



Deutscher Akademischer Austauschdienst  
German Academic Exchange Service



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# Master's degree

## MSc Computer Science

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University of Freiburg • Freiburg im Breisgau

### Overview

Degree	Master of Science
Teaching language	<ul style="list-style-type: none"><li>English</li></ul>
Languages	Although a few elective courses (5%) are held in German, the Master's programme can be studied without any German language skills.
Programme duration	4 semesters
Beginning	Winter and summer semester
Application deadline	<p><b>Non-EU applicants:</b> 31 May for admission to the winter semester, 15 December for admission to the summer semester</p> <p><b>EU applicants:</b> 15 July for admission to the winter semester, 15 January for admission to the summer semester</p>
Tuition fees per semester in EUR	Varied
Additional information on tuition fees	<p>The state of Baden-Württemberg implemented study fees for international students as well as students earning a second degree starting in the 2017/18 winter semester.</p> <p>Here you will find further information about tuition fees: <a href="http://www.studium.uni-freiburg.de/en">www.studium.uni-freiburg.de/en</a></p>
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	<p>The technological developments of the past 20 years have changed our daily lives. Smartphones, navigation devices, search engines and data streaming have become indispensable in our everyday lives. Self-directed robots, autonomous vehicles, computers that learn to understand images or mind-controlled prostheses are our future.</p> <p>We teach you the practical and theoretical skills you need to work on these and other innovations. The international Master's degree programme in computer science is designed for foreign and German students with a Bachelor's degree in computer science or a similar subject. The curriculum is very flexible, and it offers many choices so that you can develop yourself individually and prepare for a career in science or business.</p>

The Master's programme in "Informatik / Computer Science" in Freiburg offers you three options:

- Open Curriculum: a "Master of Science Informatik / Computer Science" degree programme with a self-directed, personalised course of study where you can combine various topics from all areas of computer science, such as algorithmics, data analysis, computer graphics, software and hardware development, machine learning, gender studies in STEM, or bioinformatics.
- Specialisation in Artificial Intelligence: a "Master of Science Informatik / Computer Science" degree programme with the additional qualification of "Specialisation Artificial Intelligence" where you can put a special focus on artificial intelligence, machine learning, deep learning, robotics, computer vision, computer graphics, and neuroscience.
- Specialisation in Cyber-Physical Systems: a "Master of Science Informatik / Computer Science" degree programme with the additional qualification of "Specialisation Cyber-Physical Systems" where you can put a special focus on design, verification and analysis of hardware and software systems, programming languages, distributed or embedded systems, security, and efficiency

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## Course Details

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### Course organisation

The Master's degree programme has a very flexible curriculum. Students acquire in-depth knowledge in various self-chosen IT areas by participating in different courses. Lectures, seminars, a lab course, a study project, and the Master's thesis form a personal competency profile in the field of computer science. In the meantime, the personal profile ("Individuelle Studiengestaltung") allows a look outside the box by taking some courses in subjects other than computer science.

Students can choose one of the following three options:

- open curriculum
- cyber-physical systems
- artificial intelligence

In the last semester, students work on their Master's theses. The topic is usually part of a current research project of one of our professors. Thus, students will be directly involved in cutting-edge research activities.

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### A Diploma supplement will be issued

Yes

### International elements

- Specialist literature in other languages
- Language training provided
- Training in intercultural skills
- Projects with partners in Germany and abroad

### Integrated internships

Internships are not an integral part of the curriculum. Nevertheless, students are free to take a leave of absence in order to do an internship at a company.

