



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



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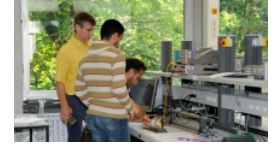
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Master's degree



Sensor Systems Technology (SSTM)

Karlsruhe University of Applied Sciences • Karlsruhe



Overview

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| Degree | Master of Science in Sensor Systems Technology |
| Teaching language | <ul style="list-style-type: none">English |
| Languages | 100% English |
| Programme duration | 4 semesters |
| Beginning | Summer semester |
| Additional information on beginning, duration and mode of study | The programme takes place on-site, but it includes blended elements. |
| Application deadline | 15 November for non-EU residents 15 January for EU citizens |
| Tuition fees per semester in EUR | Varied |
| Additional information on tuition fees | International students who are not EU nationals pay a tuition fee of 1,500 EUR per semester. (For information on exemptions, please see: https://www.h-ka.de/en/study/guidance-counseling/financing) |
| Combined Master's degree / PhD programme | No |
| Joint degree / double degree programme | Yes |
| Description/content | In many machines and in daily life, sensors play an increasing role. Sensorics is therefore seen as one of the fastest-developing branches of technology with a bright future. Traditionally, sensors and actuators are applied in process and production technology, but there is also an increasing demand in automotive as well as in medicine and environment technology applications. |

Since current and future sensor systems have to be smart, the programme has to cover a wide range of topics such as physical, optical and chemical sensors and their applications as well as control, bus systems, programming, micro controllers, pattern recognition and signal processing. Emphasis is placed on a theoretical natural sciences background as well as on technologies. German students are expected to complete their final thesis project in a foreign country, whereas foreign students do this in Karlsruhe. Therefore, students acquire skills in working in mixed international teams and are very well prepared for employment with a "global player". Students may choose two of the focal subjects Environmental Sensorics, Medical Sensorics, Microsystems/Hybrid Technology and Numerics/Advanced Programming. This broad education enables companies to employ degree-holders in various fields and therefore enhances numerous job opportunities. Statistics reveal that students are quick to find excellent jobs after completing this study programme. The small intake size of 25 students a year facilitates close contact between lecturers and students. A close relation and cooperation with local and global industry is also ensured. Course content includes the complete range of sensor systems topics: advanced natural sciences for sensor development, electronics, signal processing, control systems, pattern recognition, communication and bus systems. In semesters two and three, modules are offered in which the students can focus on subjects such as medical sensorics, environmental sensorics, hybrid technology or advanced programming. Furthermore, projects must also be completed in semesters two and three. The non-technical modules are: German language and Management.

Current information

In 2023, the course will celebrate its 25-year jubilee, since it was started in 1997. In all of these years, the students have had the best career opportunities, and they also will have great opportunities in the future.

Course Details

Course organisation

The programme has a duration of four semesters. The first semester offers an advanced basic training in natural sciences and signal processing as well as a development of practical skills. Semesters two and three comprise in-depth studies in theory and lab at the university. Additionally, there are two internal projects to be worked on. The last semester is reserved for work on the thesis project in a research project at the university or with one of the industry partners of the department.

A Diploma supplement will be issued

Yes

International elements

- International guest lecturers

Integrated internships

Internships are not part of the curriculum.

Course-specific, integrated German language courses

Yes

Course-specific, integrated English language courses

No

Costs / Funding

Tuition fees per semester in

Varied

EUR

Additional information on tuition fees International students who are not EU nationals pay a tuition fee of 1,500 EUR per semester. (For information on exemptions, please see: <https://www.h-ka.de/en/study/guidance-counseling/financing>)

Semester contribution All students pay semester fees (student services fee, registration fee, student union membership fee) amounting to approx. 160 EUR per semester.

Costs of living The cost of living is approximately 800 EUR per month for general expenses, including rent, utilities, food, household items, transport, entertainment, clothing, insurance, books, the semester contribution (not included in the above-mentioned tuition fee for non-EU nationals), etc.

