



# ENSTA ParisTech

## ENSTA Paris Tech

**ENSTA Paris Tech, the École Nationale Supérieure de Techniques Avancées**, is one of the best engineering schools in France. It provides students with a rich education in the field of engineering and trains them to design, implement and manage complex technical projects. The programs are constantly updated to keep pace with the latest technological advances. At ENSTA, students also receive courses in languages and humanities, as well as all the skills needed in the business world through subjects such as law, communication, economics, accounting, and management.

## NUCLEAR TRAINING AT ENSTA Paris Tech

**ENGINEERING DEGREE** Our engineering degrees offer three specializations: energy and environmental management, land and maritime transport, and complex systems. The energy and environmental management specialization covers the following fields: energy systems, offshore energy engineering, energy and environmental management, and nuclear power. The nuclear power curriculum provides students with scientific and technological education in advanced areas such as nuclear fission, reactor physics, fuel cycle, energy transfer and finite element modeling, structural mechanics, and interactions. The main objective is not simply to train specialists in reactor physics and calculation, but rather to give students all the keys to acquire the most complete and accurate understanding of the operation of a nuclear power plant. Thus, students are also trained to understand the politics, economics and strategy of the energy market. They are in direct contact with major players in the sector, mostly French decision-makers from large companies such as EDF, AREVA and ENGIE, as well as from public and private research centers (CEA, CNRS, ANDRA, IRSN, etc.). Thanks to the current context and the high level of training at ENSTA Paris Tech, young graduates in nuclear engineering are leaving with numerous opportunities on the job market (about 1000 positions to be filled each year) and are not struggling to find work in their preferred sector. **MASTER NUCLEAR ENERGY (MNE)** ENSTA Paris Tech is a member of a prestigious consortium of 12 Grandes Ecoles of Engineering: Paris Tech. ENSTA is also one of the founding members of the recently inaugurated Paris-Saclay University. ENSTA offers a wide range of master's degrees, including a master's degree taught in English, the Nuclear Energy master's degree. Its specialization in **nuclear facility design** (NPD) provides students with in-depth knowledge of the design and construction of nuclear facilities, with a focus on safety control, general operation, structures and infrastructures, and systems and equipment. This master's degree provides students with the fundamentals necessary to understand the physical phenomena behind the operation of a nuclear reactor. It allows students to become familiar with the main calculation codes necessary for the operation of nuclear installations and reactors. The NPD specialization also provides students with notions of radiation protection and protection of persons and the environment. It aims to give them a complete overview of the nuclear energy sector, including the study of the economic and environmental issues related to it.

## Research

ENSTA Paris research is conducted in cutting-edge areas with numerous applications, particularly in the industrial sector. The fields impacted are multiple with three major economic application sectors: sustainable energy, transportation and defense.



**Key figures**  
708 students  
98 PhD students  
30,4% foreign students  
70 partnership agreements with international universities  
80 full professors  
650 industry stakeholders