How to Apply

Please send your application or other enquiries to:
sstm.eit@hs-karlsruhe.de

Please send a paper version of your application to:
Silke Neureuther, International Office
Hochschule Karlsruhe – Technik und Wirtschaft
Moltkestrasse 30, 76133 Karlsruhe, Germany

You need to supply the following certificates:

- Bachelor's degree with transcript of records.
  (Your Bachelor's degree should be in the area of electronics, instrumentation, control, automation with a strong background in natural sciences. Duration of the Bachelor is normally 4 years. The marks should be first division. The Sensor Systems Technology programme runs at a very high level, so you should be in the top 10%. The Bachelor document can be submitted later if you have just finished but we need a provisional document from the university. Licentiatura is mostly regarded as equivalent to Bachelor.)
- Language certificate (one of the following):
  - **TOEFL** paper based minimum 550, computer based 213, internet based 83. **TOEFL Pretests, TOEFL-like Tests cannot be accepted !**
  - **Cambridge Certificate in Advanced English b** or above
  - **Cambridge Certificate of Proficiency in English c** or above
  - **IELTS 6** or above
  - **ARELS** passed
  - **CET:** CET - 6 is needed

Furthermore we need following documents:

- Curriculum vitae and references
- Statement of purpose
- Secondary education documents
- Copy of Passport
- We recommend to send a GRE test and, for students from India, an additional GATE test, if available.

We cannot send back the application papers. Do not send original documents. But when you get admission, you have to show the original documents.

Hochschule Karlsruhe – Technik und Wirtschaft
Karlsruhe University of Applied Sciences

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Hochschule Karlsruhe
Technik und Wirtschaft
UNIVERSITY OF APPLIED SCIENCES

Master

Sensor Systems Technology

Master of Science (M.Sc.)

Faculty of Electrical Engineering and Information Technology

Sensorics: Studies and Employment

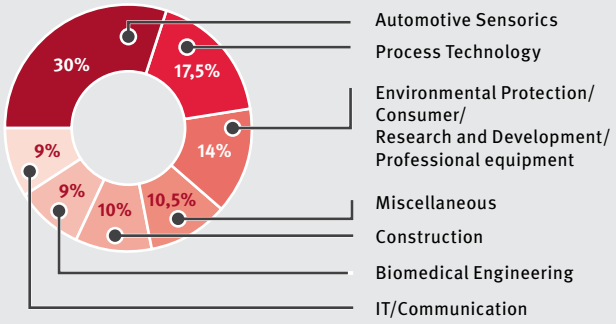
In many machines and daily life applications sensors play an increasing role. Sensorics therefore is seen as one of the most innovative branches of technology with a very promising future. Traditionally sensors and actuators are applied in process and production technology, but there is also an increasing demand in automotive as well as medicine and environment technology applications. Nowadays there is not only a need for reading recorders, but increasingly integrated sensors with their own intelligence (micro processors) are demanded.

Therefore the study programme covers physical, biological, optical and chemical sensors and their applications as well as control, bus systems, programming, micro controllers, pattern recognition and signal processing. German students are expected to do their final thesis project in a foreign country whereas foreign students do their thesis in Germany.

Therefore the students acquire skills in working in international teams and are best prepared for a job with a „global player". Students may choose two of the following major subjects: environmental sensorics, medical sensorics, microsystems/hybrid technology and advanced programming.

The Hochschule Karlsruhe – a university of applied sciences (HsKA) – offers small class sizes. This allows close contact and interactions with all professors and the teaching personnel. There are also close links and cooperation projects with local and global industry partners.

Market Segments for Sensors



Source: Bosch

Sensor Systems Technology in Short:

- Master of Science degree programme - allows to continue with PhD studies
- Accredited as research oriented by ASIIN since 2005 - with the seal of the German Accreditation Council
- Course covers four semesters = 2 years = 120 ECTS credit points
- 100 % English as language of instruction
- Course starts each year in March
- German language and culture courses are included in the curriculum. No German language skills are required to start the programme.
- Small classes of 25 students maximum
- Direct contact with professors and staff
- Many laboratories to support and explain the theoretical background of the topics
- Interactive lectures with a lot of experiments
- All professors have experience in industry
- Strong connections with local and global industry partners
- Strong research activities in the department provide interesting research topics for projects
- Interesting international community with students from many different countries
- Dual degree programme with VIT University in Vellore / Tamil Nadu / India

Research Facilities & Dual Degree Programm

The department is characterized by a strong connection between research and education. The research activities are concentrated at the Institute of Sensorics and Information Systems (ISIS) and the Institute for Optofluidics and Nanophotonics (IONAS) Please see webpages at:
www.hs-karlsruhe.de/isis
www.hs-karlsruhe.de/ionas

Many applied research projects:

- Sensor materials for field analysis applications
- Gas sensorics and control of fire-wood-fueled fireplaces
- Development of Vacuum Insulation Panels (VIP)
- Medical sensorics and medical imaging systems
- Engineering software techniques and security bus systems
- Hybrid integrated capacitive humidity sensors
- Optofluidic and Nanophotonic

Dual Degree Programme with VIT / India

In 2008 a dual degree programme was established with our partner, VIT University in Vellore / Tamil Nadu / India. Students taking part in this dual degree programme spend their first year at their home university and change to the partner university for the complete second year, including the final thesis project and final exams. Students pay fees to their home universities only during the whole programme. After completion of the programme the students receive degrees from both universities.