Funding opportunities within the university No

Requirements / Registration

Academic admission requirements Bachelor's or equivalent degree in relevant fields

Language requirements Excellent proficiency in the English language: TOEFL 550 (paper-based), 213 (computer-based), 83 (Internet-based), or equivalent
Proof of an English taught Bachelor's is NOT sufficient.

Application deadline 15 November for non-EU residents
15 January for EU citizens

Submit application to Please apply online at:
<https://www.h-ka.de/en/sstm/profile>

Services

Possibility of finding part-time employment International students who come from outside the EU or the EEA are allowed to work outside of the university for 120 full or 240 half days per year. Therefore, students may work full-time during the lecture-free period or part-time during the semester. As the Karlsruhe region has a very low unemployment rate, chances of finding student jobs are generally quite good.

Accommodation Students can apply for student housing through student services ("Studierendenwerk") at <https://www.sw-ka.de/en/wohnen/>. However, there is usually a waiting list for dormitory accommodation.
The Studierendenwerk website also provides information about its extensive private accommodation service.

Support for international students and doctoral candidates

- Welcome event
- Buddy programme

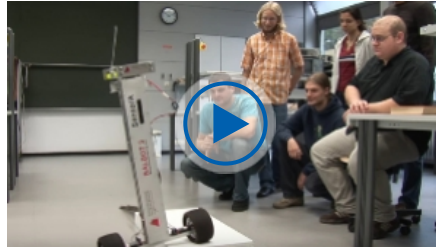


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Silvana Mehmetaj
Master of Science

I am happy that I studied in this programme some years ago. Nearly everything I learned is useful for my day-to-day work now. Job chances are best in a whole variety of fields because the course of studies covers several aspects.

The contact to the professors and staff is very good, and they are always willing to help. There are good chances to help and work in research projects during the programme. Additionally, Karlsruhe and its surroundings are nice areas and are good for excursions.

**Introduction to the Master's Degree Programme in Sensor Systems Technology**

This video introduces the Master's degree programme in Sensor Systems Technology. It shows labs, students and also some examples of research projects, so you can get an idea about the environment in which you could do your studies.

» more:
<https://www.youtube.com/watch?v=ph1nvkQlgfE>

— Karlsruhe University of Applied Sciences —



Our green campus

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Karlsruhe University of Applied Sciences (HKA) is all about technology and business. The university offers degree programmes in engineering and IT as well as business management and media. There are six faculties:

- Architecture and Construction Engineering
- Computer Science and Business Information Systems
- Electrical Engineering and Information Technology
- Information Management and Media
- Management Science and Engineering
- Mechanical Engineering and Mechatronics

Small classes and an excellent student-teacher ratio ensure that individual students are well taken care of.

Applied Teaching and Learning

The majority of German engineers have graduated from universities of applied sciences such as HKA, where teaching and learning are geared towards practical application.

Important elements of this are as follows:

- mandatory experience in business and industry of all professors
- seminars accompanied by lab classes
- mandatory internship semesters and thesis work in industry
- hands-on project work from day one

Applied Research

At HKA, teaching is complemented by research, which equally focuses on its practical application. Close links to industry ensure the university's high quality standards and ensure that its graduates are well prepared for the labour market, both nationally and globally. This is borne out by numerous university rankings, which rank HKA among the top of German universities of applied sciences.



University location

The Campus

The university's main campus is located in the centre of Karlsruhe, on the southern edge of the spacious Hardt forest. It is a green campus that is equally suited for studying and recreation. The city of Karlsruhe, with a population of 310,000, including a combined student population of well over 45,000, is the centre of one of Germany's prime technology regions.

Contact

Karlsruhe University of Applied Sciences

Faculty of Electrical Engineering and Information Technology

Prof Dr Thorsten Leize

Moltkestraße 30
76133 Karlsruhe

Tel. +49 7219251373

✉ sstm.EIT@h-ka.de

🌐 Course website: <https://www.h-ka.de/en/sstm/profile>

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International Programmes in Germany - Database

www.daad.de/international-programmes

www.daad.de/sommerkurse

Editor

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German Academic Exchange Service

Section K23 – Information on Studying in Germany

Kennedyallee 50

D-53175 Bonn

www.daad.de

GATE-Germany

Consortium for International Higher Education Marketing

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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