



MASTER IN SCIENCE AND EXECUTIVE ENGINEERING



An elite Engineering
programme for
international students

www.mines-paristech.eu



**A worldwide leading academic
and research institution
in engineering and management**

MINES PARISTECH GENERAL PRESENTATION

MINES ParisTech (previously named Ecole des MINES de Paris) is a very famous graduate school in France, ranked since a long time in the top schools for Engineering and Management. It also belongs to ParisTech (the Paris Institute of Technology, see www.paristech.fr), which is a cluster for excellence in Engineering education, located in the area of Paris, including 12 of the best Engineering and Business schools of France.

The name Ecole des MINES (literally “*School of MINES*”) dates back to the School’s foundation in 1783. Nowadays, the engineering curriculum gives students a broad background enabling them to become executive engineers in many different fields: production, research and development, economics and management. Today 54% of the alumni work in various sectors of the industry and 41% in the services (banking, consulting, IT)

ENGINEERING COURSE FOR INTERNATIONAL STUDENTS: THE “MASTER OF SCIENCE AND EXECUTIVE ENGINEERING” PROGRAMME

The aim of this Master programme is to train high level engineers able to manage complex industrial projects and to become managers of companies. This is implemented through a multidisciplinary programme, with a high technical, scientific and socio-economic content, leading to a strong background of fundamental knowledge and of practical skills thanks to strong participation of lecturers from enterprises and implementation of internships in companies.

1 - CURRICULUM

The curriculum lasts 2 years:

- **1st year: focused mainly on engineering sciences**
 - o a basis of fundamental core courses, with modules in applied mathematics and physics, economics and social sciences
 - o choice of specialized courses: approximately 90 courses offered according to the following broad themes:
 - pure and applied mathematics
 - physics, mechanics, thermo mechanics, electronics
 - materials sciences, environment,
 - engineering
 - economics and social sciences
 - information management and communication
 - o modern languages (compulsorily 2 foreign languages, French being compulsory for international students)
 - o young engineer placement in industry (3 to 4 months), as “assistant executive engineer”, with frequent possibility of international placement

- **2nd year: focused mainly on minors**

In addition to core courses (accounting and law) and to electives, students have to choose a concentration in a specific engineering field, called minor (from a choice of 17 different minors) and to implement a technical project related to an industrial problem under the close supervision of a tutor from one of MINES ParisTech 16 research centres, leading ultimately to an internship of at least 3 months in industry, and concluding by the submission of a master thesis and its oral presentation in the presence of scientific specialists and of the industrial partners.

The 17 minors are grouped in 3 main fields:

MATHEMATICS AND APPLIED MATHS

- Information systems management
- Quantitative Finance
- Geostatistics
- MAREVA (Applied Mathematics about automatics, robotics and vision)

ENGINEERING SCIENCES

- Biotechnology
- Geosciences

- Nuclear engineering
- Process engineering
- Underground engineering and management

ECONOMICS AND SOCIAL SCIENCES

- Design engineering
- Industrial economics
- Corporate Law and Economics
- Production systems and Logistics
- Scientific management

- Materials Sciences and Engineering
- Mechanical Engineering and Energy
- Energy Systems and Policies
- Innovation and Entrepreneurship

All the courses are in French and international students must master it (see section 3.4: practical considerations).
For more details about the curriculum see: <http://www.ensmp.fr/Eng/Education/civilIng.html>

2 – INTERNATIONAL ADMISSIONS

There are 2 possible ways for international admissions:

- **non-degree awarding admission:** students will attend courses during **a semester or an academic year**. At the end they will get the corresponding ECTS credits (European Credit Transfer System, typically 30 ECTS per semester), to be accredited by his home university. For studies lasting only one semester, the courses may be taken in the 1st or 2nd year of the Master curriculum, with recommendation to attend preferably the Autumn semester of the academic year (period from September to the end of January), offering a much larger choice of courses.

- **degree awarding admission:** students will attend the **whole 2 years of this programme**. At the end the students will get the “Master degree in Science and Executive Engineering” of MINES ParisTech, nationally accredited. For students coming from universities having a special agreement with MINES ParisTech, it could lead to a double degree, with addition of the home university corresponding degree, according to the conditions of the agreement with the home university.

3 – ADMISSION PROCEDURES: PRACTICAL CONSIDERATIONS

3.1 - Enrolment forms and deadlines

- o **non degree awarding admission:** application forms are to be obtained and returned by e mail (scanned file) anytime before the beginning of May prior to the beginning of the academic year (in September each year). The forms can be downloaded from the website: <http://www.mines-paristech.eu/index.php/25/Prospective-student/Master-Degree/Master-Degree-in-Science-and-Executive-Engineering/Admission>.
- o **degree awarding admission:** students have to fill the corresponding application document given at the same web address(<http://www.mines-paristech.eu/index.php/25/Prospective-student/Master-Degree/Master-Degree-in-Science-and-Executive-Engineering/Admission>) and to send it back before October 1st, one year before the date of the foreseen entrance (1st October N-1 for entrance in September N).

