



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



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Master's degree



French-German Master's Double-Degree Programme in Physics

Freie Universität Berlin • Berlin

Overview

Degree	Master of Science (MSc)
In cooperation with	Institut Polytechnique de Paris and Franco-German University
Teaching language	<ul style="list-style-type: none">• English• French
Languages	<p>First and second semester: English</p> <p>Third and fourth semesters: English or French, depending on the selected courses</p> <p>The Master's thesis at Institut Polytechnique de Paris will be written in English.</p>
Full-time / part-time	<ul style="list-style-type: none">• full-time
Mode of study	Less than 50% online
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	<p>The regular application deadline is 30 June during the first year of the Master's programme. If you plan to apply for Erasmus funding in parallel, please submit your application by 10 March.</p> <p>Besides the standard application, we also offer the possibility of an early application. The deadline for the early application is 30 June before starting the Master's studies. Candidates will apply in parallel for the Master's programme in Physics of Freie Universität Berlin (deadline for the winter semester: 15 August) and the Master's double-degree programme.</p> <p>Applicants who hold a Bachelor's degree from outside Germany should apply six weeks ahead of these dates in order to allow for processing of their applications by uni-assist.</p> <p>For more details on application, please see our website.</p>
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree	Yes

Description/content

A joint programme of Institut Polytechnique de Paris and Freie Universität Berlin

Graduates of the physics double-degree programme will receive degree certificates from both the [Freie Universität Berlin](#) and the [Institut Polytechnique de Paris](#). Over the last 10 years, dozens of our physics students have benefited from this double-degree programme, which is certified by the [Franco-German University](#).

Key facts:

- two degrees in one programme
- consecutive, research-oriented Master's course
- two-year programme (120 credit points)
- qualifies graduates for international careers in research

[French-German Master's Double-Degree Programme](#)

First year – advanced phase in Berlin

Students spend the first year at Freie Universität Berlin and complete several modules of their choice. The [Statistical Physics and Thermodynamics](#) module is mandatory.

Second year – research phase in Palaiseau/Paris

Students spend the second year of the programme at [Institut Polytechnique de Paris](#). During the first six months, they will take compulsory modules (mostly lectures on physics) as well as one module on French language and cultural literacy. Double-degree students also engage in a cohesive research phase of twelve months within one of the research groups at the Institut Polytechnique de Paris, preparing for their Master's theses.

[Flyer for the "Double-Degree Programme in Physics"](#)

We are strong in biophysics, quantum physics, nanophysics and ultrafast physics.

The [Department of Physics](#) at Freie Universität Berlin is strong in both [theoretical](#) and [experimental](#) physics, with groups focused on molecular [biophysics](#), [nanosystems](#), [ultrafast physics](#), and [quantum physics](#). The department is also home to [research centres](#) dedicated to nanoelectronics, quantum computing, photosynthesis, and catalysis as well as the Dahlem Center for Complex Quantum Systems.

Course Details

Course organisation

Deep Insights into German and French Scientific Communities

The aim of the programme is to prepare students for international careers in advanced research and industries that heavily rely on research. These career paths require a comprehensive and profound understanding of modern physics as a fundamental requirement. As a Master's student of physics, you will be involved in ongoing projects and will be a part of our diverse scientific community.

[French-German Master's Double-Degree Programme](#)

Advanced Phase in Berlin (starts on 1 October)

The advanced phase serves to deepen and broaden students' knowledge of physics and related disciplines. It also aims to bring students up to the level of current topical research. As a compulsory component of the study programme, we teach the advanced fundamentals of modern experimental and theoretical physics. Within this part, the following modules are to be completed:

Modules at the Department of Physics at the Freie Universität Berlin

- Advanced Laboratory Course (10 ECTS)
- Selected Topics: Scientific Presentations (5 ECTS)
- Statistical Physics and Thermodynamics (10 ECTS)

In addition, students must choose one of the following modules (10 ECTS):

- Advanced Quantum Mechanics
- Advanced Statistical Physics
- Quantum Field Theory and Many-Body Physics
- Advanced Solid State Physics
- Advanced Atomic and Molecular Physics
- Advanced Biophysics

In an **elective part** of the studies, students can choose from a broad range of modules on selective topics in physics, among others:

- Theoretical Condensed Matter Physics
- Nanophysics
- Magnetism and Spin Electronics
- Surface Science
- Theory of Light-Matter Interaction
- Advanced Optics
- Ultrafast Spectroscopy and Nonlinear Optics
- Photobiophysics
- Special Topics in Molecular Biophysics
- Advanced Biospectroscopy
- Semiconductor Physics
- Advanced Astronomy and Astrophysics
- Quantum Information Theory
- Advanced Computational Physics
- Signal Analysis for Physicist
- Physics and Chemistry of Sustainability I – Renewable Energy
- further modules...

Research Phase in Paris (starts on 1 September)

In the research phase, students learn to work independently in a specialised field of physics. This includes carrying out research and presenting it in the form of a Master's thesis.

