

MASTER'S DEGREE IN ENGINEERING

OBJECTIVES

Analyzing technical problems and implementing problem-solving methods in the industrial field of expertise

Conducting research for innovative and suitable solutions by integrating the latest technologies: additive manufacturing, production line modeling, augmented reality, cobotics, artificial intelligence...

Modeling and designing solutions based on a rational approach to scientific study

Integrating human, economic and organizational aspects into the technical dimension, as well as Corporate Social Responsibility (CSR) values

Acting as an eco-responsible engineer by abiding to the Sustainable Development Goals

Managing multidisciplinary teams to fully contribute to performance goals, while complying with occupational health and safety regulations

STUDENT

Duration : 234 days

on 24 months

Code : MasterDegree 4A(PA)

CodeRncp : RNCP40701



FOR WHOM?

Eligibility

Students wishing to study a program in English at a French engineers school, after an academic career in higher education abroad

Admission requirements

- Holding an international Bachelor's Degree diploma or equivalent
- Having A2 level in French (required)
- Having B1 level in English (required) - refresher courses available

Academic calendar

Full-time 2-year program, including periods of professional internship

The 2nd year can be done under a work-study contract

Scholarship

8 500 euros/an

Applicable rate for the 2026 school year.

MASTER'S DEGREE

Ingénieur diplômé du CESI

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Visit our website for opening dates

Paris - Nanterre

Back to school on 14 September 2026

Fundamental engineering sciences

Fundamental sciences are essential for engineers, including mathematics and subjects related to physics that they will need in their roles:

- Mathematics
- Mechanical engineering: solid mechanics, fluid mechanics, materials
- Electrical engineering: electricity, electronics, electromagnetism
- Energy engineering: thermodynamics, thermal science

Sciences and methods of an engineer

Industrial engineers must master engineering tools and methods to manage projects and handle problems they must solve:

- Functional analysis
- Statistics and Probability
- Operations Research
- Analysis and problem-solving methods (FMECA, VSM...)
- Management of information and communication systems
- Documentary research
- Project management
- Lean management, operational excellence
- Innovation engineering
- Introduction to research

Sciences and techniques of industrial engineering

Major in Industry & Services - The specialized sciences and techniques program aims to cover the in-depth subjects currently needed in the different industrial sectors, incorporating an eco-responsible dimension at every stage of a product's life cycle:

- 3D Capstone Project, modeling, digital mock-up
- Additive manufacturing
- Robotics, cobotics
- Artificial Intelligence
- Augmented Reality / Virtual Reality
- Sensors and connected objects
- Lean Management

- Quality, Safety, Environment
- Eco-design

Major in Civil Engineering - The sciences and techniques of civil engineering program aims to cover in-depth subjects needed nowadays in the civil engineering sector, by incorporating the eco-responsible dimension at every stage of a structure's lifecycle

- Journey through time in civil engineering
- Soil mechanics and geotechnics (onshore and offshore)
- Structural Mechanics
- Environmental engineering: circular economy, life cycle analysis, hydraulics and water management, energy retrofitting of buildings, solid waste management
- Infrastructure: urban planning, transport networks
- Design of complex structures and infrastructures
- City Information Modelling
- Natural risks
- Lean construction

Humanities, economics, legal and social sciences

The HSEL (Human Sciences, Economy and Legislation) program plays an essential role in complementing the engineer's knowledge and skills, beyond the scientific and technical fields:

- Professional communication
- Leadership and people management
- Economics and business administration
- Labor law and staff management
- Corporate social responsibility and ethics
- Quality, Safety, Environment
- Standards and regulations
- Team building and creativity development

International

English: writing and speaking skills, preparation for the TOEIC test certification

French: capacity-building course in French as a Foreign Language (FLE)
Interculturality