The Rector



HAVING REGARD TO Politecnico di Milano's Articles of Association; HAVING REGARD TO Ministerial Decree 3.11.1999, no. 509; HAVING REGARD TO Ministerial Decree 22.10.2004, no. 270; HAVING REGARD TO the University's Educational Rules - Regulations; HAVING REGARD TO the Regulation for 1st and 2nd level Specialising Masters, Post Graduate Courses and Continuing Education of Politecnico di Milano issued with Rector's Decree no. 6485 of 30.05.2024; HAVING ACQUIRED the favourable opinion of the Academic Senate during the meeting on 17.06.2024, on the establishment and activation of proposals for Specialising Masters, including the first level Specialising Master in "BIM FOR PROJECT AND CONTRACT MANAGEMENT IN CONSTRUCTION WORKS"

HEREBY DECREES

that the first level Specialising Master in "BIM FOR PROJECT AND CONTRACT MANAGEMENT IN CONSTRUCTION WORKS" is established and activated for the years 2025/2026.

ART. 1 Master's features

The first level Specialising Master in "BIM FOR PROJECT AND CONTRACT MANAGEMENT IN CONSTRUCTION WORKS" has been set up and activated at the Architecture, Built Environment and Construction Engineering Department.

The Master is provided by CONSORZIO CIS-E. The reference school is the School of Architecture Urban Planning and Construction Engineering.

The Specialising Master's Director is Professor Gianandrea Ciaramella. The Vice Director is Professor Roberto Cigolini.

The Scientific Committee of the Specialising Master's programme is composed by Professors from Politecnico di Milano: Gianandrea Ciaramella, Alberto Franchi, Paola Ronca, Roberto Cigolini, Pietro Giuseppe Crespi; and eng. Giovani Franchi e Marco Zucca di Consorzio CISE.

ART. 2

Educational objective and employment opportunities

This specializing master course aims to give the main tools of project and contract management to both engineers and architects. Nowadays it is getting more and more important to know how any project should be managed from its inception to its end, in order to optimize costs and to get forward according to a predefined schedule. During this specializing master the students will be introduced to the theory of project management, of investment valuation, and financial accounting. They will receive all the information needed to obtain the PMI (Project Management Institute) certifications and the IPMA (International Project Management Association) certifications. They will receive all the information needed to become a Lean Green Belt Project Leader. They will also be introduced to data analysis. They will be introduced to forensic engineering with specific regard to how the FIDIC contracts are to be written, read, and managed. Delay analysis and determination of the quantum are two important units about contract management. All these PM and contract management tools will be enhanced with BIM (Building Information Modeling) softwares for architectural design, structural design, mechanical design, and facility management. The BIM philosophy and its softwares have proven to be very useful: both engineers and architect must get acquainted with them. They will permit a team of architects,

engineers and project managers to be more integrated and to work more seamlessly toward the shared goal of project completion in time and on budget.

The job opportunities opened by the skills acquired following the lessons of this specializing master are varied and plentiful: construction companies, architectural firms, engineering companies, real-estate developers, general contractors, government agencies, etc., all of them need and look for project and contract managers who know how to use the BIM tools and are specializing in the digitalization of the construction industry.

The Master's will be delivered in English and online.

ART. 3 Teaching content and organisation

The Specialising Master's will start in March 2025 and will end in March 2026.

This specializing master is made of 534 hours of lectures split between 414 hours of various project and contract management subjects and 120 hours of BIM management. No intermediate tests are scheduled, while at the end of the course 150 working hours will be dedicated to the writing of a master thesis that will be reviewed and judged by the academic committee. The subject of the master thesis will be explained to the students at the end of the period of lessons. After that each student will be able to write her/his master thesis autonomously.

