

# INTERNATIONAL PROGRAMMES

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# Master's degree



### **Master of Science in Materials Science**

Paderborn University • Paderborn







### Overview

| Degree                                      | Master of Science  |
|---|--|
| Teaching language                           | • English  |
| Languages                                   | Courses and lectures are held in English only.   |
| Programme duration                          | 4 semesters  |
| Beginning                                   | Winter semester  |
| Application deadline                        | 31 May for international applicants<br>(21 September for applications from Germany)  |
| Tuition fees per semester in EUR            | None   |
| Combined Master's degree /<br>PhD programme | No   |
| Joint degree / double degree programme      | No   |
| Description/content                         | Modern materials are the basis of technological innovations in important fields such as energy, health, mobility, and information technology.  The Master's programme in Materials Science offers the possibility especially, but not exclusively, for students with a Bachelor's degree in physics, chemistry, chemical engineering, or materials science to expand and deepen their knowledge in the experimental and theoretical aspects of the fields of materials science.  The particular strength of the Paderborn programme is the specialisation in modern functional materials with a strong background of application. It provides the possibility for an early specialisation in one of the prominent research areas at the University of Paderborn.  The Master's programme in Materials Science is located at the interface between the department of chemistry and physics. It is complemented by contents from the fields of mechanical engineering, chemical engineering, and electrical engineering courses. The programme deliberately emphasises the scientific aspects of the synthesis, structure, processing, and functionality of new materials. |

### **Course Details**

#### **Course organisation**

The programme consists of lectures in different fields of materials science, which are complemented by additional exercises. Multidisciplinary seminars complement the lectures. The theoretical knowledge acquired in lectures, exercises, and seminars will be applied in lab courses equipped with experiments of current cutting-edge research.

The first two semesters (60 ECTS) consist of compulsory courses (lecture, exercises, practical course), which include the fundamental concepts of materials science. These courses are complemented by elective courses, which allow students to deepen their knowledge in four advanced areas: Materials Analysis, Materials Processing, Functional Materials, and Computational Materials Science.

In the third semester (30 ECTS), the elective courses will continue, accompanied by a lab course and a research-oriented project-based course in a working group. A seminar on current topics of materials science will prepare students for this. Also, a few courses in general studies can be chosen freely from the university's complete lecture catalogue.

For the Master's thesis in the fourth semester (30 ECTS), you will join a research group within one of the four departments and work on a supervised individual research project that will form the basis for your Master's thesis. After completion of the research work, the results will be submitted in a written thesis at the end of the semester. Subsequently, the thesis work will be defended in a concluding colloquium.

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| A Diploma suppl | ement will |
|-----------------|------------|
| be issued       |            |

Yes

#### International elements

• Language training provided

### Course-specific, integrated German language courses

No

Course-specific, integrated English language courses

No

### Costs / Funding

| Tuition fees per semester i | n |
|-----------------------------|---|
| EUR                         |   |

None

#### Semester contribution

Approx. 290 EUR per semester

The fee includes a semester ticket covering all regional public transport in the state of North Rhine-Westphalia.

#### Costs of living

Approx. 650 EUR per month is needed to cover personal expenses.

### Funding opportunities within the university

No

### Requirements / Registration

Academic admission requirements

Bachelor's degree in chemistry, physics, materials science, mechanical/electrical engineering

Furthermore, a GRE score report for all non-EU applicants is compulsory.

under certain constraints (or equivalent)

Language requirements

Applicants must provide proof of their English skills: TOEFL 550 (paper-based) or 79 (Internet-

based) or equivalent (IELTS).

Application deadline

31 May for international applicants

(21 September for applications from Germany)

Submit application to

Universität Paderborn c/o uni-assist e.V. 11507 Berlin Germany

### **Services**

Possibility of finding parttime employment Students can obtain paid jobs working as tutors, helping with technical work, or supporting research projects within one of the research groups of the department.

Accommodation

The University of Paderborn offers several student halls of residence on or near campus. As an alternative, one can look for a room or an apartment on the private market. The typical rent is between 200 EUR and 280 EUR per month.

Support for international students and doctoral candidates

- Welcome event
- Tutors

#### **Our Partners**





## **Paderborn University**



Aerial view of Paderborn University
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http://www.uni-paderborn.de



### University location

https://www.uni-paderborn.de/en/studies/international-students

### Contact

#### **Paderborn University**

Department of Chemistry

Dr Andreas Hoischen

Warburger Strasse 100 33098 Paderborn

- Course website: https://www.upb.de/materials
- f https://www.facebook.com/unipaderborn
- https://twitter.com/unipb
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Last update 04.07.2024 22:17:28

### International Programmes in Germany - Database

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#### Editor

DAAD - Deutscher Akademischer Austauschdienst e.V. German Academic Exchange Service Section K23 – Information on Studying in Germany Kennedyallee 50 D-53175 Bonn www.daad.de

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Consortium for International Higher Education Marketing www.gate-germany.de

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The publication is funded by the German Federal Ministry of Education and Research and by contributions of the participating German institutions of higher education.

