



POLITECNICO
MILANO 1863

School of Industrial and Information Engineering

The training experience offered to the students of the Master's Degree in Energy Engineering

What does an energy engineer do?

What do you study?

What are the teaching methods?

What are the assessment methods?

What does the final exam consist of?

Can I get help with my studies?

Are there any extracurricular activities?

Can I go and study abroad for a period?

Can I do an internship?

How can I express my opinion?

How can I contribute?

What's next?

Contacts



What does an energy engineer do?

A Master's Degree Energy Engineer is a highly qualified technician, capable of conducting complex analyses and developing innovative research topics in the energy field. Their skills span various interdisciplinary fields, allowing them to:

- Design, test, manage, and optimize energy production, distribution, and use systems, conducting in-depth energy efficiency studies and integrating advanced technologies.
- Critically analyze and improve existing energy technologies, conducting research to make them more sustainable and efficient.
- Develop original approaches to energy planning through in-depth studies of renewable resources and innovative solutions to global challenges such as climate change.
- Evaluate the environmental impact and safety of energy plants with detailed analyses, proposing solutions to reduce emissions and optimize production processes.
- Contribute to multidisciplinary projects with a research-based approach, collaborating with experts from different fields to integrate cutting-edge energy solutions in urban and industrial contexts.



What do you study?

The **Degree Program** (*Manifesto degli Studi*), divided by academic years and semesters, is the set of educational activities (courses, laboratories, internships, final examinations), either compulsory or elective, that make up the educational offer of a Study Program (*Corso di Studi*).

The **Study Plan** (*Piano degli Studi*) is the list of educational activities that the student intends to undertake during each academic year. The Study Plan is normally compiled by selecting educational activities from the offer defined in the Degree Program (*Manifesto degli Studi*) of the student's own Study Program. In this case, the Study Plan is automatically approved.

Students may also request to include, for the purpose of obtaining their degree, courses/laboratories offered by Study Programs other than their own. In such cases, the request is subject to approval by a dedicated committee, which assesses its consistency with the educational objectives described in the Academic Regulations (*Regolamento*) of the Study Program.

The **Credito Formativo Universitario - CFU** (University Educational Credit - ECTS) is the unit of measurement of the workload required in terms of learning activities. One credit conventionally corresponds to 25 hours of work, including both self-study/individual work and assisted teaching activities, meaning all educational activities in which the student interacts with the instructor (lectures, group exercises, laboratory activities, etc.).

The Degree Program of the MSc in Energy Engineering balances basic theoretical knowledge, advanced skills in specific sectors, and practical and design experience.

The program spans two years, each with a distinct educational objective, and is organized into seven tracks (Pre-Approved Study Plans, PSPA), which enable progressive specialization in different areas of energy engineering.

Pre-Approved Study Plans (PSPA) and customization

The first six tracks are active at the Milan Bovisa campus:

- EEG - Green Power Systems
- EEH - Oil and Gas Production



- EEP – Power Generation, which in the second year offers two specialization paths: Energy Systems for Transition and Propulsion and Power (the latter delivered as a joint track with the MSc in Mechanical Engineering)
- EES - Energy for Development
- EIT - Energy Use and Built Environment
- WND - Wind Energy (joint track with the MSc in Mechanical Engineering)
- EEE – Renewables and Environmental Sustainability (active at the Piacenza campus)

Each track includes a coordinated set of specialized courses, complemented by elective courses and a final exam. The program is designed to prepare energy engineers capable of working in technologically advanced environments or continuing their academic career with a PhD.

1. First year: Deepening and consolidation of basic skills

Students consolidate and expand the knowledge acquired in their bachelor's degree program, building a solid interdisciplinary foundation necessary to address modern energy issues with a systemic and integrated approach. The training activities are divided into several areas:

- Advanced fundamentals of energy engineering, with courses such as Heat and Mass Transfer and Energy Conversion, which delve into applied thermodynamics and energy systems.
- Cross-cutting aspects of energy, with courses on chemical processes (Fundamentals of Chemical Processes), energy economics (Energy Economics, Thermoconomics and Energy Modeling), and electrical systems (Electric Power Systems, Electric Conversion from Green Sources of Energy)
- Emerging technologies, addressed through courses such as Green Building Energy Systems, Electrochemical Energy Conversion and Storage and Digital Twin for Energy Systems Management.

The basic teachings are common and functional to all the specializations provided for by the various tracks.

2. Second year : Specialization and design application

The second year is dedicated to specialized in-depth study and the development of advanced application skills through targeted courses, project activities, and involvement in research and innovation. The goal is to provide students with a critical and integrated vision of the energy sector, preparing them to address complex, constantly evolving professional scenarios characterized by a strong push toward ecological and digital transitions.

