

Academic Courses

[Print](#)

The ITA-CET committee endorses several post-graduate courses on tunnelling world wide.

Post-graduate courses endorsed by ITA

Specialized Master in Tunnel Engineering - Politecnico Milano - Italy

This 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, in English, lasting one year.

During the first six months the students will attend theoretical lessons (divided into three areas: technical, technological and administrative) and seminars and will take part in technical visits in laboratories and construction sites. During the following six months the students will have the opportunity to participate in internships/projects in different companies, under the supervision of professors and professionals operating in the tunnelling sector.

[Visit the course web site](#)

[files/Flyer_2021_2022.pdf](#)

Specialized Master in Tunnelling and Tunnel Boring Machines - Politecnico Torino - Italy

The need of experts involved in D&B and TBM tunnelling as well as tunnel work site management is rapidly increasing throughout the world.

In this course, that has now reached its 12th edition, University lectures are merged with lectures/presentations by experts from construction companies, machine producers, design companies and professionals, to provide the multidisciplinary knowledge that is necessary to work in this sector.

The students who have attended the Post-graduate Master Course are of interest for design firms, construction companies involved in tunnelling and for tunnelling tools suppliers as well as producers of Tunnel Boring Machines and public administrations.

Attendance period: The next course will be held from January 2020 to December 2020. The class lessons last 6/8 hours a day, 5 days a week. The official language of the course is English.

ECTS (European credit transfer system): 60 (including: class lesson, practical training and final report work).

Email: This email address is being protected from spambots. You need JavaScript enabled to view it.

Website: https://didattica.polito.it/master/tunnelling/2020/at_a_glance

[Click here for a video presenting the course](#)

Specialized Master in Tunnelling and Underground Space - INSA / ENTPE - France

At the initiative of the French Association of Tunnels and Underground Space (AFTES), INSA Lyon and ENTPE in partnership with AFTES and the Centre d'Etudes des Tunnels created this Specialized Master designed to meet the high expectations of the French and international markets in training specialists in the design, construction and operation of underground structures.

This course gives general civil engineers specialized training enabling their rapid evolution to positions of responsibility, whether in project management or operations. In February 2011, this Specialized Master obtained the accreditation of the Conférence des Grandes Ecoles. It has also obtained endorsement from ITA and support from the Underground Works Union (FNTP).

Email: This email address is being protected from spambots. You need JavaScript enabled to view it.

Website: <https://www.insa-lyon.fr/fr/mastere-ouvrages-souterrains#0>

Master in Tunnels and Underground Works – AETOS Madrid - Spain

This Master is organized by AETOS (the Spanish Association of underground Works), CICCIP (Association of Civil Engineers) and UNED (the Spanish Open University).

The objective of this one-year ITA endorsed course is to provide students with a high level of instruction in tunnelling and underground works that will grant them access to the labour market in this specific technical field. Students will achieve sound knowledge in planning and design and the management and execution of works.

An additional objective is to provide supplementary specialized instruction for students who envisage a career in research and/or teaching after the course.

The Master course runs from January to October and is conducted in Spanish, although a certain number of specific conferences may be held in English.

Email: This email address is being protected from spambots. You need JavaScript enabled to view it.

Website: <http://www.aetos.es/master-programa-tuneles-y-obras-subterraneas-aetos>

Master's in Civil Engineering -Speciality Tunnelling and Underground Works (UNAM)

In 2014 the National Autonomous University of Mexico, (UNAM), the Alliance for Training and Research in Infrastructure for Development in Mexico (FiiDEM Alliance) and the Mexican Association for Tunnel Engineering and Underground Works (AMITOS) set up a Master's degree in civil engineering, with a specific focus on tunnelling and underground works.

The course, which has a duration of two years, is designed around 13 modules, covering essential topics such as geology, rock and soil mechanics, numerical methods in underground works, excavation procedures, support systems, laboratory and field testing and shotcrete use. These subjects are studied in the first two semesters. The third semester focuses on research activities and provides students with the chance to work on real projects through an internship, whilst a thesis is defended at the end of the fourth semester.

To be accepted on this course, students must have already completed a civil engineering degree (9 semesters).

