

# Engineering Science

Apply now

## WHAT DOES AN ENGINEERING SCIENTIST DO?

Would you like to be a Formula 1 driver taking the bends with squealing tires in your self-build racing car? The e-ognition team at the Hamburg University of Technology offers you this opportunity. Or would you sooner commit to a student working group that builds dams and wells in Africa to provide people there with access to drinking water? So, you see, no study program extends as far or wide as that of the engineer. At the TU Hamburg it teaches engineering science in its entire range and promotes working across disciplines.

## HOW CAN I SHAPE THE FUTURE WITH ENGINEERING SCIENCE?

Engineers improve people's lives every day all over the world by solving supply problems, organizing the transportation of goods, creating opportunities for electronic communication or developing new forms of mobility. Such as autonomous driving, for example. An interdisciplinary approach is called for.

Mechanical and electrical engineering collaborate to design the vehicle and the sensor and actuator technology. For the car to function in traffic, results of control engineering and programming that works are also required. As a General Engineer you learn in the core area at the TU Hamburg all the theoretical and practical basics that are required.

## WHAT DO I LEARN ON THE COURSE AND WHERE DO I LATER FIND A JOB?

Due to a strong focus on a methodical and analytical approach and on basic knowledge the program covers a very wide range in depth that extends beyond individual specializations. This enables TU Hamburg graduates to quickly familiarize themselves with other engineering disciplines and assume responsibility for interdisciplinary projects. In our constantly evolving world General Engineers are very much in demand and earn attractive salaries in many industries. So a good command of English and working in international teams are strong points in your favor in job hunting.

## HOW IS THE PROGRAM STRUCTURED?

The core subjects math, natural sciences, computer science, mechanics, electrical engineering, thermodynamics, control engineering and design theory cover the basics of engineering science and account for nearly half of the study program. The program starts with an intercultural project. The idea is for you to work together with students from other countries and to get to know them. After four semesters you will specialize in one of the following: Electrical Engineering, Mechanical Engineering, Mechatronics, or Biomedical Engineering. In contrast to other bachelor's courses at the TU Hamburg studying Engineering Science takes 7 semesters.

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## Engineering Science at a Glance

**DURATION OF STUDY:**  
7 SEMESTERS, FULL-TIME  
**DEGREE:** BACHELOR  
OF SCIENCE (B.SC.)

Engineering Science is the right study program for you if you enjoy studying entirely in English in an international team or if, as a foreign student, your command of German is limited. In addition you will be generally fascinated by science and technology and find math and computer science fun. You think analytically and tackle challenges boldly. You are good at learning and ready to devote more time to it. Your reward at the end of your studies is that you really have an overview of all engineering subjects and are freely able to opt for a subject to take you further on your way.

[→ Internship regulations](#)

**Links:** → [Study course info Engineering Science](#) → [Student Council AIW/GES](#)

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Before working on your bachelor thesis you will serve a 12-week internship in industry.

## **FURTHER STUDIES?**

After successfully concluding your B.Sc. course you might consider a master's course at the TU Hamburg that builds on your specialization. Despite the 7-semester bachelor's program all 4 semesters of the master's course at the TU Hamburg qualify for a BAföG student grant:

- [Mechatronics](#)
- [Medical Engineering](#)
- [Theoretical Mechanical Engineering](#)
- [Mechanical Engineering and Management](#)
- [Electrical Engineering](#)

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