Politecnico di Torino

ACADEMIC REGULATIONS

Master's degree programme

in

ENGINEERING AND MANAGEMENT

Department of Management and Production Engineering
Collegio di Ingegneria Gestionale e della Produzione

Academic Year **2025/2026**

The English translation of this document is provided as a support to the student community and has no legal effects. The Italian version shall constitute the sole authentic text and will be referred to for any legal matters.

SUMMARY

Art. 1 – Specific learning objectives and career prospects

1.1 Specific learning objectives

The Master's degree programme in Engineering and Management is designed to train engineers capable of tackling the systemic challenges of the business world with both competence and innovation. The programme aims to develop advanced skills in both technological and economic-managerial fields, enabling graduates to significantly contribute to the innovation of products and services. The curriculum covers a broad range of topics, from the economic and legal analysis of markets to project management for new product development, business strategy, organizational design, operations management and quality control.

The goal is to train highly qualified professionals ready to play an active role in strategic and operational decision-making—such as designing and managing business models, creating organizational structures, developing new products and services, and making financial decisions—which are essential for the competitiveness of companies and organizations operating in highly innovative and technologically advanced contexts.

1.2 Career prospects

The Master's degree programme aims to train a variety of professional profiles. The career prospects and the main functions and competencies associated to each profile are illustrated below.

Professional profile	Main functions and competencies
Management Engineer with expertise in innovation project management	Functions: They manage innovation projects related to the development or improvement of products, services and business processes. They are a cross-functional liaison between technical, production, logistics, marketing, information systems, finance, and control departments. They contribute to strategic planning processes, technology analysis, and the definition and management of industrial plans. Competencies: • Ability to analyse the drivers of market profitability, including competition dynamics, business strategies, regulatory frameworks, and the technological evolution of products and services. • Ability to assess how key macroeconomic variables affect the definition and implementation of corporate strategies. • Ability to identify key elements of organizational design, based on company strategy and product characteristics. • Ability to evaluate business plans related to new investments or the launch of new products and services, including their financial sustainability. • Knowledge of marketing tools: marketing levers, pricing methods and strategies in various contexts, distribution strategies, and the role of contracts in aligning actors along the supply chain. • Knowledge of techniques for managing product development project portfolios, conducting market research, forecasting sales, and analysing the diffusion of technologies. Potential employers: Manufacturing and service companies
Management Engineer with expertise in business control and management	Functions: They work as an analyst supporting top management in the areas of marketing, production, and finance, contributing to the definition and implementation of business strategies. Competencies:

	• Ability to apply advanced methodologies for management control and cost accounting. • Ability to analyse and design business flows and processes, and define the requirements and features of the information systems needed to support them. • Ability to assess the profitability and asset implications of both operational and financial business decisions. • Ability to understand the interaction between financial market trends, investment opportunities, and corporate capital structure decisions. • Knowledge of business start-up requirements, financial and asset structure, shareholders' rights and obligations, and rules of corporate governance and management. • Ability to apply quantitative tools for risk management. Ability to identify, assess, and manage key financial, credit, and operational risks. Potential employers: Manufacturing or service companies; public-sector companies and institutions.
Management Engineer with expertise in information systems for business processes	Functions: They analyse business processes, define their information requirements, and identify suitable types of IT solutions and information system architectures. They contribute to programmes and projects aimed at improving information systems and organizational performance, ensuring the right balance between risks, costs, and benefits. Competencies: • Ability to apply techniques for developing innovation projects based on Information and Communication Technology (ICT). • Knowledge of the principles of analysis, design, control, and development of information systems within manufacturing and service companies, including user interaction aspects. • Understanding of the specific managerial issues in organizations focused on the development and delivery of ICT services. Potential employers: Manufacturing and service companies; public-sector companies and institutions.
Management Engineer with expertise in operations management	Functions: They hold positions of responsibility in managing specific operational activities within companies, particularly in the areas of production and internal/external logistics. Competencies: • Knowledge of management strategies applicable to production systems and of performance analysis procedures for those systems. • Knowledge of integrated design and production techniques used in manufacturing industries. • Ability to apply methods for assessing the operational, economic, and environmental efficiency, effectiveness, and sustainability of production systems. • Knowledge of key techniques for process and acceptance control, both at the stage of raw material acquisition and product/service delivery to the market. • Ability to apply quality measurement methods and the core concepts established by quality regulations. • Knowledge of the main manufacturing processes and production technologies. • Knowledge of industrial accounting and its use for control purposes, as well as for cost engineering in product development and competitive benchmarking. • Ability to apply planning, scheduling, monitoring, and project control methods using quantitative tools.

