



Rep. Decree n° 6445 Prot. n° 163992
Date 07/07/2022
Title III Class V
UOR SEMFC

HAVING REGARD to the Statute of Politecnico di Milano;
HAVING REGARD to Directorial Decree of 3.11.1999, n.509;
HAVING REGARD to Directorial Decree of 22.10.2004, n. 270;
HAVING REGARD to the Educational Rules of University;
HAVING REGARD to the University Master's Regulation of Politecnico di Milano enacted with Rectoral Decree n. 2235 of 05.08.2013;
HAVING REGARD TO the collaboration agreement signed by the Rector of Politecnico di Milano, and by the Rector of Politecnico di Torino, for the issuance of the joint Master's qualification on File. Rep. 7149 of 29.06.2022;
HAVING ACQUIRED the favourable opinion of the Academic Senate of Politecnico di Milano, in its meeting of 20.06.2022, and of the Executive Committee of Politecnico di Torino, in its meeting of 21.06.2022; regarding the organization and activation of second level Specializing Master "TUNNELLING: DESIGN, CONSTRUCTION AND MANAGEMENT".

HEREBY DECREES

That the second level Specializing Master "TUNNELLING: DESIGN, CONSTRUCTION AND MANAGEMENT" is set up and activated for the year 2023/2024.

ARTICLE 1 **Master features**

At Civil and Environmental Engineering Department, the second level Specializing Master "TUNNELLING: DESIGN, CONSTRUCTION AND MANAGEMENT" is set up and activated.

The administrative seat of the Specializing Master is at POLIEDRA, the reference School is the School of Civil and Environmental Engineering.

The Director of the Specializing Masters for Politecnico di Milano is prof. Claudio Giulio Mario Di Prisco and the Director of Specializing Masters for Politecnico di Torino is prof. Daniele Peila.

The Specializing Master Programme Commission is made up by:

- Prof. CLAUDIO GIULIO MARIO DI PRISCO - POLITECNICO DI MILANO
- Prof. DANIELE PEILA - POLITECNICO DI TORINO
- Prof.ssa LAURA TERESA GIUSEPPINA SCESI - POLITECNICO DI MILANO
- Prof.ssa MARILENA CARDU - POLITECNICO DI TORINO

ARTICLE 2
Educational objective and job opportunities

As is testified by the number of kilometers of tunnels constructed every year all around the world, the tunnelling is a rapidly expanding sector on a global scale. In this context, suitably trained professionals, with multidisciplinary knowledges are in largely demanded. At present, these skills are not provided by the traditional academic courses and cannot be easily acquired during the standard professional activity. The Master course in tunnel engineering, supported by many companies operating in the tunnelling sector, is thus conceived as a high specializing course, aimed at providing multidisciplinary skills, by defining a complete and articulated framework of all the necessary contents to prepare professionals with operational capabilities in design, construction and project management. Academic teachers and professionals, all operating both at a national and an international level, will tackle different engineering and technological topics, but also organizational, environmental, economical, legislative, strategic and managerial themes.

The master will give the possibility of getting in touch with academic teachers, professionals and managers active in tunnelling. The course aims not only at providing an internationally recognized academic title but also at creating a centre of excellence on tunnel engineering, where the different professionals are capable of interpreting and managing the complexity of the problems and becoming active and innovative actors in the research of new engineering solutions as well as capable of assuming position of responsibility in project management. The career opportunities can be identified in companies of design, construction, manufacturers of materials and technologies, machine producers, roads and railways infrastructure managements.

The programme will be provided in English.

ARTICLE 3
Content and organization of training activities

The Specializing Master will start in **March 2023** and will end at the **end of February 2024**.

The master is conceived as a transversal and multidisciplinary course in which theoretical lessons, specialist subjects, case studies, technical visits and internships are integrated. The Master is a full time course lasting one year. During the first six months the students will attend online theoretical lessons, seminars and will take part in technical visits in laboratories and construction sites. During the following six months the students will have the opportunity of participating in internships/projects in different companies, under the supervision of professors and professionals operating in the tunnelling sectors. All participants will have access to the course material, in English, that will be uploaded on an online platform and it will remain available until the final exam.