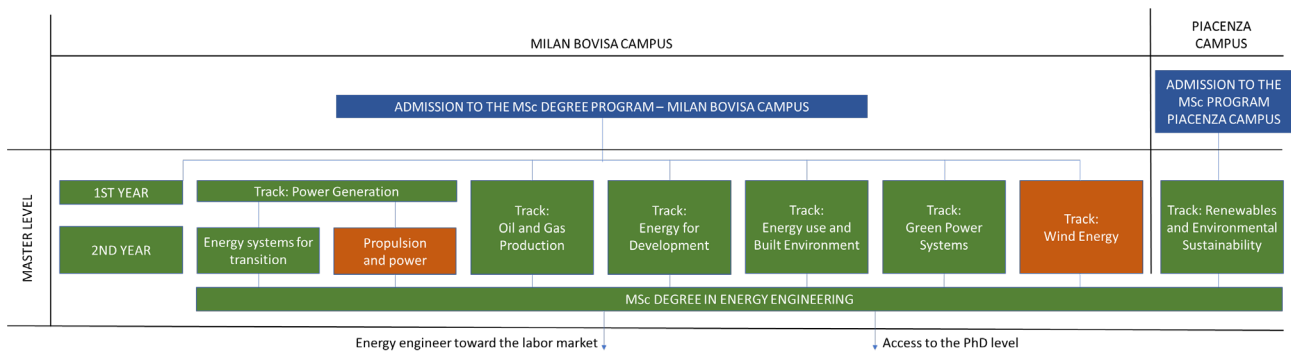
Training activities include the analysis and design of technologies for the efficient production, management, and use of energy, an in-depth study of the economic, regulatory, and strategic aspects of energy systems, and the development of transversal skills useful for project and process management.

The program concludes with free-choice activities (including soft skills training) and a final exam, which summarizes the coursework and often connects to research contexts or real-world industrial applications. This structure allows for significant customization of the study plan, aligned with the student's interests and professional aspirations.

Polimi Ambassador Programs

Energy Engineering MSc students can participate in the Polimi Ambassador excellence programs, in the Green Technologies or Smart Infrastructures profiles. To obtain the Ambassador title, students must include additional courses consistent with their chosen profile in their study plan. Participation in these initiatives is formally recognized in the Diploma Supplement, issued at the end of the program. The application procedures and available courses are indicated in the Degree Program Educational Rules.

The figure below summarizes the general structure of the Degree Program, highlighting the teaching organization over two years and the main professional and academic opportunities.



Interdisciplinary Programs

▪ PoliMI Ambassador

The PoliMI Ambassador programs are four advanced university-level training paths designed to create new professional profiles in Green Technologies, Smart Infrastructures, Inclusivity Design, and Creative Thinking. The objective is to foster the acquisition of:

- skills in specific areas consistent with the selected educational path;
- enabling digital technologies relevant to the profile;
- interdisciplinary tools and methods, and a systemic vision mindset;
- the ability to work in interdisciplinary and multi-sectoral contexts, developed through exposure—also in team settings—to case studies and challenges.

For a detailed description of the objectives of each PoliMI Ambassador program, please refer to the [PoliMI Ambassador](#) webpage.



Each educational path is developed throughout the *Laurea Magistrale* (equivalent to Master of Science) and defines, within 130 *Crediti Formativi Universitari* (University Educational Credits – ECTS), of which at least 10 must be extra credits, the minimum number of credits required to obtain the selected *Laurea Magistrale* degree and, at the same time, to receive the PoliMI Ambassador certification in the selected field.

The student must acquire at least 30 *CFU* (ECTS) in educational activities relevant to the chosen PoliMI Ambassador profile, selected from two course tables listed in the *Regolamento Didattico del Corso di Studi* (Study Program Educational Rules) of their program. In particular, the student must obtain at least 10 *CFU* from the first table (Table A) and 20 *CFU* from the second (Table B), in accordance with the procedures described in the Study Program **Educational Rules**.

The "PoliMI Ambassador" certification will be included in the Diploma Supplement and will be officially recognized through the issuance of a specific digital badge.

Failure to earn the 10 extra *CFU* (ECTS) and the minimum 30 *CFU* (ECTS) in activities related to the Ambassador profile does not preclude the student from obtaining the *Laurea Magistrale* (Master of Science) degree.

What are the teaching methods?

Teaching and learning models

The educational model of the Politecnico di Milano includes five types of assisted teaching:

- Transmissive / Lecture-Based Teaching (Didattica trasmissiva/frontale – DT): the student listens to the delivery of content that will then be consolidated independently;
- Interactive / Participatory Teaching (Didattica interattiva/partecipativa - DI): the student, under guidance, is involved individually or in groups in carrying out or participating in an activity proposed by the instructor, also through the use of suitable digital tools;
- Laboratory-Based Teaching (Didattica laboratoriale - DL): the student is involved, individually or in groups, in a practical experience aimed at applying the concepts and methodologies presented by the instructor, typically with the aid of appropriate tools and equipment in computer or experimental laboratories;



- Project-Based Teaching (Didattica progettuale – DP): the student is involved, individually or in groups, in the development of a complex project or product, which is gradually enriched as awareness and the ability to use theoretical, technical, and metacognitive tools are acquired;
- Evaluation-Based Teaching (Didattica valutativa - DV): the student is directly involved in an evaluation or self-evaluation activity followed by appropriate feedback (quantitative or qualitative, and either named or anonymous).

The courses offered in the Study program combine the different teaching methods presented in the box above. You can find details of the teaching methods for each course in the respective information sheet on the university website (accessible from the Degree program description), which also lists the objectives and expected learning outcomes, the topics covered, and the prerequisites.