	• In-depth knowledge of topics such as distribution systems configuration, logistics outsourcing, the impact of new technologies (e-logistics), and solutions adopted in various industrial and commercial sectors. • Ability to address key supply chain issues through the application of quantitative and qualitative analysis tools. • Ability to apply techniques for economic evaluation within a supply chain, such as Activity-Based Costing applied to logistics, and Lean Logistics. • Ability to organize and manage transport systems efficiently. • Ability to assess the impact of new technologies on the labour market and within companies, including effects on required skills, organizational structures, production management, and legal aspects related to business. Potential employers: Manufacturing and service companies; public-sector companies and institutions.

1.3 Professional profiles (ISTAT codes)

With reference to the list of professional profiles classified by ISTAT (Italian National Institute of Statistics, https://www.istat.it/en/), graduates from this Master's degree programme can work as:

ISTAT code	Description
2.2.1.7.0	Ingegneri industriali e gestionali
2.5.1.1.1	Specialisti della gestione nella Pubblica Amministrazione
2.5.1.1.2	Specialisti del controllo nella Pubblica Amministrazione
2.5.1.2.0	Specialisti della gestione e del controllo nelle imprese private
2.5.1.3.2	Specialisti dell'organizzazione del lavoro
2.5.1.5.1	Specialisti nell'acquisizione di beni e servizi
2.5.1.5.2	Specialisti nella commercializzazione di beni e servizi (escluso il settore ICT)
2.5.1.5.4	Analisti di mercato

Art. 2 – Admission requirements

Italian regulations on enrolment in Master's degree programmes require Italian universities to check that applicants meet the following requirements:

- have a **three-year Bachelor's degree or university diploma**, or **other educational qualification obtained outside Italy** and recognized as suitable for admission;
- meet specific curricular requirements;
- have an **academic performance considered suitable** for admission.

CURRICULAR REQUIREMENTS

As far as curricular requirements are concerned, applicants must have a Bachelor's degree or a three-year university diploma, or an educational qualification obtained outside Italy and recognized as suitable for admission. In addition, they must have gained specific knowledge and competencies during their previous academic path (credits in specific Scientific Disciplinary Fields).
In particular, applicants must have earned:

- minimum 40 credits earned in the following core Scientific Disciplinary Fields (settori scientifico-disciplinari): CHIM/07, FIS/01, FIS/03, ING-INF/05, MAT/02, MAT/03, MAT/05, MAT/09, SECS-S/02.
- minimum 60 credits earned in the following specific Scientific Disciplinary Fields (settori scientifico-disciplinari): CHIM/07, ICAR/08, ING-IND/06, ING-IND/08, ING-IND/10, ING-IND/13, ING-IND/14, ING-IND/15, ING-IND/16, ING-IND/17, ING-IND/21, ING-IND/22, ING-IND/24, ING-IND/31, ING-IND/32, ING-IND/33, ING-IND/35, ING-INF/01, ING-INF/03, ING-INF/05, ING- INF/06, ING-INF/07, IUS/01.

The credits of the Scientific Disciplinary Fields found both in the first group and in the second group are primarily counted for the first group. The remaining credits are counted for the second group. Therefore, the credits of a course can be counted partly to reach the minimum number of credits of both groups.

Applicants who lack less than **10 credits** can be admitted to the programme by the Academic Advisor of the degree programme. For applicants who lack **more than 10 credits**, the evaluation will be subject to the final approval of the Coordinator or the Vice coordinator of the degree programme.

Applicants who do not meet the curricular requirements are required to make up for their unfulfilled curricular requirements (missing credits) before enrolment, by means of:

- **enrolment in single courses in order to make up for unfulfilled curricular requirements**: this is possible for students who need to earn up to a maximum of 60 credits. Students who enrol in single courses for this reason are allowed to include in their Personal Study Plan exclusively the courses assigned by the evaluator.
  or else,
- **credit transfer at Bachelor's level**: this is possible for students who need to earn more than 60 credits. In this case, students need to enrol in the Bachelor's degree programme that offers the credits in the specific Scientific Disciplinary Fields (core subjects and commentary subjects) required for admission to this Master's degree programme.

SUITABLE ACADEMIC PERFORMANCE

Applicants must have a suitable academic performance and an English language certificate (B2 level or above, as defined by the Common European Framework of Reference for Languages: Learning, Teaching, Assessment - CEFR).

The academic performance will be assessed as follows.

1) Applicants from Politecnico di Torino

Applicants can be admitted to the programme if they earned their Bachelor's degree in:

- 4 years or less (1) - no exam average grade required
- between 4 and 5 years (1) –exam weighted average grade required (2): ≥21/30
- more than 5 years– exam weighted average grade required (2): ≥ 24/30

The weighted average grade is calculated on all accrued course credits (graded on a scale of 30) counting towards the achievement of the Bachelor's degree, after having subtracted the worst 28 credits.

