

# 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

### Tuition fees

8 500 euros per year

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