GROUPE DES ECOLES CENTRALE BRAZILIAN PARTNERSHIP

CENTRALESUPÉLEC – CENTRALE LYON – CENTRALE NANTES – CENTRALE LILLE – CENTRALE MEDITERRANEE
THE GROUP ECOLES CENTRALE
5 SCHOOLS IN FRANCE – 3 IN OTHER COUNTRIES

• CentraleSupélec (2015)
  • Merge of Centrale Paris (1829) and Supélec (1894)
  • 3 Campus (ParisSaclay, Rennes and Metz)

• Ecole Centrale Lyon (1857)
  • Campus is based in Écully since 1967

• Ecole Centrale Lille (1872)
  • Founded under the name of “Institut Industriel du Nord”

• Ecole Centrale Nantes (1919)
  • Founded under the name of “Institute Polytechnique de l’Ouest”

• Ecole Centrale Méditerranée (2006)
  • Former “École d’Ingénieurs de Marseille” founded in 1891
  • 2 Campus (Marseille and Nice)
THE GROUP ECOLES CENTRALE
ELITE INSTITUTES OF SCIENCE AND TECHNOLOGY

Key Figures:

- Nearly 7,000 engineering students
  - 20% recruited through international partnerships
- Nearly 1,300 master students
- More than 1,000 PhD candidates
- 33 Research Laboratories
  - Nearly 1,000 full-time academic staff
  - 12 International Laboratories
  - 35 Industrial Chairs
- 134 International Partners
- 100,000 engineers in activity on the GEC’s Alumni Network
THE GROUP ECOLES CENTRALE
ELITE INSTITUTES OF SCIENCE AND TECHNOLOGY

GEC’s Vision of Engineering:

• Multi-disciplinary curricula
  • Broad overview of future challenging complex problems
• Access to social sciences, foreign languages and humanities
• Soft-skills training
  • Leadership, management & innovation courses
  • Team-work and project-work
• Corporate Networking (internships, job fairs, conferences)
• Global vision & open-minded approach
• Industrial problem-solving education
THE GROUP ECOLES CENTRALE
ELITE INSTITUTES OF SCIENCE AND TECHNOLOGY

Highly selective

Recruitment

For French students

Groupe des Écoles Centrale - Brazilian Partnership
THE GROUP ECOLES CENTRALE
ELITE INSTITUTES OF SCIENCE AND TECHNOLOGY

The Anglo-saxon model
The EU model

Comparison between the French engineering school model and European models

The 3rd years french engineering course model

The EU/US course model

Year 1
Year 2
Year 3
Year 4
Year 5 (and maybe 6)

BSc
MSc

Preparatory School Year 1
Preparatory School Year 2
Engineering Year 1
Engineering Year 2
Engineering Year 3: specialization
Master Research

134 International Partners
70,000 engineers in activity on the GEC’s Alumni Network

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Groupe des Écoles Centrale - Brazilian Partnership

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THE GROUP ECOLES CENTRALE
CORPORATE PARTNERSHIPS & NETWORKING

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Groupe des Écoles Centrale - Brazilian Partnership
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Groupe des Écoles Centrale - Brazilian Partnership

2 or 3 mandatory internships
at least 28 weeks in companies and/or research laboratories

Hundreds of conferences and projects in team

1 jobfair organized every year in Brazil
around 15 companies and 100 students and alumni

São Paulo Career Fair
São Paulo
Saturday, April 6th, 2019
Hotel Pullman, Ibirapuera,
From 12 to 6:00 PM
Contact: catherine.desanwood@centralesupemarc.fr
THE GROUP ECOLES CENTRALE
ELITE INSTITUTES OF SCIENCE AND TECHNOLOGY

Recruitment by sector:
THE GROUP ECOLES CENTRALE
SOME WELL-KNOWN ALUMNI

Raphaël Gorgé
Centrale Méditerranée
CEO Groupe Gorgé

Marie Holive
Centrale Lyon
Executive Director of
NBC Universal
International Networks

Jean-Loïc Galle
CentraleSupélec
CEO Thales Alenia
Space

Jacques Maigné
Centrale Lyon
CEO Hutchinson

Benoit Potier
CentraleSupélec
CEO Air liquide

Delphine Ernotte
CentraleSupélec
President France Télévisions

Cédric Gautier
Centrale Nantes
CEO Stellia Aerospace

Carlos Tavares
CentraleSupélec
CEO PSA

Hubert Sagnières
Centrale Lille
CEO Essilor

Michèle Bellon
CentraleSupélec
Former CEO of
ERDF

André et Édouard Michelin
Marcel Schlumberger
Armand Peugeot
THE GROUP ECOLES CENTRALE
MANY STUDENTS CLUBS AND ASSOCIATIONS

