

POST-GRADUATE TRAINING



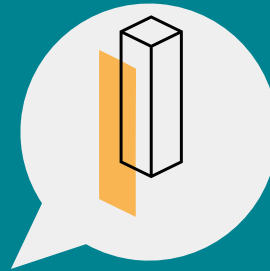
Possible continuation of training can take place in the field of the PhD programme in Risk and Environmental, Territorial and Building Development offered by the Polytechnic of Bari and the inter-university PhD programme with the University of Bari in Sustainable Territorial Management, or in other PhD programmes set up by other universities.

Finally, the Master's Degree in Territorial and Environmental Planning which has been active at the Polytechnic of Bari since the past 18 years.

2.000 GRADUATES EVERY YEAR



1st University in Italy for graduate employment rate 5 years after graduation: **97.7%**



CONTACTS

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Course Coordinator

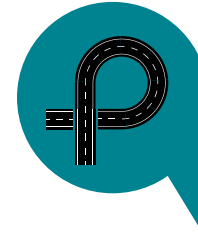
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CIVIL INFRASTRUCTURE MANAGEMENT ENGINEERING

MASTER'S DEGREE
POLIBA



Master's Degree in
Civil Infrastructure Management
Engineering



orientami.poliba.it



The **Master's Degree in Civil Infrastructure Management Engineering** offered by the **Polytechnic of Bari** is

designed to meet the training needs of a professional civil engineer requiring updated skills. Today, civil engineers are increasingly called upon to work in the improvement and management of existing infrastructure assets.

Mostly built in the later 20th century, these may no longer meet current safety and efficiency requirements.

EDUCATIONAL OBJECTIVES

The course, lasting two years, is divided into four semesters, two per year.

During the first year, the programme covers the key design disciplines of a Master's degree in Civil Engineering applied to the areas of infrastructural and structural territorial systems.

These are specifically aimed at integrating technical, managerial, economic, and maintenance processes and objectives and providing in-depth analysis of management, design and maintenance across various contexts (e.g. bridges, viaducts, transport infrastructure networks and service networks).

Programmes are specifically designed to reach defined course objectives.

The first two semesters offer classes providing basic elements of management, economic-evaluation and cost-benefit analysis, which are not typically taught on traditional LM-23 degree courses.



Location

All course lectures are held at the Bari campus.



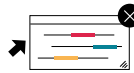
Duration

Expected course completion time is 2 years.



Language

All lessons, seminars, and laboratories are held in Italian.



Admission

A Bachelor's degree or similar recognised qualification obtained abroad is required.

In the **second year** further classes are held to elaborate on the course's managerial and technical-economic content. Moreover, in addition to twelve elective CFUs, further flexibility in the study programme is available with a choice of 12 CFUs from related and integrative courses characteristic of the degree class. This allows for more personalised learning, in line with the student's interests, in specific areas related to network infrastructures or strategic infrastructures and structures

The final semester of the second year is dedicated to other educational activities such as **internships, laboratories, and thesis preparation**, useful both in integrating knowledge acquired from courses, as well as introducing students to the world of work. The first of these objectives is carried out in groups in a synthesis laboratory under the supervision of a tutor. This consists of an interdisciplinary analysis of a case study chosen in accordance with companies or bodies operating within the field who also have agreements with the Polytechnic.

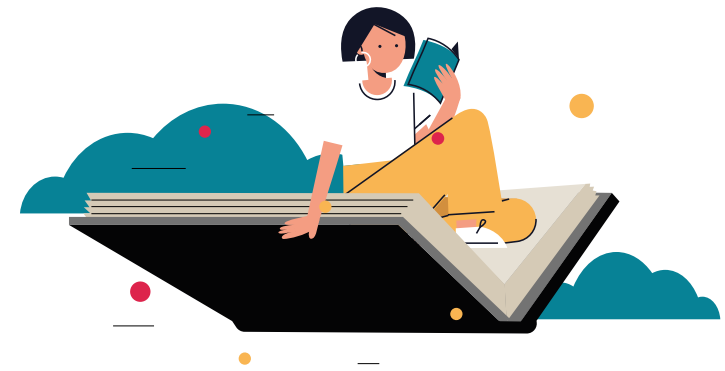
SKILLS



The degree course meets the needs of ecological and digital transition compe-

tencies, but also the managerial skills required to interpret changes in society and the world of civil engineering for public and private companies, in public administrations and in freelance professions.

Students acquire skills in the fields of **advanced representation of infrastructural systems** (GIS, WEB-GIS, BIM, augmented reality), **ICT** (5G Networks, Narrowband IoT, Sigfox, LoRaWAN, Smart meters, and remote sensing devices), **Artificial Intelligence & Machine Learning**, and **multi-objective optimization strategies**. These, combined with advanced modeling skills of civil engineering systems and the Digital Twin systems concept, enable graduates to offer increasingly efficient solutions to the complex design and management problems of our time by building decision support systems in a multi-objective cost/benefit model.



PROFESSIONAL OPPORTUNITIES



Graduates with a Master's degree in Civil Infrastructure Management Engineering will be able to operate not only in technical positions but also high-level managerial roles.

These may be in companies or public and private bodies operating in the field of design, management, and maintenance of major work projects and structural and infrastructural networks to provide essential civil infrastructure services (e.g. water, transportation, etc.), as well as in professional offices and engineering companies.