The breadth of courses offered within the program makes it difficult to define a precise curriculum structure. Nonetheless, many of these courses employ innovative teaching approaches, including blended learning and flipped classrooms. In addition, the program provides more than ten laboratory courses, enabling students to deepen their understanding of the applied and professional dimensions of their training.



What are the assessment methods?

Assessment methods and exam sessions

The assessment methods are described in the course syllabus (scheda dell'insegnamento) and are made available at the beginning of each academic year. By including a course in their Study Plan, students acknowledge and accept the related assessment methods.

Student performance is assessed through exam sessions held during the dedicated periods specified in the Academic Calendar (*Calendario Accademico*), and may also be evaluated through ongoing assessments (*valutazioni in itinere*) conducted during the semester in which the course is delivered.

For each academic year, there are five exam sessions scheduled for all courses. Specifically, two exam sessions take place at the end of the semester in which the course is taught, two at the end of the other semester, and one in September.

Ongoing assessment

Ongoing assessment may take place through various methods, such as: written and/or oral and/or laboratory tests, projects, reports, assignments, and other types of activities assigned by the instructor, carried out either in class or independently, also through the use of digital and online tools.

Ongoing assessment based on two partial exams. For courses that include an ongoing assessment based on two partial exams, the tests are generally held during the breaks in teaching activities specifically scheduled in the Academic Calendar. The date of the second exam coincides with that of the first exam session in the session immediately following the teaching semester. On that date, the student may take either the second partial exam or the regular *exam session*.

Other forms of ongoing assessment. Forms of ongoing assessment other than those described above may take place at any time during the teaching semester. For courses that include them, some assessed activities, clearly indicated in the course syllabus, may be mandatory or required in order to receive a full evaluation. Failure to participate in such activities may result in restrictions during the exam sessions, either in terms of grading or in the ability to take the exams.

Registration for exam sessions

In order to take part in an exam session, students must register via the Online Services within the specified deadlines. Exam registration is permitted only if the student is up to date with tuition fee payments and the course is included in his/her Study Plan. If the regular registration deadline is missed, it is still possible to register until 11:59 PM on the day of the exam, subject to approval by the professor. Students who decide not to take the exam must cancel their



registration no later than the day before the exam, except in cases of unforeseeable last-minute impediments.

In the MSc in Energy Engineering, the exam format is more varied and structured than in the first-level program. The large number of courses encompassed within the program makes it difficult to provide a clear definition of the exam format. However, it can be said that in the first year, written exams remains predominant, especially with open-ended questions, occasionally complemented by multiple-choice questions. Several courses include an optional oral exam, useful for confirming, clarifying, or improving the written exam grade. Interim tests are used in some courses to break up the exam and reduce the final exam load.

Starting in the second year, mandatory oral exams, technical discussions on projects, and the use of specific software become more frequent. Some exams consist of multiple parts (oral, written, and project), all of which must be passed to obtain the final grade. In general, there is an increased focus on practical and project-based learning.

Below is a list of examples of the assessment methods adopted in some courses taught in the 2024-25 academic year (students are invited to check the course information sheet for the current academic year for any changes):

- Heat and Mass Transfer includes a closed-book written exam: numerical problems and theoretical questions, without an oral exam.
- Energy Conversion A includes an exam composed of a written test and an oral test, both mandatory (or a report of an individual project work carried out during the semester for Energy Conversion B)
- Fundamentals of Chemical Processes includes a mandatory written and oral exam that assess the student's ability to quantitatively analyze chemical processes and their knowledge of thermodynamic and kinetic principles, respectively.
- Control Systems includes two individual ongoing tests and a mandatory group simulation project.
- Safety Ventilation and HVAC Design includes a mandatory oral exam on all course demos and a review and technical discussion of the project developed in a group.
- Digital Twin for Energy Systems Management includes a report on the workshops conducted with the tutor using software and an oral exam to verify understanding of the concepts covered and individual contributions, with possible theoretical questions, also in written form, depending on the number of participants.
- Thermoconomics and Energy Modeling includes lectures with a participatory approach, methodological exercises on the use of indicators and thermoconomics, and group work on energy analysis and planning at the national level.

These modalities reflect a more technical and project-oriented approach, in line with the training expected for the two-year period.



The student's exam results are evaluated according to this classification:

- from 18 to 30 with honors: this is the valid grade obtained by the student
- Absent: the student did not show up for the exam
- Refused (Rifiutato): it is assigned:
 - when the student declines the grade directly from the application
 - or when the teacher provides for it upon communication from the student
- Postponed (Rimandato) = the student will be able to re-sit at a later exam sitting (to be assigned even if he/she withdraws from a test/assessment)
- Rejected (Riprovato) = the student will be able to re-sit in a subsequent session

"Rejected" result should only be used in cases of serious preparation deficiencies that cannot be resolved between two exam sittings of the same exam session. Otherwise, no "skip-the-appeal" mechanism can be implemented.



What does the final exam consist of?

