



Albo n. 821/2019

## Call for applications

for the 2<sup>nd</sup> level Specializing Master's programme in

“Tunnelling and Tunnel Boring Machines”  
(12<sup>th</sup> edition)

Academic Year 2019/2020

(Annex “A”- Executive Decision of the Head of the Division of Student Affairs no. 639/2019)



## **ART. 1 Programme overview**

The 12<sup>th</sup> edition of the 2<sup>nd</sup> level Specializing Masters Programme in “Tunnelling and Tunnel Boring Machines” (T&TBM) is offered by Politecnico di Torino for the academic year 2019/2020.

The administrative seat of this specializing Master’s programme is located at Politecnico di Torino – Office of Specializing Master’s Programmes and Lifelong learning (“Ufficio Master e Formazione Permanente”).

The Programme is managed by the “Specializing Master’s Programmes and Lifelong Learning School” (“Scuola di Master e Formazione Permanente”).

The Programme Director is Daniele Peila, associate professor at the Department of Environment, Land and Infrastructure Engineering of Politecnico di Torino.

## **ART. 2 Training objective, didactic contents and organization of the activities**

The purpose of the programme is to provide young graduates with a sound of technical and managerial knowledge so that they can acquire a multidisciplinary knowledge that is necessary to work in the tunnelling sector.

The 2<sup>nd</sup> level specializing Master is a full time programme of approximately one academic year duration for a total of 60 ECTS.

Lectures are held in English at Politecnico di Torino – starting in January 2020. The programme includes a combination of teaching methods such as face-to-face lectures, seminars and practical activities.

Participants complete their studies with an internship (2 months, 10 ECTS, 250 hours) either abroad or in Italy in a construction site or in a tunnelling design company.

The teaching programme includes 7 months of classroom activities with academic and corporate teaching staff and it is structured as follows:

- 9 course divided in three modules (table n. 1)
- Internship
- Final project

**Table n.1 – Organization of the courses**

	<b>TEACHER</b>	<b>SSD</b>	<b>ECTS/CFU</b>	<b>HOURS</b>
<b>MODULE 1</b>				
Tunnel design and construction method	Daniela Peila	ING-ND/28	8	80
Rock Mass Characterization. Geo investigations and risk assessment	Stefano Lo Russo	ICAR/07 GEO/05	6	60
Tunnel supports	Monica Barbero	ING-IND/28 ICAR/07	5	50
Numerical design	Vincenza Floria	ING-IND/28 ICAR/07	3	30
<b>MODULE 2</b>				
General aspects of mechanized tunnelling and Hard Rock TBMs	Daniela Peila	ING-IND/28	8	80
Soil mechanics tunnelling	Daniele Peila	ING-IND/28	6	60
Plants and microtunneling	Marilena Cardu	ING-IND/28	3	30
<b>MODULE 3</b>				
Contractual and legislative aspects, work sites management, quality	Daniele Peila	ING-IND/28	4	40
Safety and environmental issues of work sites	Mario Patrucco	ING-IND/28	3	30
			<b>46</b>	<b>460</b>



### ART. 3 Admission requirements

Applicants must hold a full degree (Master of Science degree/Laurea specialistica/Laurea magistrale) by the enrolment deadline in order to be admitted to this 2<sup>nd</sup> Level Specializing Master's programme.

The programme is intended for graduates who completed a Master's degree programme (or equivalent) in the following areas:

- Civil Engineering (LM 23)
- Environmental Engineering (LM 35)
- Geology (LM 74)

All applicants must prove to have a good knowledge of the English language (equivalent to level B2 CEFR) which must be certified by a language certificate included in the list of the accepted certificates.

