



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



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Master's degree



Mining Engineering (MSc)

Clausthal University of Technology • Clausthal-Zellerfeld

Overview

Degree	Master of Science
Teaching language	<ul style="list-style-type: none">English
Languages	English
Full-time / part-time	<ul style="list-style-type: none">full-time
Programme duration	4 semesters
Beginning	Winter and summer semester
Application deadline	<p>These deadlines are recommended in order to give applicants sufficient time for visa application. Applications for the programme will be processed upon receipt.</p> <p>15 July (start of studies in the winter semester on 15 October) 15 January (start of studies in the summer semester on 1 April)</p>
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No

Description/content

The Master's programme in Mining Engineering focuses on providing students with the scientific qualifications needed for employment within the mining industry. Due to the broad range of topics covered in the lectures, students acquire the knowledge necessary in order to take up leading positions requiring a sound scientific background.

Students have the opportunity to work in interdisciplinary teams in different parts of the mining industry. Additionally, students are able to conduct research and generate reports to ensure the safe and environmentally friendly exploration and extraction of mineral resources. This is thanks to the profound knowledge of the following topics which they acquire during the Master's programme in Mining Engineering:

- Surface Mining
- Underground Mining
- Shaft Sinking
- Mining Machinery
- Underground Mine Ventilation and Climatization
- Geoinformation Systems

- IoT and Digitalisation
- Mining and Environment
- Rock Mechanics
- Mineral Resources
- Mineral Processing
- Drilling Engineering
- and a lot of elective modules on different topics...

Course Details

Course organisation

One credit point (LP) is equivalent to one ECTS point = 30 hours workload per semester. If modules are held in two semesters, they will be listed twice in the list below (once in each semester).

First semester (winter semester):

- Module: Shaft Sinking and Advanced Ventilation (lectures and tutorial, 6 LP, part 1/2)
- Module: International Mining (lectures, seminar and tutorial, 6 LP)
- Module: Geomatics (lectures and tutorial, 6 LP, part 1/2)
- Module: Mineral Resources (lecture, 6 LP)
- Module: Mineral Processing (lecture and tutorial, 4 LP)
- Module: Underground Mining Equipment (lecture and project, 6 LP)

Second semester (summer semester):

- Module: Shaft Sinking and Advanced Ventilation (lectures and tutorial, 6 LP, part 2/2)
- Module: Responsible Mining (lectures and tutorial, 6 LP)
- Module: IoT and Digitalisation for Circular Economy (lecture, 6 LP)
- Module: Advanced Rock Mechanics (lecture and tutorial, 6 LP)
- Module: Geomatics (lectures and tutorial, 6 LP, part 2/2)
- Module: Seminar on Mining Engineering (6 LP)
- Module: Advanced Surface Mining (lectures, 8 LP, part 1/2)

Third semester (winter semester)

- Module: Advanced Surface Mining (lectures, 8 LP, part 2/2)
- Module: Mining and Environment (lecture and tutorial, 6 LP)
- Module: Applied Rock Mechanics (lecture and tutorial, 6 LP)
- Module: student research project (6 LP)
- Module: elective I (lecture, 3 LP)
- Module: elective II (lecture, 3 LP)

Fourth semester (summer semester):

- Module: elective III (3 LP)
- Module: elective IV (3 LP)
- Module: Master's thesis (24 LP)

In each of the four elective modules (I to IV), one of the following lectures has to be chosen:

- Specialised Driving Methods
- Underground Blasting and Explosives Engineering
- Natural Gas Storage in Rock Caverns
- Computer-Based Block Modelling and Resource Estimation
- Computer-Based Surface Mine Planning
- Underground Water Systems and Treatment
- Selected Chapters in Underground Emergency Control
- Sustainable Mine Practice
- Mine Closure
- Mining Technology and Automation

A Diploma supplement will be issued	Yes
International elements	<ul style="list-style-type: none"> • International guest lecturers • Integrated/optional study abroad unit(s) • International comparisons and thematic reference to the international context
Integrated/optional study abroad unit(s)	Clausthal University of Technology and the Institute of Mining are connected worldwide with other mining schools and offer exchange semesters with specific partners (the offer changes every two years).
Integrated internships	There is no internship integrated in the curriculum. However, as an admission requirement, eight weeks of an internship have to be proven. If this is not possible for any reason, the internship may be deferred until the end of the second semester.
Course-specific, integrated German language courses	No
Course-specific, integrated English language courses	No

Costs / Funding

Tuition fees per semester in EUR	None
Semester contribution	Approx. 200 EUR per semester
Costs of living	Rents range from approximately 170 to 450 EUR, depending on the type of accommodation. Additional health insurance costs (approx. 90 EUR) and costs for food (150 EUR, depending on personal preferences) should be calculated.
Funding opportunities within the university	No

Requirements / Registration

Academic admission requirements	Applicants must hold a Bachelor's degree in Mining Engineering.
Language requirements	Applicants whose Bachelor's degree was not earned in the English language must provide evidence of sufficient English language skills. Sufficient English language skills can be assumed if the applicant has an IELTS grade of 6.5 or better, or has been awarded at least 85 TOEFL iBT points. TOEFL iBT Home Edition is accepted.
Application deadline	These deadlines are recommended in order to give applicants sufficient time for visa application.

Applications for the programme will be processed upon receipt.

15 July (start of studies in the winter semester on 15 October)

15 January (start of studies in the summer semester on 1 April)

Submit application to

Online via the TU Clausthal Student Portal:

<https://tuc.hispro.de/qisserver/pages/cs/sys/portal/hisinoneStartPage.faces>

Services

Possibility of finding part-time employment

There are opportunities for student jobs at the university as student research assistants, but these are highly competitive.

Accommodation

International students enrolled at TU Clausthal can choose between staying in a student residence hall (Wohnheim) or in private accommodation.

The Studentenwerk OstNiedersachsen provides approximately 1,250 rooms in Clausthal-Zellerfeld. The wide spectrum of accommodation ranges from single rooms to single or double apartments. The rental fees range from approximately 170 to 450 EUR, depending on the type of accommodation. Any student of Clausthal University of Technology can apply for accommodation in any of the residences.

Students must submit housing applications directly to student services.

Support for international students and doctoral candidates

- Welcome event
- Tutors

General services and support for international students and doctoral candidates

- Support for international students through our International Office
- Welcome meeting organised by the Mining Institute for all new students every winter semester

Supervisor-student ratio

1:10

Contact

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Mining Engineering

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🌐 Course website: <https://www.tu-clausthal.de/en/prospective-students/degree-programs/masters/mining-engineering>

📘 <https://de-de.facebook.com/TU.Clausthal>

📷 <https://www.instagram.com/tuclausthal>

📺 <https://www.youtube.com/user/tuclausthal>

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