On the website of the School of Industrial and Information Engineering, under the section [Bachelor's and Master's Degree Exams](#), the following resources are available:

- The regulations for Bachelor's and Master's degree exams, along with the *Regolamenti Integrativi* (supplementary regulations) for each *Corso di Studio* (Study Program);
- Information on how the examination sessions are conducted, key deadlines, and the procedures for submitting the thesis;
- Thesis templates: formats for traditional and article-style theses, as well as the executive summary template, which must be submitted together with the thesis in case a *Controrelatore* (Examiner) is required.

The final exam consists of the writing and defense of a thesis, independently conducted by the student. Its development requires a commitment commensurate with the assigned credits (usually 20). The thesis may be theoretical, numerical, or experimental and may be completed within an academic setting (including at foreign universities) or in collaboration with companies during a non-curricular internship (i.e., one that does not require credits beyond those for the final exam). A supervisor is required for the final thesis defense. The appointment of a co-supervisor may be required, at the discretion of the primary supervisor. Based on the quality of the work, the degree grade varies up to a maximum of 7 points (out of 110) for thesis with examiner (contro-relatore) and up to 4 points without examiner.

Can I get help with my studies?

Tutoring

In order to guide and support students throughout their studies, particularly during the first three years, the School of Industrial and Information Engineering offers various tutoring opportunities, with the aim of providing each student with the most suitable support for their needs. The approach includes peer-to-peer tutoring services, activated on demand based on student requests, as well as more traditional tutoring services offered on fixed dates and times.



- **Learn how to Learn (Information and guidance tutoring)**

Targeted at first-year students who scored below 60 on the TOL, this is an optional program consisting of three thematic webinars designed to help students immediately identify effective strategies for managing typical university situations, such as attending lectures, studying independently, managing study time, and handling distractions.

To complement the live component, asynchronous activities are provided to deepen the topics addressed during the webinars.

The program is delivered in September (over the course of one week), before the start of classes. Interested students receive a notification email inviting them to participate.

- **Peer to Peer Tutoring**

In this form of tutoring, experienced student tutors provide support, either individually or in small groups of 3–4 students, on the core courses taught during the first two years of all *Corsi di Laurea Triennale* (Bachelor's Laurea Programs). Students may request tutoring for up to two courses per semester.

Those who wish to request a tutor must apply through the “Peer-to-Peer Tutoring” platform available on their Online Services.

For further information, please contact: tutorato-ingegneria@polimi.it.

- **Tutoring for first-year students**

For many of the first-year courses of the *Bachelor's degree program*, tutoring sessions are available and led by PhD students or experienced instructors.

The calendars are available on the School's website at the page: [Calendario Tutorato Matricole](#) (*First-Year Tutoring Calendar*).

- **Specific tutoring activities**

The School also promotes specific tutoring initiatives:

Equalization peer-to-peer tutoring: this service is intended for students coming from Bachelor's degrees not strictly aligned with the chosen *Master's degree program*, or for international students. More experienced student tutors provide support, either individually or in small groups of 3–4 students, on courses within the Master's *Study Programs*.

Tutoring in support of specific courses: tutoring sessions held by PhD students and experienced instructors on selected courses from various study programs, also based on student feedback.

The schedule for these activities is available on the website at: *Calendario tutorato specifico* (*Specific Tutoring Calendar*).

Polimi Open Knowledge (POK)

POK (Polimi Open Knowledge) is the first Italian university MOOC (Massive Open Online Courses) platform, offering free online courses open to everyone. The main objective of the platform is to support students, not only from Politecnico di Milano, throughout their university and professional journey: from high school to university, from the *Bachelor's*



degree to the Master's degree, and from university to the job market.

In addition, many other courses are available for teachers, researchers, professionals, and the general public.

First-year students who wish to strengthen their foundational knowledge in mathematics and physics are encouraged to follow the modules: [Introduzione alla matematica per l'università: Pre-Calculus](#), [Introduction to Experimental Physics: Electromagnetism, Optics, Modern Physics](#).

Study Tips

Frequency and study method

It's advisable to attend classes regularly, depending on your available timetable. However, if you find a class difficult to follow or understand, you can adopt some helpful strategies:

- **Ask** the teacher or tutor for clarification and advice.
- **Review the prerequisites** : check your basic knowledge and, if necessary, explore the preparatory topics in more depth. If they aren't listed, please ask the instructor.
- **Participate in tutoring sessions** , both those led by teachers and peer-to-peer ones with other students.
- **Use teaching resources** such as books, handouts, notes, slides, instructional videos, outlines, lecture recordings (e.g., Webex), and digital tools, including artificial intelligence.
- **Study in a group** : interacting with other students promotes learning through sharing doubts, notes, and exercises.

Study load management

It's important to carefully evaluate your ability to handle the course load. It's **very helpful to interact with students from subsequent years** . If you don't know them directly, you can interact through WhatsApp groups, Telegram, or the program's Instagram pages. Alternatively, you can contact a student representative.

Practical strategies for following lessons

- **Before class** , take a quick look at the slides or handouts to familiarize yourself with the topics.
- **After the lesson** , review the contents and build a small concept map to capture the main concepts.



- **During practice**, keep a form handy. If you don't have one, find one online, ask colleagues, or create your own and update it over time.
- Try **at least one exercise on your own** immediately after the explanations to check your understanding.

