

NETWORK. DISCOVER. RESOURCES

# JOINT MASTER EUROPEAN MINING COURSE - EMC



RWTH AACHEN UNIVERSITY (GERMANY)

AALTO UNIVERSITY (FINLAND)

MONTANUNIVERSITÄT LEOBEN (AUSTRIA)



Aalto University



MONTAN  
UNIVERSITÄT  
LEOBEN

# EUROPEAN MINING COURSE – LEAVE YOUR MARK!

With a growing world population and increasing global welfare, the demand for most metals and minerals is increasing. At the same time, metal and material markets are not always predictable, making the challenge to identify and extract resources within economies of scale even more complex. Adding to this complexity, awareness of environmental issues is also growing and the world expects resources to be extracted in a responsible and sustainable manner. It will be up to the resource specialists of the future to operate successfully in this challenging environment.

In future, graduates working in the resources sector are expected to have technical skills as well as social intelligence, adaptive thinking and cross-cultural competencies. They have to have language skills, be creative and self-motivated, be champions of research and receptors of innovations.

## Start

September in Helsinki

## Degree

Master of Science from each University

## Language Credits

English 120 ECTS, 24 months fulltime

## Fees Application period

~500€ per year 01.01. –28.02.

## Entry requirements

Profound English skills,  
BSc in the engineering or geoscience disciplines, such as Mining Engineering, Resource Engineering, Geology, Earth Sciences, Environmental Engineering



## Why choose this course?

- Enhance your international resource knowledge and skills
- Join our worldwide alumni network and gain professional contacts
- Benefit from flexibility with optional modules; enabling personalized learning
- Enhance your learning with industry guest speakers
- Enjoy a program taught completely in English
- Earn an MSc from renowned European Universities

## You want to study abroad?

Adventure is the best way to learn.

## *You want to gather exciting international experience at three leading universities and meet new people?*

Discover the world with like-minded students and university staff.

## *You want to work closely with industry and in international teams?*

Well, then you are on the right track here!

## Triple-Degree programme

The European Mining Course (EMC) is an triple-degree M.Sc. program hosted by three leading technical universities in Europe:

- RWTH Aachen University (Institute of Mineral Resources Engineering (MRE)),
- Aalto University (Helsinki), and
- Montanuniversität Leoben.

Alongside with students of these three universities, there are numerous guests from Europe and from all over the world participating in the EMC to explore the international world of mining within their master studies.

The EMC covers every aspect of the life cycle of mineral resources. It is designed to provide a solid understanding of the global mining industry and takes a life-cycle approach by covering the entire mining value chain. It offers a state-of-the-art technical basis in resource modelling, mine design and economic evaluation. Technical knowledge is supplemented with topics on business economics, ethics, environmental engineering and a clearly defined and structured program for the management of health, safety and environment.



But there is more to the EMC than just studying abroad! Through guest lectures from industry, excursions and industrial projects, you get a direct insight into the international mining industry and gather valuable contacts for your professional future.

The EMC aims to train professionals who will be the future decision-makers in the mineral resources and associated engineering trade, with a strong vision of the future developments in this industry. EMC supports the development of students into adaptive, innovative and entrepreneurially-oriented engineers capable of identifying the best approach to obtain optimal value from mineral ore deposits.

## Career opportunities

Given the worldwide demand for professionals in mining and minerals engineering and management, graduates of EMC have promising career opportunities. EMC graduates will be qualified to work for:

- Mining companies and companies engaged in minerals and metals processing technology
- Engineering and consulting firms
- Companies working on ore deposits and integrated production
- Market leaders in efficient mining
- Aggregates companies
- Government agencies
- Knowledge institutions, research institutes and think-tanks

# ABOUT THE PROGRAMME

The EMC cohort 2022 will be a two-year triple-degree program with Aalto University, RWTH Aachen University and MU Leoben.

Students are enrolled at all three universities during their studies. They study one semester at each partner university and move together from university to university as a group.

The EMC starts in September in Helsinki at Aalto University (Finland) with the focus on deposit characterisation. Interesting courses cover geology, rock mechanics, economics, processing and recycling and are accompanied by an excursion to northern Finland.

After a 3-month break, during which students have the opportunity to complete an internship at a company (e.g. one of FEMPs partners), students move to RWTH Aachen University (Germany) to learn about deposit sustainability.

The third semester starts in October at Montanuniversität Leoben (Austria) and covers aspects regarding deposit development and in-depth courses about mining.

In the final semester students develop their master thesis project, which may be carried out in cooperation with a company.

Upon completion students receive a M.Sc. degree of each university and a certificate of participation in the EMC exchange program by FEMP.

## Aalto University

### 1. Semester, Sep-Dec 2023

Aalto covers aspects around deposit characterisation, focusing on economic geology and mineral economics, materials processing and synthesis and rock mechanics.

## RWTH Aachen

### 2. Semester, Apr-Sep 2023

RTWH Aachen will offer courses connected to deposit sustainability. Courses address mine wastes, feasibility studies and mining and modelling.

## MU Leoben

### 3. Semester, Oct-Jan 2022/23

The MU Leoben provides courses with focus on deposit development, those include underground mining, deposit modelling and occupational safety.

## Thesis, Home University

### 4. Semester, Feb-Aug 2024

The thesis semester covers a 6-month 30 ECTS full-time thesis. Theses might be done with industry partners or at research facilities within the universities.



## Living in different cities

The EMC program is inherently international because the studies take place at three different universities in three different countries. The program provides its students with a profound experience of working, studying and living in multiple countries in an international environment. Together with the international group of students you can explore the cultural and natural offers in the three cities and make many great experiences while living abroad.

Finland's national parks and lakes invite to day trips, the old town of Helsinki holds exciting places and not to be neglected are the relaxing evenings in one of the many Finnish saunas.

