

INTERNATIONAL PROGRAMMES

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Master's degree





MSc Tropical Hydrogeology and Environmental Engineering (TropHEE)

Technical University of Darmstadt • Darmstadt









Overview

Degree	Master of Science in Tropical Hydrogeology and Environmental Engineering
Teaching language	• English
Languages	Courses are held entirely in English.
Full-time / part-time	• full-time
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	Deadline for the DAAD scholarship: 15 December 2023 (date of receipt at the university) The deadline refers to the year before students intend to start the programme. Deadline for TropHEE programme: 31 August of the year in which students want to start their studies at the university.
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	The study programme aims at deepening and diversifying the students' knowledge, abilities, and competences in applied geosciences, with a distinct focus on hydrogeology and environmental engineering in the framework of international development cooperation. The programme encompasses two lines of specialisation, one being more geoscience-related focussing on hydrogeology, and one being more engineering-related focussing on environmental engineering. The hydrogeology specialisation includes modules such as the following: Hydrogeology, Hydrochemistry, Hydrogeochemistry, Soil and Unsaturated Zone, Aquifer Sedimentology, Isotope and Tracer Techniques, Groundwater Modelling, Geophysical Methods,

and Geo-Information Systems (GIS). The environmental engineering specialisation includes modules such as the following: Integrated Water Resources Management, Water and Wastewater Treatment, Water Supply Systems, Hydraulic Engineering, Applied Microbiology, and Flood/River Management.

Compulsory modules independent from the chosen specialisation include a field trip to a semiarid region, a project seminar featuring project team work and scientific writing, and a module on setting up research concepts. The programme will be completed by the preparation of a Master's thesis.

Course Details

Course organisation

Generally, the TropHEE programme begins in the winter semester, since all courses follow an annual cycle. TropHEE is divided into the following phases:

- A preliminary phase (distance introductory course and learning control) without
 matriculation takes place before the applicant begins his/her studies at TU Darmstadt. This
 ensures that all participants are on the same level of knowledge in the field of basic
 geosciences.
- An attendance phase over three semesters at TU Darmstadt, comprising semester courses as well as block courses (78 ECTS credits)
- The scientific training (eight weeks, 12 ECTS credits) can be done during the course and, if applicable, in the home country of the student. Its results are documented in a written report.
- The fourth semester, in which the Master's thesis is prepared (six months, 30 ECTS credits)

All courses, excursions, and the Master's thesis are awarded credits according to the European Credit Point System (ECTS). The successful participation in a course is assessed by an examination or by coursework. During the first three semesters, you can acquire a total of 90 credits, while the completion of the Master's thesis is awarded with another 30 credits.

The modules are divided into basic modules and special modules, which can be selected and combined according to the individual specialisation interests of the student. The specialisation process is supported by the TropHEE instructors and lecturers as well as the student adviser of the institute through individual guidance and counselling.

In his or her Master's thesis, the candidate shall apply and deepen the knowledge and experiences gained during the lectures by working on a specific geoscientific topic. The candidate's work will be supervised by one of the lecturers. There are opportunities to prepare the thesis in cooperation with companies and partner institutions. A geoscientific problem and data sets from the candidate's home country may well be suitable for the thesis.

Details can be found on the following website: http://www.trophee.tu-darmstadt.de/.

» PDF Download

International elements

- International guest lecturers
- Training in intercultural skills
- Study trips

Integrated internships

The mandatory module scientific training can be done as an internship of eight weeks during the semester break, usually between the second and third semesters.

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	The registration fee totals about 300 EUR per semester. This includes administrative fees and a student ticket that is valid for short distance public transport in Darmstadt and the state of Hesse. Registration fees
Costs of living	Estimated living expenses are about 700 EUR to 900 EUR per monthplus 750 EUR for field trips Please note that these costs are just a rough estimation and can vary greatly depending on your way of life and your accommodation. Costs and budget
Funding opportunities within the university	Yes
Description of the above- mentioned funding opportunities within the university	International students in their final study phase can apply for financial funding by the TU Darmstadt twice a year. Funding

Requirements / Registration

Academic admission requirements	Applicants should hold a Bachelor's degree in Geosciences; or a Bachelor's degree in Civil or Environmental Engineering with sound knowledge in natural sciences (mathematics, chemistry, physics) and basic knowledge in geosciences, water science/engineering, and environmental science/engineering. Moreover, the topic of the Bachelor's thesis must be from the geoscience field or from the field of water and/or environmental research. For details, please refer to the study regulations. Applicants for a DAAD scholarship must have at least two years of professional experience in the field of water and geology at the time of the application.
Language requirements	Adequate English ability can be proven by one of the following: UNIcert III, TOEFL (Paper 550, CBT 213, iBT 88), IELTS 6.5, CAE (grade C1), TOEIC (792, Listening 490 / Reading 455) or confirmation from the university if your Bachelor's degree programme was taught in English.
Application deadline	Deadline for the DAAD scholarship: 15 December 2023 (date of receipt at the university) The deadline refers to the year before students intend to start the programme. Deadline for TropHEE programme: 31 August of the year in which students want to start their studies at the university.
Submit application to	Our homepage: Tropical Hydrogeology and Environmental Engineering, Master of Science

Application:
DAAD Application
TropHEE Application

Services

Possibility of finding parttime employment Student jobs are available in the private sector or in the research projects. International students can work while studying at TU Darmstadt. For example, you can apply for any of the student jobs offered by TU Darmstadt.