Laboratory activities

In laboratory activities, in addition to taking notes, active participation is essential, aiming to acquire practical and instrumental skills. Collaborating with classmates allows the diverse knowledge within the group to be leveraged.

Particularly difficult exams ("killer exams")

It's common to encounter some particularly challenging exams along the way. Each student has a different predisposition towards topics or types of tests.

The key is **not to get discouraged**, but to approach the exam methodically. It's important:

- Find out about the **required topics and exam methods**: time available, type of exam (written, oral, mixed), any projects, permitted aids (calculators, forms, notes), use of the computer, etc.
- **Plan your exam session** in a balanced way, evaluating your limitations and trying to obtain a sustainable number of credits.
- If you experience persistent difficulties, **speak to the teachers** to clarify any doubts and receive helpful guidance.

If an exam proves to be a seemingly insurmountable obstacle, it's important not to give up. Whether you choose to continue or change direction, it's essential to calmly evaluate what's best for you and continue working with determination toward your goals.

Materials provided by teachers

Typically, during the first lesson, the instructor will explain the available teaching materials and provide information on any support tools. If this doesn't happen, it's always advisable to ask for clarification directly.

Each course has an associated space on the **Webeep platform**, where materials, notices, and resources are uploaded. Some instructors provide additional content through personal websites.



The **official course syllabus can be consulted through the "Detailed Program"** link on the course information sheet, accessible from the Degree Program's curriculum. The same information sheet also provides information on:

- Educational objectives
- Expected learning outcomes
- Topics covered
- Prerequisites
- How lessons and exams are conducted
- Number of hours of independent study expected based on the CFU

If you have any questions, you can always ask the instructor or consult with students who have already taken the course.



Are there any extracurricular activities?

Passion in Action

"**Passion in Action**" is the catalogue of open-participation educational activities offered by Politecnico di Milano to its students, aimed at fostering the development of transversal skills, soft and social skills, and at encouraging/facilitating a personalized enrichment of each student's personal, cultural, and professional background.

Those who are interested can take advantage of this opportunity and choose which activities to attend, exploring different subjects according to their interests and personal inclinations.

Students who participate in *Passion in Action* may register for any activity in the catalogue, regardless of its thematic relevance to their *study plan*, provided that any specific prerequisites for individual activities are met.

The skills and competencies acquired are recognized through the awarding of a digital badge and will be reported in the *Diploma Supplement*.

The catalogue is updated regularly. Since the educational modules are activated asynchronously with respect to the semesters, interested students are advised to check the [Passion in Action](#) page periodically.

Student Associations

Student associations are organizations formed by students with the aim of promoting cultural, technical, social, and recreational activities, and creating opportunities for personal and professional growth within the academic environment.

Participating in a student association allows for greater engagement in university life, making the academic experience more dynamic and stimulating. It also fosters the development of transversal skills such as leadership and teamwork, as well as the expansion of one's network, valuable both during university and in professional life.

At Politecnico di Milano, several student associations are active, each with different goals and areas of interest. The full list is available at: [Student Associations](#).

The Study Program organizes and offers several "Passion in Action" activities of particular relevance to Master's Degree students in Energy Engineering. Examples of courses offered include:

- Hydrogen and fuel cell technology



- Sustainable development

The Passion in Action initiatives organized by the Study Program are advertised its WeBeep channel.

Among other extracurricular activities, we also highlight:

- Laboratory visits as part of various courses.
- Orientation events organized by the University Career Service.

There are no student associations directly affiliated with the Study Program in Energy Engineering.

Can I go and study abroad for a period?

Students who wish to take part in an exchange experience must apply through one of the two international mobility calls, which are published in November and April. The University's Mobility Call covers various types of international experiences: simple exchange (1 or 2 semesters) in EU and non-EU countries, Double Degree programs, and Special Programs for students enrolled in specific Study Programs (e.g. Alliance4Tech).

Due to procedural timelines, interested students must apply the year before the planned mobility period.

The choice of possible exchange destinations must be made at the same time as submitting the application to the mobility call. Students are therefore encouraged to gather all the necessary information about each selected destination, out of respect for all applicants.

In fact, declining an assigned destination due to inadequate research into the educational offer results in a lost opportunity, not only for the student who withdraws, but also for other students who could have taken advantage of that placement.

Once they have applied to the call, candidates must carefully follow the deadlines, monitor the rankings, and confirm or decline their interest in the assigned destination, if any. Dates vary for each call, but this phase of the process generally takes place between January and March for the first call, and between May and July for the second call.

Only after the candidate has confirmed the assigned destination, the International Mobility Unit will proceed with the official nomination of each student to the selected host institution. Delays in confirming the destination will result in exclusion from the exchange program.

To view the list of available destinations, students can refer to:

- the section of the Polimi website dedicated to the mapping of all partner universities. By filtering by School and Study Program, students can access useful information about each destination;
- the Exchange your Mind section of the Polimi website, which collects testimonials, useful information, presentations, and in-depth materials on the topic.

An international experience is valuable in its entirety, it allows students to discover new countries, cultures, people, and languages. These aspects should be taken into account when choosing a destination.

