Civil Engineering deals with the planning, design, construction, assessment, monitoring, maintenance and management of structures and infrastructures, including buildings, bridges, tunnels, dams, water collection, distribution and drainage systems, transportation systems such as roads, railways, harbors, airports, and other engineering works that play a fundamental role for the economic growth and sustainable development of the modern society and resilient communities.

The realization of these civil engineering systems requires the capability to face complex challenges related to the rapid change of global socio-economic processes. This implies the fulfillment of continuously increasingly safety and functionality requirements and the sustainable usage of natural resources, which may significantly affect both the economy and environment over time, involving future generations.

The Bachelor programme (BSc) in Civil Engineering aims at providing future professionals with sound theoretical principles of mathematics, physics, chemistry and computer science, together with the fundamentals of the core subjects of Civil Engineering (including surveying, mechanics of fluids, solids, soils and structures, structural design, hydraulic engineering works, transportation infrastructures).
EDUCATIONAL PROGRAM: LAUREA (BACHELOR OF SCIENCE)

1st YEAR (7 Exams)

2nd YEAR (6 Exams)

3rd YEAR (7 Exams)

DEGREE

TOPICS

BASIC DISCIPLINES
- Mathematics
- Geometry
- Physics
- Computer science
- Chemistry
- Rational mechanics

CORE DISCIPLINES
- Surveying and data processing
- Structural mechanics
- Hydraulics
- Geotechnics
- Structural design
- Hydraulic engineering
- Construction of roads, railways, and airports

ENTERING THE JOB MARKET

MASTER OF SCIENCE EDUCATIONAL PROGRAM
LAUREA MAGISTRALE (MASTER OF SCIENCE)

1st YEAR (4 Tracks)

2nd YEAR (7 Tracks)

MASTER OF SCIENCE DEGREE

DOCTORAL PROGRAMS

POST-GRADUATE MASTER PROGRAMS

ENTERING THE JOB MARKET

TRACKS

The 2-year Master of Science program offers seven tracks within four main areas, which allow graduate students to specialize in different sectors.

**STRUCTURES:** structural design and assessment of civil and industrial buildings, large structures, bridges, structural components for industrial plants.
- Design of New Structures
- Assessment of Existing Structures
- Advanced Structural Analysis
- Earthquake Engineering

**GEOTECHNICS:** foundations, retaining walls, tunnels, underground pipelines, stability of slopes and excavations.

**WATER ENGINEERING:** free surface water and groundwater, use and management of water resources, land hydraulic protection, civil and industrial plants.

**TRANSPORTATION INFRASTRUCTURES:** design, construction, and management of roads, railways, harbors, airports.
CIVIL ENGINEERING AT POLITECNICO DI MILANO
EXCELLENCE IN EDUCATION AND RESEARCH

1st in Italy
6th in Europe
11th in the World

OVERALL SCORE 87,2%
ACADEMIC REPUTATION 86%
EMPLOYER REPUTATION 88,7%
CITATIONS PER PAPER 85,5%
H-INDEX CITATIONS 89,1%

EMPLOYMENT RATE
97%
1 year after graduation, net of students

EMPLOYED WITHIN 6 MONTHS
89%
calculated on employed after 1 year from graduation

TOP 5 SECTORS

Civil Engineering 32%
Building and Construction 16%
Transports and Logistics 11%
Oil & Gas 4%
Business Consultancy 4%

EMPLOYMENT STATUS
Employee 66%
Self-employed 34%

CONTRACT TYPE
Permanent 51%
Fixed-term 20%
Apprenticeship 21%
Internship 3%
Other* 5%

COMPANY SIZE
1 - 250 69%
251 - 1000 13%
+ 1000 18%

*Project based; occasional collaboration

Source of employment data: Career Service - Politecnico di Milano (2022)
In order to enter the degree program, an entrance test (Test On Line) shall be carried out during sessions predefined by Politecnico di Milano. Alternative tests accepted by Politecnico di Milano include SAT-GRE or GMAT above the minimum required.

https://www.polimi.it/en/international-prospective-students
https://www.poliorientami.polimi.it/come-si-accede/ingegneria