

# Computer Science

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## WHAT DO COMPUTER SCIENTISTS DO?

Can you imagine a health insurance card on which not just general data is stored but one that is really intelligent? As a computer scientist you can help to develop it—a card that uses patients' data to improve preventive measures or even to help cure better. That is only a minor example of the important and responsible role that computer science will play in the future. It ranks alongside biotechnology, medical engineering and nanotechnology as one of the key technologies.

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

Digital change and artificial intelligence are taking over in our daily lives. You can see that from how fast the technology in your cellphone is developing. Apps that weren't around a few years ago determine your life. Computers and consumer electronics are growing ever smarter and more connected. Manufacturing processes are changing too. In factories machines are communicating with each other and learning in the process. At the TU Hamburg computer linguistics deals with speech and how natural speech in the form of text documents or spoken messages can be processed automatically. At times nature can serve as a model. Using a new kind of calculation rule, scientists have been able to make a major contribution by investigating the behavior of bees in gathering nectar.

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

Graduates in computer science from the TU Hamburg have an extensive, in-depth knowledge of mathematical modeling, software technology and hardware systems technology. You learn about and understand mathematical methods and processes in computer science and core process methodology in systems development. Your career prospects are outstanding. Demand for computer scientists in industrial and research institutions is as high as ever. In non-IT sector companies demand is increasing disproportionately as more and more in-house IT departments are set up.

## HOW IS THE PROGRAM STRUCTURED?

The computer science program at the TU Hamburg is strictly informatics-oriented with a computer science share of 60%, mathematics 30% and non-technical subjects such as business administration 10%. It consists of four semesters of foundation studies and two semesters of specialization, including a six-week software internship. Specializations are computer and software engineering, mathematics and engineering sciences. The fifth semester can be spent studying abroad.

## FURTHER STUDIES?

After taking your B.Sc. studies to a successful conclusion studying for an M.Sc. is the obvious next step. A master's program in data science is currently under development at the TU Hamburg.

→ [Computer Science \(M.Sc.\)](#)

## Computer Science at a glance

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

Computer Science is the right study program for you if you are imaginative, think logically and abstractly and are fond of looking for solutions to tricky questions. You enjoy making use of all the possibilities that digitization offers and would like to help develop new technologies. Programming skills are not essential, but you should be good at English and should like math lessons.

→ [Internship regulations](#)