



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



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Master's degree



Computational Engineering (CompEng)

Ruhr-Universität Bochum • Bochum

Overview

Degree	Master of Science
Teaching language	<ul style="list-style-type: none">English
Languages	Owing to the international focus of the programme, all lectures and examinations are held in English.
Full-time / part-time	<ul style="list-style-type: none">full-time
Mode of study	Less than 50% online
Programme duration	4 semesters
Beginning	Winter semester
Additional information on beginning, duration and mode of study	In general, courses take place during the semester in the form of face-to-face lectures on campus. Some courses are held as online lectures/exercises or in a blended learning format. For all courses, lecture notes or other recordings are available online. However, the exams can only be written in person.
Application deadline	Non-EU applicants: 15 May for the following winter semester EU and national applicants: 15 July for the following winter semester
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	Yes
Description/content	<p>Numerical simulations based on realistic computational models along with experimental verification methods have become indispensable tools for advanced computer-oriented engineering. The Master's course of study provides the key qualifications in:</p> <ul style="list-style-type: none">civil and structural engineeringengineering mechanicsfinite element analysiscomputational fluid mechanics

- mathematics
- advanced programming

These qualifications are required for innovatively designing and analysing high-tech engineering systems and materials.

The research-oriented focus of the Master's programme ensures that students are well prepared for subsequent PhD studies.

Most of the lecturers spent an important part of their career in countries abroad, thus having profound teaching skills paired with a lot of international experience.

Founded in the year 2000 and with more than 650 graduates so far, the Master's programme Computational Engineering at the Ruhr-Universität Bochum is one of the first and most successful international degree programmes in the field of computational engineering in Germany.

Course Details

Course organisation

The Master's programme starts every winter semester and takes four semesters (two years) to complete. During the first semester, all students attend basic courses in mathematics, structural engineering, numerical methods and mechanics. During the second and third semesters, students complete some compulsory and several elective courses. The fourth semester is dedicated to the Master's thesis. Students are free to either write their Master's theses in an academic environment at various university departments or in the industry while being supported by a lecturer of the Master's programme. Due to the faculty's close connections to the industry, support can be offered to students in finding a suitable company with which to cooperate. After completion of the programme, the successful candidates are awarded the title Master of Science (MSc) by the Ruhr-Universität Bochum.

A Diploma supplement will be issued

Yes

International elements

- International guest lecturers
- Language training provided
- Training in intercultural skills
- Study trips
- Specialist literature in other languages
- Courses are led with foreign partners
- Projects with partners in Germany and abroad

Course-specific, integrated German language courses

Yes

Course-specific, integrated English language courses

Yes

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

- Access to databases with study material
- Chats (with lecturers and other students)
- Discussion forums and / or groups
- Flipped Classroom
- Mobile learning apps
- Online sessions
- Online study material provided by institution
- Video learning (Pre-recorded videos, Vlogs, Video-Podcasts)

Costs / Funding

Tuition fees per semester in EUR

None

Semester contribution

Students have to pay a social contribution fee of approx. 360 EUR per semester, including a semester ticket covering public transport in the entire state of North Rhine-Westphalia.

Costs of living

Minimum of 950 EUR per month to cover personal and living expenses

Funding opportunities within the university

Yes

Description of the above-mentioned funding opportunities within the university

Students with outstanding academic performance who are involved in special social activities can receive 300 EUR per month for a year from the Ruhr-Universität Scholarship Fund "Deutschlandstipendium": <https://studium.ruhr-uni-bochum.de/en/deutschlandstipendium-information-students>. International students with good to very good academic performance who need financial support during the final phase of study can receive a graduation grant from the International Office at RUB: <https://international.ruhr-uni-bochum.de/en/scholarships-international-office>.

Requirements / Registration

Academic admission requirements

Applicants can be admitted to the Master's programme if they have a Bachelor's degree or equivalent degree in civil engineering, mechanical engineering, or a related engineering discipline as well as mathematics or a comparable subject. Students who completed their Bachelor's degree in the field of computer science or IT will **not** be accepted.

Language requirements

The language of instruction is English. You thus have to furnish proof that you have sound English language skills. To be accepted to the programme, at least one of the following requirements must be fulfilled:

- completion of your first degree programme in English (this means that all lectures must have been held in English)
- TOEFL: minimum score – paper-based 550, computer-based 215, Internet-based 79 (The TOEFL score must not be older than two years.)
- IELTS (Academic): minimum score 6.0 (overall band score)

Application deadline

Non-EU applicants: 15 May for the following winter semester
EU and national applicants: 15 July for the following winter semester

Submit application to

In order to study Computational Engineering at the Ruhr-Universität Bochum, candidates must submit an online application approx. six to ten months prior to the beginning of their studies. The online application system is open for applications from November until May/July.

A link to the online application system as well as a detailed step-by-step guide on how to apply can be found at www.compeng.rub.de.

Services

Accommodation

In the city of Bochum, you can find a variety of affordable and pleasant accommodations. On average, students in Bochum pay at least 650 EUR per month for a one-person flat, which is below the average rent in Germany. A room in a shared flat is available for 350 - 650 EUR.

Accommodation in one of the halls of residence of the student support organisation (Akademisches Förderungswerk "AKAFÖ") is usually more affordable. About 5,000 students in Bochum live in 18 student halls close to the campus. In the halls, students have their own single room and share a kitchen and bathroom with other students, they rent a flat with a private bathroom and kitchen, or they share a flat with one or several flatmates.

More information on the student halls can be found at <http://www.akafoe.de> and <https://studium.ruhr-uni-bochum.de/en/accommodation>.

In addition, private and church-affiliated student halls offer apartments and rooms for students: <http://www.stuwo.de/wohnheim-region/bochum/>, <https://www.seven-stones.de/>, and <https://green-stay.eu/>.

Career advisory service

The programme coordinators offer individualised career counselling for all Computational Engineering students. In addition to this, the RUB Career Service checks students' application documents, organises career-related events, workshops and counselling sessions, and provides information materials in German and English.

Support for international students and doctoral candidates

- Welcome event
- Buddy programme
- Tutors
- Specialist counselling
- Visa matters
- Accompanying programme
- Help with finding accommodation
- Support with registration procedures

Contact

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🌐 Course website: <https://compeng.rub.de/>

📷 <https://www.instagram.com/compeng.rub/>

📺 <https://www.youtube.com/channel/UCpapESOILYczVkvw88BKvfA>

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International Programmes in Germany - Database

www.daad.de/international-programmes

www.daad.de/sommerkurse

Editor

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German Academic Exchange Service

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GATE-Germany

Consortium for International Higher Education Marketing

www.gate-germany.de

Disclaimer

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