

Deutscher Akademischer Austauschdienst German Academic Exchange Service

# INTERNATIONAL PROGRAMMES

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## Master's degree



# Natural Hazards and Risks in Structural Engineering (NHRE)

Bauhaus-Universität Weimar • Weimar



### Overview

Degree	Master of Science in "Natural Hazards and Risks in Structural Engineering"
Teaching language	• English
Languages	Courses are held in English. Prior knowledge of the German language is an advantage to help the students in their daily life in Germany. German classes start two months before the beginning of the semester.
Full-time / part-time	• full-time
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	<ul> <li>15 July         Please note: Current information on application modalities and deadlines can be found on our website: https://www.uni-weimar.de/de/bauingenieurwesen/studium/masterstudiengaenge/natural-hazards-and-risks-in-structural-Engineering/.     </li> <li>The enrolment for students of the "Postgraduate Courses for Professionals with Relevance to Developing Countries" DAAD scholarship is only possible in the winter semester. Therefore, the application has to be done by the 15 October the year before. For further details, check the above-mentioned homepage.     </li> </ul>
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 degree programme in "Natural Hazards and Risks in Structural Engineering" is an intensive and application-based, advanced course of study. The programme is taught by specialists

in their respective field and it is based on active research activities. It provides students with a solid technical basis in the key areas of structural engineering through a coherent and coordinated programme, integrating research and practical applications.

The degree programme enables students to acquire excellence in oral and written skills. By providing students with advanced scientific and interdisciplinary knowledge, they are able to take on demanding engineering tasks in the areas of planning, construction and realisation of structures under specific conditions. They are also able to carry out site- or structure-specific risk analysis using modern tools to estimate the threat of natural hazards.

In addition to strengthening their theoretical and scientific competence, students develop skills in modelling, simulation and application of performance-based design, fieldwork and laboratory investigations.

In order to structure and reflect the complexity of the chain reactions inherent to natural hazards, this programme explores in detail various engineering disciplines and engineering-related areas of the natural sciences, social sciences and economics. It examines the central role that structural engineering plays in reducing the impact of natural disasters. Furthermore, it focuses on the engineering methods that are used to assess and reduce the vulnerability of structures.

The programme highlights the demands on engineering technology at both regional and global level by using international projects as models. The elective compulsory modules expand on specific lines of development; they equip and prepare students systematically for future professional careers or further research positions.

#### **Course objectives**

The increasing occurrences of natural hazards all over the world, as well as their various effects on individuals, societies and modern economies, are one of the major challenges for decades to come. The Master's course of study in Natural Hazards and Risks in Structural Engineering confronts this challenge by providing indispensable tools for dealing with these phenomena in various civil engineering design processes. The Master's course of study combines practical structural engineering with state-of-the-art concepts in the fields of computational mechanics, dynamics and probability theory/stochastic analysis. The Master's course of study thus provides key qualifications for innovative work in the field of earthquake, flood and wind engineering, as well as offering an international context in which students can achieve both technical success and personal advancement.

#### **Course Details**

Course organisation	The curriculum (four semesters) consists of compulsory modules (60 credits), elective compulsory modules (12 credits) and at least 12 credits of elective modules (see also the PDF below). Students must select and successfully complete a special project (12 credits) and the Master's thesis (four months or 24 credits). Upon request, students may be permitted to participate in this degree programme on a part-time basis.
A Diploma supplement will be issued	Yes
Special promotion / funding of the programme	DAAD development-related postgraduate course
Course-specific, integrated German language courses	No
Course-specific, integrated English language courses	Νο

## Costs / Funding

Tuition fees per semester in EUR	None
Semester contribution	Enrolment fees amount to approx. 200 EUR per semester. This is a contribution to student services and the student council. It includes free regional transport by buses in Weimar, Erfurt, Jena and Gera as well as by regional trains in Thuringia, student discounts for meals at the university cafeteria and for theatre and museum tickets, access to the university sports complex and buildings. The additional fee for the "Thoska" student ID is 20 EUR (a one-time only fee).
Costs of living	<ul> <li>In Weimar, living expenses tend to be lower than in larger German cities. We recommend for students to budget about 861 EUR per month:</li> <li>Health insurance approx. 100 EUR</li> <li>Books and stationery approx. 70 EUR</li> <li>Rent approx. 291 EUR</li> <li>Meals approx. 200 EUR</li> <li>Other expenses approx. 200 EUR</li> </ul>
Funding opportunities within the university	Yes
Description of the above- mentioned funding opportunities within the university	There are scholarships granted by the university as an institution. Additionally, the International Office grants scholarships that support international students and students going abroad for studies or internships. https://www.uni-weimar.de/en/university/studies/financing-your-studies/financing-opportunities/

