



# INTERNATIONAL PROGRAMMES

© Anika Büssemeier / [

# **Table of Contents**

Bachelor's degree	2
Computer Science (BSc, English) • Saarland University • Saarbrücken	2

# Bachelor's degree



# **Computer Science (BSc, English)**

Saarland University • Saarbrücken











# Overview

Degree	Bachelor of Science (BSc)
In cooperation with	<ul> <li>Max Planck Institute for Informatics</li> <li>Max Planck Institute for Software Systems</li> <li>German Research Center for Artificial Intelligence (DFKI)</li> <li>Center for Bioinformatics</li> <li>CISPA Helmholtz Center for Information Security</li> </ul>
Teaching language	• English
Languages	All courses and seminars are entirely taught in English.
	When living in Germany, it is useful to learn some German, e.g. in language classes offered by the university.
Programme duration	6 semesters
Beginning	Winter semester
Application deadline	One final deadline on 15 July for the following winter semester and additional early submission deadlines: https://saarland-informatics-campus.de/en/computerscience-course/faq/
Tuition fees per semester in EUR	None
Joint degree / double degree programme	No
Description/content	Studying computer science (CS) here means you will be at the forefront of innovation and the most recent developments in this fast-paced and exciting field. You will gain the foundational knowledge needed to master the computing systems of today and tomorrow. You will make a contribution towards major advances in areas such as the Internet of things, trustworthy software, or artificial intelligence, etc., with a far-reaching impact on our world, both now and in the future.  The initial two years of the programme cover a comprehensive syllabus, ensuring that you will acquire in-depth understanding of the fundamental principles of computer science. Depending on your interests, you can then specialise by selecting from a vast range of core and advanced courses taught by our world-class faculty.

Students are free to choose courses according to their preferences. There is no fixed timetable for courses. Part-time studies are possible.

#### Basic courses:

- Maths 1 (Calculus)
- Maths 2 (Linear Algebra)
- Maths 3 (Multivariate Calculus & Probability Theory)
- Programming 1 (Functional Programming)
- Programming 2 (Imperative Programming)
- System Architecture
- Theoretical Computer Science
- Algorithms and Data Structures
- Software Lab
- Elements of Machine Learning
- Big Data Engineering
- Concurrent Programming

#### Core courses:

- Operating Systems
- Computer Graphics
- Database Systems
- Embedded Systems
- Information Retrieval and Data Mining
- Artificial Intelligence
- Computer Architecture
- Security
- Software Engineering
- Compiler Construction
- Automated Reasoning
- Image Processing and Computer Vision
- Computer Algebra
- Algorithms and Data Structures
- Introduction to Computational Logic
- Geometric Modelling
- Complexity Theory
- Cryptography
- Optimisation
- Semantics
- Verification
- Telecommunications

## **Course Details**

#### Course organisation

Our curriculum starts with a mandatory part comprising maths, programming, algorithms and data structures, theoretical computer science, machine learning, and system architecture to provide a solid introduction to the foundations of CS: click here for an example.

From the fourth semester on, you can specialise your programme according to your interests by selecting among a wide range of more than 20 core courses that go deeper into a specific field (e.g. artificial intelligence, computer graphics, visual computing, complexity theory, software engineering, databases, compilers, and so on). Finally, you can get to the bottom of things with advanced courses that are on the edge of current research.

You will complete your studies by writing a Bachelor's thesis in one of the more than 70 research groups headed by world-class faculty here at Saarland Informatics Campus. After completing your Bachelor's degree, you can continue studying at Saarland University by applying to one of our Master's programmes or our graduate school to pursue a PhD.

be issued	
International elements	<ul> <li>Language training provided</li> <li>Projects with partners in Germany and abroad</li> <li>International guest lecturers</li> </ul>
Integrated internships	Internships are possible, but they are not compulsory.
Special promotion / funding of the programme	Other (e.g. state level)
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	Approx. 280 EUR per semester, including a semester ticket covering public transport in the Saarbrücken area
Costs of living	Students in Saarbrücken should calculate to have about 900 EUR living expenses per month, though this figure will vary individually. This figure includes fixed costs such as the obligatory health insurance and the rent for an apartment. The health insurance is about 115 EUR per month and covers all necessary procedures. The rent adds up to about 300 to 400 EUR per month.
Funding opportunities within the university	Yes
Description of the above- mentioned funding opportunities within the university	Application for a scholarships is possible.  https://saarland-informatics-campus.de/en/studium-studies/further-services-and-support/#CS-custom-anchor-Financing-your-studies-and-finding-a-place-to-live

# Requirements / Registration

Academic admission
requirements

#### **Admission Requirements**

This is a competitive programme with a limited number of seats. To be considered for admission you must provide a University Entrance Qualification (UEQ) and choose one of three application tracks listed and detailed below.

