

## Clausthal University of Technology

The Clausthal University of Technology is centrally located in the Harz Mountains in the northern part of Germany. The area is renowned for its natural beauty with its National Park, lakes and forests that provide a dramatic backdrop to many outdoor pursuits. It is a comparatively small university with about 4600 students. The private studying atmosphere is characterised by direct and personal contact with the teachers. Due to the intensive cooperation with the international industry, students have the opportunity to be involved in scientific work.

By German standards, the costs of living and accommodation in Clausthal are relatively low. Sufficient opportunities are available for housing on campus or private rental.

Because all travelling distances are short, there is usually no need for a car or public transportation. In town, almost all destinations are within walking or biking distance.



The Aula Academica (Source: TU Clausthal Archive)

## Contact

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## Starting WS 2014/15

## Master of Science Geothermal Engineering



## Why Geothermal Engineering?

As geothermal energy is available in many areas of the world, it is an increasingly important alternative to help lower the dependency on energy imports from other countries and to develop a broader base in the future energy mix. There are many different applications of geothermal energy to be had, from direct heating to power generation, depending on the temperature available in the subsurface.

To further develop the systems and processes, well-educated experts are needed. The course structure provides students with the necessary knowledge about the geothermal reservoirs, how to characterise them, and what technologies are available to extract the energy from the reservoir. In addition, students will be equipped with the fundamental principles of managing geothermal energy projects effectively in order to maximise their commerciality, while recognising their legal, social and environmental constraints.

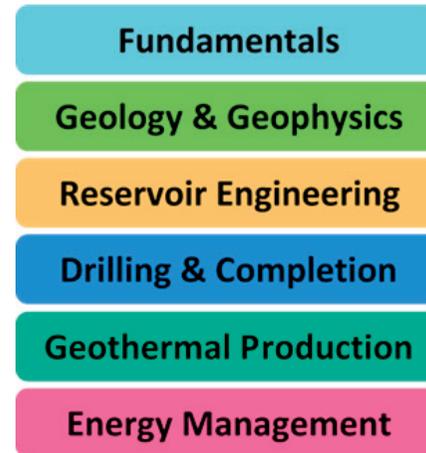
## Job opportunities

As governments strive to increase the use of re-newable energies, interest in Geothermal Energy is increasing and the sector is coming more to the fore. There are opportunities for employment in the field of power generation and in the direct use of the heat for heating and cooling. The future research and development programmes will need trained staff to ensure the exploitation of Geothermal Energy is ever more efficient and economic.

A current survey suggests the sector could provide about 40,000 jobs in Europe in direct context with the development of geothermal resources.

## Programme structure

The Master programme in Geothermal Engineering is based on the Bachelor degree in “Energy and Raw Materials” with a specialisation in “Petroleum Engineering”. The main modules are:



## Option of a semester abroad

Since 2012, TU Clausthal has worked in close collaboration with the Sapienza University of Rome. Besides joint research projects, there is ERASMUS agreement to support exchange of students to afford them the opportunity to complete some course modules at Sapienza University of Rome. Thus, students are given the chance to gain international experience and spend part of their study at an excellent international university in the country where the first geothermal power production worldwide succeeded.

## Programme details

- Duration: 4 semesters (i.e. 2 years)
- Language of instruction: English
- Basic knowledge of the German language is recommended
- Starting Winter Semester 2014
- Semester fee: 144 € per semester
- Option of a semester abroad

## Application requirements:

Bachelor of Science:

- Petroleum Engineering
- Chemical Engineering
- Mechanical Engineering
- Energy Technologies
- or related degree

Application deadline: October 1st for German applicants and July 15th for international applicants.

If a visa is needed, early application before the April 30th is strongly recommended.

An English language certificate, such as TOEFL (minimum 79), IELTS (minimum 6.5), is required.