Check the table in order to know the required level and accepted certificates:

EXAMINATION BOARD	CERTIFICATE	MINIMUM REQUIREMENTS
<b>IELTS</b> <a href="http://www.ielts.org">www.ielts.org</a>	IELTS ACADEMIC or GENERAL TRAINING	5.5
<b>PEARSON</b> <a href="https://pearsonpte.com/">https://pearsonpte.com/</a>	Pearson Test of English Academic	59
<b>ETS</b> <a href="http://www.ets.org">www.ets.org</a>	TOEFEL IBT	≥ 72
	TOEIC	Listening:400 Reading:385 Speaking:160 Writing:150
<b>CAMBRIDGE:</b> Assessment English <a href="https://www.cambridgeenglish.org/">https://www.cambridgeenglish.org/</a>  precedentemente conosciuto come: <b>CAMBRIDGE</b> English Language Assessment	All certificated	Cambridge English Scale score ≥ 162
	Cambridge English: PRELIMINARY (PET) obtained before 2016	Pass with Distinction (≥ 91) Statement of Results is required
	Cambridge English: FIRST (FCE) obtained before January 2015	≥62 Statement of results is required
	Cambridge English ADVANCED/CAE obtained before 2015	Any score
	Cambridge English: PROFICIENCY/CPE obtained before January 2015	Any score

Candidates are exempted from having one of the above-listed certificates by providing a stamped declaration/certificate written on official letter headed paper, which certifies that:

- a) They have attended at least one school year at a high school in which the medium of instruction is English. In this case the school must issue a certificate stating that "The medium of instruction is English".
- b) They have a foreign high school diploma which is recognized by the Italian Ministry of Education and Research as equivalent to the Italian high school diploma (diploma di maturità), or they have a higher qualification awarded by a higher education institution in which the medium of instruction is English.



In both cases the school must issue a certificate stating that “The medium of instruction is English”. With regard to points “a” and “b”, please note that diplomas awarded by high schools (or higher education institutions) in the USA, UK, Canada, Ireland, Australia and New Zealand do not need to include the phrase “The medium of instruction is English”.

Also students who have not earned their Master’s degree yet but are going to graduate before the enrolment deadline can submit their application for admission to the programme.

#### **ART. 4 Admission and selection process**

Applicants are required to complete and submit their on-line Application Form on Politecnico di Torino website: [https://didattica.polito.it/master/tunnelling/2020/how\\_to\\_apply](https://didattica.polito.it/master/tunnelling/2020/how_to_apply)

DO NOT apply by e-mail, fax or mail because these applications will NOT be considered.

Applications are due by:

- **October 4<sup>th</sup>, 2019** at 1 p.m. - Italian time

Applicants are required to upload to their Application Form ALL the following supporting documents on Politecnico di Torino website (in English or Italian only):

1. valid identification document (passport for extra EU applicants);
2. Curriculum Vitae (CV must include the authorization to the processing of personal data – in compliance with the General Data Protection Regulation (EU Regulation 2016/679) and the Personal Data Protection Code, Legislative Decree 30 June 2003 no. 196 and subsequent amendments);
3. English language certificate (see table n. 2 “English language certificates”, art. 3);
4. exam transcripts for both Bachelor’s and Master’s degree programmes:
  - for applicants with degree(s) awarded by a non-Italian university: official transcript(s) issued by the university of origin, produced on letter-headed paper, containing the full list of exams and grades. The transcript(s) must also include the date of the degree conferral.

Upon enrolment, admitted applicants must submit the original copy of their “*Dichiarazione di Valore*” Statement of validity” (related to their Master’s degree) issued by the Italian Diplomatic Mission in the country where the degree was awarded. If the Master’s degree was awarded by a European university, admitted applicants can present their “Diploma Supplement” instead of their “*Dichiarazione di Valore*”.

or

- for applicants with degree(s) awarded by an Italian university: self-certificate (“*dichiarazione sostitutiva di certificazione*” - Art. 46 DPR 28 December 2000, n. 445) in which applicants declare that they earned **both a Bachelor and a Master’s degree**.

The self-certificate must include: the name of the degree programme, name of the university, date of degree conferral and graduation final grade, full list of all the exams and grades (this information is required for both degrees).

In compliance with art. 75 of D.P.R. 445/2000, should the self-certificate be found to be false or incorrect, the applicant loses any benefit which he/she might have acquired on the basis of the untruthful declaration.

5. Admission form and questionnaire (available on the webpage of the Specializing Master’s programme [https://didattica.polito.it/master/tunnelling/2020/documentation\\_required](https://didattica.polito.it/master/tunnelling/2020/documentation_required))
6. Motivation Letter: max 1 page (see the template available at this link [https://didattica.polito.it/master/tunnelling/2020/documentation\\_required](https://didattica.polito.it/master/tunnelling/2020/documentation_required))

Failure to attach even one of the above mandatory documents causes the exclusion of the applicant from the selection process.

