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## SUSTAINABLE MOBILITY ENGINEERING

MASTER'S DEGREE **POLIBA** 



Master's Degree in Sustainable Mobility



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# The Master's Degree in Sustainable Mobility Engineering at the Polytechnic University of Bari

is part of the Safety
Engineering degree class and aims to provide the skills, knowledge and abilities needed to plan, program and control transport systems, services and networks, as well as design low environmental impact solutions for the efficiency and safety of traditional and smart mobility systems and services.

## EDUCATIONAL OBJECTIVES

The training program is intended for first-level graduates in engineering with a solid background in basic sciences and aims to train students able to integrate safety and sustainability in systems, infrastructures, and engineering solutions for sustainable mobility, or to develop, design and manage plans, systems, and processes in a complex system such as mobility.

This subject requires the development of innovations aimed at reducing environmental impact and improving energy efficiency, while simultaneously ensuring the safety and quality of users' life.

The analysis of the evolution of mobility services in recent years and the projection of what will need to be implemented for future generations makes it necessary to train transversal professional figures capable of addressing the new challenges of sustainable mobility, integrating several strategies for mitigating the impacts of transport on the territory and promoting the ecological and digital transition.

This approach not only stimulates technological innovation, but also the adoption of sustainable practices that improve the quality of life and strengthen the safety of transport systems, reflecting the evolution of engineering in an increasingly interconnected and multidisciplinary context.



#### Location

Courses are taught at the Bari campus.



#### Duration

Expected course completion time is 2 years.



#### Language

All lessons, seminars and laboratories are held in italian.



#### **Admission**

Curricular Requirements and preparation.





In conjunction with safety objectives, the training aims to develop skills aimed at applying techniques for designing infrastructures for soft mobility and for managing means of transport, also in the context of smart mobility. In particular, in the field of measurements, analyses and decision support for mobility, skills will be provided on the analysis and processing of large amounts of data, on the extraction of value from big data. Furthermore, the course aims to decline the design of transport systems in the direction of environmental, economic and social sustainability by providing skills relating to:

- Low environmental impact transport solutions, also in the field of logistics, such as electric or hybrid vehicles and sharing systems, through the optimisation of the use of energy resources;
- Software tools and methodologies for analysing transport scenarios, for example for defining travel times, polluting emissions and for cost-benefit and multi-criteria assessments:
- The accessibility and equity of transport systems, taking into account the needs of all categories of users of such systems, including vulnerable road users.



Graduates can expect job opportunities in:

- public and private companies,
- urban planning agencies,
- engineering consultancies and organizations that deal with sustainable development in the transport sector.

The skills acquired make them suitable for roles that require an integrated vision of sustainability, innovation and management of transport services.



## POST-GRADUATE TRAINING

Post-graduate training includes the possibility of participating in PhD courses, including the one in Risk and Environmental, Territorial and Construction Development offered by Polytechnic University of Bari or Short Specialization Programmes (second level masters) such as (among those specialization programmes active to date and provided by the Polytechnic University of Bari at DICATECh) the second level master in Territorial and Environmental Planning.