



Deutscher Akademischer Austauschdienst  
German Academic Exchange Service



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# Master's degree



## Software Systems Engineering

University of Potsdam • Potsdam

### Overview

Degree	Master of Science
In cooperation with	This innovative Master's degree programme is offered by the Faculty of Digital Engineering, a faculty jointly founded by the Hasso Plattner Institute (HPI) and the University of Potsdam.
Teaching language	<ul style="list-style-type: none"><li>English</li></ul>
Languages	English is the language of instruction in the Software Systems Master's programme.
Full-time / part-time	<ul style="list-style-type: none"><li>full-time</li></ul>
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	The application deadline is 1 June.
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	<p>The Master's programme in Software Systems Engineering is science and research oriented. In four semesters, the lecturers impart in-depth scientific fundamentals, advanced specialist knowledge and skills in the field of software systems engineering and computer science as well as advanced methods. Teaching also focuses on skills and knowledge of concepts, methods, techniques and procedures for the planning, analysis and development of complex IT and data systems.</p> <p>The study programme at HPI not only provides students with an excellent education but also prepares them in a practical manner for a career in management positions. The soft skills (professional skills) for the further development of social and personal competencies round off the curriculum. Graduates are able to innovatively design IT systems and data, to manage them in a reflective manner, and to communicate forward-looking ideas and results to decision-makers in a comprehensible way.</p> <p>With the Master's degree in Software Systems Engineering, you will study at the joint Digital Engineering Faculty of the University of Potsdam and the Hasso Plattner Institute. The University of</p>

Potsdam is represented in international ranking lists such as Times Higher Education and Nature's Top 175 young. HPI achieves a top ranking in the German CHE ZEIT ranking every year.

## Course Details

### Course organisation

In the Master's programme, the schedule can be arranged flexibly. Students individually choose their areas of specialisation from a wide variety of subjects.

#### Mandatory modules

- Conceptual Foundations
- Data Foundations
- Analytical Foundations
- Systems Foundations
- Ethics, Law and Compliance
- Software Systems Engineering Lab

#### Areas of specialisation

- Software Systems
- Online and Interactive Systems
- Data-Driven Systems
- Machine Learning and Analytics
- Models and Algorithms

#### Professional Skills

- Technology-Communication and Transfer
- Management and Leadership
- Basic Design Thinking
- Entrepreneurship and Innovation

#### Master's thesis

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### A Diploma supplement will be issued

Yes

### International elements

- International guest lecturers
- Specialist literature in other languages
- Courses are led with foreign partners
- Projects with partners in Germany and abroad
- International comparisons and thematic reference to the international context

### Integrated internships

Internships are not mandatory, but there are many opportunities: HPI provides up to ten internships per year at the research laboratories of a global software company. Internships in international companies are regularly arranged through the project partners of the HPI research groups.

### Course-specific, integrated German language courses

No

### Course-specific, integrated English language courses

No

## Costs / Funding

Tuition fees per semester in EUR	None
Semester contribution	No tuition is charged for studying at the University of Potsdam (with the exception of a few continuing education courses). There is only an administrative fee, which currently amounts to 316 EUR. This semester contribution includes a semester ticket entitling you to free use of public transport all over Brandenburg and Berlin.
Costs of living	Living in Germany is rather cheap compared to other countries in Northern and Western Europe. Monthly living expenditures of students at the University of Potsdam vary between 870 and 1,200 EUR, largely depending on accommodation. A more detailed list of the average monthly expenditures of our students can be found <a href="#">here</a> .
Funding opportunities within the university	Yes
Description of the above-mentioned funding opportunities within the university	HPI offers scholarships which are exclusively for excellent foreign students with a first academic degree. The scholarship covers the financing of the study stay in Germany as well as the semester fees at the University of Potsdam.

## Requirements / Registration

Academic admission requirements	<p>The following special admission requirements apply to the Master's programme in Software Systems Engineering:</p> <ul style="list-style-type: none"><li>• A Bachelor's degree or an equivalent first professional university degree in one of the subjects computer science, IT systems engineering, data science or related subjects to the extent of at least 180 credit points</li><li>• Knowledge to the extent of 18 credit points in each of the following areas must be demonstrated*:<ul style="list-style-type: none"><li>◦ Discrete structures and logic, analysis and linear algebra as well as stochastics</li><li>◦ Software development and programming languages</li><li>◦ Algorithms and data structures as well as theoretical computer science</li></ul></li><li>• Language skills in English (details below)</li></ul> <p>Full details on admission requirements in the <a href="#">subject-specific admission regulations</a></p> <p>*In individual cases, the examination board may decide on comparable performance. All information on applying as well as current study and examination regulations can be found on the pages of application for the <a href="#">Master's programme</a>.</p>
Language requirements	Language skills in English, at least C1 of the European Framework of Reference for Languages.
Application deadline	The application deadline is 1 June.
Submit application to	Please submit your application via uni-assist: <a href="#">online application form</a> .

# Services

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## Possibility of finding part-time employment

Job opportunities for students alongside their studies are numerous. Depending on personal and professional skills, students can find jobs in the service sector (e.g. in restaurants, supermarkets, cinemas, museums, theatres, etc.) or work as student assistants at the University of Potsdam or at one of the many non-university research institutions located in the area. The German capital, Berlin, is located just around the corner, and students can also find jobs there. Please see [this website](#) for further information.

## Accommodation

There are several student dormitories in Potsdam. These are administered exclusively by Potsdam's Association for Student Affairs ("Studentenwerk Potsdam"). You can apply for a room in one of these dormitories if you are under the age of 30. If you are a Master's student, you can only apply if the degree at the University of Potsdam is your first Master's programme. Additionally, there are also a few private dormitories in Potsdam, to which these conditions do not apply. However, many students prefer to find an apartment in Potsdam or Berlin, which they often share with fellow students. The housing market is tight, so please start looking for an accommodation as early as possible.

For information on how to register for a dorm room or find accommodation elsewhere, please click [this link](#).

## Career advisory service

The Career Service of the University of Potsdam supports students and graduates who want to actively shape their careers. The aim is to ensure comprehensive career orientation and to provide opportunities for the development of professional skills. The Career Service offers workshops, seminars, and individual counselling. There are information pages on a wide range of occupational fields as well as a database of internships and jobs. Many of the services are also available in English.

## Support for international students and doctoral candidates

- Welcome event
- Buddy programme
- Tutors
- Accompanying programme
- Cultural and linguistic preparation
- Visa matters

# Contact

## University of Potsdam

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🌐 Course website: <https://hpi.de/en/studies/before-your-studies/degree-programs/master/software-systems-engineering.html>

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

🐦 [https://twitter.com/HPI\\_DE](https://twitter.com/HPI_DE)

🌐 <https://www.linkedin.com/school/hasso-plattner-institute/>

📷 [https://www.instagram.com/hpi\\_de/](https://www.instagram.com/hpi_de/)

📺 <https://www.youtube.com/user/hpiv1>

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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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Consortium for International Higher Education Marketing  
[www.gate-germany.de](http://www.gate-germany.de)

## 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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