

Applied Geology

Generated: 30. 3. 2026

Faculty	Faculty of Mining and Geology
Type of study	Follow-up Master
Language of instruction	English
Code of the programme	N0532A330042
Title of the programme	Applied Geology
Regular period of the study	2 years
Coordinating department	Department of Geological Engineering
Coordinator	prof. Ing. Petr Skupien, Ph.D.

About study programme

The Applied geology in the master's study is a technically oriented geological field of study that in necessary extent ensures all the geological research and survey activities. The study is focused mainly on the education of experts in the area of hydrogeology, engineering geology, technical mineralogy and petrography, environmental geochemistry, deposit geology and applied geophysics. The students go through subjects of natural scientific and technical nature, which will enable them to adapt professionally to related and interdisciplinary fields. In theoretical and practical tuition it aims at performing, managing, organizing and evaluating of all types of geological works. The study is permeated with analysis of geological problems and associated technical activities, evaluation of economic and environmental aspects of geological, mining and industrial activities, application of information technology and geoinformatics.

Professions

- Engineering geologist
- Geologist specialist
- Specialist in science, research and development
- Deposit geologist
- Geophysicist
- Geologist
- Geologist for nature and landscape protection
- Hydrogeologist
- Drilling engineer

Hard skills

- Project management
- Designing
- Professional competence in geology
- Analytical skills
- Knowledge of English in written and spoken form
- Knowledge of system approach
- Data processing in GIS, statistics (R, IBM SPSS)
- MS Office

Graduate's employment

Graduate can find employment in wide range of geological investigation and exploitation enterprises, organization which deal with ecological geology problematic etc. Hi is also able to deal in the management post.

Study aims

The study in this field is predominantly focused on the education of the engineers in the applied geology (hydrology, engineering geology, technical mineralogy and petrography, environmental geochemistry, economy geology, drilling exploration and applied geophysics). Theoretical as well as practical parts of the education are targeted at implementing, managing, organizing and assessing of all kinds of geological operations. The core of the study concentrates on the analysis of geological phenomena, assessment of economic and ecological aspects of geological activities, mining and industrial utilizations, application of computer technologies and geoinformatics

Graduate's knowledge

Theoretical as well as practical parts of the education are targeted at implementing, managing, organizing and assessing of all kinds of geological operations. The core of the study concentrates on the analysis of geological phenomena, assessment of economic and ecological aspects of geological activities, mining and industrial utilizations, application of computer technologies and geoinformatics.

Graduate's skills

Graduates are able to solve individually wide complex of geological and geoscience problems with utilization theory, concepts a methodology concern also problematic of related technical and geoscience fields.

Graduate's general competence

Graduate is able to decide individually in relation to new and varying circumstances, so as take into account wide social consequences.

Study curriculum

- form Full-time (en)