Professional training program

IG2I
A specialised program in Computer Technology and Industrial Engineering

- Post-BAC admission (S or STI2D) – parallel admission with a BTS or DUT (2-year technician certificates)
- 5-year training: 3-year common core programme followed by 2-year specialisation (Information Systems or Industrial Data Processing)
- Internships (19 to 20 months: France + abroad)
- Students can enrol in an apprenticeship program

ITEEM
Program specialising in Entrepreneurship, Management & Engineering

- Post-BAC admission (S or STI2D)
- 5-year program

  Specialisation in entrepreneurship engineering + Business/ Management (in partnership with SKEMA Business School)
- Internships (16 to 17 months: France + abroad)

ADMISSION TRAINING INTERNSHIP COMPANY TRAINING

MASTERS PROGRAMS

- Automatic Control and Electric Systems
  - Electrical engineering for sustainable development
  - Systems, autonomous machines and fieldbus
- Chemistry
  - Catalysis and processes
- Mechanical Engineering
  - Mechanical sciences and civil engineering structures
- Civil engineering
  - Geomaterials and civil engineering structures
- Networks and Telecommunications
  - Telecommunication systems
  - Telecommunications.
- Health Engineering
  - International biomedical engineering
- Automatic Control and Robotics
  - International Robotics & Transport
- Turbulence
  - International turbulence

PHD PROGRAM

Centrale Lille awards the title of Doctor through 2 graduate programs: ED SPI 072 and ED SPI 287 Students can enrol in a CIFRE PhD programme (Conventions Industrielles de Formation par la Recherche)

The three training programmes of Centrale Lille are accredited by the Commission des Titres d'Ingénieur (French accreditation institution)

Cti Commission des Titres d'Ingénieur

RECHERCHE, VALORISATION & **INNOVATION**

RESEARCH, VALUE-CREATION AND INNOVATION

From fundamental to applied research and innovation, Centrale Lille follows a high quality scientific policy in perfect harmony with the European strategic approaches implemented by the Horizon 2020 programme.

Thanks to its **five research laboratories** and the researchers team working there, Centrale Lille makes advances a wide variety of scientific fields and aims to develop innovatory approaches in collaboration with industrial partners. In 2014, Centrale Lille registered 10 patent families.

Centrale Lille also contributes to the training of researchers offering 5 Research Masters programs both to its ownstudent engineers and to students recruited abroad.

At Centrale Lille, research is conducted in several main fields:

- Nanotechnologies, Micro-technologies, Optoelectronics
- Mechanics, Civil engineering
- Electronics, Electrotechnics
- Information processing, Acoustics
- Automatic control, Robotics
- Complex Systems Engineering
- Catalytic Processes Engineering

THE RESEARCH LABORATORIES

- Lille Research Center in Computer Science, Signal and Automatic Control (CRIStAL - UMR CNRS 9189).
- The Electronics, Microelectronics and Nanotechnology Institute, IEMN (UMR CNRS 8520).
- Laboratory of Catalysis and SolidState Chemistry (, UCCS - UMR CNRS 8181).
- Lille Mechanics Laboratory (LML UMR CNRS 8107).
- Lille Electrical Engineering and Power Electronics Laboratory, (L2EP)

REALCAT : a platform unique in the world

Inauguratedin May 2014, the Realcat platform is a **highly integrated platform applied for the High-throughput screening of catalysts for industrial biorefineries**,enabling the potential development of new materials in catalytic chemistry. REALCAT is open to industrial companies, essentially in including Green chemistry and Phytochemistry.

3 QUESTIONS TO...

Pauline Lecomte, research professor at Lille Mechanics Laboratory (LML)

What has your career beeun thus far?

I obtained an engineering degree in Mechanics at the Université de Troyes, followed by a Masters programme in Materials Mechanics and a PhD programme at Centrale Lille. I entered the Laboratoire de Mécanique de Lille in late 2006. An internship in a research laboratory shortly after High School gave me the aim to be a researcher.