The master's is a **60 ECTS** programme and teaching will be organised as follows:

Didactic activity	MANDATORY Courses		
Course	SSD	Total hours	ECTS
BIM Regulations and standards	ICAR/14	40	1,5
Data as asset: PIM (Product Information Modeling) and AIM (Asset Information Modeling)	ICAR/09	90	3,5
Schedule and computing (4D and 5D)	ING-IND/09	25	1
Building management and maintenance (6D and 7D)	ICAR/09	25	1
Common data environment and other tools for the digital future of the construction field	ICAR/12	50	2
Oracle Primavera P6	ICAR/12	50	2
Legal BIM	ICAR/12	25	1
Fundamentals of management engineering	ING-IND/35	225	9
Certificazione Internazionale Project Management IPMA® (Level D, Level C, Level B, Level A) / IPMA® International Project Management Certification (Level D, Level C, Level B, Level A)	ING-IND/35	50	2
PMI project management certifications (CAPM® and PMP®)	ING-IND/35	128	5
Lean Six Sigma Green Belt Project Leader	ING-IND/28	155	6
Real estate valuation and valorization	ICAR/12	82	3
Leadership & soft skills + communication and public speaking	ING-IND/35	68	3
Data analyst	ICAR/12	50	2
Data analysis with Matlab	ICAR/12	25	1
Contracts by international standards (FIDIC, JCT, NEC, AAA)	ICAR/11	25	1
Introduction to Contract Management for FIDIC contracts (Red, Pink, Yellow, and Silver)	ICAR/12	50	2

Introduction to Claim Management for FIDIC contracts (Red, Pink, Yellow, and Silver)	ICAR/12	50	2
Introduction to Delay Analysis	ICAR/12	50	2
Determination of the quantum	ICAR/12	25	1
Forensic Engineering: from claim to dispute, dispute boards, arbitration	ICAR/22	75	3

Other activities	MANDATORY Courses		
Course	SSD	Total Hours	ECTS
Dissertation writing, discussion and final exam	n.a.	150	6

ART. 4 Admission requirements

Candidates with a Bachelor or Master of Science in Engineering, Architecture and similar scientific disciplines are eligible. Equivalent foreign qualifications in their respective University Systems will be considered valid. The maximum number of admitted students is 50. The selection process is carried out by the Scientific Committee.

ART. 5 Formal requirements

The **admission application** must be submitted starting from the day after the date of this Decree and <u>no later</u> than one month BEFORE the start of the program.

The extended information on data processing and data subject rights is available on the website <u>www.polimi.it\privacy</u>

The managing authority delivering the program must provide students with all the necessary set of forms and information on how to correctly apply to the Master's.

Once the validity of the qualification has been verified, the Managing Body will advise the student on the documentation needed to prove the authenticity of their qualification, in accordance with the MIUR/MAE's note "Procedures for entry, residency and enrolment of international students and the respective recognition of qualifications, for higher education courses in Italy for the academic year 2024/2025.

In particular, the Managing Body can request the following documents:

* Italian/foreign citizens having graduated in Italy

- copy of the identity document
- copy of the Diploma Supplement or copy of the degree diploma or self-certification through the appropriate form provided by the Master's Managing Authorithy.

* Italian/EU citizens with qualification obtained abroad

- copy of the identity document
- **copy of the academic qualification** in original language and its translation into Italian/English/French or Spanish
- copy of transcripts with the list of exams in the original language and their translation into Italian/English/French or Spanish or Diploma Supplement in English language (when enrolling, the students have to submit:
 - o the Declaration of Value issued by the relevant area's Italian Representative abroad or

- the **Diploma Supplement with digital signature or electronic time stamp** or, in case of absence of digital signature/electronic time stamp, **the Diploma supplement with apostille** or
- $\circ~$ a certificate issued by the Enic/Naric Centres ${\rm or}~$
- $\circ~$ a certificate issued by the World Education Services WES).

Under Art. 75 of Italian Presidential Decree 445/2000, if the Administration, after carrying out suitable checks, finds that the content of the declarations made by the applicant is untrue, the declarant forfeits any benefits obtained through the untrue declaration.