The duration of the Bachelor's path is calculated on the basis of the number of academic years in which the applicant has been enrolled at the university, starting from the first enrolment in the Italian university system:

- for full-time students: the duration of the Bachelor's path is equivalent to the number of academic years of enrolment.
- for part-time students: each year of enrolment is counted as half-year.
- for full-time students taking part in the "Dual Career" programme: each year of enrolment is counted as half-year, as for part-time students.

In the event of credit transfer, the duration of the Bachelor's path must be increased proportionally to the number of credits that have been recognized by Politecnico (10-60 CFU =1 year, etc.). The worst 28 credits must be subtracted proportionally to the number of validated credits.

(1) Applicants must have graduated by the end of the December Graduation Period
*(2) The weighted average is calculated as follows: ∑(grade*credits) / ∑credits*

2) Applicants from other Italian universities

Applicants who have a Bachelor's degree awarded by another Italian university must have a weighted average grade of all the exams ≥ **24/30**, regardless of the number of years it took them to graduate. The weighted average grade (∑(grade*credits) / ∑credits) is calculated on all accrued course credits (graded on a scale of 30) counting towards the achievement of the Bachelor's degree, after having subtracted the worst 28 credits.

3) Applicants with a non-Italian educational qualification

To be admitted to Politecnico Master's degree programmes, applicants must have an academic qualification awarded by an accredited/recognized foreign university, earned after completing at least 15 years of total education (including primary school, secondary school and university).

Applicants who have attended a university programme lasting five or six academic years (different from the 3+2 system) without completing it must still meet the minimum requirement of 15 years of total education (of which at least 3 years at university level) and they must have earned at least 180 ECTS credits or equivalent. Pre-university courses or foundation years cannot be counted towards the minimum number of credits or the minimum numbers of years of total education mentioned above.

In addition to having an adequate academic background and certified knowledge of English (minimum B2 level), applicants who wish to enrol in an Italian-taught degree programme also have an Italian language certificate (minimum B2 level), as defined by the Common European Framework of Reference for Languages (CEFR), as an admission requirement.
The applicant's academic performance and the consistency between the degree programmes offered by Politecnico and the applicant's previous academic background are assessed by the professors designated by Coordinator of the Collegio. The evaluation is carried out on the Apply@polito platform under the section called "Applicants with a non-Italian qualification."

A positive evaluation (offer of admission) allows applicants to enrol in the programme only in the academic year in which the application has been submitted. Admitted applicants who do not complete the enrolment process within the deadlines are required to apply again to the programme in the next academic years.

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More information is available at https://www.polito.it/en/education/applying-studying-graduating/admissions-and-enrolment/master-s-degree-programmes

Art. 3 – Programme curriculum

3.1 Programme overview

The educational path of the Master's degree programme in Management Engineering consists of two main parts: a common core, which forms the foundation of the economic and management training, and a set of optional courses that allow students to tailor their studies to different management areas. This approach enables students to refine their skills in specific fields of interest, preparing them effectively to face future professional challenges.

3.2 Organization of educational activities

The list of courses (compulsory and optional), curricula, possible organization of courses into modules, any pre-requisites and exclusions and the list of the faculty members responsible for the courses are available at:

- Engineering and management: https://didattica.polito.it/pls/portal30/sviluppo.offerta_formativa_2019.vis?p_coorte=2026&p_sdu=38&p_cds=559
- Ingegneria Gestionale: https://didattica.polito.it/pls/portal30/sviluppo.offerta_formativa_2019.vis?p_coorte=2026&p_sdu=38&p_cds=558

The list of the Scientific Disciplinary Fields (Settori Scientifico Disciplinari) for each activity (specific subjects and complementary subjects) is available at: https://didattica.polito.it/pls/portal30/sviluppo.vis_aiq_2023.visualizza?sducds=38558&p_a_acc=2026&tab=0

Art. 4 - Student career

The Student Guide is published on the Teaching Portal every year before the beginning of the academic year. There is a specific Student Guide for each Master's degree programme. The Student Guide is available on the web site of the degree programme.

It contains information and deadlines on:

- academic calendar;
- Personal Study Plan and Annual Personal Study Plan;
- free choice credits;
- internships;
- tuition fees;
- dual career;
- classes and exams;
- class delivery;
- foreign language learning;
- studying abroad/mobility programmes;
- exam rules;
- transfers in/out and internal transfers;
- interruption, suspension, withdrawal, forfeiture;
- credit transfer.

Art. 5 - Final Examination

The Master's thesis represents a key milestone in the educational path of the Master's degree programme, offering students the opportunity to demonstrate the competencies they have acquired by carrying out a complex and structured work. The final examination can be completed in one of three formats: standard, combined with an internship, or combined with a thesis seminar.

