Career Opportunities

Graduates work in engineering and consulting firms, public bodies, construction and maintenance companies, financial and insurance institutions, and infrastructure service operators as Asset Managers, Life-Cycle or Operations Analysts, Monitoring and Digital-Twin Specialists, Risk & Resilience Analysts, Monitoring & Predictive Maintenance Engineers, and professionals supporting planning, project coordination, maintenance, management, and data-informed decision processes for civil infrastructures.

Supporting Partners

Public and Private Organizations, Service Providers, Public Authorities, Construction Companies, Consulting Firms, Insurance Companies, Investment Banks, Investment Funds, Water Service Providers, Concessionaries for the Construction and Management of Toll Motorways, Logistics Platforms, Energy and Technology Companies, Boards of Professional Engineers, Railway Network Managers, etc

Master Programme delivered mainly online

- asynchronous classes (telematic)
- synchronous classes (telematic and in-person)
- in-person activities in the range of 5-10% of the mandatory ECTS

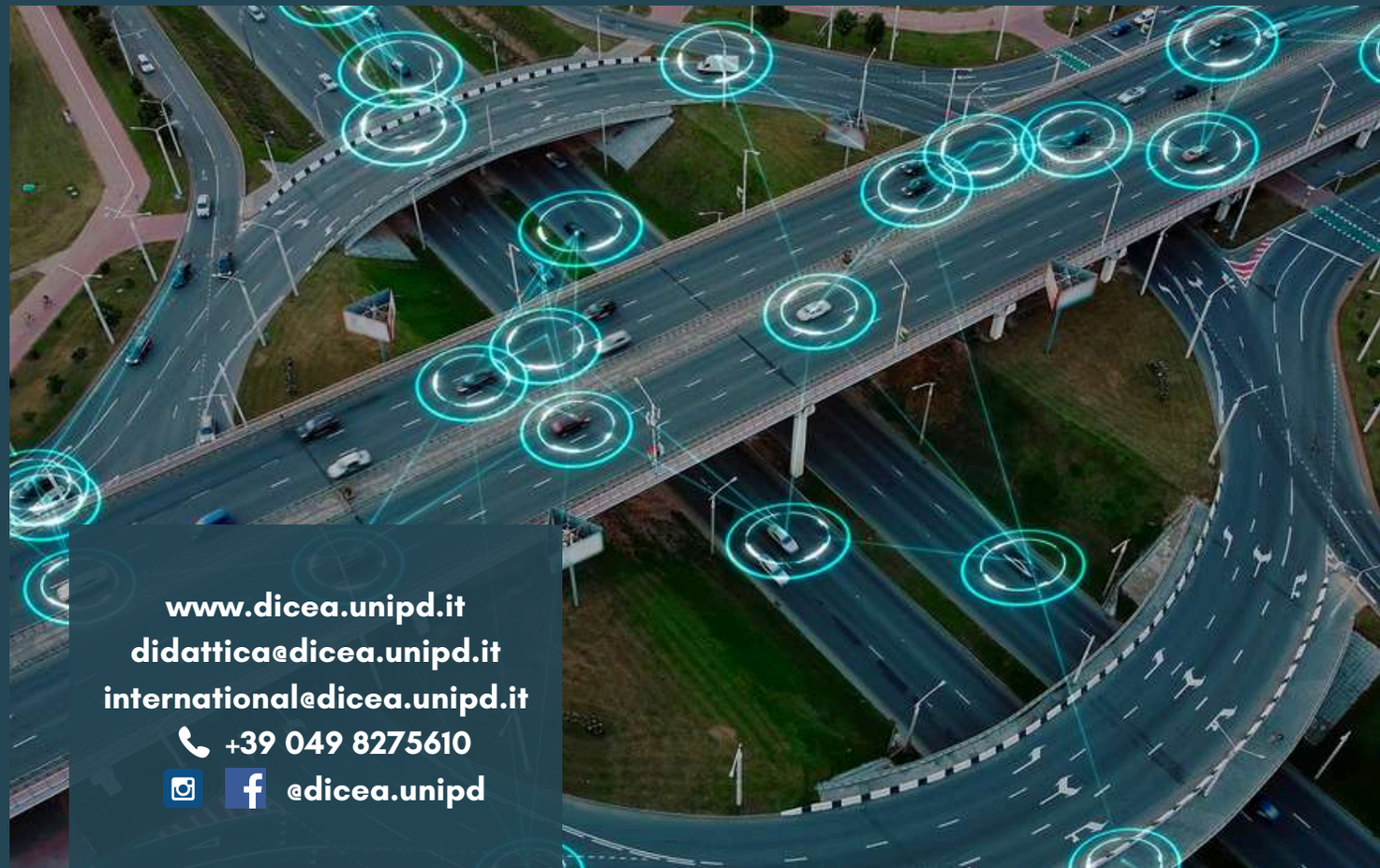
Civil infrastructures are undergoing a profound digital transformation. Infrastructures are no longer conceived as static structures, but as intelligent, data-driven systems operating throughout their entire life cycle. This international Master's Program is an innovative programme designed to educate a new generation of engineers capable of integrating structural engineering, digital technologies, artificial intelligence, and sustainability principles into infrastructure management.
Delivered entirely in English and predominantly online, the programme combines engineering excellence with advanced digital methodologies and data science to address the global challenges of resilience, optimization, and predictive maintenance.

