

# General information

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## GEOTECHNOLOGY AND ENVIRONMENTAL ENGINEERING

**Degree:** Graduate – University

**Duration:** 3 years (6 semesters); a total of 180 ECTS credit points

**Professional title awarded:** univerzitetni diplomirani/a inženir/ka geotehnologije (UN) (Engineer of Geotechnology), shortened: univ.dipl.inž. geoteh. (UN)

### Basic goals and competences:

The Geotechnology and environmental engineering university study programme is a natural sciences and engineering programme that prepares future graduates for work involving underground construction, environmental engineering and obtaining mineral resources.

During their studies, students perform industry placement training that gives them the opportunity to get acquainted with work processes and use their theoretical knowledge in practical situations. Together with the acquired practical experience and the counselling offered by teaching and professional mentors, students use electives to shape their study programme in such a way that the theoretical and specialist content is tailored to their requirements and needs.

Consequently, students obtain the necessary competences required for direct employment and/or continued professional or theoretical training in the entire field of obtaining mineral resources, primary processing of raw materials, blasting, underground construction, drilling techniques, observation and tracking in nature, geotechnical research, evaluation and conducting of activities affecting nature, the rehabilitation of degraded areas, environmental management, solid waste materials and land redevelopment due to natural disasters (landslides, earthquakes, etc.) and because of incorrect past activities affecting nature.

The knowledge and skills obtained enable graduates to work in demanding professional and managerial jobs both in the public and private sector; at the same time, it gives them the opportunity to continue their studies in the framework of similar postgraduate courses.


### Graduate competence profile

#### General competences+

- Being able to work in engineering companies, public administration, research laboratories in institutes working in the field of geotechnology, environmental engineering, mineral extraction, etc.
- Being able to use basic knowledge of mathematics, physics and chemistry to solve engineering problems.
- Being capable of conducting experiments as well as analysis and data interpretations.
- Theoretical and practical knowledge from the particular field of expertise.
- Being able to quantify and identify as well as formulate and solve engineering problems.
- Being capable of using techniques, skills and modern engineering tools needed for practical work.
- Being able to produce a quality professional analysis in the field of geotechnology and environmental









engineering.


- Being able to perform individual and project work in the field of geotechnology and environmental engineering.
- Understanding ethical and professional responsibility.
- Recognising the need for and capability of life-long learning.
- Confident expression of thoughts and communicating in a foreign language.


 Being able to use the acquired knowledge and skills in the wider area of geotechnology and environmental engineering.


•  **Destination**


• Being able to participate in projects involving geotechnology, environmental engineering and raw material


-  **traction.**
-  Being able to choose, describe and interpret different natural phenomena within the domain of geotechnology
-  **and environmental engineering.**
-  Being capable of problem parametrization and optimisation within the field of geotechnology and
-  **environmental engineering.**
-  Being capable of understanding stochastic processes in the natural environment.
-  Being capable of continuing studies in the field of engineering and the natural sciences.
-  Being able to offer wider social participation in the area of technological development.

•  **Employment possibilities+**

•  The knowledge and skills obtained enable graduates to work in demanding professional and managerial jobs in

•  both the public and private sector. Graduates are especially able to find work in companies working with

•  geotechnology, in environmental engineering, in construction, in utility and road companies, in other extractive

•  industries where there is a need for raw material extraction and in activities in the earth's crust connected to the

construction of infrastructure, dumps, landfills, the rehabilitation of damaged areas, etc.



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