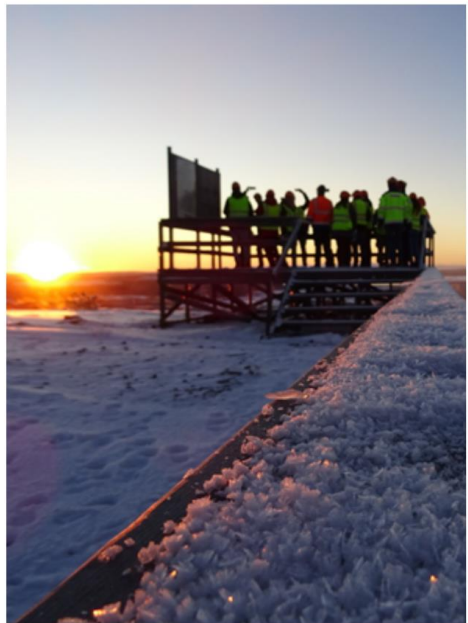
Aachen offers nice evenings with its beautiful old town and the famous cathedral and is located directly at the foothills of the Eifel national park.

Leoben is a student town from where you can get to the nearby mountains for hiking in the summer or skiing in the winter.



## Eligibility

To become part of the next EMC cohort you must apply via the online platform of Aalto University. You do not have to pay a tuition fee, but you will have to pay social fees at all 3 universities. If you want to take the EMC courses, you need to have a valid and relevant bachelor's degree when you start your exchange with us.



## English language requirements

Since the working language of the degree program is English and all courses are taught in English, all exchange students are required to have an advanced level of the English language - comparable to the level B2 of the Common European Framework of Reference. Such a level is required to be able to successfully complete the courses. The universities require proof of an English language test score, so make sure your English is up to par when you start your exchange.

## ENGAGE WITH THE INDUSTRY!

The EMC offers direct collaboration with industry and sees it as vital to its success. Working together on projects and understanding the needs helps to develop yourself towards a well equipped future resource specialist.

Industry partners of the EMC actively support the education and will provide guest lectures or challenge you with group projects. Companies will also invite you from time to time for a get-together and enable you to directly learn about a potential future employer.

The EMC is certainly proud of its long standing relationships with its industry partners, who host company and site visits and offer internships and work placements for the EMC students.

The past has shown that this relationship continues after graduation with many of our 800+ graduates joining our industry partners and building their careers with them.

### Excursions

During the EMC program you will be invited to join the EMC excursions to mine sites, equipment manufacturers and processing plants to gain a deeper insight into the industry.

- **Leoben:** you will visit the surface mine Erzberg and the underground mines Breitenau and Mittersill
- **Aachen:** will offer you trips to equipment manufacturers in the Ruhrarea, quarries and lignite mines
- **Finland:** a whole excursion week to the northern part will be organized for you

These field trips are also a great way to build your network within the industry and form stronger connections with your cohort from the three partner universities.

## FEMP

The Federation of European Mineral Programs is a not-for-profit foundation created to support the education of MSc level students in the field of mineral engineering.

FEMP is directly connected to the EMC and has supported over 800 talented individuals who completed their MSc over the last 25 years. Our alumni have already spread around the world and are helping to lead the mining industry.

It is our hope and ambition that FEMP will continue to help develop these future industry leaders as they meet the challenges of the industry while utilising the experiences and skills obtained during their MSc.



## Scholarships

FEMP scholarship: Admitted students can apply for a FEMP scholarship to cover part or all of the EMC tuition fees.

The Erasmus Mobility Scholarship: This covers a max of 12 months of study in a country within the EU. It can only be requested once per academic year for mobility periods taking place outside of your home university. To start the application an Erasmus+ Learning Agreement will need to be completed. Make sure you enquire if you are eligible for this scholarship (only after being accepted into the program) by contacting your home university.

## Alumni and Reunion

- Over the past 25+ years, over 800 international students graduated from EMC or one of the other FEMP study programs
- Strong international alumni network, every year FEMP and the Alumni Council organize several activities, include the annual reunion with often over 100 participants.

## **Application**

If you want to participate in the EMC, you have to apply at apply via the online system of Aalto University. You'll find the most current information on our homepage [www.emc-master.eu](http://www.emc-master.eu)

After your admission to the EMC you will receive further information from Aalto University about the further process, this contains among others scholarship opportunities at the partner universities and your housing options.

## **Action list**

### **Step 1 Prepare your application**

Make sure you are eligible for the EMC. If you are in doubt, please don't hesitate to reach out and clarify with us!

### **Step 2 Apply for the EMC**

Deadline: End of February

You need to apply for the EMC via the online portal of Aalto University. You'll find the link and all relevant information on our homepage [www.emc-master.eu/application](http://www.emc-master.eu/application)

### **Step 3 Follow the instructions after admission**

Once you got accepted to the EMC, you'll receive an admission letter and further information from Aalto University on how to complete your enrolment and other formalities.

If you have any questions,  
reach out to us via our homepage or one of  
the contacts below.

## **European Mining Course – EMC**

**For more information about the program please visit [www.emc-master.eu](http://www.emc-master.eu) or contact your main university below:**

RWTH Aachen University	Yannick Feldmann	<a href="mailto:EMC@mre.rwth-achen.de">EMC@mre.rwth-achen.de</a>
Aalto University	Mikael Rinne	<a href="mailto:mikael.rinne@aalto.fi">mikael.rinne@aalto.fi</a>
Montanuniversität Leoben	Nikolaus Sifferlinger	<a href="mailto:Nikolaus-August.Sifferlinger@unileoben.ac.at">Nikolaus-August.Sifferlinger@unileoben.ac.at</a>