



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



Table of Contents

Master's degree	2
Geodetic Engineering • University of Bonn • Bonn	2

Master's degree



Overview

Degree	Master of Science
Teaching language	<ul style="list-style-type: none">English
Languages	Courses are held in English (100%).
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	<p>Current application deadlines for the following winter semester:</p> <ul style="list-style-type: none">Non-EU applicants: 31 MayEU applicants: 15 August <p>For further information on the specific application deadlines, please visit our website on requirements and application.</p>
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	<p>The Master's programme Geodetic Engineering is dedicated to students with a BSc in Geodesy and Geoinformation or related topics, such as Computer Science, Mathematics, Physics, Geosciences or Electrical Engineering.</p> <p>It is a full-time programme taught entirely in English. The standard period of study is four semesters, including the Master's thesis. The programme offers three profiles, which cover the main research fields of our institute:</p> <ul style="list-style-type: none">Mobile Sensing and RoboticsGeodetic Earth System Science and Data AnalysisGeoinformation and Spatial Development <p>Each student will choose one area as a major and a second area as a minor topic. Depending on the student's interests, the curriculum allows the student to focus almost entirely on one main topic or on a broader range of topics.</p> <p>Graduates will be equipped with skills and tools to recognise and solve geodetic engineering</p>

problems. During their studies, they will participate in current research projects. The Master's programme provides an entry qualification for PhD programmes.

Course Details

Course organisation

The Geodetic Engineering programme is extended over 24 months and is structured into mandatory modules and compulsory elective modules, including teaching units with a duration of one semester. An exam completes each module. Three different types of modules are offered: lectures, seminars and projects. Credit points (CP) are the basis of evaluation.

By the beginning of the first semester, the students are required to choose a major and a minor profile out of the following options:

- Mobile Sensing and Robotics
- Geodetic Earth System Science and Data Analysis
- Spatial Information and Development

The [curriculum](#) of the MSc programme Geodetic Engineering is structured as follows:

- The first semester offers mandatory advanced modules covering the basic knowledge that will be required for the remaining programme. Lectures and exercises cover the following topics: Coordinate Systems, GNSS, Statistics and Adjustment Theory, Geoinformation Systems and Earth Observation. For each student, an individual study plan will cover topics that were not provided by the student's prior education. Chosen profiles will be introduced via two mandatory modules.
- In the second and third semesters, students intensify their knowledge by taking one mandatory and three to five compulsory modules from their major profile. From the minor profile or from external offers, they may choose up to three compulsory elective modules. Two project modules introduce the students to current research topics and train them to be able to do self-sufficient research. These topics are meant to be preparation for the Master's thesis and therefore should only be selected from the major profile.
- The last study semester is devoted to the Master's thesis.

The Master's programme will be successfully completed once 120 CP have been obtained. Of these 120 CP, students will obtain 15 CP from advanced modules, 3 CP from the individual study plan, 30 to 42 CP from modules out of the major profile, 6 to 18 CP from modules out of the minor profile and/or external offers, 24 CP from the projects modules, and 30 CP from the Master's thesis.

A Diploma supplement will be issued

Yes

International elements

- Projects with partners in Germany and abroad
- International guest lecturers

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 University of Bonn is a public university and therefore does not charge tuition fees. However, all students must pay the so-called social contribution (semester fee) of about 330 EUR per semester. It includes, among other things, a student transit pass for public transport and statutory accident insurance.

Costs of living The cost of living for students in Bonn is around 800 EUR to 1,000 EUR, with apartment rent accounting for the largest share.

Funding opportunities within the university No

Requirements / Registration

Academic admission requirements Applicants must have a three-year Bachelor of Science degree in Geodesy, Geoinformation or related topics, such as Geoscience, Computer Science, Mathematics, Physics or Electrical Engineering.

In detail, applicants must have a total of at least 24 credits from Mathematics, Physics and Programming. Furthermore, they must have a total of at least 48 credits from at least two of the following six research areas:

- Physical Geodesy, Space Geodesy, Geodynamics and Earth System Research
- Data Analysis, Modelling and Scientific Computing in the context of Geoscience
- Photogrammetry, Remote Sensing, Computer Vision and Robotics
- Geodetic Measurement Technology, Engineering Geodesy and Satellite Measurement Technology
- Algorithmics, Spatial Databases, Geo-Information and Geo-Information Systems
- Urban Development, Land Readjustment and Real Estate Evaluation and Land Management

Based on your application documents, the examination board will decide your eligibility for the Master's programme.

Before you apply, please check the [requirements](#) carefully.

Language requirements Applicants must provide proof of their English skills:

- TOEFL paper-based: 575 points
- TOEFL Internet-based: 90 points
- IELTS: 6.5

Native English speakers; German, Swiss and Austrian citizens with an "Abitur"/"Matura"; and students who earned their first degree entirely in English do not have to submit language certificates.

Before you apply, please check the [requirements](#) carefully.

Application deadline Current application deadlines for the following winter semester:

- Non-EU applicants: 31 May
- EU applicants: 15 August

For further information on the specific application deadlines, please visit our website on [requirements and application](#).

Submit application to <https://www.gug.uni-bonn.de/en/master-ge/before-study>

Services

Accommodation

Students of the University of Bonn can apply for a room in a dormitory of the "Studierendenwerk Bonn" (further information: www.studierendenwerk-bonn.de/en/accommodation).

For further information regarding housing in Bonn, please visit our website: www.uni-bonn.de/housing.

International applicants who are admitted to the Master's programme can apply for a dorm room through the programme coordinator. Unfortunately, we cannot guarantee that all students will be allotted a room as these are in short supply.

Career advisory service

The University of Bonn has a central Career Service (www.uni-bonn.de/careerservice) that provides a range of advice and support about choosing a career and applying for jobs. Moreover, international students can join the iStart career programme (www.uni-bonn.de/istart), which teaches participants tangible knowledge and valuable skills that will enable them to write successful applications for jobs in Germany. The programme is geared toward giving students a successful career path both during and after their studies and thus making it easier for them to enter the job market.

Support for international students and doctoral candidates

- Buddy programme
- Specialist counselling
- Welcome event

General services and support for international students and doctoral candidates

The University of Bonn offers a range of different support programmes for international students. The Welcome Days (www.uni-bonn.de/welcomedays) before the start of every semester are an opportunity for new students from abroad to gather information on the most important issues, such as enrolment, registration with the local authorities, and opening a bank account. Getting to know fellow international and German students during recreational activities is another benefit of the Welcome Days.

The Study Buddy programme (www.uni-bonn.de/study-buddy) matches newly arrived international students (mentees) with a University of Bonn student (buddy) who helps them as they start their studies and adjust to life in Bonn. The buddies give tips, advice and assistance that make it easier for their mentees to become familiar with the university and get settled in Bonn.

Contact

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Geodetic Engineering

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🌐 Course website: <https://www.gug.uni-bonn.de/en/master-ge>

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International Programmes in Germany - Database

www.daad.de/international-programmes
www.daad.de/sommerkurse

Editor

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www.gate-germany.de

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