

## The University

### City of Siegen

The city has about 100,000 residents and is surrounded by an idyllic, rural landscape. The local area is home to several internationally recognized industrial companies, many of which cooperate with the university in a variety of innovative projects. The nearby hills and lakes provide opportunities for outdoor activities. Frankfurt and Cologne can be reached within 1.5 hours by train. The location offers many opportunities to travel throughout Germany and Europe. The student ticket entitles use of local public transport free of charge throughout North Rhine-Westphalia.

### University life

The University of Siegen is a research university with currently about 19,000 full-time students. We have a thriving community of about 2,000 international students and over 100 countries are represented in the student body. A comprehensive program of extracurricular activities is offered by the Department of International Student Affairs. The program includes cultural nights, social meetings and trips to German cities which offer great opportunities to meet other international students and experience German history and culture. In addition, German courses are offered. The campus provides a number of entertainment activities. Sports classes are offered at the university gym, and students are welcome to join student organizations or get involved with the student-run campus radio and television, or other activities, such as choirs and orchestras.



# Master of Science in Physics University of Siegen, Germany

## Contact

Department of Physics  
School of Science and Technology  
University of Siegen  
Walter-Flex-Str. 3  
57068 Siegen  
Germany  
<http://www.physik.uni-siegen.de/>

For questions concerning the international MSc program in Physics please contact the coordinator of the program:

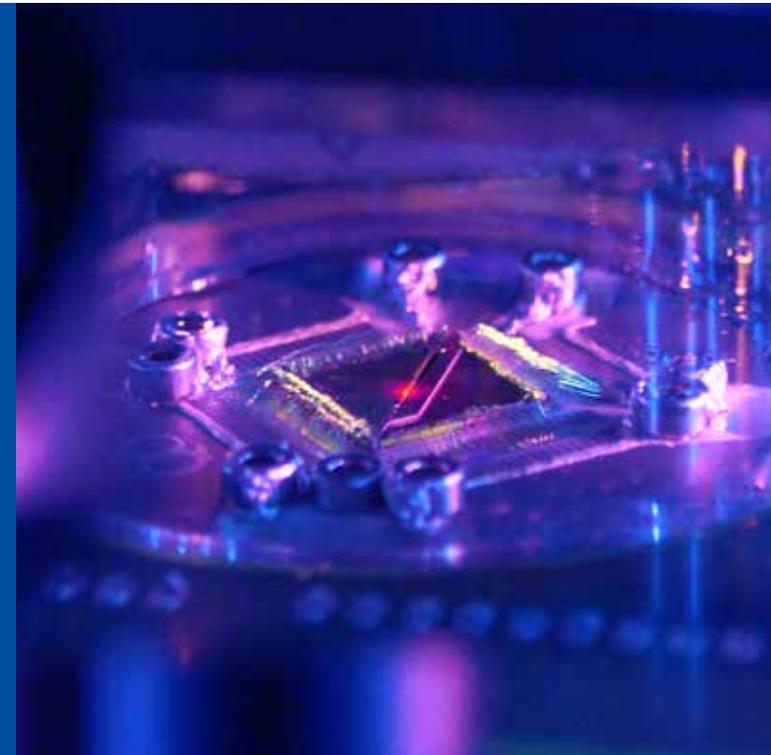
Dr. Matthias Kleinmann  
e-mail: [international.master@physik.uni-siegen.de](mailto:international.master@physik.uni-siegen.de)

For general administrative issues please contact the advisor for international students of the School of Science and Technology:

Ms. Faria Afzal  
e-mail: [igs.advisor@nt.uni-siegen.de](mailto:igs.advisor@nt.uni-siegen.de)

## Helpful links

University  
<http://www.uni-siegen.de>  
International Student Affairs  
<http://www.uni-siegen.de/isa/>  
German Academic Exchange Service  
<http://www.daad.de>



## General Information

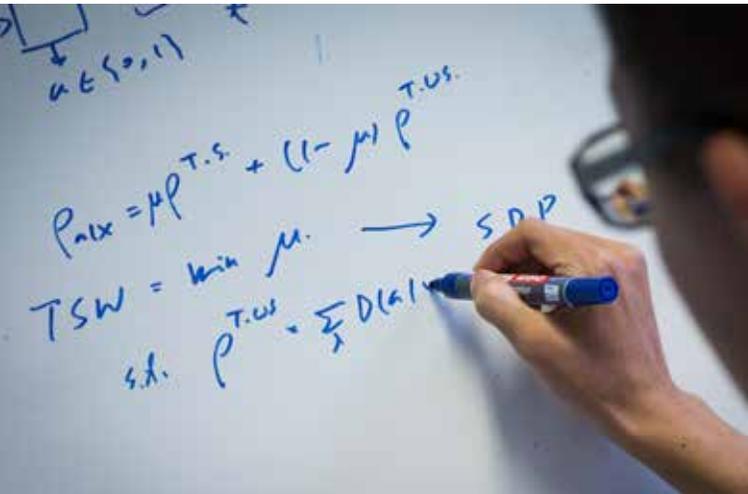
The Master of Science in Physics is a research-oriented study program. During the first year, students choose between various lectures and courses and in the second year students carry out a project in one of the research groups, leading to the master thesis. The program does not require knowledge of the German language. Admission is possible each year in spring and fall.

