

MASTER'S DEGREE IN TECHNOLOGY AND ENGINEERING MANAGEMENT

ESEIAAT

Terrassa School of Industrial, Aerospace
and Audiovisual Engineering



UNIVERSITAT POLITÈCNICA
DE CATALUNYA
BARCELONATECH

International Campus of Excellence

MASTER'S DEGREE IN TECHNOLOGY AND ENGINEERING MANAGEMENT

The objective of the master's degree in Technology and Engineering Management (MEM) is to develop the knowledge and skills of engineers and scientists in the management of people, projects, resources and organisations in technical environments. The MEM focuses on effective decision making in engineering and technological organisations in today's competitive and rapidly changing business environment.

Companies and organisations need engineers who are able to integrate technical and business skills to face new challenges and solve difficult problems. This master's degree has an analytical orientation and gives students the knowledge and tools to face these challenges in this complex and competitive world of technology. The MEM's curriculum has technology-based core courses in marketing, management, finance and law, as well as a wide range of optional technical courses in engineering, management and business

+50%
of master's degree students are international students

+60%
of doctoral candidates are international students

90%
UPC master's degree graduate employment rate

Source: 2nd graduate employment survey of graduates of Catalan universities by the Catalan University Quality Assurance Agency (AQU Catalunya)

Participation in international networks: CLUSTER, TIME, CINDA and Smile-Magalhães

Curriculum

This information may be subject to change. Up-to-date information is available at upc.edu

90 ECTS credits

1st semester

Finance and Accounting	7.5
Tools for Decision Making	7.5
Information Technologies and Data Analysis	7.5
Asset and Facility Management	7.5
Leading Teams	7.5
Environment, Health and Safety, and Quality Management	7.5

2nd semester

Production and Logistics	7.5
International Business	7.5
Strategy and Marketing	7.5
Advanced Project Management	7.5
Combinatorial Optimisation in Logistics	7.5
Simulation of Industrial and Logistic Processes	7.5
Business Analytics	7.5

3rd semester

Master's Thesis	30
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Compulsory subjects

Optional subjects

Why this master?

The methodology of the master's degree in Technology and Engineering Management follows an adapted project-based learning approach. During the degree, students will work in teams on a project that demonstrates their newly assimilated knowledge and further development of their skills.

Admission

Admission to this master's degree requires:

- A bachelor's degree in engineering.
- An English language certificate equivalent to B2.2 in the CEFR, for candidates whose first language is not English.

Professional experience in engineering or management positions is viewed favourably in the admission process, although it is not compulsory.

Professional opportunities

In their professional roles, graduates of this master's degree will be expected to manage and lead cross-disciplinary engineering and science-based teams, apply quantitative analytical and critical thinking techniques to project

and process management, take a multidisciplinary approach to complex problems involving the Integration of engineering and management principles in projects and processes, and communicate clearly in the language of business to a variety of audiences.

Competencies acquired

Graduates of this master's degree will be able to:

- Analyse data to identify patterns.
- Optimise problems and systems using mathematical models and skills in decision making under uncertainty.
- Apply the theoretical and fundamental principles of management in engineering and technology companies in uncertain environments.
- Analyse the need for physical and financial resources in process and project management in technological environments.
- Include aspects related to internationalisation in decision making.
- Carry out and defend a comprehensive project in technology and engineering business management.

Work placements

The Terrassa School of Industrial, Aerospace and Audiovisual Engineering (ESEIAAT) offers students the option of taking extracurricular placements (on a voluntary basis) while they are studying: you can take up to 1,085 hours of extracurricular placement. Every year, the ESEIAAT signs about 1,000 placement agreements, which means that about 40% of students who take a placement sign an agreement with a company. Moreover, it is obligatory for students to be paid for placements.

Delivery and duration

The master's degree is taught face-to-face in English and starts in September and February. It lasts one academic year of on-campus courses (60 ECTS credits) and six months of on-campus or online work on the master's thesis (30 ECTS credits).

International double master's degrees

The ESEIAAT offers double master's degrees with the University of Bergamo and the Politecnico di Torino.

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The Terrassa School of Industrial, Aerospace and Audiovisual Engineering (ESEIAAT) has substantial experience and an outstanding reputation and is a benchmark in the fields of industrial, aerospace and audiovisual engineering. Its teaching model is based on the learning-by-doing method, in which students engage in real-world projects. The School, which stands out for its focus on innovation, has agreements with universities around the world and solid relationships with business partners. It offers a programme for high achievers and double degree programmes.

The Universitat Politècnica de Catalunya · BarcelonaTech (UPC) is a renowned public institution of research and higher education that is a benchmark in the fields of engineering, architecture, sciences and technology. With its 50 years of history, the UPC welcomes more than 30,000 students every year and hosts the largest concentration of technological research and innovation in southern Europe. It is the best Spanish university in Engineering and Technology, according to the 2020 QS World Universities Rankings by Subject.

Your talent make us proud

Further information:

eseiaat.upc.edu

admissions.eseiaat@upc.edu

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