* Non-EU citizens having graduated abroad

Non-EU foreign citizens must submit the following documents to the Managing Authority:

- **copy of the degree** in the original language and its translation into Italian/English/French or Spanish;
- **copy of the transcripts** with the list of exams in the original language and their translation into Italian/English/French or Spanish (when enrolling, the students have to submit:
 - the Declaration of Value issued by the relevant area's Italian Representative abroad or
 - the **Diploma Supplement with digital signature or electronic time stamp** or, in case of absence of digital signature/electronic time stamp, the **Diploma supplement with apostille** or
 - $\circ~$ a certificate issued by the Enic/Naric Centres or
 - $\circ~$ a certificate issued by the World Education Services WES).
- copy of a valid passport)

After the acceptance from the University, and only after confirming to the Managing Authority their participation to the programme in accordance with its procedures, students will have to register on the Ministerial portal https://www.universitaly.it. Once the registration has been completed, the student will have to inform the Managing Authority, so that the application can be sent to the authorities responsible for issuing the entry visa.

The managing authority informs Politecnico di Milano Masters and Continuous Educations unit, about the starting date of the course AT LEAST due months before the starting date.

ENROLMENT PROCESS:

Students admitted to the Master's Programme must obtain the access credentials to Politecnico di Milano's online services on the website <u>www.polimi.it</u>, enter their personal data and attach valid identity document (passport for non-EU citizens). Students already registered are expected to update their personal details, if these are obsolete.

<u>Portal access credentials must be safely kept since they will be required for the access to all Politecnico di</u> <u>Milano's services.</u> Lost credentials can be autonomously restored or obtained through an OTRS ticket.

In order to proceed with the enrolment, students admitted to the Masters' must pay the enrolment fee as well as the enrolment stamp via Politecnico di Milano's online services.

In addition to the above documentation, non-EU citizens must upload a copy of a valid entrance document as well as the residence permit, on their online services personal data record.

In order to be enrolled at Politecnico di Milano, regardless of the Master's delivery mode (in person, online/distance learning), non-EU citizens must upload a copy of a valid passport on their online services personal data record.

ART. 6

Degree and award recognitions

ISSUED CERTIFICATION

In order to be able to take the final exam, students admitted to the Master's final examination have to pay the due fee through the online services of Politecnico di Milano.

At the end of the Programme, upon completion of the course and after passing the final test, the student will be awarded the first level specialising Master in "BIM for project and contract management in construction works", in English language.

STUDENT OBLIGATIONS

Attendance is compulsory for at least 80 per cent of the programme activities.

Withdrawal from the Programme must be communicated in written form. The training period cannot be suspended for any reasons.

TESTING METHODS

The final exam will consist of the discussion online of the master's thesis.

ART. 7

Tuition fees and contributions

The cost of this Specialising Master programme is € 4,000.00 divided as follows:

- Politecnico di Milano enrolment fee is € 500.00 per student.
- Participation fee is € 3,500.00 per student

Politecnico di Milano enrolment fee will not be refunded under any circumstances.

As far as the Specialising Master participation fee is concerned, it will be the managing authority responsibility to define the procedures.

ART. 8 Personal data processing

Under EU Regulation no. 2016/679 on data protection, the University processes personal data only for purposes related to the master's admission, enrolment and management, and you agree to the disclosure of your personal information to third parties, particularly:

- public and private entities possibly interested in recruitment;
- to academic programme backers; Politecnico Treasurer for services related to tuition fees;
- to Managing Authorities managing loans, housing, flexible employment contracts, cultural, recreational and/or sport activities.
- I authorise the use of the data for statistical purposes in respect of the procedures and authorisations required by the cited regulation.

The extended information on data processing and data subject rights is available on the website <u>www.polimi.it\privacy</u>

ART. 9 Publication

This Decree is made public on Politecnico di Milano's website at <u>https://www.polimi.it/corsi/master-universitari-e-corsi-post-laurea/</u>

FOR CLARIFICATIONS AND FURTHER INFORMATION, PLEASE CONTACT:

Professor PAOLA RONCA

CONSORZIO CISE C/O POLITECNICO DI MILANO PIAZZA LEONARDO DA VINCI 32 20133 MILANO (MI) Phone: +39 022399 4341/4381 Email: paola.ronca@polimi.it; franchi@cise-polimi.it Website: http://www.masterpesenti.polimi.it

> The Rector (prof. Donatella Sciuto) *Signed Donatella Sciuto*

Digitally signed document, under legislation.