## Research

At the Department of Physics about 400 students and 16 professors work together, resulting in an excellent student-to-staff ratio. The department focuses its research activities on three topical research areas (particle physics, quantum optics and solid state physics). In detail, the research groups work on

- Experimental high energy physics and astroparticle physics
- Theoretical particle physics
- Experimental quantum- and nano-optics
- Theoretical quantum optics and quantum information theory
- Experimental solid state physics

The researchers are involved in numerous international collaborations, giving young students the chance to work directly on challenging problems in current research.



## Structure of the Program

In the first year, students select lectures and courses according to their specialization. The Department of Physics offers courses centered around the topics of the research groups. In addition to lectures, master students take a lab course and a seminar. The second year is then devoted to the MSc thesis, which is prepared in one of the research groups. The aim of the thesis is to deliver a contribution to

current research in theoretical or experimental physics.

The MSc degree is based on the ECTS system which guarantees a high international acceptance. An MSc degree is a precondition to enter a doctoral program in Germany.

## Example Curricula

During the MSc program, students specialize according to their interests. Below, examples for different possible curricula are listed, but other specializations are also possible.

### Specialization: Experimental Solid State Physics

Courses: Experimental Solid State Physics, X-ray Physics, Nano-Optics, Condensed Matter Theory, Experimental Quantum Optics, Nano-Structures, Lab Course

### Specialization: Theoretical Quantum Optics

Courses: Quantum Theory of Light, Laser Spectroscopy, Condensed Matter Theory, Quantum Information Theory, Experimental Quantum Optics, Mathematical Foundations of Quantum Mechanics, Cosmology, Lab Course

### Specialization: Experimental Quantum Optics

Courses: Experimental Quantum Optics, Laser Spectroscopy, Methods of Optics, Data Analysis, Quantum Information Theory, Nano-Optics, Lab Course

### Specialization: Theoretical Particle Physics

Courses: Theoretical Particle Physics II, Physics of the Higgs, Extensions of the Standard Model, Collider Physics, Quantum Information Theory, Experimental Particle Physics, Lab Course

### Specialization: Experimental Particle Physics

Courses: Experimental Particle Physics, Theoretical Particle Physics I, Physics at the LHC, Detector Physics, Data Analysis, Astroparticle Physics, Lab Course

## Admission

### How to apply

The following application documents have to be submitted electronically to the coordinator of the MSc program in physics:

- Short cover letter
- Curriculum Vitae
- Application form
- Certificate of the Bachelor of Science degree in physics
- Transcript of university education
- Proof of proficiency in English
- Two letters of recommendation

Detailed instructions and requirements can be found on the website of the department. Students who are in the process of finishing their bachelor degree are welcome to apply. Also, excellent students with a BSc degree in a subject related to physics can apply.

## Application deadlines

Admission for winter semester (lectures starting in October):

- 31st May each year for general applications,
- 31st August for applicants from EU/EHEA countries, if no visa is needed.

Admission for summer semester (lectures starting in April):

- 31st December in the preceding year for general applications,
- 28th February for applicants from EU/EHEA countries, if no visa is needed.

## Semester Fees and Living Costs

### Semester fees

Students of the University of Siegen are currently not charged tuition fees. However, there is a fee of approximately EUR 250 per semester as part of the registration. This fee includes a ticket for free public transport in the region.

### Living costs

The estimated average costs of living are EUR 700 per month, including rent, health insurance, food, clothing, learning materials, phone and internet, travel expenses, entertainment, and sports. These estimated costs of living may vary depending on lifestyle, type of accommodation, budget, and spending habit. Please note that additional one-time expenses for residence permit and deposit amount to approximately EUR 600.

### Funding possibilities

There are several possibilities to obtain funding for studies in Germany. These include:

- Grants for foreign students from the German Academic Exchange Service (DAAD)
- Grants from the House of Young Talents of the University of Siegen
- Working possibilities as tutors at the university.