The course is taught primarily in Spanish.

Website: <http://www.ingenieria.unam.mx/posgradoingcivil/index.html>



[Flyer 2018](#)

Contact persons: **Susana García Cotto** (This email address is being protected from spambots. You need JavaScript enabled to view it.) **M.I. Marco Tulio Mendoza Rosas** (This email address is being protected from spambots. You need JavaScript enabled to view it.)

Information on other academic courses in tunnelling

Information on other courses in tunnelling offered by establishments can be found below:

Austria - Montanuniversität Leoben



[Information on courses offered by the University.pdf](#)



[Brochure NATM engineering.pdf](#)

Website: <http://www.subsurface.at>

Course director: **Professor Robert Galler** (This email address is being protected from spambots. You need JavaScript enabled to view it.)

Austria - University of Graz



[Course brochure](#)



[Course content](#)

Website: <https://www.tugraz.at>

Contact person: **Wulf Schubert** (This email address is being protected from spambots. You need JavaScript enabled to view it.)

Brazil - University of Brasilia



Information on courses offered by the University of Brasilia

ITA-CET University Network member: André Assis (This email address is being protected from spambots. You need JavaScript enabled to view it.)

Brazil - University of São-Paulo



Information on courses offered by the University of São-Paulo

ITA-CET University Network member: Tarcisio Celestino (This email address is being protected from spambots. You need JavaScript enabled to view it.)

China - Tongji University



Information on courses offered by TongjiUniversity

Website: <http://civileng.tongji.edu.cn> (University webpages)

ITA-CET University Network member: Yun Bai (This email address is being protected from spambots. You need JavaScript enabled to view it.)

China - Southwest Jiaotong University



Information on courses offered by Southwest Jiaotong University

ITA-CET University Network member: Wenge Qiu (This email address is being protected from spambots. You need JavaScript enabled to view it.)

France - Ecole Nationale des Travaux Publics de l'Etat



List of courses offered by the Ecole Nationale des Travaux Publics de l'Etat

ITA-CET University Network member: Denis Branque (This email address is being protected from spambots. You need JavaScript enabled to view it.)

Germany - Ruhr University, Bochum



Information on courses offered by Ruhr-University Bochum

ITA-CET University Network member: Markus Thewes (This email address is being protected from spambots. You need JavaScript enabled to view it.)

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Italy - Politecnico di Torino



Courses offered by the Politecnico di Torino

Website: <https://didattica.polito.it/master/tunnelling/2018/introduction>

ITA-CET University Network member: Daniele Peila (This email address is being protected from spambots. You need JavaScript enabled to view it.)

Netherlands - Delft University of Technology



Information on courses offered by Delft University of Technology

ITA-CET University Network member: Professor Wout Broere ([link to web page](#))

Norway - Norwegian University of Science and Technology



Information on courses offered by the Norwegian University of Science and Technology.pdf

Website links: [Courses](#) and [Master](#)

ITA-CET University Network member: Bjorn Nilsen (This email address is being protected from spambots. You need JavaScript enabled to view it.)

Slovenia - University of Ljubljana



Information on courses offered by the University of Ljubljana

Website: <https://www.ntf.uni-lj.si>

ITA-CET University Network member: Jakob Likar (This email address is being protected from spambots. You need JavaScript enabled to view it.)

Switzerland - ETH Zurich



Information on courses offered by ETH Zurich

Website: <http://www.igt.ethz.ch>

ITA-CET University Network member: Georgios Anagnostou (This email address is being protected from spambots. You need JavaScript enabled to view it.)

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USA - Colorado School of Mines



Information on courses offered by Colorado School of Mines

ITA-CET University Network Member: Michael Mooney (This email address is being protected from spambots. You need JavaScript enabled to view it.)

Website: <http://ucte.mines.edu/UCTE-grad-program>

USA - Colorado Boulder

Website: <https://www.colorado.edu> (Online certificate in tunnelling)

ITA-CET University Network Member: Dr. Fulvio Tonon, P.E., Ph.D. (This email address is being protected from spambots. You need JavaScript enabled to view it.)