## **Requirements / Registration**

Academic admission requirements	The minimum qualification for admission to this programme is normally a Bachelor of Science degree in civil engineering or an equivalent university degree, a degree from a college of public administration, or a degree from a government or accredited professional school. The examination committee must ensure that the candidate's prior degree is equivalent to that of the Bachelor's programme in civil engineering. If not, the examination committee may attach additional conditions for admission, which the candidate must meet. The final grade for the first professionally qualifying Bachelor of Science degree should generally be 2.5 or better. If the first university degree is not based on a final academic project, the applicants must submit other academic work they have produced.
Language requirements	<ul> <li>Candidates must provide proof of English language proficiency equivalent to level B2 (CEFR) by submitting either:</li> <li>1. proof of English proficiency as a native speaker: certificate of higher education entrance qualification or first-level professional qualification (i.e. undergraduate degree) from an English-speaking country</li> <li>2. proof of English proficiency at level B2 (CEFR), certified by one of the following internationally recognised certificates:</li> <li>TOEFL (Internet-based score 85 or better) The institution code for the Bauhaus Universität Weimar is 8968.</li> <li>Cambridge Certificate First Certificate in English (FCE)</li> <li>IELTS, band score 6.5 (min. 6.0 in each sub-area)</li> <li>or another equivalent certificate</li> </ul>

	The certificate must not be older than two years at the planned start of studies in the forthcoming winter semester.
Application deadline	<ul> <li>15 July</li> <li>Please note: Current information on application modalities and deadlines can be found on our website: https://www.uni-weimar.de/de/bauingenieurwesen/studium/masterstudiengaenge/natural-hazards-and-risks-in-structural-Engineering/.</li> <li>The enrolment for students of the "Postgraduate Courses for Professionals with Relevance to Developing Countries" DAAD scholarship is only possible in the winter semester. Therefore, the application has to be done by the 15 October the year before. For further details, check the abovementioned homepage.</li> </ul>
Submit application to	Bauhaus-Universität Weimar c/o uni-assist e.V. 11507 Berlin Germany

## Services

Possibility of finding part- time employment	A part-time job can be a good way to finance your studies. There are opportunities for students who are looking for teaching and research assistantships at the university or part-time jobs with local companies. Be sure to check the job openings. Jobs are offered on the "Pinnwand" message board, on the job portal operated by the Career Service and by the "Studierendenwerk Thüringen" Student Service. Weimar is a small town with few jobs for students. Although basic English is spoken nearly everywhere, as the historic city of Weimar attracts many visitors from all over the world, you have to speak German very well to have a chance to find a job. International students are only permitted to work in Germany with a work permit.
Accommodation	You can find accommodation in Weimar through Thuringia's student services ("Studierendenwerk Thüringen"). More than 1,000 apartments in the city are administered by Thuringia's student services. These residences are at various locations, and they cater to different needs and preferences. Costs for accommodation range between 250 and 350 EUR per month depending on size and location. The university itself does not provide accommodation. Further information: https://www.stw-thueringen.de/en/housing/residential-homes.html Online application: https://www.stw-thueringen.de/en/housing/application/online- application.html Typically, between two and up to five students share an apartment. Students have their own bedrooms and share a kitchen and a bathroom. Most rooms are furnished (bed, desk, chair, cupboard, shelf), but kitchenware and appliances are not included. Mentors for international students provide assistance in settling in during the first couple of days and also organise events. Students advertise private and shared flats on the message board ("Pinnwand") on the university website: https://www.uni-weimar.de/de/universitaet/aktuell/pinnwaende/bereich/wohnen/.
Support for international students and doctoral candidates	<ul> <li>Welcome event</li> <li>Tutors</li> <li>Buddy programme</li> <li>Accompanying programme</li> </ul>