The educational programme is divided as follows:

SSD	Teaching	Total hours of activity	ECTS
ING-IND/28 - ICAR/07	1 Tunnel design: general concepts & risk management in tunnelling	37,5	1,5
GEO/05 - GEO/11	2 Geology, hydrogeology, geophysics and risk analysis	75	3
ICAR/07	3 Soil and Rock Mechanics & Investigations	85	3,5
ICAR/07	4 Computational methods	100	4
ING-IND/28	5. Construction Methods: conventional tunnelling	50	2
ICAR/07-ING - IND/28	6. Construction methods: Improvements and presupports (technology)	25	1
ING-IND/28	7. Construction Methods: mechanized tunnelling	87,5	3,5
ICAR/07 - ICAR/09 - ING-IND/28	8. Assessment of excavation related hazard and design of mitigation measures	162,5	6,5
ING-IND/28	9. Plants	75	3
ICAR/06 - ING-IND/28	10. Monitoring	25	1

ING-IND/28 - ICAR 17 - ING-IND/17	11. Environment, Contracts, Management and Safety	112,5	4,5
ING-IND/28 - ICAR/09	12. Maintenance & refurbishment	25	1
	Visite tecniche	40	1,5
	Project work	120	5
	Stage	480	19
	Total	1.500	60

ARTICLE 4

Requirements for participation

The Specializing Master is for candidates with a Laurea Magistrale/Specialistica (equivalent to Master of Science) in Civil, Environmental, Mechanical Engineering or other scientific fields. For foreign candidates, equivalent academic qualifications in the related academic fields will be evaluated.

The selection is made by the Commission.

ARTICLE 5

Formal fulfilment

The **admission application** must be presented in one day from the day after the date of this Decree and **within December 9, 2022**.

*** Italian/foreign citizens with educational qualifications obtained in Italy**

- Self-certification concerning personal identity (surname and name, date and place of birth, nationality and residence)
- copy of the identity document
- copy of the Diploma Supplement or photocopy of the laurea qualification and certificate with the list of exams taken for graduate students of the Old Educational System

*** Italian/U.E. citizens with a qualification obtained abroad**

- Self-certification concerning personal identity (surname and name, date and place of birth, nationality and residence)
- copy of the identity document
- Photocopy of the academic qualification obtained, with a certificate showing the scores obtained in each exam or Diploma Supplement (**upon enrolment**, the on-site **Value Declaration issued by the Italian Representation abroad competent for the territory or certification issued by the Enic/Naric Centres**)

The admission application must show the declaration. "I authorize this University, pursuant to EU Regulation n. 2016/679 regarding the protection of personal data, the personal data processing for the sole purposes related to the admission, enrolment and management of the master, and in any case, I allow to disclose personal information to third parties and in particular:

- to public and private Bodies for possible recruitments;
- to training programme providers; to the Bank Treasurer of Politecnico for services connected to taxes;
- to bodies managing honor loans, accommodation, flexible employment contracts, cultural, recreational and/or sport activities.
- It also authorizes the use of data for statistical purposes in compliance with the procedures and authorizations required by the aforementioned legislation.

The whole information on data processing and rights of the interested party is available on the web site www.polimi.it/privacy

The documents must be sent to:

C/O POLIEDRA - VIA G. COLOMBO, 40
20133 MILAN (MI)
Phone: 0223992900
Fax: 0223992901
email: formazione-poliedra@polimi.it

Pursuant to Article 75 of Presidential Decree 445/2000, if the Administration finds, on the basis of appropriate checks, an untruthful content on declarations provided by the candidate, the declarant does not have the benefits eventually obtained by the provision issued on the basis of the untruthful declaration.

*** Non-U.E. citizens with a qualification obtained abroad**

Non-EU foreign citizens must submit to the Institution:

- **copy of qualification** in original language and the related translation into Italian/English/French or Spanish
- **copy of transcripts** with the list of exams in original language and the related translation into Italian/English/French or Spanish or **Diploma Supplement**
- **copy of valid passport**

At least 30 days before the closing date for registration, as indicated in this article.