After the application deadline, the Selection Committee assesses all the applications and the attached documents.



Selections will consist in the evaluation of:

- Curriculum Vitae;
- Academic Results;
- Motivation

The Selection Committee can assign a maximum of **100 points** to each applicant according to the following criteria:

- Max 20 points for academic background's coherence with T&TBM programme's topic;
- Max 25 points for MSc's final grade (for graduands: weighted average grade of the exams passed before the application deadline as stated in the documentation uploaded to [Apply@polito](mailto:Apply@polito.it));
- Max 25 points for motivation;
- Max 21 points for average grade obtained in the exams, number of years needed to get the final degree and CV evaluation;
- Max 8 points for work experiences related to T&TBM programme's topic (max 1 point per year);
- Max 1 point for work experiences in a different field but in the engineering and/or geology's field (max 0,5 points per year)

Applicants who do not score **at least 60 points** are not admitted to the programme.

The person responsible for the admissions administrative procedure is Mr. Alberto Pusceddu (Head of the Specializing Master's Programmes and Lifelong Learning Office at Politecnico di Torino).

#### **ART. 5 Selection Outcomes**

At the end of the selection process, the following lists will be published on the "Selection Outcomes" page of the Specializing Master's programme's website:

- the list of applicants admitted to the Specializing Master's programme;
- applicants on reserve list.

Candidates who attached all the required documents and who fulfill all the requirements will see their position in the rankings and their final score on the "Selection Outcomes" page, where the official lists are published.

Please note that:

- candidates who have not yet obtained the Master's degree will be provisionally accepted. In case they will not obtain the degree within the enrolment deadline they will not be admitted to the programme;
- candidates who will not attach all the required documents, who will not satisfy all the requirements or who will not reach the minimum score required, will be not admitted.

#### **ART. 6 Participation confirmation, enrolment and documents submission**

##### Participation confirmation

Admitted applicants who intend to confirm their participation in the programme must comply within the deadline defined by Politecnico for participants to accept the offer for the Specializing Master's programme, and:

- download the Acceptance Declaration, fill it in and send it by e-mail to [master.universitari@polito.it](mailto:master.universitari@polito.it);
- pay the first instalment of your participation fee: € 1,000.00 (one thousand / 00).

Failure to send the declaration and payment within the aforementioned term is considered as final renunciation to the programme.



Applicants on the reserve list who are eligible for replacement have the possibility to enrol in the programme if one or more participants renounce their offer of admissions. In this case, they are contacted by the Office of Specializing Master's Programmes according to their order on the ranking list.

Admitted students are given a deadline to confirm their participation.

Admitted students are invited to inform the Office of Specializing Master's Programmes ([master.universitari@polito.it](mailto:master.universitari@polito.it)) with an official notification if they decide to decline their offer of admission.

### Enrolment

Admitted students who confirmed their participation must enrol in the programme following the instructions and deadlines received by e-mail.

Admitted students are not allowed to be simultaneously enrolled in another Specializing Master's programme nor in any other university programme. Students enrolled in another programme must finish or suspend their studies before enrolling in the 2<sup>nd</sup> level Specializing Master's programme in "Tunnelling and Tunnel Boring Machines".

### Documents submission

After completing the enrolment process, admitted students must present the original documents uploaded to their Application Form to the Office of Specializing Master's Programme together with the Acceptance Declaration before the programme starts (please refer to art. 4).

Upon enrolment, participants who hold a degree from a non-Italian university must submit the original copy of the "*Dichiarazione di Valore*" / "Statement of validity" (related to the Master's degree) issued by the Italian Diplomatic Mission in the country where the qualification was awarded or Statement of Comparability issued by the CIMEA Center.

Participants with a Master's degree awarded by a European university can submit the "Diploma Supplement" instead of the "*Dichiarazione di Valore*" / "Statement of validity".

Participants with a non-Italian degree who do not submit their "Statement of validity", can enrol in the programme with "condition", but they must present this document within 6 months from the beginning of the programme.

Participants who do not provide the above-mentioned mandatory document by the deadline are placed on a hold and cannot progress in their studies until the document is presented.