UNIVERSITÀ DEGLI STUDI DI PADOVA

ICEA

MASTER DEGREE IN

INTELLIGENT CIVIL INFRASTRUCTURES ENGINEERING



www.dicea.unipd.it
didattica@dicea.unipd.it
international@dicea.unipd.it
+39 049 8275610
@dicea.unipd

Entry Requirements

Bachelor's Diploma (or equivalent).
A minimum three-year undergraduate degree (or equivalent) in civil engineering or related subjects, with proven skills in civil engineering.

Additional entry requirements
Please verify country-based specific entry title and GPA requirements at:
https://www.unipd.it/en/entry-title-requirements

The entry qualification documents are accepted in the following languages: English / Italian.
No legalized documents are required at the application stage.

Language requirements
English: B2 level (CEFR) or equivalent certificate.
Please check for the full list of accepted certificates, minimum scores, and exemptions at:
https://www.unipd.it/en/studying-padua/admission/language-requirement.

Tuition Fees and Scholarships

Annual fees: up to € 2,739 (3 instalments).

Scholarships and fee waivers for international students available at:
www.unipd.it/en/funding-and-fees

PROGRAMME STRUCTURE

First Year

I SEMESTER	CFU/ECTS
• Smart Transportation Systems and Infrastructures	6
• Maintenance and Construction Analysis for Smart Recovery of Infrastructures	6
• Surfaces Configuration: Remote Sensing, GIS-BIM, and Life-Cycle perspectives	9
• Topics in Economics and Finance of Infrastructures	9
II SEMESTER	
• Management and Control of Water Infrastructures	9
• ComputationalModeling of CivilInfrastructures	6
• Infrastructure Project and Service Management	9

Second Year

I SEMESTER	CFU/ECTS
• Management and Smart Monitoring of Bridge Infrastructures	9
• Infrastructure Investments and PPP	9
II SEMESTER	
• MCDA and Decision Support Systems	6
• Data-DrivenArtificial Intelligence for Smart Infrastructures	9
• Final Thesis | Dissertation	18

Note: Compulsory language course at the first year: English B2 for native Italian speakers, Italian A2 for non-native Italian speakers

Elective Courses (12 CFU | ECTS)

First year
Monitoring, Maintenance, and Management of Smart Transport Infrastructures - Sustainable Mobility - Highway Hydraulic Engineering
Elements of Numerical Modeling for the Environment - BIM and Construction Management - Big Data Analytics and Data Mining for Engineers

Second year
Geotechnical Risk Assessment for Infrastructures - People and Quality Management - Performance Management and Predictive Analytics.

CALL FOR ADMISSIONS A.Y. 2026 | 27

- Non-EU students: **7 January 2026 - 7 March 2026**
- EU students and Non-EU students already residing in Italy: **10 March 2026 - 10 April 2026**
- Program type: **Limited access**
- Available places for European or non-European students residing in Italy: **50**
- Application fee: **€60 (non-refundable)**