

Program: Geotechnical and Environmental Management (field of study Mining and Geology)

II level studies (MSc program) fully taught in English, 3- semesters (90 ECTS) - starting in mid-February 2020, ending in July 2021. Second semester is a mobility period when the students will follow a structured exchange program at the University of Miskolc (Hungary). Erasmus Plus mobility grants will support the students during their stay in Hungary

The international program is based on two master programs: Environmental engineering MSc with Remediation and geotechnics specialization at the University of Miskolc and the Mining and Geology MSc with Mining Engineering specialization at the TU Wroclaw. Students registered at Wroclaw University of Science and Technology, after earning credits for all courses in the curriculum and defending the thesis, will receive the diploma of our university.

The program was designed as a response to the growing need for specialists qualified in geotechnics and rock mechanics who, on the other hand are able to deal with environmental risk assessment, remediation across all stages of the mining value chain. In Europe this need was caused by the implementation of the Extractive Waste Directive of the EU. Nevertheless environmental and geotechnical issues remain important for the whole global extractive industry. Beside problems caused by newly developed deposits and currently operating mines, legacy of the extensive ore mining activities in the past needs site remediation and safety measures all over the Globe.

Graduate profile

The graduate will possess most current and deepened knowledge as well as practical skills in general subjects, like geostatistics and geochemistry and also in specialization issues like geomechanics, open pit excavation design, geological modelling, integrated analysis of deformations, environmental management, waste remediation methods, environmental geotechnics and industrial safety problems. Beside these, the graduate will possess managerial skills, will be trained in project management, decision making, risk mitigation, will know the legal and economic environment of the mining industry.

Alongside with faculty staff, several industrial experts will be involved in teaching. Therefore students will be well informed and aware of the current industry challenges and expectations. Graduates will be prepared to design technological processes, manage these processes in an industrial scale as well as to solve research and development type of problems using entrepreneurial skills.

Studying in the international environment will enhance their inter-cultural competence and interpersonal skills. Graduates will be prepared to work in global business environment.

Employment options - worldwide

- underground and surface mining companies
- geotechnical and civil engineering enterprises
- companies and institutions specialized in monitoring and environmental protection
- companies specialized in waste remediation and post-mining site reclamation

- mining authorities and regulators, governmental and local institutions dealing with environmental protection and geotechnical engineering
- research institutes, development centers dealing with geotechnical or environmental problems
- in companies related to the mining industry, civil engineering or environmental engineering.