These three options are described below:

1. Standard Option: students must write an original thesis under the supervision of a Supervisor. The work may be carried out at the University's departments and laboratories, at other Italian or international universities, in external research laboratories, or in companies and professional firms that collaborate with the University. The expected workload amounts to approximately 400 hours, equivalent to 16 ECTS credits.
2. Internship-Based Option: students can combine an 8-ECTS-credit internship, to be completed exclusively in a company, with a thesis project that builds upon the work carried out during the internship. In this case as well, students must produce original work under the supervision of a Supervisor, with a total workload of approximately 400 hours, equivalent to 16 ECTS credits.
3. Thesis Seminar-Based Option: this option allows students to combine a 6-ECTS-credit thesis seminar with a 10-ECTS-credit final examination. The thesis seminar is a learning activity specifically designed to provide students with the methodological competencies and theoretical tools needed to write a Master's thesis. During the seminar, students attend lectures, workshops, and practical sessions covering various aspects of academic research, including the formulation of research questions, literature review, data collection and analysis, and academic writing. The seminar also promotes a critical and systematic approach to study, encouraging students to develop analytical skills and to formulate innovative, well-founded solutions to the research problems they identify. In summary, the seminar is intended to equip students with the methodological tools necessary for developing their thesis work, fostering a critical and methodical research approach. The final examination enables students to further develop and complete the study initiated during the seminar, with a total workload of approximately 400 hours, equivalent to 16 ECTS credits.

For all formats, students are required to conduct an in-depth analysis of a specific technical or design-related problem, critically review the available documentation, and propose appropriate and innovative solutions. The final thesis is presented and discussed before a designated Graduation Examination Committee. During the defense, candidates must demonstrate their ability to work independently, show a solid understanding of the topics addressed, and effectively communicate the outcomes of their work.

The thesis may be written and presented in English.

The workload required to complete the thesis, for all formats (standard, internship-based, or thesis seminar-based), is approximately 400 hours, equivalent to 16 ECTS credits.

Students must submit their thesis topic request online through the dedicated procedure available in the "Thesis" section of their personal page on the Teaching Portal, in accordance with the deadlines published in the Student Guide – Thematic Calendar section.

The final examination consists of the presentation of the written thesis and the public discussion of the Master's thesis.

The Examination Committees responsible for final evaluations assess the student's entire academic career, considering their cultural maturity, ability to develop original ideas, and the quality of the thesis work.

The final grade is given by the Graduation Examining Committee. Its members evaluate the overall average grade of all the exams on a scale of 110. The committee may add up to a maximum of 8 points, considering the following:

- quality of the thesis work (commitment, autonomy, methodological rigor, relevance of results achieved, etc.);
- thesis oral defence (clarity in presentation, etc.);
- outstanding results achieved during the academic path (number of honours, experiences at foreign universities or research centres, extracurricular activities, participation in Student Teams etc).

A degree with honours (cum laude) may be awarded at the Committee's discretion if the total score is at least 110 by qualified

majority, i.e. at lasts 2/3 of the Committee members.

If the thesis meets the required standards, the Committee may grant the dignità di stampa (printing honour) only if the final grade is 110 cum laude and the Committee's decision is unanimous.

More Information and Deadlines:

- Student Regulations
- Student Guide

Diploma Supplement:

In compliance with article 11, paragraph 8, of Ministerial Decrees No. 509/1999 and 270/2004. Politecnico di Torino issues the Diploma Supplement, a document that can attached to a higher education qualification. It is designed to improve the transparency of international qualifications, as it provides the description of the curriculum successfully completed by the student. This certificate follows the European model developed by the European Commission, the Council of Europe and UNESCO – CEPES: it is issued in two languages (Italian-English) and it is composed of approximately 10 pages.

More information at https://www.polito.it/en/education/applying-studying-graduating/academic-experience/certificates-and-other-documents

Art. 6 - References

6.1 Student Regulations

The Student Regulations define the rights and responsibilities of students and set out the administrative and disciplinary rules that all students enrolled in a degree programme or in a single learning activity at Politecnico must abide by.

6.2 Other Regulations

Particular aspects of students' academic progress are governed by specific Regulations or Calls for Applications published on its website.
In particular:

- The Tuition Fee Regulations specify the annual tuition fees that students must pay. The procedure for requesting a tuition fee reduction is explained in a dedicated guide.
- The University Regulations on Funds for Student Mobility Abroad outline the principles and rules for awarding and disbursing mobility grants. Standard procedures apply to all types of mobility programmes with unified Calls for Applications published twice a year at https://www.polito.it/en/education/applying-studying-graduating/studying-abroad
- The Code of Ethical Conduct also applies to students.