



# National Technical University of Athens

Interdisciplinary Postgraduate Programme:  
**“Design & Construction of Underground Works”**



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## M.Sc. “Design & Construction of Underground Works” - NTUA

The MSc Programme of “Design and Construction of Underground Works” was founded in 1999 in an effort to **support and enhance specialized engineering education** in all aspects of the design and construction of underground works.

The **School of Mining and Metallurgical Eng.** and the **School of Civil Eng.** of NTUA in 1999, followed by the **School of Rural & Surveying Eng.** of at 2018 are the founding schools that provide faculty staff and support to the programme.



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### Main aims:

- **Upgrade the quality of engineering education** and meet the demand for qualified engineers that would be ready to uptake key positions in the design and construction of underground projects.
- Provide **support for further research** in the field and to promote the development of new knowledge and innovation.
- Disseminate knowledge and **promote underground space development** for solving problems faced by modern societies



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### Studies:

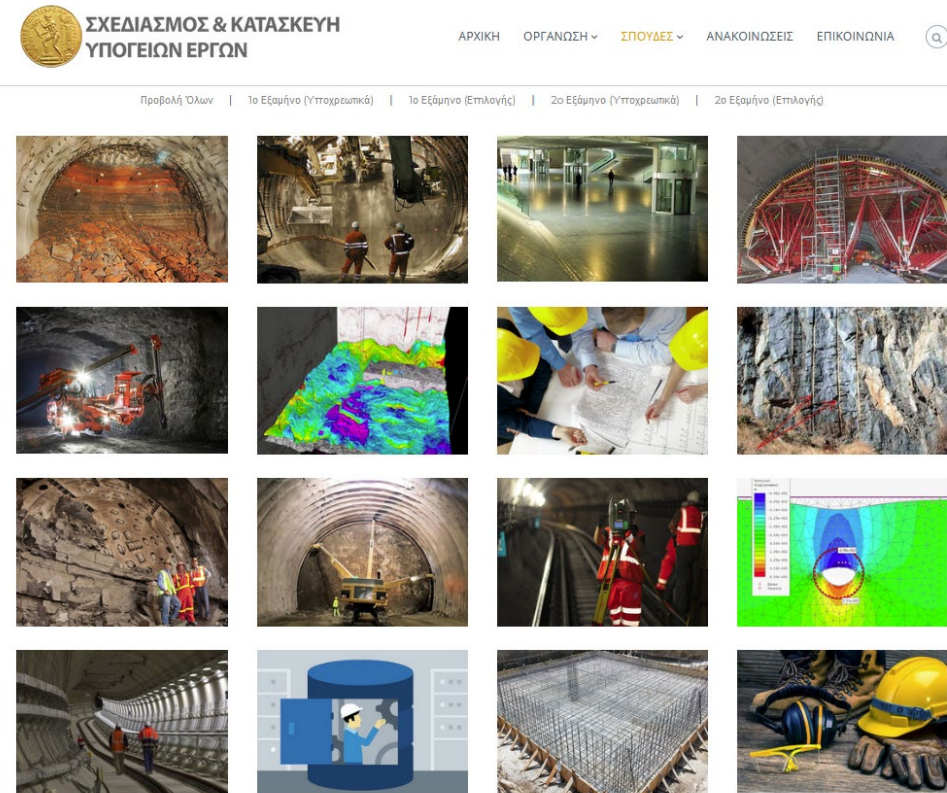
- The studies are structured in two parts. The first one is comprised by the courses taught in two semesters (four-month term), while the second one follows in which the students should carry out and finally defend their Master’s dissertation thesis
- Part-time option available for working students (2 years total duration)



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### Studies:

- Students must attend and succeed in a total of 10 courses (8 mandatory, plus 2 selective ones – out of 8)
- They cover a broad and diverse spectrum that enable students to comprehend rock behavior, design and construction strategies, risk, costing and financial issues as well as other disciplines that are interlinked with underground development (e.g. ventilation, etc.)





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Every year the students participate in a 5-day field trip all over Greece to witness the development of underground projects, to test their skills in real conditions and to get valuable knowledge and insight information on the actual development process.





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### Impact:

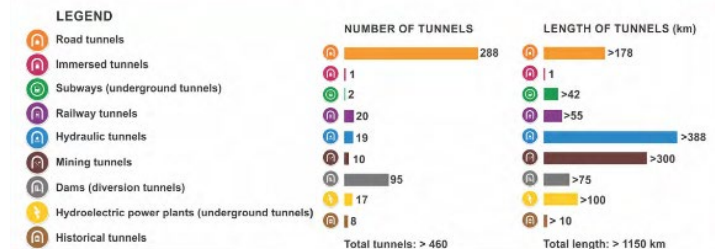
- Through the 20 years of its life, more than 400 engineers were awarded the Post Graduate Specialization Diploma (M.Sc.) and are now serving in all major design and construction firms in Greek and abroad, as well as in public administration agencies
- A great number of alumni are now “exporting” their knowledge abroad as being part of major companies all over the world



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### Impact:

- The majority of the tunnel and underground projects in Greece has been materialized in a 25 years period, coinciding with the life span of the MSc programme
- All projects that have been developed in Greece in the past 20 years, or are now being developed, have been designed and constructed by Greek engineers that have graduated from the programme







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### Impact:

- Cultivating a new generation of engineers that encompass and promote tunnels and underground space and that could eventually be the stakeholders that will prioritize the development of underground infrastructure to address the needs of society

