

**SafeMine** PhD-Programme will train the next wave of qualified professionals who can lead the future of health and safety work in the European mining and tunneling industry based on a modern view of how an attractive mine should be designed.

Four leading European mining universities - **Clausthal University of Technology** (Germany), **Luleå University of Technology** (Sweden), **RWTH Aachen University** (Germany) and **Montanuniversität Leoben** (Austria) - are working closely together with industrial partners in order to develop this PhD-Programme.

## *SafeMine PhD course in Luleå: Attractive workplaces in mining*

Date: November 25-29, 2019

Location: Luleå University of Technology and Kristineberg mine in Boliden, Sweden

**Registration latest November 1<sup>st</sup> to [jan.johansson@ltu.se](mailto:jan.johansson@ltu.se)** (The course is limited to a maximum of 12 students)

### **Preparation material to read**

- Joel Lööw, Bo Johansson, Eira Andersson, Jan Johansson (2018). *Designing Ergonomic, Safe, and Attractive Mining Workplaces*. CRC Press, Taylor & Francis. ISBN 9781138092211
- Information material about Boliden mines
- Annual report for Boliden mines
- Statistics on production and work accidents at Boliden mines
- Lööw, J., & Nygren, M. (2019). Initiatives for increased safety in the Swedish mining industry: Studying 30 years of improved accident rates. *Safety Science*, 117, 437-446. <https://www.sciencedirect.com/science/article/pii/S0925753519301286?via%3Dihub>
- Abrahamsson Lena, Jan Johansson, "From Grounded Skills to Sky Qualifications", *Journal of Industrial Relations* 48(5), 2006. <https://journals.sagepub.com/doi/pdf/10.1177/0022185606070110>
- Lööw, J., Abrahamsson, L. & Johansson (2019). Mining 4.0—the Impact of New Technology from a Work Place Perspective, *J. Mining, Metallurgy & Exploration*. <https://doi.org/10.1007/s42461-019-00104-9>.

### **Examination**

The course ends with an individual, written report in the form of an essay (max 4000 words) that is sent to Jan Johansson ([jan.johansson@ltu.se](mailto:jan.johansson@ltu.se)) within one month after the course is completed. The doctoral student receives a course certificate after completing the course.

## **Preliminary program for SafeMine training course.**

### Sunday, November 24

Arrival in Luleå

### Monday, November 25

09.30 Introduction  
Presentation of participants and teachers  
Presentation of the department  
SIMS project  
12.00 *Lunch break*  
13.00 Future Trends and Challenges for the Mining Industry  
14.00 What is Attractive Mining Work?  
15.00 Health and Safety in Mining  
16.00 Safety Hazards and Risk Management in Mining

### Tuesday, November 26

8.30 Technology and Organizational Issues in Mining  
9.30 Lean Mining  
10.30 Gender in Mining  
11.30 Mining 4.0  
12.15 *Lunch break*  
13.15 Design and planning of field study

### Wednesday, November 27

06.00 Visit to the mine in Boliden  
Three hours drive

### Thursday, November 28

8.30 Analysis of results from the mining visit  
12.00 *Lunch break*  
13.00 Design of an action plan to create an attractive and sustainable mine

### Friday, November 29

8:30 Presentation of the action plan and comments from Boliden  
Instructions for the individual report writing  
Summary of lessons learned  
End of course  
12.00 *Lunch*  
Home trip

**Recommended hotels in the city center, 10 minutes with the No. 6 bus:**

Elite Stadshotellet

+46 920 274000

[info.lulea@elite.se](mailto:info.lulea@elite.se)

<https://www.elite.se/en/hotell/lulea/stadshotellet>

Clarion Hotel Sense

+46 920 450 450

[cl.sense@choice.se](mailto:cl.sense@choice.se)

<https://www.nordicchoicehotels.com/hotels/sweden/lulea/clarion-hotel-sense/>

**Recommended hotel within walking distance, 2 km, 20 minutes  
(the hotel is located in an industrial area):**

Scandic Luleå

+46 920 276411

[lulea@scandichotels.com](mailto:lulea@scandichotels.com)

[https://www.scandichotels.com/hotels/sweden/lulea/scandic-lulea?\\_ga=2.118434753.914874531.1568795160-655340278.1568795160](https://www.scandichotels.com/hotels/sweden/lulea/scandic-lulea?_ga=2.118434753.914874531.1568795160-655340278.1568795160)