

Study branch Geotechnics and Underground Engineering

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Faculty	Faculty of Civil Engineering
Study programme	Civil Engineering
Type of study	Bachelor
Language of instruction	English
Code of the branch	S02
Title of the branch	Geotechnics and Underground Engineering
Regular period of the study	4 years
Cost	50,000 CZK per semester
Coordinating department	Department of Geotechnics and Underground Engineering
Coordinator	prof. Ing. Antonín Lokaj, Ph.D.
Key words	Mining Structures, Underground Engineering, Geothermal Energy, Slope Stability, Geotechnics

About study programme

The basic aim of the specialization study - Geotechnics and Underground Engineering is the complex education and training of specialists and the achievement of the level of bachelor education, which will ensure the effective use of acquired knowledge especially in the field of geotechnical, underground and mining construction, foundation engineering, but also in the field of environmental and energy geotechnics.

Graduate's employment

Worker in the field of surface and underground mining, a worker of a design and realization company, a company performing geotechnical research, a manager at the level of the state administration.

Study aims

The aim of the study specialization Geotechnics and Underground Engineering within the framework of the Civil Engineering program is to educate middle management operating staff in the areas of underground engineering, geotechnical constructions and foundation engineering as well as in mining geotechnics. Graduates will acquire basic theoretical and practical knowledge and skills related to the behavior of the rock environment and its interaction with structural elements located in it. Attention is also paid to acquiring basic knowledge in the field of application of modern information systems in the building industry with the aim to increase the possibility of graduates' employability in projects conducted in the Building Information Modeling (BIM) system.

Graduate's knowledge

According to the catalog of the National System of Occupations, he is a graduate of the bachelor study program Civil Engineering who is competent to work as an independent construction engineer, which includes primarily the position of site manager, independent construction engineer technologist, independent construction engineer for the preparation of production and investment, independent construction engineer designer and independent construction engineer of investments and engineering.

Graduate's skills

Geotechnics and Underground Engineering graduates find employment not only in specialized geotechnical companies, but also in companies with more general building focus. The graduate of this specialization also meets the requirements for education prescribed by the State Mining Administration of the Czech Republic for acquisition firearms permission. The graduate has the possibility of authorization in the field of Geotechnics at Czech Chamber of Authorized Engineers and Technique Activities in Construction.

Graduate's general competence

The graduate is able to solve a standard practical geotechnical problem under the guidance of more experienced workers, is able to obtain necessary information for solving the given problem, to sort, analyze and interpret this information. The graduate is prepared to coordinate and manage the work team and to be responsible for the results of the work team in the given problem area.

The graduate is able to present the solved problems and proposed methods and methods of solution in a clear and knowledgeable way. Graduate specialization skills also include basic professional communication in a foreign language.