

MINERS - Mine Emergency Response and Rescue School

Project title: MINERS - Mine Emergency Response and Rescue School



Duration of the project: 2018 - 2019

Project leader: Montanuniversität Leoben (MUL), Austria

Co-location Centre: EIT RawMaterials CLC East Sp. z o.o. (CLCE) (Co-location Centre for Eastern Europe)

Project partners:

Boliden Mineral AB, Sweden

College of the Holy and Undivided Trinity of Queen Elizabeth near Dublin (TCD), Ireland

DI Wilhelm Schön, Austria

Technische Universität Bergakademie Freiberg (TUBAF), Germany

University of Zagreb, Faculty of Mining, Geology and Petroleum Engineering (UNIZG-RGNF), Croatia



Web page: <https://eitrawmaterials.eu/course/miners/>

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Project description:

MINERS aims to establish an **international mine emergency response and rescue training module** for integration into university masters and PhD curricula. The program will combine the know-how of different international universities, companies and experts and will prepare students to work in the fields of mine **emergency response, rescue operations and crisis management**. The students will not only learn the theoretical backgrounds of national and international safety standards and rescue procedures, but they will also be trained under real life conditions, supported by experts, to learn proper skills to run a safe and successful rescue mission. This Mine rescue program will bring together students from different universities trained by international experts, who have personally been involved in mining accidents and have led rescue operations all over the world.

Background of the project:

Working in the mining industry has always been a dangerous profession. Due to a permanent process of improving work practices and safety standards, the risk of accidents and catastrophes is reduced to a minimum, but still remains. The idea for the Mine Emergency Response and Rescue School (MINERS) originated among the consortium partners in the light of recent mining catastrophes, such as the Rudna copper mine rockfall (Poland, 2016), the Soma Kömür İşletmeleri coal mine explosion (Turkey, 2014), the Sassjadko mine explosion (Ukraine, 2015, 33 dead) or the well known San Jose Mine accident in Chile in 2010, as well as a lot of smaller local accidents, emergencies and catastrophes.

Having access to well trained, highly qualified and dedicated mine rescue personnel is a key to successfully conduct rescue operations, but also reduces the risk of accidents. Many engineers are involved in an accident or catastrophe already at the start of their careers and in most of these cases the lack of knowledge to successfully run a rescue operation is the key factor for their decision of pursuing further training in mine rescue and mine safety. An external network of emergency responders, innovative technical and organisational approaches and common skills is not always available, as synergies and coordination between institutions are required. In particular, in the ESEE (East and South- East Europe) region there is a need for improved crisis management structures and a common basis of training. This is why MINERS aims to build a basis for this structure already on the university level.

Impact, objectives and scope of the project:

- 1) An increase of safety will provide a **better working environment for miners as well as improve the image of companies in public** if an accident happens. Proper crisis management and emergency response mechanisms will help better the image of the mining industry as a whole. Due to its broad and integrative approach the project has a strong desiloing effect on emergency response structures within companies, countries and industrial branches. The implementation of ongoing work from various universities



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and companies will ensure best practice and best education available during the module.

- 2) Due to the planned international exchange between participating universities and companies, **a great field for future research can be established and topics for bachelor and master theses**, like occupational safety or crisis management in mining will be created. During the program students will participate in project work covering specific topics related to industrial needs. These results will help support the industries research and safety. A modern training handbook will be available to the students for support of their studies.
- 3) By combining the efforts of the participating universities, **a new joint education module (35 ECTS) for universities** will be established and conducted. The module will consist of different theoretical and practical training parts, supported by a newly developed handbook for mine rescue and emergency response at university level. MINERS also builds a basis for young entrepreneurial and innovative engineers in the field of mine safety and emergency response. To keep the level of education as high as possible, only a group of maximum 30 selected students will be able to participate in the MINERS program at a time.

The education module will be split in two parts. The first part is a training and exchange program that combines theoretical lessons as well as hands on exercises. Students will learn basics and standards for mine emergency response and rescue operations. Joint field exercises attended by all participating universities and supported by experts from the mining industry will help the students to develop their knowledge, while the courses will be held at different locations (Leoben, Freiberg, Zagreb, etc.).

Part two is an individual learning and work phase. Participating students will work on individual topics in cooperation with industrial partners. During an internship and an individual work phase project work will have to be carried out. The results will be published and available for each participant.

On top of that, the strong connection to industrial partners within the individual work phase should also bring new industrial partners from the field of mine safety into the KIC consortium.