At the same time, it is important to remember that it is not always possible to obtain one of the top-listed choices; therefore, each option included in the list of preferred destinations should be selected carefully and thoughtfully.



Students who independently organize their period of study abroad are referred to as “*Free Movers*.” This type of mobility is not part of any structured exchange program organized by Politecnico di Milano, such as Erasmus.

Since it is not a structured and formal program, *Free Mover* candidates must take care of all aspects of their stay abroad on their own (contact with the host university, meals, accommodation, health insurance, etc.), and no financial support is provided for expenses related to the mobility period.

The activities eligible for recognition within a *Free Mover* experience include course attendance or thesis work, with different requirements applying to the application and approval process by the Study Program/thesis supervisor.

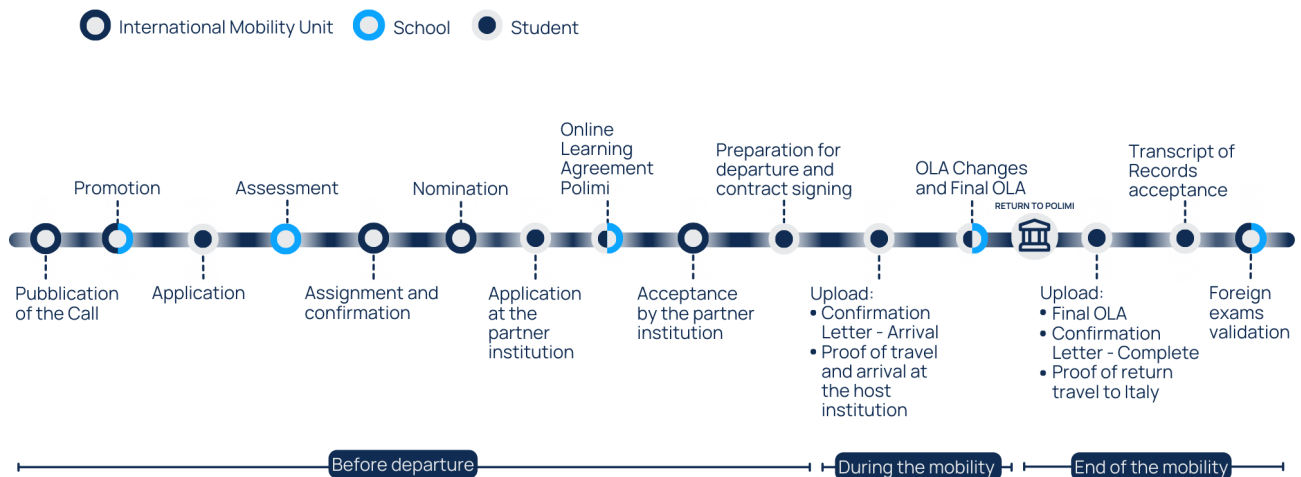
The application for a *Free Mover* mobility may be approved by the student’s *Corso di Studi* (Study Program) only if certain criteria are met. These include an evaluation of the student’s CV and an assessment of the reputation of the host institution where the mobility is intended to take place. The specific criteria are detailed below:

- The host institution for the mobility cannot be one for which there are existing exchange agreements with Politecnico di Milano for the School to which the student is enrolled;
- The host institution must be recognized as a quality institution within the student’s Study Program, and applicants must describe and demonstrate the validity of the proposed institution (a high ranking position in international university rankings can be one criterion, although not the only one);
- The *Free Mover* candidate must have a specific weighted average exam grade of at least 24 out of 30.

Students enrolled in a Degree Program who have already earned at least 60 University Educational Credits (ECTS) in their academic record may apply for a *Free Mover* mobility.

Similarly to the institutional mobility organized by Politecnico di Milano, *Free Mover* mobility is not permitted during the first semester of the Master’s degree. However, students may submit their application during their first semester for mobility periods in subsequent semesters.

For Erasmus+ exchanges, please refer to the box above. The process timeline is shown below.



Double Degree : With the Double Degree, students earn two degrees: one from Politecnico di Milano and the other from a partner institution abroad, thanks to a shared curriculum and a pre-established mobility program between the two universities. Students study at Politecnico di Milano for at least two semesters, earning a total of 60 credits. They then continue their academic career at the partner institution, taking courses and exams, and preparing for the final thesis. The credits earned abroad can range from a minimum of 60 to a maximum of 120, depending on the agreement. The final defense of the thesis is scheduled at both universities, earning two degrees of equal standing.

Enhance : provides the opportunity to take advantage of an integrated educational offering across the 10 participating universities (Chalmers University of Technology (Sweden), Eidgenössische Technische Hochschule Zürich (Switzerland), Gdansk University of Technology (Poland), NTNU Norwegian University of Science and Technology (Norway), RWTH Aachen (Germany), Technische Universität Berlin (Germany), Technische Universiteit Delft (Netherlands), Universitat Politècnica de València (Spain), Warsaw University of Technology (Poland)). Specifically, the system allows students to choose the courses they will take to earn their degree, regardless of where they are taught.