### Course-specific, integrated German language courses

Yes

### Course-specific, integrated English language courses

No

## Costs / Funding

<b>Tuition fees per semester in EUR</b>	Varied
<b>Additional information on tuition fees</b>	<p>The state of Baden-Württemberg implemented study fees for international students as well as students earning a second degree starting in the 2017/18 winter semester.</p> <p>Here you will find further information about tuition fees:  <a href="http://www.studium.uni-freiburg.de/en">www.studium.uni-freiburg.de/en</a></p>
<b>Semester contribution</b>	<p>180 EUR per semester:</p> <ul style="list-style-type: none"> <li>• Administrative fee: 70 EUR</li> <li>• Contribution to the constituted student body: 7 EUR</li> <li>• Contribution to the student union: 103 EUR</li> </ul>
<b>Costs of living</b>	<p>Participants must ensure that sufficient funding is available to finance their participation in a course of study. The average cost of living in Freiburg for one month is currently approx. 850 EUR to 1,000 EUR.</p> <p>Some details:</p> <ul style="list-style-type: none"> <li>• Rooms in private accommodation including extra costs: 350 EUR – 700 EUR</li> <li>• Rooms in student residences: 250 EUR and 550 EUR including extra costs</li> <li>• Private expenses amount to around 350 EUR per month.</li> <li>• Health insurance (recommended) is available for approx. 120 EUR per month.</li> <li>• Transport: A special student ticket for regional transport costs approx. 89 EUR per semester.</li> </ul> <p><a href="http://www.studium.uni-freiburg.de/en/counseling/welcome-guide-for-international-students/finance">www.studium.uni-freiburg.de/en/counseling/welcome-guide-for-international-students/finance</a></p>
<b>Funding opportunities within the university</b>	Yes
<b>Description of the above-mentioned funding opportunities within the university</b>	<p>There is one scholarship scheme for students who obtained an excellent result in their undergraduate studies (final grade of 1.5 or better in the German grading system).</p> <p>More information:</p> <ul style="list-style-type: none"> <li>• Deutschlandstipendium: <a href="http://www.studium.uni-freiburg.de/en/counseling/scholarship-advising/deutschlandstipendium-germany-scholarship?searchterm=deutschlandstipendium&amp;">http://www.studium.uni-freiburg.de/en/counseling/scholarship-advising/deutschlandstipendium-germany-scholarship?searchterm=deutschlandstipendium&amp;</a></li> </ul>

## Requirements / Registration

<b>Academic admission requirements</b>	<p>Applicants must hold a Bachelor's degree in one of the following:</p> <ul style="list-style-type: none"> <li>• computer science</li> <li>• computer engineering</li> <li>• informatics</li> <li>• mathematics</li> <li>• information technology</li> </ul> <p>OR they should hold a degree in a closely related field with an excellent cumulative GPA or final grade.</p>
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The aim of the programme is to develop both practical and theoretical skills. Mathematical analyses and proofs play an important part in the curriculum. Additionally, true mastery of the practical sides of computer science requires mastery of its theoretical foundations. A profound knowledge in theoretical computer science (formal languages, automata theory) is thus one of the most important prerequisites for admission.

#### Language requirements

An exemption from submitting an English language certificate is only granted to native speakers from the USA, UK, Ireland, Australia, New Zealand, and Canada or students who completed their Bachelor's degree in one of these countries. All other candidates have to submit one of the following English language certificates:

- TOEFL iBT, minimum 95 points
- Academic IELTS, minimum 7.0 points
- Cambridge Certificate of Advanced English (C1)
- Cambridge Certificate of Proficiency in English (C1)
- Pearson PTE Academic (min. 76)
- TELC
- TOEIC
- UNIcert III or IV

#### Application deadline

**Non-EU applicants:** 31 May for admission to the winter semester, 15 December for admission to the summer semester

**EU applicants:** 15 July for admission to the winter semester, 15 January for admission to the summer semester

#### Submit application to

You will find all information about the application procedure on our [website](#).

## Services

#### Possibility of finding part-time employment

Qualified students may easily find opportunities for research and teaching assistantships within the Department of Computer Science.

#### Accommodation

As Freiburg is an attractive city, finding a suitable and affordable place to live can take a little while. The University of Freiburg offers all newly enrolled international students the possibility to apply for student housing via the International Office. In addition to these dormitories, which are run by the Studierendenwerk Freiburg ([www.swfr.de/en](http://www.swfr.de/en)), several independent residence halls are listed on the university website (<http://www.housing.uni-freiburg.de>). The Studierendenwerk Freiburg and the International Office also offer a list of available private rooms.

