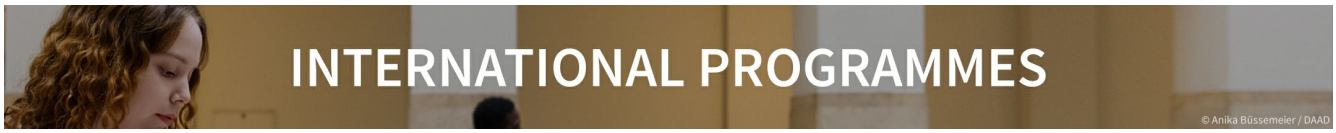
Deutscher Akademischer Austauschdienst
German Academic Exchange Service



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Bachelor's degree **2**

BSc Information Engineering • Hamburg University of Applied Sciences • Hamburg 2

Bachelor's degree

BSc Information Engineering

Hamburg University of Applied Sciences • Hamburg

Overview

Degree	Bachelor of Science in Information Engineering
Teaching language	• English
Languages	Classes are in English. German is not required to complete the degree programme. However, we recommend that you learn a bit of basic German before starting the course to help with integration into life in Germany.
Full-time / part-time	• full-time
Programme duration	7 semesters
Beginning	Winter and summer semester
Additional information on beginning, duration and mode of study	This course is taught in person only. There is not an option to study online.
Application deadline	Application periods: Programme starting in October: 1 April to 31 May (non-EU applicants) 1 June to 15 July (EU applicants) Programme starting in April: 1 October to 30 November (non-EU applicants) 1 December to 15 January (EU applicants) Please have your school certificates (and where necessary) your university transcripts checked first by uni-assist (www.uni-assist.de) to get a VPD ("Vorprüfungsdokumentation") BEFORE applying to HAW Hamburg. With your VPD, please then apply using theHAW Hamburg online application portal. The HAW Hamburg online application portal is only open during the application periods. You do not need to send your documents with the postal mail to complete your application.
Tuition fees per semester in EUR	None
Joint degree / double degree	No

programme	
Description/content	Today's complex information processing systems require specialists with comprehensive know-how regarding the software, hardware and information technology aspects of such systems. This degree enables you to understand, specify, design and maintain such systems as well as to further specialise in the disciplines involved. Basics of Mathematics and Mathematics Extensions The first two semesters will supply the mathematical fundamentals for scientific engineering. During the following two semesters, you will be taught the basics of signal & system theory, which are generally essential for information technology. Introduction to Electrical Engineering and Electronics In this series of lectures, the foundations of electrical engineering are presented, which include basic measuring techniques and methods of design and analysis of linear and nonlinear circuits. These courses are supplemented by two lectures on electronics that introduce electronic devices and the foundations of analogue electronic circuits. A lecture on digital circuits completes this series. Electrical Engineering Applications Information and communication systems are software-based and run on application-specific hardware. Fundamentals of microcontroller architecture and programming are introduced in one course. An additional course offers the design and implementation of application-specific digital systems and the corresponding VHDL hardware description language. Software Construction Technical systems are widely based on software. Therefore, knowledge of programming languages and methods of software design is absolutely essential. This course introduces the procedure-oriented programming language C and the object-oriented language JAVA. Additional topics are algorithms and data structures. Computer Science This course is based on the course "software construction". It contains methods and procedures to design complex software systems and is completed with modern concepts of databases and operating systems. Finally, there is a software engineering project in which students have to apply their knowledge to solve a manageable problem in small groups. Advanced Engineering Topics and Electives Students specialise in further fields of engineering via electives and the following modules: bus systems & sensors and digital communication systems and digital signal processing, which deal with the transmission and processing of analogue and digital signals. Non-Technical Modules The programme complements the engineering modules with other modules that prepare graduates for success in their careers: economics & management and scientific & project work, intercultural competence and German language. The study process is supported by two modules in learning and study methods. Industrial Placement In the fifth semester, students complete an internship in industry for 20 weeks in order to become acquainted with the daily working life of an engineer. Personal support is provided by a professor. There is no mandatory practical training before the programme begins. This course is taught in person only. There isn't an option to study online.