- Students’ Union
- **Junior enterprise**, Job Fair organisation
- **Sport clubs**: Sailing, Rugby, Football, Basketball, Martial Arts,…
- **Arts clubs**: Jazz, Chess, Theatre, Cinema, Dance,…
- **Science & Technology clubs**: Computers, Fablabs, Robotics,…
- **Social responsibility**: tutoring students from disadvantaged backgrounds
- **International students’ clubs**
- and many more…
THE GROUP ECOLES CENTRALE
ACADEMIC EXCHANGE TRACKS

Incoming (GEC schools as Host Institutions):

- **Double Degree Programs (DD)**
  - Engineering (2 years mobility, courses and internship)
    - DD 1A + 2A
    - DD 2A + 3A

- **Conventional Exchange Program**
  - 1 semester
  - 1 year
Incoming (GEC schools as Host Institutions):

- **Double Degree Programs (DD)**
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- **DD 1A + 2A**
THE GROUP ECOLES CENTRALE
ACADEMIC EXCHANGE TRACKS

Incoming (GEC schools as Host Institutions):

• Double Degree Programs (DD)
  • Engineering (2 years mobility, courses and internship)

• DD 2A + 3A

Incoming (GEC schools as Host Institutions):

• Double Degree Programs (DD)
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• DD 2A + 3A
THE GROUP ECOLES CENTRALE
ACADEMIC EXCHANGE TRACKS

Incoming (GEC schools as Host Institutions):

- Conventional Exchange Program
  - 1 semester
  - 1 year

1 semester or 1 year
(in the 2nd or the 3rd year at Ecoles Centrale)
- Courses,
- Projects in team
- Internship in a lab or in a company

These mobilities don’t deliver the French degree!
Recruitment Agenda Calendar for Double Degree:

- **June-September**: Call for double degree
- **September-October**: Interview of candidates by the GEC committee
- **November**: Announcement of Selected Candidates
- **December**: Deadline for Eiffel scholarships
- **April**: Announcement of Eiffel scholarships
- **May**: Announcement of BRAFITEC scholarships
- **August-September**: Beginning of Mobility exchange

**Number of places available for Double Degree with Brazil in the Group:**

~ 140
PRESENTATION OF EACH CENTRALE SCHOOL
MORE SPECIFICALLY
CENTRALESUPELEC
CENTRALESUPÉLEC
A GLOBAL LEADING ENGINEERING SCHOOL IN SCIENCE & TECHNOLOGY

• Top tier French « Grandes Ecoles »
• Ecole Centrale Paris (1829)
• Supélec (Ecole Supérieure d’Electricité - 1894)
  ➢ merged in Jan 1st 2015 to jointly create CentraleSupélec covering all the fields of engineering
• Sharing values of scientific excellence, innovation, entrepreneurship, internationalization and leadership
• Founding members of Université Paris-Saclay
Pedagogy modalities: interdisciplinarity and meaning, skill's evaluation and new pedagogies with active learning, concrete situations, associative activities, companies at the heart of the trainings, project and professional training student as an actor of his curriculum and his professional project.

SKILLS

- Think and act as an accountable ethical professional
- Be a leader: lead a team carry out a project
- Convince others
- Act, initiate and innovate in the science and technology environment
- Thrive and innovate in the digital world
- Thrive in a multicultural and international environment
- Analyze, design and implement complex systems with scientific technological, human and economic component
- Acquire and develop in-depth expertise in a scientific or societal field and a job sector
- Be able to create value for a company and its customers
CENTRALE LYON
A LONG CULTURE IN ENGINEERING EDUCATION

- 1550 student engineers enrolled in various programmes
- 25% female students
- 235 Master students, 200 PhD students
- 24% international students
- Over 50 different nationalities on campus
- 12,000 alumni throughout the world

6 CNRS laboratories
(National Scientific Research Center)
- Laboratory of Fluid Mechanics and Acoustics (LMFA)
- Laboratory of Tribology and Systems Dynamics (LTDS)
- Lyon Nanotechnology Institute (INL)
- Ampère Laboratory (Electrical Engineering)
- Camille Jordan Institute (ICJ : Mathematics)
- Lyon Research Center for Images and Intelligent Information Systems (LIRIS)

Main partners:
Airbus, Alstom, CEA, CNES, Dassault aviation, Dassault systems, DCN, Eads, Eurocopter, EDF, Lafarge, Michelin, PSA, Renault, Saint-Gobain, SNCF, Safran, Snecma, ST Microelectronics, Andritz, IHI, Thales, Thomson multimedia, Total, Naval group...

