



Deutscher Akademischer Austauschdienst  
German Academic Exchange Service



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# Master's degree



## Engineering Geohazards (MSc)

RWTH Aachen University • Aachen

### Overview

Degree	Master of Science (MSc)
Teaching language	<ul style="list-style-type: none"><li>English</li></ul>
Languages	The degree programme is taught entirely in English.
Full-time / part-time	<ul style="list-style-type: none"><li>full-time</li></ul>
Mode of study	Less than 50% online
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	Non-EU applicants: 1 March for the following winter semester (starting in October) EU applicants: 15 July for the following winter semester (starting in October)
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	<p>Our society worldwide is repeatedly the victim of destructive natural forces due to extreme natural events. High economic losses, the loss of human life and the endangerment of social structures have to be overcome regularly. Predicting the effects of these forces in terms of their extent, space, time and intensity and minimising their consequences is a central, interdisciplinary challenge at a local, national and global level. The intensities of extreme exogenous natural events (storms, storm surges, heavy rainfall events) are increasing, but endogenous natural events (earthquakes, volcanic eruptions) also regularly occur with varying degrees of damage. Complex chains and cascading catastrophes that follow an initial extreme natural event are often of no less intensity (tsunamis, mass movements) and cumulative in their extent.</p> <p>The Master's degree programme in Engineering Geohazards (EGH) is interdisciplinarily linked between natural sciences, engineering and economics. In four semesters, a comprehensive geoscientific basis is taught to understand the complex impact of natural hazards and assess their consequences for society. In order to protect lives from the consequences of natural disasters, the responsible development and design of engineering protection measures is an essential part of this</p>

programme. Furthermore, the course of study imparts skills for sustainable preparation and rehabilitation of the habitat in the area of conflict between disaster prevention, national and business economics and ecology, since coping with disasters is associated with high costs. In the long term, graduates are expected to contribute to better control and to develop a sustainable design of our living space. Practical experience and the option of an applied Master's thesis in the partner companies as part of a research module are an integral part of the curriculum. This period is thus also intended as a fixed mobility window. There is also the possibility to attend courses within the geoscientific network of the Aachen/Bonn/Cologne/Jülich research area within the ABC-J module, especially if these courses complement the RWTH Aachen University's offers.

## Course Details

### Course organisation

In the first year of study, the focus is on understanding processes and fundamentals in the field of geo- and engineering sciences. In addition, a research module is integrated, which should enable the development of models and the critical evaluation, the assessment of strengths and weaknesses as well as the estimation of uncertainties of these models. Thereby, contents learned shall be linked while space for innovative approaches will also be offered. Integrated into a current research project (from academia and/or industry), the processing and evaluation of data related to natural hazards and the sensitive and valuable public relations work related to this topic will be trained.

In the second year of study, the acquired basics will be deepened. An internship in industry or research is an integral part of the curriculum and the possibility of a mobility module is given.

The course of study concludes with a Master's thesis.

### A Diploma supplement will be issued

Yes

### International elements

- Integrated study abroad unit(s)
- Study trips

### Integrated study abroad unit(s)

Mobility modules for recognition of courses and exams taken during study periods abroad

### Integrated internships

Since practice-oriented work is another focus of the Master's programme, the regular curriculum includes an internship, which is either research-based or to be completed in a company/industry.

### Course-specific, integrated German language courses

No

### Course-specific, integrated English language courses

No

## Online learning

### Pace of course

Instructor-led (Specific due dates for lectures/assignments/exams)

### Phase(s) of attendance in Germany (applies to the entire programme)

Yes, compulsory

**Types of online learning elements**

- Discussion forums and / or groups
- Online tutorials
- Video learning (Pre-recorded videos, Vlogs, Video-Podcasts)

## Costs / Funding

**Tuition fees per semester in EUR**

None

**Semester contribution**

Approx. 300 to 350 EUR per semester (including semester ticket for public transport in North Rhine-Westphalia). There is no special additional fee for international students.

**Costs of living**

Please note that a single person must prove a minimum monthly income of 861 EUR to the Immigration Office in Aachen in order to have their residence permit extended. It is estimated that a single student living in Aachen will need at least 1,100 EUR a month to meet basic living expenses.

**Funding opportunities within the university**

Yes

**Description of the above-mentioned funding opportunities within the university**

<https://www.rwth-aachen.de/cms/root/Studium/Im-Studium/Stipendien-Foerderung/~dyiv/Liste-von-Stipendien/?www.rwth-aachen.de=cms&root=Studium&Im-Studium=~ehg&lidx=1>

## Requirements / Registration

**Academic admission requirements**

- Bachelor of Science or Engineering
- a minimum of 50 ECTS in geoscientific modules (general geology, geophysics, organic and inorganic geochemistry, structural geology, sedimentology, hydrogeology, engineering geology, GIS, remote sensing), of which at least 5 ECTS have to be earned in fieldwork
- a minimum of 20 ECTS in mathematics, chemistry, and physics modules

**Language requirements**

Applicants must provide proof of their English language skills according to RWTH Aachen University regulations.