The Institution sends all the documents listed above for the evaluation of the qualifications, for the purposes of participation in the Specializing Master, to Politecnico di Milano, **Corporate & Continuing Education Unit within the deadline of this call**, according to the provisions of the MIUR/MAE note "Procedures for access, stay and registration of visa applicant students for higher education programmes in Italy for the academic year 2018/19"

The Corporate and Continuing Education Unit communicates the acceptance of the student and the outcome of the access tests, where required, to the competent Representations, for completion of the documentation related to the qualification, required for the issue of the Entry Visa.

After confirmation of acceptance by the University, the candidates submit their qualification to the Diplomatic Representation, for the required consular acts.

ENROLMENT METHOD:

Students admitted to the Master's programme must create access credentials to Politecnico di Milano's online services using the following website www.polimi.it They must then enter their data and create a person code, attaching a valid identity document (passport for non-EU citizens), and communicate their person code to the Master's programme Manager. Registered students will have to update their personal data, if it is obsolete.

Keep portal access credentials for later access to Politecnico di Milano services. Lost access credentials can be autonomously restored or with ticket OTRS.

Politecnico creates a temporary student identification number to allow the student to pay the enrolment stamp online.

An Italian degree is self-certified by completing the appropriate form provided by the Managing Authority. A degree obtained abroad must be documented by presenting a **declaration of value (DOV)** issued by the Italian Representations abroad (Italian Embassy or Consulate) on letterhead complete with its original stamp or a **certificate issued by the Enic/Naric Centres.**

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

ARTICLE 6

Qualification and recognitions

CERTIFICATION ISSUED

At the end of the programme, after passing the final exam, the second level Specializing Master diploma in “Tunnelling: Design, Construction and Management” will be issued, in English, jointly with Politecnico di Torino.

Students admitted to the Master's final examination will pay the fee via the online services of Politecnico di Milano in order to be able to take the exam.

OBLIGATIONS OF STUDENTS

Attendance to the activities of the Master is compulsory for at least 75% of the programme activities.

The renunciation to study must be submitted in writing. The training period cannot be suspended for any reason.

It is not possible to enrol, at the same time, in a Specializing Master and in another study programme activated by an Italian University.

METHOD OF VERIFICATION

The course ends with a Project Work consisting in the presentation of a work/project carried out during the Master course and in the discussion of the stage activity.

ARTICLE 7

Tuition fees and contributions

The cost of the Specializing Master is € **8,000.00**, to be paid as below:

- € **500.00** – registration fee to Politecnico di Milano
- € **7,500.00** – participation fee

Tuition fee and contribution can be paid with the following deadlines:

- Within January 31, 2023 - € **4,000.00**
- Within June 30, 2023 - € **4,000.00**

The registration fee for Politecnico di Milano will not be refunded under any circumstances

Tax and registration fee can be paid to the current account IBAN number: IT27D0335901600100000008723 – Current account 100000008723 – CAB 01600 – ABI 03359 – CIN EUR 27 – CIN IT D
POLIEDRA - at Banca Intesa – Piazza Ferrari 10 – 20121 Milan

Please state as reason **ID 2360 MU2 Tunnelling**.

ARTICLE 8

Data Treatment

The University, pursuant to EU Regulation n. 2016/679 regarding the protection of personal data, uses the personal data processing for the sole purposes related to the admission, enrolment and management of the master, and in any case, I allow to disclose personal information to third parties and in particular:

- to public and private Bodies for possible recruitments;
- to training programme providers; to the Bank Treasurer of Politecnico for services connected to taxes;
- to bodies managing honor loans, accommodation, flexible employment contracts, cultural, recreational and/or sport activities.
- It also authorizes the use of data for statistical purposes in compliance with the procedures and authorizations required by the aforementioned legislation.

The whole information on data processing and rights of the interested party is available on the web site www.polimi.it/privacy

ARTICLE 9
Advertisement

This Decree is published on the Politecnico di Milano website at the page <https://www.polimi.it/corsi/master-universitari-e-corsi-post-laurea/>

FOR INFORMATION ON THE UNIVERSITY MASTER:

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20133 Milano (MI)

Phone: +39 02 2399 2925

Fax: +39 02 2399 2901

Email: formazione-poliedra@polimi.it

<http://www.mastertunnelling.polimi.it>

The Rector
(Prof. Ferruccio Resta)
Signed Ferruccio Resta