# Why ?

The MSc in Transportation Engineering And Mobility (MSc-TEAM) aims to respond to the **deep transformations** taking place – or expected soon – in the field of **mobility**. The goal is to train new engineers to meet challenges and satisfy the demand for new skills coming from the **job market** at a national and international level.

Transportation engineers interconnect services, modes, vehicles, and infrastructures. They manage complexity, facilitating or creating innovative business both for large transport operators and for a distributed ecosystem of actors, boosting the economic growth and, at the same time, ensuring sustainability. MSc-TEAM trains a new generation of experts with excellent skills in modelling and simulation of transportation systems.

You can enter the MSc-TEAM **from different Bachelor's degrees** and the Study Program allow an effective **start in any semester of the year**.

# **Director of the Study Program:**

Prof. Gennaro Nicola Bifulco gnbifulc@unina.it https://calendly.com/gnbifulc/meet-the-director





#### Polytechnic and Basic Sciences School

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### MSc in Transportation Engineering and Mobility

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#### **Student Secretary's Office**

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Faculty of Engineering

# Master of Science TRANSPORTATION ENGINEERING AND MOBILITY

# **MSc-TEAM**





2024|25

# LEARNING **GOALS**

Master's graduates in Transport and Mobility Engineering work in highly innovative professional contexts, characterised by a significant propensity to use new technologies. They are qualified experts in the planning, programming, design and management of infrastructures, terminals, networks, services and technological and organisational processes (including highly innovative ones) related to the mobility of persons and the transport and distribution of freights. The competencies of the Master's degree in Transport and Mobility Engineering cover a wide range of activities, such as logistics, railways, smart roads, mobility as a service and others.



# **PREREOUISITES TO ENROLL**

A bachelor's degree in civil engineering or industrial engineering or information and communication technologies. Other cases considered on an individual basis

# MSc **STUDY PROGRAM**

#### **GENERAL STUDY PROGRAM**

Positioning and location-based services Electric Systems in Transportation Systems and Control Fundamentals Mandatory Subjects Road Safety Machine Learning and Big Data Modeling Transportation and Mobility

One choice out of 3 options

- Digital maps and geological 3D models
- Safety of excavations for infrastructures
- Structural Health Monitoring for Infrastructures

Two choices out of 6 options

- Sustainable road materials
- Intelligent Transportation Systems
- Transport Planning and Appraisal
- Traffic Control
- Railway and Transit services
- Freight and logistics

#### One choice out of 3 options

Unmanned Aircraft Systems for Transportation and Mobility Resilience of Geotechnical Systems Resilience of Transportation Systems | Real-time System

Three pre-filled study plans are available:

- Smart Mobility
- Smart Planning
- Resilient networks

One choices out of 5 options

**Energy Management for** Transportation

Testing and Validation of automated road vehicles

Statistical Lab for Industrial Data Analysis

Infrastructure-Building Information

With 10 additional ETCS it is possible to get one of two different Diploma Supplements

# **SMART INFRASTRUCTURES DEVELOPER APPLIED MACHINE LEARNING**



Digital badges issued for the Diploma Supplements



# IOB **OPPORTUNITIES**

The job opportunities of the Master's Degree in Transport and Mobility Engineering are: in public administration **agencies** responsible for mobility and transport; in business units dealing with transport infrastructures, networks and services; in large public and private companies dealing with the production and management of mobility services, transport systems and fleets of autonomous and **connected vehicles**: in small and medium-sized enterprises with highly innovative features in the mobility sector. The main fields of work are:

- Smart roads, railways and hubs
- CCAM Cooperative Connected and Automated Mobility
- Road and mobility safety
- Circular economy, re-use and sharing paradigms
- Adaptation, maintenance and operation of infrastructures and services
- Design, implementation and control of complex networks of infrastructure, services and pricing systems
- Analysis, forecasting, control and management of mobility demand and traffic flows
- Infrastructure planning and public decision-making

# CONTINUATION **OF STUDIES**

MSc-TEAM graduates may be admitted competitively to postgraduate academic education, such as: PhDs, Level II Masters, Postgraduate Schools, and Doctoral Courses at the national and European levels.

Graduates of the MSc-TEAM study program have access to the research and development actions of the National Centre for Sustainable Mobility.

# WHERE

The courses are held in Via Claudio, a few minutes' walk from Piazzale Tecchio and the main transport links