- Specialist counselling
- Visa matters

General services and support for international students and doctoral candidates Social meetings

## Bauhaus-Universität Weimar



Main building of the Bauhaus-Universität Weimar © Bauhaus-Universität Weimar, photo: Nathalie Mohadjer

Bauhaus-Universität Weimar is a small and very international university with a highly distinctive spectrum of subjects. Situated in the historic city of Weimar, Germany, it originated from two progressive institutions: The "Weimar Saxon-Grand Ducal Art School" and the "Staatliches Bauhaus".

Different personalities from various countries have shaped the institution and developed ideas known and respected worldwide. At Bauhaus-Universität Weimar, we continue to follow a unique path that offers unparalleled opportunities by combining science and technology with art and design.

We see our university as a "Bauhaus of the 21st century" – open, experimental, innovative in the technical as well as in the aesthetic sense, and free from any imitation of the past. The university's main fields of study and research are architecture, civil engineering, art and design as well as media.

We offer an ideal space for creative academic and artistic work, supported by laboratories, workshops, studios, libraries, online teaching facilities and a favourable student-teacher ratio. Bauhaus-Universität Weimar is connected worldwide due to a large network of partners, which our students benefit from through programmes such as study abroad periods as well as international projects and excursions. Among more than 200 international partners are universities and schools in Ethiopia, France, Italy, Japan, Romania, the Russian Federation, Switzerland, and the USA.

Here are some important facts from the history of the university: In 1919, Walter Gropius created the "Staatliches Bauhaus" in Weimar. Four years later, he called for the search for the "new unity of art and engineering". That meant combining the vanguard of art and design with modern industry. With this approach, the Bauhaus became the most famous school of architecture, art, and design in the 20th century.

Our university flourishes through its experimental environment, familiar atmosphere and especially through the people, who study, research and work here at the university. The best way is to experience this special atmosphere yourself. Join our "Welcome to Weimar" online crash course or visit us, for example, at the annual Bauhaus Summer School and learn about what lies behind the following numbers:

Four faculties – Architecture and Urbanism, Civil Engineering, Art and Design, Media 47 degree programmes

Approx. 4,100 students including doctoral students Approx. 27% international students 84 professors More than 200 partner universities and more than 500 student exchanges

https://www.uni-weimar.de/en/university/international/to-weimar/fulltime-students/preparing-your-studies/



#### 0 University location

The historic city of Weimar is a cosy town that has had a profound influence on Europe. This becomes most evident in architecture, art and design, music, and literature.

Weimar is situated right in the middle of Thuringia, the "green heart of Germany", and it is about 300 km from both the German capital, Berlin, and the German financial centre, Frankfurt am Main. Today, Weimar is a lively town with about 65,000 inhabitants and a town centre where you can reach everything within 15 minutes. The green areas of the town, such as the park on the river Ilm, include many sights, e.g. Goethe's summer house and the palaces of Tiefurt, Ettersburg, and Belvedere. Among many others, the famous German writers Johann Wolfgang von Goethe and Friedrich Schiller walked in the park along the River Ilm. The famous pianist and composer Franz Liszt stimulated modern music, and the architects Walter Gropius and Henry van de Velde initiated modernism.

Weimar has much to offer for art lovers and culture lovers, revellers, lovers of nature, and gourmets. There are more than 20 museums, three cinemas, a national theatre and various cabaret theatres, student clubs, concerts, and multifaceted cultural events such as the traditional folk event and the "Zwiebelmarkt", not to mention Thuringian delicacies like "Rostbratwurst" (sausage), "Rostbrätel" (marinated grilled meat), and "Thüringer Klöße" (dumplings). During the summer, Weimar hosts the annual Bauhaus Summer School, Yiddish Summer Weimar (featuring klezmer music), and several art festivals. Other highlights include the "backup" film festival and Master classes at the "Hochschule für Musik Franz Liszt". In the "International Student Barometer" survey, 95.4 percent of international students commend the exceptional quality of life in the city of Weimar. We hope to welcome you to Weimar soon!

### Contact

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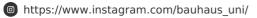
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