#### Career advisory service

The university offers the following career services:

- company visits
- discussions with and talks from employers
- advising on application procedures and documents

#### Support for international students and doctoral candidates

- Welcome event
- Buddy programme
- Tutors
- Accompanying programme
- Specialist counselling
- Cultural and linguistic preparation

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**Supervisor-student ratio**

1,000 computer science students (undergraduate and postgraduate), 22 professors, more than 100 scientific staff, and 12 administrative staff

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**Christian Herrera  
Salazar**  
Dr

When I searched for options to study my Master's in computer science, I found the University of Freiburg, which is one of the most prestigious universities in Germany in this field. The University of Freiburg's Department of Computer Science is renowned for having won several international robotic competitions, and yes, the same researchers who have won these competitions are the ones that teach the students in Freiburg.

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# University of Freiburg

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Traditional and modern: the University of Freiburg in Germany

© Universität Freiburg - Sandra Meyndt

The University of Freiburg was founded in 1457 as a classical comprehensive university, making it one of the oldest institutions of higher education in Germany. Awarded for its excellence in both research and teaching, the university also boasts a long history, with numerous Nobel laureates. Brilliant scholars and creative thinking distinguish it today as a modern, top-notch university, well equipped for the challenges of the 21st century. As an organisation with around 24,500 students, 288 degree programmes, and 6,536 employees (2021), the University of Freiburg is committed to family friendliness, equal opportunities, and environmental consciousness in its day-to-day operations. The structure of the university is multifaceted, ranging from 11 academic faculties – from the humanities and the social and natural sciences all the way to engineering – to 19 research centres. This goes to show that we are a dynamic, large-scale institution with a diverse educational offering. As studies, research, and continuing education are all an integral part of this offering, we maintain a close relationship with the city and the region as well as with the international academic community. Bilateral partnerships, research projects, joint study courses and memberships in international networks such as the League of European Research Universities (LERU) and of EUCOR – The European Campus are examples of the university's strong transnational relations. All our students, including those from abroad, can take courses at the Universities of Basel (Switzerland) and Strasbourg (France) without having to enrol. Via EUCOR, The European Campus mobility grant, they also receive allowances for travel expenses to their partner institutions.

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## 📍 University location

Freiburg im Breisgau is a city in south-western Germany on the edge of the Black Forest. Freiburg was founded by Konrad and Duke Bertold III of Zähringen in 1120 as a free market town – hence its name, which translates to "free town". Freiburg holds a central position in Europe at the trijunction of Switzerland, France, and Germany, and is the city with the most hours of sunshine per year in Germany. It is nestled in one of the oldest cultural landscapes north of the Alps, a location which has had an unmistakable influence on the town. The university plays an essential part in the quality of life in Freiburg; both in the academic sphere and in the perception of the general public, the activities of the university are of central importance. Since its founding, teaching, learning and research have formed an indivisible whole.

With approx. 230,000 inhabitants, Freiburg has a friendly size, offering the safe surroundings of a smaller city whilst at the same time excelling in terms of culture, shopping and infrastructure. Both the inhabitants and the city government of Freiburg attach great importance to ecological values and sustainable development. This "green city" atmosphere influences many aspects of city life – from the numerous cyclists on the streets to cutting-edge solar energy research. Surrounded by the beautiful landscapes of the Black Forest and the wine-growing regions of the Rhine Valley, Freiburg is a popular destination for tourism and leisure activities.

# Contact

**University of Freiburg**  
Faculty of Engineering  
Admissions Office

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79110 Freiburg im Breisgau

Tel. [+49 7612038340](tel:+497612038340)

✉ [mcs@informatik.uni-freiburg.de](mailto:mcs@informatik.uni-freiburg.de)

🌐 Course website: [https://www.tf.uni-freiburg.de/en/study-programs/computer-science/m-sc-computer-science?set\\_language=en](https://www.tf.uni-freiburg.de/en/study-programs/computer-science/m-sc-computer-science?set_language=en)

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📷 <https://instagram.com/unifreiburg/>

📺 <https://www.youtube.com/c/Universit%C3%A4tFreiburg>

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# International Programmes in Germany - Database

[www.daad.de/international-programmes](http://www.daad.de/international-programmes)  
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## GATE-Germany

Consortium for International Higher Education Marketing  
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## Disclaimer

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