UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II
POLYTECHNIC AND BASIC SCIENCES SCHOOL

DEPARTMENT OF CIVIL, BUILDING AND ENVIRONMENTAL ENGINEERING

Student's Guide

2nd Cycle Degree/Master

MSc in
Transportation Engineering and Mobility

Degree programme class: LM-23

THE ACADEMIC YEAR 2022/2023

A quick guide to the programme

The programme at a glance

The Master's degree in Transportation Engineering and Mobility aims to respond to the profound transformations taking place - or expected soon - in the field of transportation. The goal is to train a new generation of engineers to meet transformation challenges and satisfy the demand for new skills and competencies in transportation and mobility, as required by the job market at a national and international level. The Master's degree trains transportation and mobility engineers to compete under changed conditions and perspectives by leveraging the acquired skills in modelling and simulation of transportation systems, thus boosting the economic growth in transportation and, simultaneously, ensuring sustainability goals.
To this aim, the Master's degree in transportation engineering and mobility at the University of Naples Federico II offers a learning approach oriented toward acquiring a wide range of specific skills. Training activities are integrated with experiential and laboratory teaching, corroborated by other helpful skills for rapid landing in the job market. Students explore applicative problems in their internship and thesis and develop and test solutions with industrial stakeholders. As a result, the master's graduates in Transportation Engineering and Mobility work in highly innovative professional contexts, characterised by a significant propensity to use new technologies.

Job opportunities

The job opportunities for the master's graduate in Transportation Engineering and Mobility are: in public administrations; in agencies responsible for mobility and transportation; in operational 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 autonomous and connected vehicle fleets; in small and medium-sized companies with highly innovative characteristics in the mobility sector. The master's graduate covers job activities with highly specialised professional, intellectual and scientific functions in transport engineering, with technical functions in the early stages of the career.
The knowledge, skills and abilities acquired by the master's graduates in Transportation Engineering and Mobility allow for extensive employment opportunities, ranging over many sectors.

Admission to the programme and prerequisites

Joining the MSc in Transportation Engineering and Mobility requires a BSc in one of the classes L7 (Civil and Environmental Engineering), L8 (Computer Engineering), and L9 (Industrial Engineering). Otherwise, at least a level 6 qualification (European Qualifications Framework - EQF) is required, and admission will be subject to the assessment of basic knowledge, which should include at least 36 ETCS in basic sciences and at least 39 ETCS in industrial engineering or information and communication technology or civil engineering.
In all cases, evidence of English language proficiency at level B2 or above must be provided in the form of a certificate issued by the University or a higher-level body recognised by the University; otherwise, individual testing may be carried out.
For further details, refer to:
https://www.universitaly.it/index.php/public/schedaCorso/anno/2021/corso/1572550#
Enrolment (foreign students):
http://www.international.unina.it/admission-regulation/
Enrolment (Italian students):
https://www.segrepass1.unina.it/GuidaAlleImmatricolazioniOnLine.pdf

Study plan (the Academic Year 2022-23)

General Study Plan

The *General Study Plan* allows students to compose their programme according to the appropriate rules. The Master's Degree Course Management Board evaluates, according to the General Study Plan, all submitted programmes.
https://www.transportengineering.it/wp-content/download/GeneralStudyPlan.pdf

Pre-filled Study Plans

Pre-filled Study Plans are also available. These plans are automatically approved by the Educational Management Board. Three pre-filled plans are currently available:

- Smart Mobility
- Smart Planning
- Resilient Networks

https://www.transportengineering.it/wp-content/download/PreFilledStudyPlans.pdf

Special training paths

Starting from the Master's programme in Transportation And Mobility Engineering, it is possible to obtain the diploma of *Smart Infrastructure Developer*. For this, activities for an additional 10 ETCS are required.
Two *Smart Infrastructures Developer Study Programs* are currently available (SID_A and SID_B), they ensure compliance with the general rules of the special training path established by the University of Naples Federico II and include 10 ETCS activities additional to the master's regular path.
https://www.transportengineering.it/wp-content/download/SpecialTrainingPlans.pdf

All Study Plans can be consulted at:
https://www.transportengineering.it/wp-content/download/StudyPlans.pdf

Traineeship opportunities

Training activities are integrated with experiential and laboratory teaching, corroborated by other helpful skills preliminary to involvement in the job market. Students explore applicative problems in their internship and thesis (final exam dissertation) and develop and test solutions with industrial stakeholders.
The University of Naples Federico II supplies a wide selection of agreements with private companies and public institutions, aimed at carrying out training internships outside the University (http://www.unina.it/didattica/tirocini-studenti).
The University also offers post-graduate internships, made available by several companies (http://www.orientamento.unina.it/tirocinio-post-laurea/).
The competent Didactic Area Offices collect the students' curricular internship requests (both intra- and extra-moenia), they then provide the student with the internship booklet and the documents for the final registration by the university tutor. They also collect the requests for the stipulation of extra-moenia internship agreements by the professors belonging to the department and take care of the transmission to the University Student Internship Office of the internship agreements already signed by the companies for subsequent signature by the Rector or his delegate.