160 Researchers , 85 Research Engineers, 200 PhD students, 50 Post docs

Rhône-Alpes is France’s Second most economically important Region
- Lyon is just 2 hours from Paris by the TGV High Speed Train,
- 90mn from the Mediterranean coast,
- 90mn from the Alp Mountains (the Rhône-Alpes Region has no less than 216 ski resorts)
Specializations & Masters

- Transport and Traffic engineering
- Energy engineering
- Civil and Environmental engineering
- Aeronautical engineering
- Computer science and communication engineering
- Bioengineering and nanotechnologies
- Mathematics and Finance
- Materials Science
- Electrical engineering
- Industrial engineering
- Ocean, Atmosphere, Climate
- Mechanics
- Environmental risk
- Health engineering
- Applied maths & statistics
Tradition dating back to 1919

Among the best “French Engineering Schools” / 350+

2,150 graduate students

37,000+ Centrale Groupe alumni

550 Researchers and teaching staff

270 PhD students

40-acre campus in Nantes

**Industrial environment**

Nantes & Saint-Nazaire Airbus Factories

STX Ship building (Queen Mary

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6 Laboratories associated to CNRS (A or A+) for a cutting edge research

- **Fluid Mechanics Laboratory (LHEEA):** Hydrodynamics & Ocean Eng., Energetics, Atmosphere Dynamics, Internal combustion engines
- **Laboratory of Digital Sciences of Nantes (LS2N):** Cybernetics (Robotics, Signal & Automatics, Electronic Systems, Telecom & Radar) and Computer Science
- **Research Institute of Civil Engineering & Mechanics:** Metallic & composites assemblies, computational mechanics, polymers...
- **Laboratory for Mathematics “Jean Leray”:** non-linear PDE, scientific calculus, approximation, probability statistic
- **Urban Environment and Architecture (CERMA):** modeling & simulation of natural phenomena, design and characterization of ambiance
- **High Performance Computing Institute (ICI):** a mid-sized computing center of 6000 cores, one of the most powerful French regional centers.
Centrale Nantes specialisations and masters (in english)

- Control, embedded systems, image processing
- Robotics
- Virtual reality, computer science
- Atmosphere, water and urban environment
- Ocean engineering
- Civil and environmental engineering

- Aeronautics
- Materials and Composites
- Energetics and propulsion
- Industrial engineering
- Manufacturing
- Health

* Offering scholarships for students covering tuition fees + insurance/travel, monthly allowance
CENTRALE LILLE

KEY FIGURES

- **270 People**
  - 31 Professors
  - 49 Associate Professors
  - 10 CNRS
  - 120 PhD Students
  - 27 Postdocs / Research engineers / ATER
  - 35 Invited Profs / PAST (7 FTE)
  - 17 Teaching Assistants

- **1500 Students**
  - 1273 Engineering Diplôme d’Ingénieur
  - 69 Master Sciences M2R (Research)
  - 120 Doctoral Ph.D programs

- **25 M€ Total budget**

- **88 International partnerships**

- **200 Company partnerships**

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Centrale Lille

Lille Beffroi

Leonard de Vinci

First automated metro in the world

Louvre Lens near Lille

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CENTRALE LILLE
4 AXES OF SPECIALIZATION IN 8 TRACKS

SUSTAINABLE CONSTRUCTIONS & ENERGY
- Constructions and sustainable materials
- Energy and smart grids

SMART SYSTEMS AND ENVIRONMENTS
- Smart systems and advanced networks
- Future networks and smart environments

INDUSTRY FOR THE FUTURE
- Smart industries
- Sustainable conception and productions

FROM STRATEGY TO DATA MANAGEMENT
- Data science and Artificial intelligence
- Modelisation and industrial architecture (IT)

Involved in 6 Laboratories

Fundamental informatics
Computer Engineering
Automatic Control
Signals

Micro-Nano-Technologies
Functional Electronics
Acoustics & Optoelectronic
Microfluidics

Electrotechnics
Power Electronics

Catalytic
Process Engineering
Solid chemistry

Civil Engineering
Material Sciences
Mechanics

Fluid Mechanics
CENTRALE MEDITERRANEE
Marseille, the 2nd biggest city in France
- 860 000 people
- 3000 researchers
- 2nd pole of public research in France
- 100 000 students

Centrale Marseille facts and figures
- **1000** Students registered in the engineering program
- **11** Masters with **39** specialities
- **80** PhD students supervised by Centrale Marseille researchers
- **15 000** Alumni throughout the world

- **Staff** : **70** administratives, **85** teachers and researchers and more than **200** instructors
- **8** research laboratories in co-supervision
Engineering Specializations:

- **INFO → Computer Sciences**
  - INFO-DOIT Development and Organization in Information Technology,
  - INFO-IAM IA, Machine Learning and Data Science

- **GREEN → Chemistry, process engineering and sustainable processes**

- **MECA → Mechanics**
  - Modelization of Structural and Material Mechanics,
  - Fluids: energy, transport, environment, health,
  - Naval Engineering

- **DDEFI → Data, Economic & Financial Decisions**

- **PICSEL → Photonics, Image, Signal and Communication**

- **CliMaTHs → Mathematics and Modeling for Climate, Earth, Man**

**Complex System Engineering (Master in English)**

- Environmental Engineering
- Biomedical Engineering
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https://www.centralesupelec.fr/
https://www.ec-lyon.fr/
https://www.ec-nantes.fr/
https://centralelille.fr/
https://www.centrale-mediterranee.fr/