Course Details

Course organisation	• First Semester
	  ◦ Mathematics 1 (5 TU) + Exercise (1 TU)
	  ◦ Electrical Engineering 1 (3 TU) + Lab (1 TU)
	  ◦ Software Construction 1 (4 TU) + Lab (1.5 TU)
	  ◦ German (2 TU)

- Learning and Study Methods (3.25 TU)

- Second Semester
  - Mathematics 2 (5 TU) + Exercise (1 TU)
  - Electrical Engineering 2 (3 TU) + Lab (1 TU)
  - Electronics 1 (3 TU) + Lab (1 TU)
  - Software Construction 2 (3 TU) + Lab (1 TU)
  - Intercultural Competence (2 TU)
  - Learning and Study Methods (1.25 TU)

- Third Semester
  - Signals and Systems 1 (3 TU) + Lab (1TU)
  - Electronics 2 (4 TU) + Lab (1.5 TU)
  - Digital Circuits (3 TU) + Lab (1 TU)
  - Algorithms & Data Structures (3 TU) + Lab (1 TU)
  - Economics & Management (3 TU) + Exercise (1 TU)

- Fourth Semester
  - Signals and Systems 2 (3 TU) + Lab (1 TU)
  - Digital Systems 1 (3 TU) + Lab (1 TU)
  - Microcontrollers (3 TU) + Lab (1 TU)
  - Software Engineering 1 (3 TU) + Lab (1 TU)
  - Databases (3 TU) + Lab (1 TU)

- Fifth Semester
  - Scientific & Project Work (2 TU)
  - Industrial Placement of 20 weeks

- Sixth Semester
  - Operating Systems (3 TU) + Lab (1 TU)
  - Bus Systems and Sensors (3 TU) + Lab (1 TU)
  - Digital Signal Processing (3 TU) + Lab (1 TU)
  - Digital Communication Systems (3 TU) + Lab (1 TU)
  - Elective Project 1 (3 TU)

- Seventh Semester
  - Elective Module 1 (3 TU) + Lab (2 TU), Elective Module 2 (3 TU) + Lab (1 TU)
  - Elective Project 2 (4 TU)
  - Bachelor's Thesis

1 TU = teaching unit of 45 minutes/week

This course is taught in person only. There isn't an option to study online.

For more detailed information about the modules and course content, please click on the PDF link below.

» PDF Download

A Diploma supplement will be issued	Yes
Integrated internships	An internship of twenty weeks is to be completed during the fifth semester. Programme advisers will assist students in finding an appropriate internship.
Course-specific, integrated German language courses	Yes
Course-specific, integrated English language courses	No

Costs / Funding

Tuition fees per semester in EUR	None
Semester contribution	Each semester, students have to pay a semester contribution (345 EUR as of September 2024). This fee includes a semester ticket for unlimited use of Hamburg's public transport system. For more information about studying and living in Hamburg, see: https://www.haw-hamburg.de/en/international/international-students/.
Costs of living	Hamburg is a relatively expensive city. Depending on your lifestyle, you should expect living costs of 700 to 900 EUR for rent, food, and other expenses.
Funding opportunities within the university	Yes
Description of the above-mentioned funding opportunities within the university	Students can apply for scholarships for academic excellence. They can also apply for an examination scholarship when they are in their final semester. This will serve as a financial support while students are completing their Bachelor's theses. More information can be found here: https://www.haw-hamburg.de/en/international/international-students/.

Requirements / Registration

Academic admission requirements	• Secondary school certificate (twelve school years minimum) equivalent to the German "Abitur" or "Fachhochschulreife" • Proof of English ability if English is not the applicant's first language (see language requirements) • Strong interest in technology and technical systems, good understanding of mathematics, ability to think in abstract ways Uni-assist (VPD) (http://www.uni-assist.de): Students who completed their school education outside Germany must have their high school certificate and (where necessary) their university transcripts checked by uni-assist and receive a VPD (pre-registration documentation) BEFORE applying to the HAW Hamburg. The VPD from uni-assist must be uploaded as part of the application process at HAW Hamburg. Please be advised that the uni-assist VPD process can take six to eight weeks, so please apply early. For more information about admission requirements: https://bit.ly/3d2yPQu
Language requirements	TOEFL: iBT 87, PBT 550, CBT 220 IELTS: minimum Band 6.0 Cambridge FCE Grade B, CAE, CPE Alternatives: BULATS 65 Pearson PTE General Level 3, PTE Academic 59 TELC English B2 Completion of a full, English-language degree programme This information is correct at the time of publication. Changes are possible. Please see the university website for the official scores and levels that are necessary for the application.
Application deadline	Application periods: Programme starting in October:

	1 April to 31 May (non-EU applicants) 1 June to 15 July (EU applicants) Programme starting in April: 1 October to 30 November (non-EU applicants) 1 December to 15 January (EU applicants) Please have your school certificates (and where necessary) your university transcripts checked first by uni-assist (www.uni-assist.de) to get a VPD ("Vorprüfungsdokumentation") BEFORE applying to HAW Hamburg. With your VPD, please then apply using theHAW Hamburg online application portal. The HAW Hamburg online application portal is only open during the application periods. You do not need to send your documents with the postal mail to complete your application.
Submit application to	Please apply using the myHAW online application system on the HAW Hamburg website. You do not need to send your documents with the postal mail to complete your application. If you have questions about the application process, please e-mail the admissions office: studierendensekretariat@haw-hamburg.de.

