



Physics

Physics at the Freie Universität – since 1949

With our fundamental research in theoretical and experimental physics we contribute to the advances of technologies and innovations in software, medicine, geology, and material production.

Biophysics uncovers the function of biologically relevant macromolecules, e.g. proteins.

Nanophysics and Surface Science explore the behavior of systems and materials with atomic dimensions, e.g. graphene or carbon nanotubes.

Ultrafast Physics uses ultrashort laser pulses to reveal real-time dynamics in atomic and molecular systems.

In the **Dahlem Center for Complex Quantum Systems**, the researchers work on theoretical quantum condensed matter physics, e.g. complex materials, nanomagnetism, and quantum chaos.

Open-minded and vibrant – just like Berlin

Our department reflects the stunning cultural and intellectual mix of Berlin: here, people speak many languages, live their own colourful lifestyles and engage in cutting-edge projects.

Get to know us

Masters' Fair, 27th of April 2019

www.physik.fu-berlin.de/master

Contact

Freie Universität Berlin

Department of Physics

Arnimallee 14

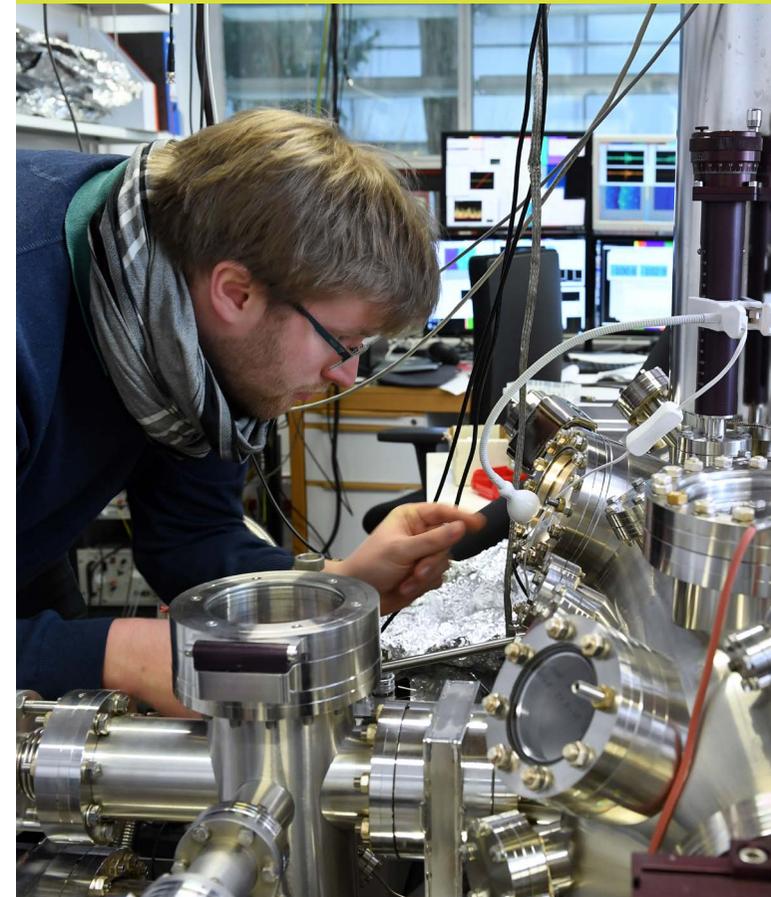
14195 Berlin

Tel. +49 30 838 54010

E-Mail. masterstudium@physik.fu-berlin.de

www.physik.fu-berlin.de

Master of Science



Master in Physics (M. Sc.)

- research-oriented
- standard duration – 4 semesters
- teaching language – English
- program start – winter and summer semester
- no tuition fees

What you learn

You acquire universally valuable skills such as understanding of complex structures, analytical proficiency, and reasoning. You learn to manage problems in a wide variety of fields of natural science and technology and become flexible and highly desired professionals on the job market.

Requirements

- Bachelor of Science in Physics or equivalent non-German degree in Physics at a university level
- Language proficiency at or above level B1

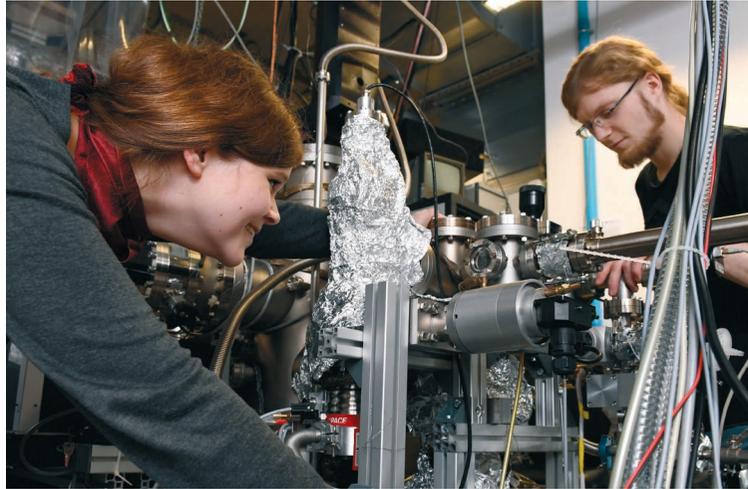
Application

July to August for the winter semester

December to January for the summer semester

For concrete dates and required documents please see: www.physik.fu-berlin.de/enroll

Doing a Master's at the Freie Universität Berlin was an interesting yet challenging experience. What I liked most was the work in a research group as part of my Master's project. Doing „real“ physics and applying all that I had learned in the laboratory was very fulfilling. Alexander Goschew, PhD in Physics



Working side by side with trained scientists

In the Master's program, you join one of the 30 research groups in our department. You work closely with postgraduates and professors and learn to perform independently in your chosen field of physics.

Encouraging and supportive

Our teaching staff is accessible and supportive. We encourage individual choices and inspire students to use our department's ample opportunities for international collaboration and networking.

For many students, the graduate programme in Physics opens the door to an esteemed academic career at international research institutions.

Physics is modern alchemy. Physicists are “hackers” who try to overcome the limitations of natural laws.

Vincent Mallet, French-German Double Master Student

Program Structure

Target – 120 credit points,
approx. 30 points each semester

Coursework Phase

60 CP

Compulsory – 15 CP

Advanced Laboratory Course for Master Students
Seminar Selected Topics in Physics

Compulsory-elective – 20 CP

Modules to choose in **theoretical physics**

- Advanced Quantum Mechanics
- Statistical Physics and Thermodynamics
- Advanced Statistical Physics
- Quantum Field Theory and Many-Body Physics

Modules to choose in **experimental physics**

- Advanced Solid State Physics
- Advanced Atomic and Molecular Physics
- Advanced Biophysics

Elective – 25 CP

Modules from physical and non-physical subjects to choose

Research Phase

60 CP

Students join a research group and write their Master's thesis.

Modul Scientific Specialization – 15 CP
Modul Methodology and Project Planning – 15 CP
Master's thesis with its accompanying seminar – 30 CP