Jobs & part-time work

Accommodation

TU Darmstadt's International Affairs Department assists international students in their search for accommodation through its Housing Assistance Office. A major science hub, Darmstadt is home to multiple research institutions, three universities, and many high-technology companies, all of which attract people from around the world. A wide variety of accommodations that vary in size, furnishing, and rent are available in Darmstadt and its vicinity. As the university does not own or manage student housing, we support students in finding housing in private and public student dormitories or on the private market. In order to improve your chances in finding the optimal place to live, we recommend that you start your search early. We are happy to assist you in this process. Please make sure to register online on the housing assistance website for international students.

Our services include the distribution of an "Accommodation Guide" that includes links to private and public student dormitories, hotels and youth hostels, and a "Housing Guide" that provides tips on how to search for accommodation in Darmstadt.

Career advisory service

Each year, a course on (re)integration into the job market is held, which prepares students for the application process after completing the Master's programme.

Support for international students and doctoral candidates

- Welcome event
- Buddy programme
- Tutors
- Pick-up service

Technical University of Darmstadt



Institute of Applied Geosciences, TU Darmstadt
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TU Darmstadt

By choosing **TU Darmstadt**, you are making an investment in your personal and professional future. Committed to academic rigour, cutting-edge research, and interdisciplinary collaboration, **TU Darmstadt** provides its community with an environment that sparks innovation. Our challenging 113 academic programmes allow students to gain international experience at an early stage while preparing them for successful careers in research, education, and the private sector.

In addition to its acclaimed strengths in engineering and technology,**TU Darmstadt** offers prospective students a wide range of study programmes in the natural sciences, social sciences, and the humanities.

Our subject profile: 50% Engineering 35% Natural Sciences 15% Humanities

Founded in 1877, **TU Darmstadt** is one of Germany's leading universities of technology and a member of TU9, a network of the most distinguished German institutes of technology. **TU Darmstadt** is also the coordinator of the European University **UNITE!** (University Network for Innovation, Technology and Engineering) – an alliance of nine leading European universities of technology.

TU Darmstadt has a global reputation for outstanding technology transfer through industrial partnerships, award-winning teaching facilities, and highly ranked research output. Its distinct focus on interdisciplinary cooperation works as a catalyst for innovative approaches to technology in research and everyday life applications.

Committed to an international orientation in teaching and research, as well as the promotion of values like open-mindedness and mutual respect, TU Darmstadt is home to a diverse community of students and researchers from 120 countries. With more than 500 partner universities around the globe and 40 double degree programmes as well as a strong network of industrial partners in the region, our alumni are sought-after professionals on the local, national, and international level. The QS Graduate Employability Ranking regularly ranks TU Darmstadt among the best universities in the world.

At **TU Darmstadt**, it is our priority to support international students in navigating this new environment. The International Student Services (ISS) team is happy to assist you before and during your stay.



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University location

General note: **Germany** has one of the world's best health care systems. The country has been coping comparably well with the Coronavirus pandemic.

With around 160,000 inhabitants and well over 40,000 students (roughly 26,000 of whom are aff U Darmstadt), the science city of

Darmstadt offers a high quality of life as well as numerous cultural and tourist attractions in the immediate vicinity. Due to the city's location in the centre of the **dynamic Rhine-Main region** and an excellent public transportation system, **Darmstadt** is well connected to destinations in **Germany** and around Europe.

A metropolitan high-tech centre in the heart of Europe, **Darmstadt** is the birthplace of numerous inventions that have changed our daily lives: from the radio-controlled clock, Plexiglas®, and the first enzyme-based washing agent to the liquid crystals in our mobile phones and notebooks. As the home of Art Nouveau, the internationally renowned European Space Agency, and research facilities like Fraunhofer Institutes, **Darmstadt** offers a creative and innovative milieu for living, studying and conducting research.

- Getting around: All TU students are equipped with a semester ticket (Semesterticket" in German), which provides free access to public transportation and local trains throughout the state of Hesse.
- The University Sports Centre at TU Darmstadt gives students the opportunity to find a healthy balance between work and personal life. There are also plenty of opportunities to participate in activities at the university stadium or swimming pool. Entry is free of charge to both facilities. During the ongoing pandemic, students have the option of taking online classes.
- Finally, TUtor International is a project at TU Darmstadt supporting international students culturally, academically and socially. Our aim is to assist international students with their orientation and integration into student life and German society. As a multicultural and international team, we are well aware of the differences in cultural backgrounds, and we are here for you as companions and friends. Connect with us on Instagram and Facebook.

Contact

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- Course website: https://www.geo.tu-darmstadt.de/trophee/index.en.jsp
- f http://www.facebook.com/trophee.tud
- https://twitter.com/TUDarmstadt
- in https://www.linkedin.com/groups/13970794/
- https://www.instagram.com/p/CdLUI9YMo-o/
- https://www.youtube.com/channel/UChlArKIIMh8xYGSdUSfo0QQ

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Editor

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Disclaimer

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