Services

Possibility of finding part-time employment	If you are coming to Germany on a visa, you will have to provide proof of your finances for the first year: 853 EUR/month – 10,236 EUR/year. EU students can work 20 hours/week. Students from non-EU countries are only permitted to work 120 full days (240 half days) in one calendar year, and part-time job opportunities are limited, especially for students who do not speak German. It is unlikely that we will be able to offer you a job on campus. More information can be found here, under "Visa & Paperwork": https://www.haw-hamburg.de/en/international/international-students/
Accommodation	"Studierendenwerk Hamburg" offers affordable accommodation for students under the age of 30. Generally, students have their own room in a shared apartment with a communal bathroom and kitchen. The monthly rent for a room in a student hall of residence is usually between 350 and 450 EUR (including amenities). New students can apply three months before the start of their degree programme. Please be advised that it is unfortunately not easy to find accommodation in Hamburg; finding somewhere to live can take a while. The student halls of residences offered by the "Studierendenwerk Hamburg" often have waiting lists. Further information on accommodation can be found here:https://www.haw-hamburg.de/en/study/campus-life/accommodation/.
Career advisory service	The HAW Hamburg has a Career Service Office that offers advice on working in Germany, finding internships and successfully applying for jobs in Germany.
Support for international students and doctoral candidates	• Welcome event • Buddy programme

- Tutors

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Anthony Omiunu

BSc Information Engineering student

Germany is ranked third behind the USA and UK as the favourite destination for international students, and international students do not have to pay tuition fees in Hamburg. Therefore, it was an easy decision for me to study in Germany. Studying engineering at the HAW Hamburg means I am doing lots of projects and lab work as well as an internship, so I feel I am being well prepared for my future career. The university also awarded me a scholarship, which really helps me to focus on my studies.

Information Engineering at HAW Hamburg

Information Engineering students talk about studying at HAW Hamburg.

» more: https://www.youtube.com/watch?v=psFHB48w9Fs

Hamburg University of Applied Sciences

HAW Hamburg – Campus Berliner Tor

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Hamburg University of Applied Sciences (HAW Hamburg) is one of the largest of its kind in Germany and within our four faculties we offer a wide range of Bachelor's and Master's programmes in engineering, IT, life sciences, design and media as well as business and social sciences. We focus on applied sciences in our teaching, giving our students a practical insight into their fields of study through projects, lab work, internships and theses in industry. Our expertise is drawn from faculty members who have worked in industry before joining the university. In research, we are an important partner for the city of Hamburg's companies and innovation clusters, developing new ideas from the synergies of this dynamic location.

Our fields of expertise reflect the technologies, industries and services that make Germany a leading economy, and our close collaboration with Hamburg's innovation clusters allows us to develop this knowledge in our teaching and research.

We are a very international university, with students from over 100 countries making up 16% of our students. Combined with the international nature of the city of Hamburg, you will feel very comfortable studying here.

Read more about the city and what our students say:https://bit.ly/3bq2rl3

University location

In the north of Germany and in the heart of Europe, Germany's second largest city (1.8 million) offers excellent quality of life and international flair. If you like to spend your leisure time outdoors, then you will love Europe's "greenest" city with its lake, canals and beautiful parks. For those of you who love culture, Hamburg's museums, theatres and its world-famous concert hall, the Elbphilharmonie, will inspire you. Hamburg is also one of the most dynamic commercial centres in Europe, placing its strategic focus on six innovative segments: aviation (Airbus), IT and media, the international port and logistics, life sciences (biotechnology, medical technology and health care), nanotechnology, and renewable energies. We are sure you will feel at home.

Contact

Hamburg University of Applied Sciences
Department of Information & Electrical Engineering

Berliner Tor 7
20099 Hamburg

ie_info@haw-hamburg.de
Course website: https://www.haw-hamburg.de/en/study/degree-courses-a-z/study-courses-in-detail/course/courses/show/information-engineering/Studieninteressierte/

https://www.facebook.com/HAWHamburgStudyAbroad

https://www.instagram.com/hawinternational/

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Kennedyallee 50
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www.daad.de

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