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# Master's degree

## Master of Science in Applied Physics (MSc)

**University of Freiburg • Freiburg im Breisgau**

## Overview

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<th><strong>Degree</strong></th>
<th>Master of Science in Applied Physics</th>
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<tbody>
<tr>
<td><strong>Course location</strong></td>
<td>Freiburg im Breisgau</td>
</tr>
<tr>
<td><strong>In cooperation with</strong></td>
<td>Local Fraunhofer Institutes (ISE, IWM, IPM, IAF, EMI), Medical Center – University of Freiburg, research centres (FMF, FDM, FIT, FRIAS), Kiepenheuer Institute for Solar Physics (KIS)</td>
</tr>
<tr>
<td><strong>Teaching language</strong></td>
<td>English</td>
</tr>
<tr>
<td><strong>Languages</strong></td>
<td>Courses are held entirely in English (100%). Participants can choose to write their Master's theses in English or German.</td>
</tr>
<tr>
<td><strong>Programme duration</strong></td>
<td>4 semesters</td>
</tr>
<tr>
<td><strong>Beginning</strong></td>
<td>Winter and summer semester</td>
</tr>
<tr>
<td><strong>Application deadline</strong></td>
<td>15 July for the following winter semester 15 January for the following summer semester</td>
</tr>
<tr>
<td><strong>Tuition fees per semester in EUR</strong></td>
<td>Varied</td>
</tr>
<tr>
<td><strong>Additional information on tuition fees</strong></td>
<td>International students from non-European Union (EU) countries will have to pay a tuition fee of 1,500 EUR per semester. (There are no tuition fees for EU citizens.) Information on student fees for international students and possible exceptions can be found on the <a href="#">student portal</a> website.</td>
</tr>
<tr>
<td><strong>Combined Master's degree / PhD programme</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Joint degree / double degree programme</strong></td>
<td>No</td>
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</tbody>
</table>

**Description/content**

The MSc Applied Physics aims to continue and broaden studies begun at the Bachelor’s level. It provides an interdisciplinary study programme at the interface between fundamental physical concepts and resulting modern technologies. Participants will deepen their knowledge in modern physics and will be introduced to central methods of physical research, such as measuring...
techniques, methods for data analysis or numerical simulation. In cooperation with associated institutes at the university and with the Fraunhofer Institutes in Freiburg, the Master’s programme offers the possibility for a specialisation in a particular area of applied physics, such as optical technologies, biological systems, medical physics, energy conversion, or interactive and adaptive materials.

## Course Details

In the first year of their studies, participants consolidate their knowledge in advanced theoretical and experimental physics. Advanced Physics and Applied Physics courses can be selected from a range of state-of-the-art topics from a broad spectrum. Students can choose each semester among various courses, where they learn to give oral presentations on a specific topic of modern research. In addition, students can select from a variety of elective courses in physics or from course programmes of other faculties.

During their final one-year research phase (research traineeship & Master’s thesis), students specialise in a particular field by participating in a cutting-edge research project at the Institute of Physics or one of the associated research centres.

### Costs / Funding

<table>
<thead>
<tr>
<th>Tuition fees per semester in EUR</th>
<th>Varied</th>
</tr>
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</tr>
<tr>
<td>Semester contribution</td>
<td>155 EUR per semester</td>
</tr>
<tr>
<td>- Student services fees (including the initial contribution for the &quot;Semester Ticket&quot;): 78 EUR</td>
<td></td>
</tr>
<tr>
<td>- Administrative fees + student government fees: 77 EUR</td>
<td></td>
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<tr>
<td>Costs of living</td>
<td>Participants must ensure that sufficient funding to finance their participation in a course of study is available. The average cost of living in Freiburg for one month is currently approx. 800-985 EUR. Some details:</td>
</tr>
<tr>
<td>- Student accommodation costs approx. 280-450 EUR (monthly)</td>
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<td>- Private expenses amount to around 350 EUR (monthly)</td>
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<tr>
<td>- Health insurance is available for approx. 45-90 EUR (monthly)</td>
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</tr>
<tr>
<td>- Transport: A special student ticket for regional transport costs approx. 94 EUR (per semester).</td>
<td></td>
</tr>
<tr>
<td>Funding opportunities within the university</td>
<td>No</td>
</tr>
</tbody>
</table>
Requirements / Registration

Academic admission requirements

A Bachelor's degree in physics or equivalent is required. The admission committee decides on the equivalence of the degree.

Bachelor's degrees from non-European countries need to be from four-year programmes. You can apply if you have a three-year degree AND either a graduate diploma or Master's degree (from a programme with a duration of one to two years).

Language requirements

Applicants must have a working knowledge of English and are required to provide appropriate evidence of their language skills. An example of adequate certification of English language skills is a school leaving certificate from a German-speaking Gymnasium ("Abitur"). Applicants who do not hold an "Abitur" are required to have a B2 (CEFR) certificate or equivalent for the English language. Native speakers of English are not required to provide proof of language proficiency in their mother tongue.

Application deadline

15 July for the following winter semester
15 January for the following summer semester

Submit application to

Zulassungskommission MSc Applied Physics
Physikalisches Institut
Albert-Ludwigs-Universität Freiburg
Hermann-Herder-Str. 3
79104 Freiburg
Germany

Services

Accommodation

As Freiburg is an attractive city, finding a suitable place to live can take a little time. Only some of our international students can be offered a room in a student dormitory. The Studentenwerk (student social services) is in charge of the student dormitories. Applicants must expect a waiting period. In addition to these dormitories, several independent dormitories are listed on the university website. The Studentenwerk also offers a list of available private rooms, and the International Office can be contacted for further assistance in finding accommodation (http://www.international.uni-freiburg.de).

Specific specialist or non-specialist support for international students and doctoral candidates

- Specialist counselling
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 25,000 students, 284 degree programmes, and 6,736 employees, 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 20 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 the European Confederation of Upper Rhine Universities (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 the "Eucor - The European Campus" mobility grant, they also receive allowances for travel expenses to the partner institutions.

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 nestles 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
Institute of Physics

PD Dr Markus Walther
Hermann-Herder-Strasse 3
79104 Freiburg im Breisgau

master@physik.uni-freiburg.de
Course website: https://www.physik.uni-freiburg.de/studium-en/MSc_ApplPhysics

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