What does your research concern?

In simple terms, we are aiming to understand how materials break and to predict structural failures. A part of our researchs work, in collaboration with medical colleagues, concerns the resistance of body tissues. We use an experimental approach in order to understand various phenomenoa and develop models.

What do you like in your job?

Above all, the practical application of our research results! My profession allows me to learns, to broaden my outlook and, above all, to choose the areas to focus on in my research work.

NETWORKS & PARTNERS

CENTRALE LILLE **NETWORK**

Centrale Lille has built a solid network of partners giving it a regional, national and international reputation. The numerous academic and business organisations involved in this partners network have enabled the School to establish itself as a leading player in the higher education & research sectors, as well as in economic life.

The School is a member of **the Écoles Centrales Group**. Together with the Schools of Paris, Lyon, Marseille and Nantes, we make up a more visible entity with regard to institutions and the economic world. The Écoles Centrales share common educational values and principles in the training of high-level generalist engineers.

Centrale Lille is a charter member **of the ComUE Lille Nord de France** (an associations of universities and higher education institutions in the area) bringing together all six universities and several Grandes Écoles in the Nord-Pas-de-Calais region. This grouping aims to reinforce the international visibility and attractiveness of regional educational institutions, emphasizing educational values of excellence and success for all the students involved.

Centrale Lille is also a partner of the **Université de Lille** and, as such, is a leading partner in the **IDEX** project (≈ National Excellence Project), aiming to foster higher education & research initiatives at the highest international levels.

COMPANIES, CENTRALE LILLE'S STRENGTHS

The School has built up many partnerships with companies, leading to solid results. The involvement of companies in the educational and training project is one of Centrale Lille's major strengths. This allows training engineers able to put into practice the knowledge acquired during their studies. Apprenticeships, professional training programmes, Project Activities, internships, doctoral programmes, conferences, industrial research contracts, doctoral supervision agreements, training tax funds are among the many and varied types of partnership forged between the School and the companies, which contribute to the leading position occupied by Centrale Lille at the forefront of economic life, both nationally and internationally.

BUILDING NEW PARTNERSHIPS TOGETHER

CONTACT **Eric André**
Director of development and Business relations
eric.andre@centralelille.fr - +33 (0)3 20 67 60 48 - +33 (0)6 83 20 59 08

A **DYNAMIC** POLICY FOR AN **INTERNATIONAL REPUTATION**

Centrale Lille is outward-looking and internationally ambitious. By hosting foreign students and researchers as well as by encouraging its students to undertake their studies and their internships abroad. Centrale Lille has confirmed its international ambitions. It has developed **partnerships with 4 international research laboratories** in Russia, China, Japan and India and regularly hosts **20% of foreign students of more than 20 different nationalities** on its campus.

Centrale Lille's engineering program has a distinctly international character: **Double degrees, internships in foreign countries**. Centrale Lille has thus developed a dense and varied network around the world, involving more than **88 partnerships with foreign universities.**

Centrale is also a member of the **T.I.M.E** network ((Top Industrial Managers Europe). Created in 1989, the T.I.M.E network is a programme enabling the most talented students from the network's universities and schools, **to obtain two separate master's degrees from two different countries** by following a 6-year training programme. More than 55 universities (Australia, Brazil, China, Japan, Norway, Russia, Canada, EU ...) are members of the T.I.M.E network. After graduation, students of T.I.M.E network programme are qualified to work in multicultural environments. throughout the world

centralelille

centralelille

AUDACE • EXIGENCE • RESPECT

Cité scientifique - CS 20048
59651 Villeneuve d'Ascq Cedex

T. +33 (0)3 20 33 53 53
F. +33 (0)3 20 33 54 99

centralelille.fr

• ecole.centralelille.fr • ig2i.centralelille.fr • iteem.centralelille.fr •