Non-EU nationals are required to comply with the norms on entry visa and residence permit. They have to submit:

- Student Visa - type D for participants who are non – EU citizens residing abroad;
- Valid residence permit for non-EU citizens residing in Italy.

Politecnico di Torino reserves itself the right to check the truthfulness of the declarations included in self-certificate sent by the applicants (pursuant to article 46 of DPR no. 445 of 28 December 2000) and excludes admitted students from the programme in the event of false declarations, without prejudice to their criminal liability.

## **ART. 7**

### **Student assessment and final qualification**

#### **STUDENT OBLIGATIONS**

The Specializing Master's programme requires full time commitment. Attending activities for at least 85% of the programme is mandatory for all students.

Absences for more than this limit leads to exclusion from the Specializing Master's programme.

Withdraw from the programme must be put in writing.

For the purpose of obtaining the Specializing Master's degree, the Master Coordinator also evaluates if the student has participated in the programme activities and if his/her behavior has been correct.

Detailed rules on the exams will be provided during the opening day.

Students cannot be simultaneously enrolled in a Specializing Master's programme and in another university programme.

#### **STUDENT ASSESSMENT**



At the end of each module, participants have to take an exam consisting in a written test and/or an oral evaluation test. At the end of the programme, participants make a final presentation (dissertation of their project work conducted during internship) and are assessed for it.

### **FINAL QUALIFICATION**

Upon completion of the programme, participants who regularly attended the activities and earned 60 ECTS (required for graduation), are awarded the "Tunneling and Tunnel Boring Machines" 2<sup>nd</sup> level Specializing Master's diploma by Politecnico di Torino. The Diploma will be issued in Italian.

### **ART. 8**

#### **Participation and enrolment fee**

The participation fee is 6.000,00 Euro (six thousand/00) + 19,53 Euro (nineteen/53) for the enrolment fee. The total amount must be paid to Politecnico di Torino according to the following instalments:

- 1.000,00 Euro (one thousand/00) by the date defined by Politecnico as the deadline for accepting the offer of admission to the Specializing Master's programme;
- 2.000,00 (two thousand/00) Euro + enrolment fee at the time of enrolment;
- 3.000,00 (three thousand/00) Euro: balance payment after six months.

The participation fee and the enrolment fee can be paid by bank transfer through the "Apply@polito" platform. The participation fee paid by the participants to accept their offer of admission to the Specializing Master's programme (1.000,00 Euro) can be refunded only in the following cases:

- failure of VISA issuing by the Italian Embassy (for extra-EU citizens only);
- if the programme does not start, which happens only if the minimum number of participants is not reached.

In case of withdrawal or exclusion from the programme the participation fee and enrolment fee will not be refunded under any circumstances.

The programme starts only if the minimum number of participants is reached.

FOR ANY INQUIRIES OR ADDITIONAL INFORMATION PLEASE CONTACT:

Office of Specializing Master's Programmes and Lifelong Learning  
Corso Duca degli Abruzzi, 24 - 10129 Torino (ITALY)

Email: [master.universitari@polito.it](mailto:master.universitari@polito.it)

### **ART. 10**

#### **Processing of personal data**

In accordance with the General Data Protection Regulation (EU Regulation 2016/679) and the "Code regarding the protection of personal data" (Legislative Decree No. 196 of 30th June 2003 and further amendments) personal data are processed by Politecnico di Torino exclusively **for the selection and enrolment process** in pursuit of the university aims and in accordance with the transparency purposes imposed by the law. The processing of personal data is based on the principles of correctness, lawfulness and relevance of purposes. More information on the processing of personal data is available at: <https://didattica.polito.it/privacy/>

Access to all documents is allowed in the forms provided for by current legislation.

### **ART. 11**

#### **Final provisions**

1. Communication with applicants takes place primarily through the "Apply@Polito" platform. Specific communications might be sent via email or SMS using the contact details provided by applicants during registration on the platform.



2. Politecnico does not take any responsibility in case of unavailability of recipients and for loss of communications due to inexact indication of an applicant's email address or telephone number or due to delay or failure to notify changes to the contacts provided during registration.
3. The Call for applications is published on the online University Bulletin available at [https://www.swas.polito.it/dotnet/albo\\_online/](https://www.swas.polito.it/dotnet/albo_online/). The same can be found on <https://didattica.polito.it/master/>.