3.2 – Inscription and scholarship fees

- o Inscription fees: € 800 per year. Students admitted in the context of the European ERASMUS programme or other special exchange agreement with their home university are exempted. In this case students will have to pay only social insurance fees: about 300 Euros per year.
- o Scholarship fees: a grant of 18,000 Euros is given to international students, corresponding to these fees. Only some extra fees can be required for exceptional expenses (industrial visits,...).

3.3 Selection procedures

Due to the extremely severe selection for French students, **a special care is given to ensure that the scientific quality of the international admitted students matches our requirements**. So the selection is compulsory and implemented as follows:

- Non-degree awarding admission: the admission is decided from the examination of the application file
- Degree awarding admission: the procedure will include partially or totally the following steps:
 - * pre-selection by the home university (depending of agreement with the home university)
 - * participation to a written test (in English or in French, details will be given to applicants about the content and procedure)
 - * participation to an oral scientific interview

This procedure will take place in the country of the applicants between October and December one year before the year of admission. The final decision of admission will be given in January of the year of admission.

3.4 Course language: French

The majority of the programme’s courses are conducted in French. All students, particularly those coming for 6 months to one year (for non-degree awarding periods), must, on arrival in Paris, have reached an intermediate level of comprehension in French (level 2 of the TEF test or B2 of DELF) acquired in their country of origin.

MINES ParisTech may provide some help:

- either before departure in the home country of the students through dedicated online programmes (as FILIPE and PADEN),

- either after arrival in France through:
 - o courses of French as Foreign language, included in the engineering curriculum
 - o intensive programmes in French language in special institutions : 2 months before the entrance, offered by MINES ParisTech (see French language learning in section 3.5) only for degree-awarding admissions (2 years studies).

3.5 Financial support and Scholarships

MINES ParisTech does particular efforts to find scholarships and various other financial supports for international students in order to reduce their education and living expenses in France (amounting to about 600 Euros per month in Paris), in addition to reduced or waived inscription and scolarity fees (see section 3.2).

For students coming for 6 months or one year (non degree awarding programme), a support may exist by national or international scholarship programmes, such as Erasmus (Europe), Brafitec (Brazil), Mexfitec (Mexico), Arfitec (Argentina) or Chilfitec (Chili). Some support may also be provided by the implementation of internships in companies (implying a supplementary period after studies).

For students wishing to attend the whole Master of Engineering Programme (2 years), MINES ParisTech tries to find a scholarship for these students through different ways:

- * In case they exist, scholarships from the national government of the student are one opportunity (even for one year), for instance Brafitec in Brazil, etc.. or from special scholarship programmes sponsored by companies
- * applications of the best students are submitted to the Eiffel Scholarship selection board (from French government)
- * in the frame of our partnership with French companies, those operating in the country of the students are contacted to propose them to support these students for their studies in France.
- * possibilities of scholarship through our Foundation also exist thanks to the help of our alumni donations.
- * **accommodation** for MINES ParisTech students is in a special residence (called "Maison des MINES"), in rooms for 2 persons, costing about 216 Euros per month on which the French government repays about 90 Euros as a standard student accommodation allocation (see also section 3.6).
- * lastly during the engineer course, students have to do 2 internships in companies (about 6 months in total included in the 2 years) during which they are paid as engineers. It allows them to earn some additional money.
- * **French language learning:** Generally international students are not fluent in French. So, for students seeking a degree awarding admission, their selection being achieved in December before the year of their entrance, they are asked to begin to learn French by all possible means in their country (including by the help of dedicated online programmes like FILIPE and PADEN provided by MINES ParisTech, with free access) and then they are offered a 2 months intensive programme in French language in France before the entrance. This programme is carried out in one of the best institutions in teaching French language, and students are accommodated in French families during this stay. This enables students to get a wider grasp of French habits and customs, on top of acquiring fluency in everyday French.

Till now, we could ensure a scholarship to all our international students, thanks to all these opportunities. It can be stated that to come to study to MINES ParisTech is not a question of money but of will and of quality of the students.

3.6 Arrival in France and Accommodation

For practical matters concerning arrival and life in France, students should contact the French Embassy/ Consulate in their country for visa applications, as well as the person in charge of the engineering course (See useful addresses in Section 4 below). MINES ParisTech admission office will help students for these applications, providing them the necessary attestations. Information (in French) is also given at :

http://www.diplomatie.gouv.fr/en/espaces_dedies.php3?id_rubrique=2192

For accommodation, MINES ParisTech provides a hall of residence (Maison des MINES) located near to the School. Admission to the hall of residence for international students will be dealt with at the same time as the enrolment procedures according to the number of rooms available (see Accommodation in section 3.5).

4 - FURTHER INFORMATION

4.1 Mines ParisTech website: www.minesparistech.eu

Useful headings: prospective students/ Master degree /Master degree in Science and Executive Eng./presentation/ admission, Companies, International

4.2 - Useful addresses

- **Contacts / International Admissions:** admission_ic@mines-paristech.fr
- **International Office:** jean.du_mouza@mines-paristech.fr , or pierre.baladi@mines-paristech.fr