Graduation thesis and exam

Characteristics
The Master's Degree in Transportation Engineering and Mobility is subject to a final dissertation. The test consists of the evaluation by a Commission appointed by the didactic structures of the master's degree thesis, presented by the graduate student and elaborated by him in an original way, under the guidance of one or more university supervisors and with the possible correlation of experts also external to the 'University. The thesis (final dissertation), however, characterized by originality, can be developed within a culturally homogeneous and coherent path that also involves laboratory activities and elective teaching; these activities can also be carried out in collaboration with qualified external parties. The thesis must demonstrate theoretical and / or methodological and / or numerical and / or experimental activities and must demonstrate mastery of the topics covered, the ability to operate with originality and autonomously and a high level of communication skills.

How to access the final dissertation:
To access the final exam, the student must have acquired all the credits required by his / her study path, except for those for the final dissertation, in accordance with the General Didactic Regulations and the Regulations of the Transportation Engineering and Mobility Master's Degree Course. The final dissertation is evaluated by a Commission appointed by the didactic structures and usually chaired by the Course Coordinator or his / her delegate. The final exam includes the discussion of the master's dissertation. During the discussion, the use of projection tools and audio-visual supports is encouraged. The discussion must be in English. The evaluation of the final exam is graded out of 110, with possible honours attributed by the Commission unanimously; the evaluation takes into account the weighted average of the marks of the curricular exams, weighted with the relative credits and compared to 110; it is also possible to take into account the student's entire career, in terms of quality, continuity and duration. The Didactic Coordination Commission of the Course can draw up more detailed regulations to regulate the procedures for requesting and assigning supervisors, co-supervisors and dissertation topics, as well as any timing and steps necessary for the notification of the dissertation to the Examination Commission, any details of the methods assessment and anything else useful to regulate access and conduct of the final exam; any such regulations must be widely disseminated and cannot be applied before 6 months from their issue.

International exchange programmes (Erasmus programme)

Erasmus agreements already active in the civil area are automatically extended to all degrees included in the learning activities of the department. More details on this argument can be found at: https://www.dicea.unina.it/erasmus-2/

Orientation and Tutoring

Orientation to incoming students

The incoming orientation activity is carried out through several channels. The main channel is managed by the Polytechnic School and Basic Sciences (http://www.scuolapsb.unina.it/), with periodical orientation days shared with the other MScs of the school. Other initiatives are independently organized and carried out by the Department of Civil, Building and Environmental Engineering (DICEA). Finally, a communication channel is in place thanks to SoFTel (Orientation, Training and Teledidactics Service - www.orientamento.unina.it)

The orientation activity is aimed primarily at students enrolled in the Degree Programs of the L7 Class of the University, but also at those of the other three-year engineering study classes (classes L8 L9) in Italy and abroad. Orientation is also carried out by means of digital and web resources like websites and socials, video resources, and webinars. These tools that allow the achievement of a massive audience are accompanied by specific tools for different territorial scales. At the international level, the network of international research and training contacts of the Department of Civil, Building and Environmental Engineering is active in order to focus attention on massive material. With reference to the Mediterranean scale, the channels already consolidated with the DICEA 'Mediterranean PhD Short School' initiative, linked to the department of excellence project, is also exploited. At the international level, the collaboration of large global companies that have expressed an explicit support for the course of study (AlmavivA, FS Italiane, CRF/Stellantis) is exploited as well, including the support from the National Transport Cluster. These same subjects will be called upon to collaborate in the input orientation with reference to the national territorial scale, supported in this by the national subjects who have expressed an interest (Ministry of Infrastructure and Transport). At a regional and local level, incoming orientation will also be carried out through the organization of events and presentation days.

Incoming orientation, at any level and by any means, is aimed at providing information on the framework of the training offer (study plans), through the presentation of cultural profiles, professional opportunities, educational organization, and cultural and aptitude requirements.

Tutoring and counseling

The tutoring is entrusted above all to the teachers identified for this task, as well as to the Coordinator. In addition to them, the students are able to have a direct relationship during the teaching hours or during dedicated time windows with all the teachers of the MSc. This traditional and irreplaceable form is flanked by more structured initiatives. In particular, further specialized support services are made available by the SINAPSI University Center (www.sinapsi.unina.it), aimed at reducing the drop-out phenomenon through different levels of intervention:

a) specialized tutoring services aimed at students with disabilities and students with Specific Learning Disorders (SLD), aimed at facilitating the student's integration into university life; starting from the peculiarities and needs of each student, through psychological, pedagogical-didactic and technological interventions, the services are aimed at removing the 'barriers' and supporting the student throughout the course of study;
b) university success support services aimed at all students of the University of Naples Federico II who experience difficulty in facing their university career and encounter, during the academic process, obstacles of various kinds, such as delay in studies, difficulties on a personal level, doubts regarding the university choice, problems of social exclusion, difficulties in improving one's own set of skills; in this context, activities are developed aimed at mapping drop-out risk indicators, promoting Focus Group, Community Learning, and counselling initiatives, planned at the request of the individual student or teachers and coordinators of the Degree Programs concerned;
c) interventions related to the Anti-Discrimination and Culture of Differences area aimed at preventing and combating violations of human rights and prevarications related to gender, sexual orientation, ethnicity, and socio-economic status.

