



Deutscher Akademischer Austauschdienst  
German Academic Exchange Service



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# Master's degree

## MSc Neuroscience

universität freiburg

University of Freiburg • Freiburg im Breisgau

### Overview

Degree	Master of Science in Neuroscience
Teaching language	<ul style="list-style-type: none"><li>English</li></ul>
Languages	Classes and examinations in the MSc Neuroscience degree programme are conducted in English. Master's theses are generally written in English.
Full-time / part-time	<ul style="list-style-type: none"><li>full-time</li></ul>
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	31 March for the following winter semester
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 Neuroscience Master's programme at the University of Freiburg unites teaching expertise from the departments of biology, engineering, and behavioural sciences and economics to offer a coherent course programme that provides the training needed by the next generation of neuroscientists.</p> <p>The English-taught two-year course of study is offered by labs from three departments and research centres, and it will deliver higher education in both the foundations of neuroscience and the latest research in the field. Our modular course structure caters to the individual backgrounds and research interests of the participants, providing theoretical training as well as practical training in the essentials of neuroscience as well as electives.</p>

Transcending the disciplines out of which neuroscience evolves, the MSc programme takes an integrated approach: incorporating skill training and education in a wide range of theoretical and experimental methods, students in our programme are encouraged to approach problems from different angles.

Starting in October, the programme stretches over two years. The academic year in Germany is divided into two terms, which are called semesters. After having finished your first semester, having learned the foundations of neuroscience and its research methods, you will have the opportunity to select an individual research path that will cater to your individual research interests. You will be able to choose from a wide range of specialisations including computational neuroscience, neural circuits and behaviour and neurotechnology and create your individual curriculum composed of different courses.

#### KEY POINTS:

- **Interdisciplinary and international (English-taught)**
- Combined experimental and theoretical training in neuroscience
- **Individual study programme** with many elective courses to choose from
- Electives cover topics such as **computational neuroscience, neural circuits and behaviour and neurotechnology**
- Joint programme of the **Department of Biology, Department of Engineering and Department of Behavioural and Economic Sciences**
- **State-of-the art neuroscience facilities at one of Germany's top universities**
- Historic university town with a vibrant student life and extraordinary possibilities for leisure activities

## Course Details

### Course organisation

Our integrated approach will offer an insight into the research done at the University of Freiburg's internationally renowned research facilities while offering a chance to gain first-hand experience in neuroscientific research in our state-of-the-art facilities.

#### First Semester

You will begin the programme by obtaining a comprehensive education in the foundations of neuroscience and the experimental and theoretical methods used in neuroscientific research. In the lecture entitled "From Membrane to Brain" and its accompanying seminar, you will acquire in depth knowledge about the structure and functional principles underlying brain function and neuroanatomical structures, organisational schemes, and processes in nerve cells and functional systems of the brain (e.g., visual, auditory, motor, somatosensory and cognitive systems). In two practical courses, "Physiology and Anatomy of Neuronal Systems" and "Neurophysiology: Measurement and Analysis of Neuronal Activity", practical experience in basic neurobiology will be gained in (i) measuring and analysing physiological properties of neurons and neuronal networks and (ii) in comparative and functional neuroanatomy in rodents and humans on the basis of fixed tissue specimens and models. Important theoretical concepts and mathematical tools essential for model building and data analysis in neuroscience will be taught in a separate "Quantitative Methods in Neuroscience" course consisting of lectures and practical exercises.

#### Second Semester

In the second semester, you will have the chance to focus on a specific neuroscientific topic. While you will meet with all students of your semester in the "Advanced Topics in Neuroscience" module, consisting of a lecture series and regular "Journal Clubs" to discuss recent neuroscience publications, you can individually choose from various elective subjects such as Computational Neuroscience, Neural Circuits and Behaviour, and Neurotechnology. Each elective offers multiple courses to choose from, enabling you to create your own individual and multidisciplinary curriculum.

#### Third Semester

In the third semester, you will continue with lab work related to your specialisation, diving deeper into practical work. You will enter two research laboratories for two research internships, during

each of which you will carry out a research project that matches your specific neuroscientific interests. Furthermore, this will allow you to explore research fields for future Master's thesis opportunities.

#### Fourth Semester

The fourth semester will be dedicated to your Master's thesis project and the preparation of your written thesis and the final oral exam.

A Diploma supplement will be issued	Yes
Integrated internships	Two internships in the third semester
Course-specific, integrated German language courses	No
Course-specific, integrated English language courses	No

## Costs / Funding

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>
Semester contribution	<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>
Costs of living	<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>

Funding opportunities within the university No

## Requirements / Registration

Academic admission requirements <http://www.mscneuro.uni-freiburg.de/apply-now>

Language requirements <http://www.mscneuro.uni-freiburg.de/apply-now>

Application deadline 31 March for the following winter semester

Submit application to <https://campus.uni-freiburg.de/>

## Services

**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.

**Support for international students and doctoral candidates**

- Welcome event
- Visa matters

# University of Freiburg

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.

## 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

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🌐 Course website: <https://www.mscneuro.uni-freiburg.de/>

📘 <https://www.facebook.com/unifreiburg>

🐦 <https://twitter.com/UniFreiburg>

🌐 <https://www.linkedin.com/company/albert-ludwigs-universit-t-freiburg-im-breisgau>

📷 <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)  
[www.daad.de/sommerkurse](http://www.daad.de/sommerkurse)

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## Disclaimer

The data used for this database was collected and analysed in good faith and with due diligence. The DAAD and the Content5 AG accept no liability for the correctness of the data contained in the "International Programmes in Germany" and "Language and Short Courses in Germany".

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