

## The University

### City of Siegen

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

### University life

The University of Siegen is a medium-sized research university with currently about 19,500 full-time students. We have a thriving community of about 2,000 international students and over 110 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 cities around Germany which offer great



opportunities to meet current international students and experience German history and culture.

The campus provides a number of entertainment activities. Sports classes are offered at the university gym, and students are encouraged to join student organizations or get involved with the student-run campus radio and television.

## Master of Science M.Sc. in Nanoscience and Nanotechnology University of Siegen

School of Science and Technology  
Department of Chemistry and Biology  
Department of Physics  
Department of Electrical Engineering

Language of instruction: English

### Contact

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School of Science and Technology  
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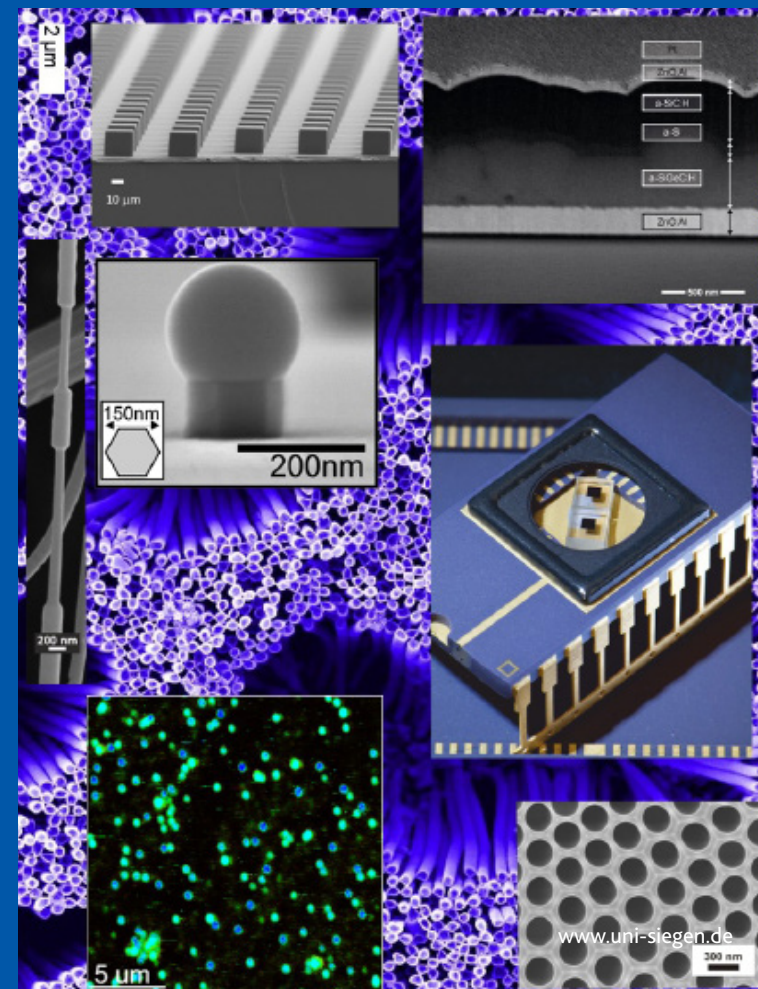
If you have any questions regarding the IGS - Nanoscience and Nanotechnology Program, please contact

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If you have any general questions regarding the International Master Program at the School of Science and Technology, please contact

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University  
<http://www.uni-siegen.de>



## General Information

The international M.Sc. course is a research oriented study program with high quality theoretical and practical modules in Nanoscience and Nanotechnology providing students with a first-rate education.

## Program Details

The Master program has a duration of two years, divided into four semesters. The first three semesters are organized into lectures and lab courses. In the fourth semester students work on an advanced research topic and write their master thesis. The courses are taught in English. The program is taking into account the different background of students which hold a Bachelor in Chemistry, Physics or Electrical Engineering which are being offered a selective training scheme during the first term.



## International Degree

The Master's of Science degree in Nanoscience and Nanotechnology is awarded upon successful completion of the program. The Master of Science degree requires a total of 120 credits. The grades and credits of the program are based on the European Credit Transfer System (ECTS), which guarantees a high international acceptance of the M.Sc. degree.

## Research

The master program was designed to bridge the gap between nanoscience and nano-technology. The part related to nanoscience includes chemical preparation of nano-scale compounds and their characterization by physical methods, while the part related to nanotechnology is focused to devices, e.g. nano-electronics and photonic devices based on nano-scale structures.

This requires a highly interdisciplinary approach which is reflected in the research activity of the present work groups and the equipment available at the school of science and technology of the university of Siegen. In this program groups from the departments of Physics, Chemistry and Electrical engineering participate, which allows to pursue research covering all aspects of modern nanoscience and nanotechnology.

A few examples of available methods:

- atomic force microscopy (AFM)
- focussed ion beam lithography (FIB)
- electron microscopy (SEM, EDX, WDX, ESEM, TEM)
- optical and confocal fluorescence
- synthetic nano-chemistry (wet, solid-state, ...)
- spectroscopy (liquid, solid-state NMR, UV, VIS, RAMAN, IR, ESR, luminescence, X-ray photoelectron spectroscopy)
- diffraction and scattering (X-ray, electron, DLS and SLS)
- processing (PVD, CVD, etching, optical and nanoimprint, lithography)
- thermal analysis (DSC, DTA, TG)

## Ph.D. Program

The M.Sc. degree enables students, with adequate grades, to pursue their studies in order to obtain a Ph.D. degree, e.g. within the international Postgraduate Program (IPP) at the University of Siegen

## Admission

### Requirements

1. A Bachelor in Physics, Chemistry or Electrical engineering is required (with grade 2.7 or better, according to ECTS).
2. Proficiency in English: TOEFL (Code No. 8429) 533 (paper-based), 200 (computer-based), 72 (internet-based); or CAE level C; or IELTS grade 6 or equivalent; or English on level B2 of the CEFR (Common European Framework of Reference for Languages).

## How to apply

The admission applications are accepted through online application portal UNISONO. Please do not send any documents by post unless specially asked for. To apply, Please visit on the following link <https://unisono.uni-siegen.de/qisserver/pages/cs/sys/portal/hisinoneStartPage.faces>

Please note that the online application consist of two parts

1. Fill the get to know part and you will receive an email.
2. Using the credentials provided in the email, login to UNISONO and fill in the application.

In case of admission, original documents have to be presented at time of enrollment.

## Application Deadlines

EU applicants: 31 August for the following winter semester.

Non-EU applicants: 30th April for the following winter semester. Considering the duration of the visa process, an earlier application is highly recommended.

## Semester Fees and Living Costs

### Semester Fees

Students of the University of Siegen are not charged tuition fees. However, there is a semester fee of approximately EUR 250 due before every semester start as part of (re-)registration. The semester fee includes transportation ticket which allows students to travel free-of-charge throughout North Rhine-Westphalia.

### Cost of Living

It is important that students calculate their finances for the time required to complete the degree, and ensure they have enough funds to cover semester fees and living costs.

The estimated average cost of living amounts to 700 to 800 EURO per month, including rent, health insurance, food, clothing, learning materials, phone and internet, travel expenses, entertainment, and sports. These estimated costs of living can vary depending on lifestyle, type of accommodation, budget, and spending habit.

Please note that there is an additional one-time per year expense for residence permit (approximately 100 Euros) and a deposit for residence (approximately EUR 500).