Career orientation and job placement

Outbound orientation and placement initiatives are active at the University and School facilities. The University has activated a helpdesk for outbound orientation and placement accessible through the portal http://www.orientamento.unina.it/, from which information on initiatives and opportunities for professional integration can be obtained.

The School of Polytechnics and Basic Sciences, as part of the revision and enhancement of the University's orientation/insertion initiatives, has launched in 2019 the testing of a new formula consisting of a periodic cycle of structured meetings with companies called 'The School meets companies'. During these meetings, companies have the opportunity to introduce themselves, receive job applications tailored to their needs, conduct brief interviews with candidates and share experiences and ideas with researchers from the departments.

In addition to the targeted events, the portal of the Polytechnic School and Basic Sciences (www.scuolapsb.unina.it) has a special section (The School meets the Companies) in which recruitment events, the 'job fairs' are systematically reported.

The internship and traineeship activities with companies are also part of the process of placement, thanks to the value of contact with companies.

Calendar of educational activities and timeline

Terms and deadlines

First-year enrolment and enrolment in subsequent years usually take place from 1 September to 31 October of each year, as disclosed in a specific *Guide to registration and payment of fees* published at: https://www.segrepass1.unina.it/Welcome.do

The enrolment procedure for foreign students is published at:
https://www.transportengineering.it/eng/enrolling-in-transportation-engineering-and-mobility/

Further deadlines (deadlines for submitting study plans, deadlines for submitting ERASMUS applications, etc.) are indicated on the MSc website or can be requested from the MSc coordinator:
https://www.dicea.unina.it/transportation-engineering-and-mobility-msc-team/
https://www.transportengineering.it/eng/

Academic Calendar: courses and exams

http://www.scuolapsb.unina.it/index.php/studiare-al-napoli/calendario-delle-attivita-didattiche/2-non-categorizzato/135-calendario-delle-attivita-didattiche-ingegneria

Course Timetable

http://easyacademy.unina.it/agendastudenti/index.php?view=easycourse&include=homepage&_lang=en

Graduation dates

http://www.scuolapsb.unina.it/downloads/materiale/esami/LM-TEAM_esami.pdf

Contact persons

Degree Programme Director: Prof. Gennaro Nicola BIFULCO – Department of civil, building and environmental engineering – phone +39 081 76 83883 – eMail: gnbifulc@unina.it

Contact person for International Students: Prof.ssa Francesca PAGLIARA – Department of civil, building and environmental engineering – phone +39 081 76 83932 – eMail: fpagliar@unina.it

Contact person for student orientation: Prof. Giovanni PUGLIANO – Department of civil, building and environmental engineering – eMail: giovanni.pugliano@unina.it

Student Administration Offices: Dott.ssa Tiziana BELLARDINI – Department of civil, building and environmental engineering – eMail: tiziana.bellardini@unina.it
Services for students with special needs and with specific learning disabilities: https://www.sinapsi.unina.it/home_sinapsi
Further contact persons at the websites (also useful for info, news and resources):
https://www.transportengineering.it/eng
https://www.dicea.unina.it/transportation-engineering-and-mobility-msc-team/

Sites and links

Site and connections:	Department of Civil, Building and Environmental Engineering (Dipartimento di Ingegneria Civile, Edile e Ambientale-DICEA) Via Claudio 21, 80125 Napoli (IT)

Degree programme website	https://www.dicea.unina.it/transportation-engineering-and-mobility-msc-team/
	https://www.transportengineering.it/eng/
Department website	https://www.dicea.unina.it
School website	http://www.scuolapsb.unina.it/
University website	http://www.unina.it/home
Orientation website	http://www.orientamento.unina.it/
Social networks	https://www.facebook.com/Trasportation.Engineering.and.Mobility
	https://www.linkedin.com/company/msc-team/
	https://www.instagram.com/transportation_engineering/
	https://www.youtube.com/channel/UCe7x8zj10lT2fKp4JMApv_A

Courses descriptions

The content and objectives of the courses, as well as the name of the course holder, the method of delivery and of the assessment can be found at the link:
https://www.transportengineering.it/wp-content/download/LM-TEAM-allCourses.pdf