Hyset : is a 120-credit study program offered jointly by Politecnico di Torino e Milano, NTNU Norwegian University of Science and Technology (Norway), Universitat Politècnica de Catalunya (Spain), and Technical University Eindhoven (Netherlands). Hyset offers training in hydrogen technologies, considered essential for addressing climate change and promoting decarbonization in various sectors such as energy, industry, and mobility. In the first year, students acquire fundamental and industrial knowledge of the hydrogen value chain at the Politecnico di Milano. In the second year, students delve deeper into specific topics at another



POLITECNICO
MILANO 1863

partner university, concluding the program with a master's thesis, preferably completed as an internship at a European industrial partner. Upon completion of the program, students earn a double degree from both universities.



Can I do an internship ?

The stage, also referred to as internship (*tirocinio*), is an educational experience in the professional world, allowing students to put into practice the skills acquired during their academic path, and to guide them toward making informed future career choices.

It can take place either in Italy or abroad, in companies, professional firms, foreign universities, or public and private research institutions.

The stage is considered as **curricular** when it is aimed at students. Specifically, it can be:

- *curriculare obbligatorio* (compulsory curricular), linked to the acquisition of University Educational Credits (ECTS) and included in the Study Plan;
- *curriculare opzionale* (elective curricular), linked to the acquisition of University Educational Credits (ECTS) and included in the Study Plan at the student's discretion;
- *curriculare facoltativo* (curricular but voluntary), not involving the acquisition of ECTS and not included in the Study Plan, with a maximum duration of 12 months, to be completed before the thesis defense.

The extracurricular stage is instead intended for recent graduates who are not enrolled in any other university Study Program, and may last up to a maximum of 6 months.

More information: *Stage per laureati* ([Internships for graduates](#)).

Students interested in a curricular stage, whether *obbligatorio*, *opzionale* or *facoltativo*, can visit the [Stage curricolari](#) (Curricular Internships) webpage for more information about:

- how to find internship opportunities (which is the responsibility of the student);
- the documents that the host organization must request from Politecnico di Milano (*Convenzione di Tirocinio* - Internship Agreement and *Progetto Formativo* - SAT - Internship Academic Structure).

Internship and Master's Degree Thesis

The optional curricular internship and the *Laurea Magistrale* (Master of Science) thesis are two separate activities. The first is optional and does not allow for the acquisition of University Educational Credits (ECTS), while the second is mandatory and involves the acquisition of credits.

It is not excluded that the activity carried out during an optional curricular internship could lead to a Master's Degree thesis. However, for this to be possible, the research activity at an external organization must be carried out under the supervision of an academic advisor from Politecnico di Milano, who must agree from the beginning of the internship on the research objectives and methodologies, and must supervise the activities throughout their execution. It is the student's responsibility to contact an academic advisor before the internship begins.



POLITECNICO
MILANO 1863

The Study Program in Energy Engineering does not include mandatory curricular internships. However students may undertake an optional curricular internship (i.e., one that does not lead to the acquisition of credits as part of the program). This is typically the case for students completing an internship in a company for their thesis. For information on internships and traineeships, students are encouraged to contact the University Career Service.

How can I express my opinion?

Students' opinions are important, and Politecnico di Milano provides several tools through which students can express their views.

OPIS Questionnaire

The *OPIS questionnaire* is the official tool used to collect students' opinions on teaching. The questionnaires are anonymous and results are processed in aggregate form.

The outcomes of these questionnaires are essential for instructors and *the* Study Programs Councils, as they offer insight into students' thoughtful and honest feedback, helping to improve both the educational offer and teaching methods. Once a year, every Study Program Council is required to reflect on its educational path, starting also from the results of these questionnaires. Student Representatives are involved in this process, collaborating in the definition of possible improvement actions.

For this reason, it is important that students express their opinions responsibly, in the interest of the entire academic community of students and faculty.

Students are asked to give their opinion on every course they attended during the semester, by answering a questionnaire that gives students the opportunity to directly contribute to the improvement of the quality of education. For each course, the questionnaire becomes available approximately two-thirds into each semester, and its completion is mandatory before registering for exam sessions for the first time.

Graduating Students' Questionnaire

During the final year of the Study Program, students are also required to give their opinion on the entire educational path. Completing the questionnaire is mandatory in order to register for the Bachelor's/Master's Degree graduation session (Graduating Students' Questionnaire). In this survey, students are asked to provide feedback on several aspects, including the organization of teaching, specific course content, facilities, internships, international mobility opportunities, and the final examination.

Student Services Satisfaction Questionnaire

This questionnaire is mandatory for registration to the first exam session of the academic year and is intended only for regular students in the final year of their Study Program. The questions concern the services offered to students, including, for example: enrolment procedures, Study Plan submission, exam registration, tuition fees, student offices, ICT, libraries, dining services, and communication.



POLITECNICO
MILANO 1863



How can I contribute?

Role of Student Representatives

Student representatives play a key role in ensuring the proper and transparent functioning of the University's governing bodies, where they participate to bring the students' perspective. They are elected every two years and serve not only as points of reference for students in various aspects of university life, but also contribute concrete proposals to improve the student experience.

The **Senato Accademico** (*Academic Senate*) is the body responsible for guiding and planning the University's development, with particular focus on teaching and research, and oversees the overall proper functioning of the institution. The Consiglio di amministrazione (Board of Directors), on the other hand, defines the long-term financial planning based on the proposals and opinions of the Senate. Therefore, the student representatives in these bodies are involved in decisions that affect the entire University.