- 12 months of a coherent research phase in a scientific group at the [Institut Polytechnique de Paris](#)
- The first six months also include lectures of [aM2 programme](#) in physics (25 ECTS).
- French language and culture (5 ECTS)
- your own Master's project in cooperation with a research group at the Institut Polytechnique de Paris

A Diploma supplement will be issued	Yes
International elements	<ul style="list-style-type: none"> • Language training provided • International guest lecturers • Specialist literature in other languages • International comparisons and thematic reference to the international context
Integrated internships	No additional internship is necessary.
Special promotion / funding of the programme	<ul style="list-style-type: none"> • Franco-German University (FGU)

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 In total, the semester contribution amounts to 304.40 EUR. It includes a fee of 181.40 EUR for the transportation ticket contribution. This allows you to use public transportation in Berlin for free. Other costs covered by the semester contribution include a 50 EUR enrolment fee, a 63 EUR semester contribution to the student support service ("studierendenWERK Berlin"), and a 10 EUR contribution to the student union.

Costs of living Compared to other European countries, the cost of living in Germany is quite reasonable. However, the cost of living has also risen somewhat in Germany in recent years. The prices for food, accommodation, clothing, cultural events, etc. are slightly above the EU average. You will need around 950 to 1,200 EUR each month to cover your living expenses. The biggest expense is monthly rent, which is between 400 and 700 EUR in Berlin.

Funding opportunities within the university Yes

Description of the above-mentioned funding opportunities within the university The [Deutschlandstipendium scholarship](#) allows students at Freie Universität Berlin of all nations and all parts of society to fully concentrate on their studies. The programme supports talented students with 300 EUR per month. To apply, you have to be already enrolled within the standard time to degree during the funding period or have a letter of acceptance to start a degree programme at Freie Universität Berlin.

Additionally, the Franco-German University provides double-degree students with a monthly **support of 350 EUR for ten months** during their stay abroad.

Requirements / Registration

Academic admission requirements Academic admission requirements include a professionally-qualifying German or equivalent non-German degree at the university level in physics, [corresponding to the Bachelor of Science in Physics](#) at the Freie Universität Berlin.

Language requirements English – B2

Applicants whose native language is not English and who have not acquired their qualifying degree at an educational institution where English is the language of instruction will need to present certification of their proficiency in English at or above level B2 of the Common European Framework of Reference for Languages (CEFR). Verification of English language proficiency can be provided by generally recognised [language tests](#).

German and French – A2 and higher

Students must have a good command of German and French. The proficiency of one of these languages must be higher than the A2 level, and the other can be on a A2 level. German and French language knowledge has to be demonstrated upon application.

Application deadline

The regular application deadline is **30 June** during the first year of the Master's programme. If you plan to apply for Erasmus funding in parallel, please submit your application by **10 March**.

Besides the standard application, we also offer the possibility of an **early application**. The deadline for the early application is 30 June **before** starting the Master's studies. Candidates will apply in parallel for the Master's programme in Physics of Freie Universität Berlin (deadline for the winter semester: 15 August) and the Master's double-degree programme.

Applicants who hold a Bachelor's degree from outside Germany should apply six weeks ahead of these dates in order to allow for processing of their applications by uni-assist.

For more details on application, please [see our website](#).

Submit application to

Double Application

Applications have to be submitted online via the [online portal of the Institut Polytechnique de Paris](#) and, **at the same time**, by e-mail to: doublemaster@physik.fu-berlin.de.

Services

Possibility of finding part-time employment

There are many ways of earning money while you study, for example as waiting staff, academic assistants, or private tutors. Knowledge of German will improve your chances of finding a part-time job, but it isn't necessarily required. However, it is important to be aware of the legal regulations.

The student support service at the university, called studierendenWERK Berlin, and the local representative of the "Bundesagentur für Arbeit" (Federal Employment Agency) can provide information about jobs for students. When searching for a job, look at online job boards, ads in local newspapers, and notice boards on campus.

Accommodation

You have the option to stay in a public/private student dormitory or in a private (shared) apartment. Student dormitories are not administrated by the university itself, so Freie Universität Berlin does not have any on-campus housing. However, it works together with "[studierendenWERK Berlin](#)" regarding student accommodation.

If you do not wish to stay in a student dormitory, you can try to find a room or an apartment on the private housing market. Many students in Berlin live in shared apartments ("WGs"). You can find these offers online (e.g. [WG-Gesucht](#) or [Kleinanzeigen](#)) or on notice boards on campus.

Available rooms/apartments near the university are rare. Therefore, students mostly commute from other parts of the city. The commute via public transportation usually takes between 30 minutes and an hour, which is considered a normal travel time in Berlin due to the size of the city.

Career advisory service

The [Career Service](#) of Freie Universität Berlin aims to support international students at Freie Universität by providing information, advice, and events related to career planning, internships, and job applications.

Support for international students and doctoral candidates

- Specialist counselling

**General services and support
for international students
and doctoral candidates**

The [International Student Support](#) team at FU Berlin regularly offers information events that include Q&A sessions. While personal office hours aren't available due to team size, students can contact Info-Service Study for general inquiries or the General Academic Advisory Service or Psychological Counseling for complex concerns. The team also enhances expertise in international affairs, contributing to FU Berlin's internationalisation process.

Contact

Freie Universität Berlin

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🌐 Course website: <https://www.physik.fu-berlin.de/en/studium/master/doppelmaster/index.html>

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

🐦 https://twitter.com/fu_berlin

🌐 <https://www.linkedin.com/school/freie-universitat-berlin/>

📷 https://www.instagram.com/fu_berlin/

📺 <https://www.youtube.com/c/FreieUniversitaetBerlin>

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International Programmes in Germany - Database

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www.daad.de/sommerkurse

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Disclaimer

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