

Contact Information

For further information please visit:

<https://tu-freiberg.de/studium/studienangebot/geomatics-master>

Or send an E-Mail at:

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Project Coordination:

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[Link to the MSc-Program on Geomatics for Mineral Resource Management at the TU Bergakademie Freiberg](https://tu-freiberg.de/en/international/application)

The project EC-Geo-Sustain receives funding from the European Institute of Innovation & Technology (EIT) under the Project Agreement No 17002. The EIT is a body of the European Union.

Requirements & How to apply

According to the study regulation of TU Bergakademie Freiberg (TUBAF) applicants need to submit the following documents until the **31.01.20xx** (VISA is required)/ **31.08.20xx** (no VISA is required) at TUBAF, International Centre, Akademiestr. 6, 09599 Freiberg:

- Completed application form „**Application for Admission**“
- Proof of a BSc-Degree in a related field (e.g. Geodesy or Geoinformatics)
- Current transcript of records
- Proof of English proficiency by means of a recognized language test e.g. Test of English as a Foreign Language (TOEFL) with a total score of at least 90 points (internet-based test) / each with minimum 22 listening, 20 reading, 20 speaking, 24 writing or 550 points (paper-based test)
- Proof of German language proficiency of level B1 or above after the Common European Framework of Reference for Languages
- 1 passport photo

All necessary application forms as well as further information (e.g. how to apply for VISA) can be found at:

<https://tu-freiberg.de/en/international/application>

Academic Calendar TU Bergakademie Freiberg:

Winter Semester: 01.10. - 31.03

Lecture Period: second week of October - beginning of February

Examination period: February/March

Summer Semester: 01.04. - 30.09.

Lecture period: beginning of April - beginning of July

Examination period: July to September

Geomatics for Mineral Resource Management

A European MSc-Program



Associated Project Partners



Co-funded by

Supported by



This activity has received funding from the European Institute of Innovation and Technology (EIT), a body of the European Union, under the Horizon 2020, the EU Framework Programme for Research and Innovation



About EC-Geo-Sustain

A continuously rising global demand for raw materials requires to progress the extraction of mineral resources in areas of the geosphere, which are more difficult to access. Simultaneously, the highest levels of safety and environmental and social regulations need to be fulfilled, and the optimal use of natural resources by maximizing recovery is desired. This requires engineers to be able to develop new innovative solutions, making the best use of most modern technology to acquire, manage and analyze geodata.

The European Course on Geomatics for Mineral Resource Management aims to develop future leaders and innovators in this field. The educational content focuses on the pillars:

- Sensing technologies for mine data gathering,
- Spatial (big) data management and visualization and
- Spatial (big) data analysis and modelling.



The aim of this MSc course is to enable students to integrate these three pillars into innovative Geomonitoring concepts. Students will be exposed to the most recent research originating from several large European research projects. The implemented interaction with several local industry partners will allow students to work on real projects, understand industry needs and to train and develop their entrepreneurial skills. With a guided but flexibly designed exchange program between partnered Universities, students will be exposed to different fields of expertise and cultural environments. Graduates are expected to be future leaders in the field of technology development and innovation bringing modern geomatics concepts to marketable products for a secured future in the mineral resource industry.

Course Description

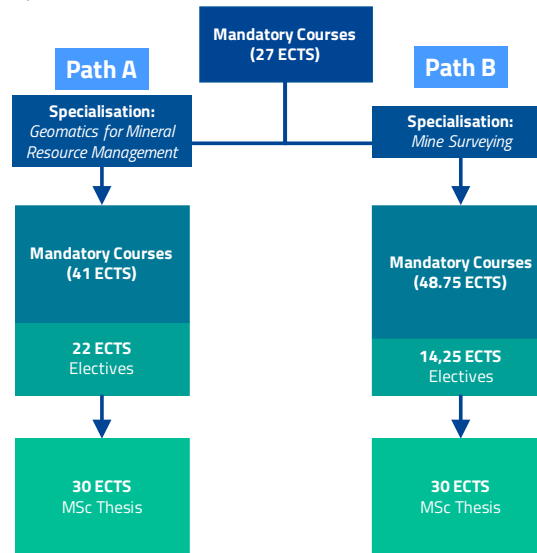
This MSc-Program is set to last a total of 4 semesters, with each semester including courses worth 30 ECTS credits the least (120 ECTS credits total). The program itself offers two different specialisations.



The first specialisation is called *Geomatics for Mineral Resource Management* and is offered by the TU Bergakademie Freiberg (Germany). This path focuses on the process of resource modelling and mine management. Students will be taught in a variety of subjects related to the field mining and mineral resources. This includes financial, environmental, political as well as the legal aspects of national and international mining projects.



The second specialisation is called *Mine Surveying* and is offered as a joint course between the TU Bergakademie Freiberg and the Montan Universität Leoben (Austria). This path focuses on the acquisition, processing and evaluation of surveying data and other (big) data during a mining process. Students will be educated in measurement techniques fitted for applications in a mining environment. In addition to that, a range of modern computational applications in mining will be taught such as machine vision and other relevant techniques.

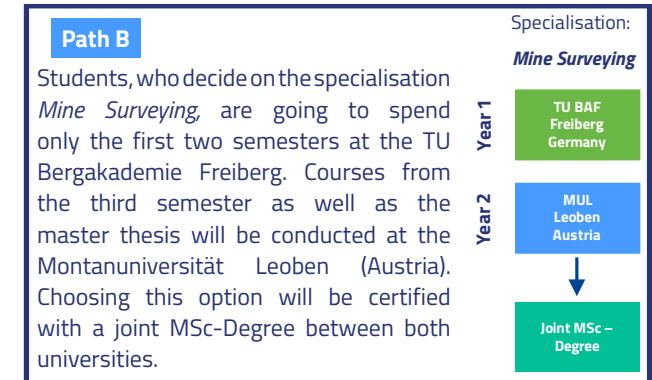
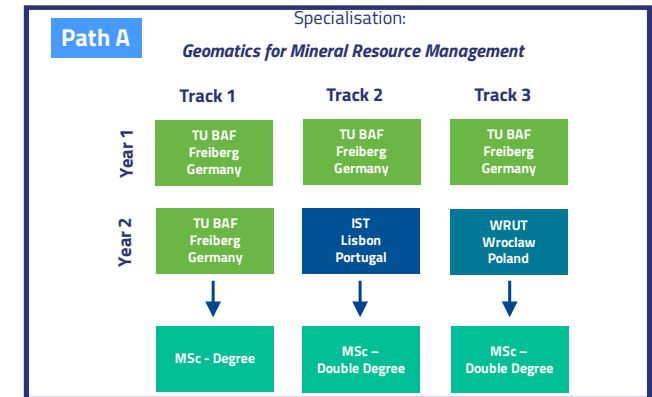


Course Structure

Students, who decide on the specialisation *Geomatics for Mineral Resource Management*, are, on default, set to study 4 semesters at the TU Bergakademie Freiberg (Germany) and are going to graduate with an MSc-Degree.



If desired, an arrangement with the Wrocław University of Science and Technology (Poland) or the Técnico Lisboa (Portugal) can be made*. While the first two semesters will be held at the TU Bergakademie Freiberg, the courses for the third semester as well as the master thesis will be conducted in one of the partner universities. Choosing this option will be certified with two degrees (one from the TU Bergakademie Freiberg and one from the respective partner university).



*Exchange options with TU Delft exist every Winter Semester