The Joint Student-Professor Committees (Commissione paritetica) of each of the four Schools (3I – Industrial and Information Engineering; ICAT – Civil, Environmental and Territorial Engineering; AUIC – Architecture, Urban Planning and Construction Engineering; Design) monitor the educational offer, the quality of teaching and student services, and make proposals to enhance them. Depending on the School, some or all of the representatives on the Joint Student-Professor Committee also sit on the School Council, which coordinates the study programs and provides general guidance to the School.

The members of the Academic Senate, the Board of Directors, and the Joint Student-Professor Committees form the **Student Council**, a body where discussions take place on topics addressed within the various governing bodies. At the beginning of their term, they also elect the student representatives to the *Nucleo di Valutazione* (*Evaluation Committee*), the *Comitato Unico di Garanzia* (*Guarantee Committee*), and the Sports Committee.

Each **Study Program** has a certain number of student representatives (the number varies depending on the number of enrolled students). Student representatives are full members of the **Study Program Council**, the body responsible for defining the Degree Program and Educational Rules for each Study Program. In this context, student representatives contribute to defining how teaching is delivered, analyzing the effectiveness of courses, organizing the study plan, and acting as spokespersons for their fellow students by reporting any issues related to teaching.

If you want to learn more about the role of representatives, as well as the different representation lists present at the Politecnico, we invite you to visit the page [Polimi – Rappresentanti e Associazioni](#).

Work with Us as a Tutor



Politecnico di Milano offers students the opportunity to carry out tutoring activities as part of paid collaborations within the University:

- If you are a Master's degree student, you can support teaching through tutoring activities.
- If you are a Bachelor's degree student, you can take part in *Peer-to-Peer* tutoring activities, assisting fellow students along their academic path.

These collaborations are assigned through specific calls for application and are reserved for students who meet certain academic and financial requirements. Compensation and the number of working hours vary depending on the assigned role.

For more details on requirements, application procedures, and deadlines, visit the page: [Polimi - Paid Collaborations](#).

What's next?

The [Career Service](#) is the professional guidance and placement service of the Politecnico di Milano. It works in collaboration with employers (both private and public companies) and with the Study Programs Councils to offer students, starting from their early academic years, a wide range of initiatives aimed at bringing them closer to the professional world. The goal is to broaden their perspective by presenting them with future opportunities in terms of promising sectors and the most in-demand roles and skills.

Among the services offered by the Career Service:

- **Personalised support programs** with a *Career Advisor*, providing tips for preparing an effective CV, simulating job interviews, and more. [Discover more in the video resources.](#)
- **Special orientation pathways** to explore professional roles in innovation ([Am I an Innovator?](#)) across a variety of settings, from roles in established companies to positions involved in launching new start-ups.
- **Support in identifying internship opportunities**, both before and after graduation ([Internships](#)), as well as assistance in setting them up and formalising them through an *Internship Advisor*.
- **Organisation of orientation and mentoring events** with Italian and international companies (e.g. roundtables, career talks, career competitions, company tours), regularly posted on the website: [[Career Service](#)].

In addition to the activities listed in the box above, the program provides support to the Career Service in organizing the Energy & Sustainability Career Week, which takes place annually with the participation of many companies. Faculty members of the study program moderate roundtable discussions and take part in events designed to foster student-company networking.

The Study Program uses its own channels to promote Career Day, the major job fair dedicated exclusively to students and graduates of Politecnico di Milano.

Finally, regarding outgoing orientation towards the doctorate, the Degree Course offers support to the STEN (Energy and Nuclear Sciences and Technologies) doctoral course in conjunction with the Open Day and other outreach initiatives attended by Master of Science students.



Contacts

Coordinator/President of the Study Programme: Paolo Chiesa

Study Plans: Luca Molinaroli (BSc level), Paolo Chiesa (MSc level)

Admissions:

Italian candidates: Paolo Chiesa, Luca Molinaroli

Foreign candidates: Paolo Colbertaldo, Lorenzo Sforza, Behzad Najafi (Milan campus);

Emanuele Martelli, Michela Longo, Behzad Najafi (Piacenza campus)

Graduation/Final Exam: Andrea Lucchini, Federico Viganò (Piacenza campus)

Transfers and programme changes: Luigi P. M. Colombo, Luca Molinaroli, Paolo Chiesa

International Mobility: Gianluca Valenti

Orientation: Augusto Della Torre

Tutoring: Davide Falabretti

Internship: Luigi P.M. Colombo

Student Representatives: rappresentantistudenti-ccsenergetica@polimi.it

Teaching Secretariat: Marisa Cascardi, Paola Robustelli

Useful links

Website of the [School of Industrial and Information Engineering](#)

Study Programme Website : <https://www.ccs-energetica.polimi.it/it/>

WeBeeP Channel of the Degree Course : <https://webeep.polimi.it/course/view.php?id=2585>

Student Office: [Online counter](#)

Campus and Services: [Equal Opportunities and Inclusion](#) , [Psychological Well-being](#)