**Application deadline**

Non-EU applicants: 1 March for the following winter semester (starting in October)

EU applicants: 15 July for the following winter semester (starting in October)

**Submit application to**

<http://www.rwth-aachen.de/cms/root/Studium/Vor-dem-Studium/Bewerbung-um-einen-Studienplatz/Master-Bewerbung/~dqml/Bewerbung-Master-Internationale/?lidx=1>

## Services

### Possibility of finding part-time employment

International students may take up **work in the private sector** during the semester or the semester break for up to four months without having obtained a work permit. Students thus may take up full time work for 120 days or part-time positions (up to four hours per day) for 240 days. This regulation is also stated on the residence permit.

During the semester, students are allowed to take up jobs with working hours of up to 19 hours a week. During the semester break, students may work full-time but only for a maximum of 13 consecutive weeks.

**Student assistants** are more flexible as regards working hours, as the full and part-time regulation does not apply. As a student assistant - the so-called HiWi, you are allowed to work up to 19 hours per week throughout the year.

### Accommodation

<https://www.rwth-aachen.de/cms/root/Studium/Vor-dem-Studium/~egp/Wohnen-in-Aachen/lidx/1/>

### Career advisory service

Career Center of RWTH Aachen University: <http://www.rwth-aachen.de/cms/root/Studium/Nachdem-Studium/~ejx/Karriere/?lidx=1>

"Praxisinitiative Aachener Geowissenschaftler" (PAG): <http://www.fgeo.rwth-aachen.de/cms/Geowissenschaften-und-Geographie/Studium/Studierende/Angewandte-Geowissenschaften-und-Georess/~cxve/Praxisinitiative-PAG-/?lidx=1>

### Support for international students and doctoral candidates

- Welcome event
- Buddy programme

## RWTH Aachen University

With 260 institutes in nine faculties, RWTH Aachen University is one of Europe's leading institutions for science and research. Currently, more than 47,000 students are enrolled in 173 academic programmes. More than 14,000 of them are international students hailing from 138 different countries. The scientific education students receive at RWTH Aachen University is firmly rooted in real-world application. As a result, our graduates are highly sought after by businesses to work as trainees and fill executive positions. National and international rankings show that our graduates have a high aptitude for managing complex tasks, constructively solving problems in teams, and taking on leadership responsibilities. Thus, it should come as no surprise that one in five board members of German corporations is an alumnus of RWTH Aachen University. Work conducted in the research centres at RWTH Aachen University is strongly oriented towards the current needs of industry, commerce, and the professions. This has resulted in numerous innovations, patents, and licences. The individual competence centres at RWTH Aachen University collaborate effectively across departments and faculties in interdisciplinary groups and forums, while still maintaining a strong focus on their own department specialisation. For instance, the computer science and biology departments – and even the social sciences – all have a clear connection to the school's engineering focus. This has been a crucial factor in motivating multinational corporations such as Philips, Microsoft, and Ford to locate their research institutions in the Aachen region. Excellence in teaching and research constitutes the basis from which RWTH Aachen University works with other leading institutions and technical universities around the world.



### University location

As Germany's westernmost city, Aachen is located on the borders of Belgium and the Netherlands. Its population is about 260,000. Aachen's historic centre around the distinctive cathedral (UNESCO World Heritage Site) is characterised by a student lifestyle. At the city's doorstep, the hilly Eifel landscape with its rivers, lakes, and forests offers a picturesque countryside for outdoor recreation. Aachen benefits from its

central location in the heart of Europe!

## Contact

### **RWTH Aachen University**

Lehr- und Forschungsgebiet Neotektonik und Georisiken/Neotectonics and Natural Hazards Group

Lochnerstraße 4-20  
52056 Aachen

✉ [n.engels@nug.rwth-aachen.de](mailto:n.engels@nug.rwth-aachen.de)

🌐 Course website: <https://www.fgeo.rwth-aachen.de/cms/geowissenschaften-und-geographie/Studium/Studiengaenge/Master-courses-of-study/~gtoxo/Engineering-Geohazards-M-Sc-/?lidx=1>

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# International Programmes in Germany - Database

[www.daad.de/international-programmes](http://www.daad.de/international-programmes)  
[www.daad.de/sommerkurse](http://www.daad.de/sommerkurse)

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Consortium for International Higher Education Marketing  
[www.gate-germany.de](http://www.gate-germany.de)

## Disclaimer

The data used for this database was collected and analysed in good faith and with due diligence. The DAAD and the Content5 AG accept no liability for the correctness of the data contained in the "International Programmes in Germany" and "Language and Short Courses in Germany".

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