

# Bingen Technical University of Applied Sciences

'Practically' the best choice

Bingen Technical University of Applied Sciences has been training students in engineering and life sciences since 1897. We provide qualified teaching, an intensely practical orientation while closely cooperating with companies. Our approximately thirty degree courses cover engineering, life sciences, IT and communication technology. As a result of application-oriented research, prospective academic degrees from bachelors to doctorates are open to you here. Another advantage are our dual programs during your vocational training or career. Exchange programs and double degrees enable you to supplement your skills with international experience.

Geared towards the substantial needs of the working world and life, we work closely with regional and national companies to ensure these requirements are met. As a graduate of Bingen UAS, you will be familiar with the practical aspects and will have already made important contacts.

Solid career paths in the business and science worlds will consequently be available to you. We follow the European Credit Transfer System (ECTS). There are currently no numerus clausus restrictions on admissions.

Studying at Bingen UAS means personal supervision and support, short paths and communication channels including open doors at a modern yet historical university of applied sciences on its own campus.

Applying to the degree course Master of  
**Computer Science**

The master's degree course starts in the summer and the winter semesters. Applications are completed and submitted online at [www.th-bingen.de/application](http://www.th-bingen.de/application)

## Contact

**Technische Hochschule Bingen**  
Computer Science

Berlinstraße 109  
55411 Bingen am Rhein  
Germany

Academic Advisory Office  
[beratung-m-in@th-bingen.de](mailto:beratung-m-in@th-bingen.de)  
T. +49 6721 409-523

**Bingen Technical University  
of Applied Sciences**  
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[th-bingen.de/en](http://th-bingen.de/en)

## Computer Science

Master's course (English)

Start: winter semester 22/23



31.03.2022

„Innovation  
is born from  
the interaction  
between  
constraint and  
vision.“

– Marissa Mayer | US Computer Scientist

# Computer Science

## Paving the way for innovation

Information technology is not only transforming our professional and everyday lives, it is also significantly shaping future production systems and industrial developments. If companies are to play a pioneering role in their respective industries, it is vital they have well-grounded and professional IT expertise.

Information technology plays a pivotal role as a driver of innovation in the form of robotics, artificial intelligence, mobile systems and big data, for example. Along with scientific know-how and a research mindset, comprehensive skills are required to develop and drive such new systems and solutions forward.

### Computer Science – a degree course future oriented

As a graduate of the Master's degree course in Computer Science, in comparison to the Bachelor's degree, you will possess the following advanced qualifications:

- › The ability to take on management duties with responsibility for projects and staff
- › A very good ability to think and work abstractly
- › Particular skills in solving problems in the field of information technology, including interdisciplinary contexts
- › Planning, development, management and responsibility for information systems and IT landscapes
- › In-depth knowledge on information systems technologies and principles
- › Interdisciplinary skills, as a basis for leadership of staff and other management functions
- › The application of scientific methods and concepts

### What you should already have

- › A bachelor's degree or diploma in a computer science course or a related degree course and eligibility under Section 65 of the German Higher Education Act by possessing an entrance qualification for a university of applied sciences, a general higher education entrance qualification (Fach-/Hochschulreife) or the like.
- › Final grade of ECTS Grade B or better (alternatively a grade point average 2.5 or better)
- › At least 210 credits, in exceptional cases 180 credits with additional qualifications

### Structure of the degree course

The regular course length of the Master's degree course in Computer Science is three semesters. The program is completed with the awarding of the academic degree Master of Science (M. Sc.). With the Master's in Computer Science, you have the qualification to plan, (further) develop, integrate and operate information systems in companies. The necessary specializations in information systems are taught accordingly.

The second focus of the Master's course is on theoretical knowledge and practical skills for working scientifically. Upon successful completion, the door to an academic career, including a doctorate, is open to you. Electives are available for the specialization and individualization of the course content. Here you will acquire further expertise, for example in cryptography, artificial intelligence, agile project management, leadership, management or personal development.

### Career fields

The degree course qualifies graduates for management functions in a variety of areas in the IT market:

- › Management of IT products and IT projects
- › Planning and optimization of IT landscapes
- › Design of information systems
- › Systems analysis and quality management
- › Development of key technologies
- › Control of projects
- › Academic work and publications
- › Leadership of staff and teams
- › Corporate responsibility



Computer Science courses		
1st semester	2nd semester	3rd semester
Architecture of Information Systems (6 credits)	Higher Mathematics (6 credits)	Master's thesis (30 credits)
Systems Analysis (6 credits)	Database Systems (Advanced) (6 credits)	
Artificial Intelligence (6 credits)	Scientific Seminar (6 credits)	
Two required electives (6 credits each)	Two required electives (6 credits each)	