The University Entrance Qualification

The central component of your application is a University Entrance Qualification enabling for direct access to study programmes at German universities (UEQ). Without a UEQ, it is legally impossible to enrol. What constitutes a UEQ depends on various aspects. We cannot assess whether your documents constitute a UEQ before you apply. We can only check your application documents after you submit your complete application.

#### **Application Tracks**

In addition to the UEQ, you need to provide additional qualifications. Depending on your ability to prove these additional qualifications you can choose one of the following three tracks:

- Provide documentation of having successfully participated in a science/informatics/mathematics Olympiad, and results from an English test.
- Provide the results of an aptitude test and an English test.
- Participate in an on-site interview.

Note that you cannot apply for multiple tracks. You have to choose one when submitting your application. After you submit your application, you can no longer change between tracks.

Detailed information: https://saarland-informatics-campus.de/en/computerscience-course/faq/

#### Language requirements

English proficiency is essential. Standardised test results (IELTS Academic Test, TOEFL iBT Test, TOEFL Essential, Cambridge Certificate) are required. Exceptions are only made for native speakers and those who obtained a high-school diploma in a country where English is the native language (Australia, Canada, Ireland, New Zealand, UK, USA).

#### Application deadline

One final deadline on 15 July for the following winter semester and additional early submission deadlines: https://saarland-informatics-campus.de/en/computerscience-course/faq/

#### Submit application to

Saarland Informatics Campus Application Portal

Please have a look at the requirements and details regarding the admission process on our website:

- Computer Science at Saarland University
- FAQs

#### **Services**

#### Possibility of finding parttime employment

Jobs as tutors and research assistants are available in the department and cooperating institutes each semester. Openings are posted on bulletin boards and on our websites.

Additionally, check out the career portal of Saarland University:https://www.unisaarland.de/en/institution/career-center.html.

#### Accommodation

If you aren't already living in Germany, you can apply to rent one of the apartments reserved by the university for its international BSc programmes. These apartments are intended to make it easier for you to settle in and can be rented for one year. By the end of the first year, you will need to find new accommodation (either in a university hall of residence or on the private housing market). The university provides assistance with both. It is also very common to share an apartment with fellow students (called "Wohngemeinschaft" in German, or "WG" for short).

https://saarland-informatics-campus.de/en/computerscience-course/faq/

#### Support for international

Welcome event

# students and doctoral candidates

- Buddy programme
- Tutors
- Cultural and linguistic preparation
- Visa matters
- Pick-up service

Supervisor-student ratio

1:4



©Saarland Informatics Campus

# Kurt Mehlhorn Prof Dr Dr-Ing EH (Director MPI and winner of the Leibniz Prize)

Saarland University offers an outstanding education in computer science at all levels: Bachelor's, Master's, and doctorate.

Moreover, Saarbrücken is a fantastic place to live — I moved here more than 45 years ago and have always enjoyed living here.

#### **Our Partners**















## Saarland Informatics Campus – Overview

With 900 researchers and 2,500 students from 80 countries, Saarland Informatics Campus is one of the leading locations for informatics in Germany and in Europe. Five globally renowned research institutes and Saarland University with three collaborating departments and 24 academic programmes cover all areas of computer science.

#### » more:

https://www.youtube.com/watch? v=8f65y\_JLMfA&list=PLtP1eXEDZj65L\_ cfFfUB1H\_X\_CTvU4SSK

# Saarland University



Welcome to Saarland University at the Saarland Informatics Campus

© Saarland University

The university is home to several top research centres that have a direct influence on the departments of informatics, engineering, and life sciences and give this medium-sized university a wide reputation as a strong, research-driven place.

Located in the south-west of Germany, very close to the French border, Saarland University is a campus university offering an extensive range of courses and internationally networked state-of-the-art research. International students receive excellent supervision and can enjoy a comprehensive range of sports, culture and leisure activities while studying at the university surrounded by forest.

The Department of Computer Science is one of the four best computer science departments in Germany (CHE ranking) and part of the Saarland Informatics Campus (SIC).

At SIC, activities of all informatics facilities, co-located at Saarbrücken, converge. The renowned Max Planck Institutes for Computer Science and Software Systems as well as the German Center for Artificial Intelligence, the Center for Bioinformatics and the Cluster for Multimodal Computing and Interaction and Saarland University with three departments and 24 degree programmes cover the entire spectrum of computer science.

Its 900 scientists and about 2,500 students from more than 80 nations create a stimulating international research environment and make the SIC one of the leading locations for computer science in Germany and Europe. So far, seven Leibniz Prizes from the German Research Foundation, four Konrad Zuse Medals and 33 awards from the European Research Council have gone to scientists at Saarland Informatics Campus.

https://saarland-informatics-campus.de/en/https://www.uni-saarland.de/en/home.html



## Q

#### University location

As the state capital, Saarbrücken is the regional centre of the Saarland, and it is situated in the heart of the Europe. The city has approximately 180,000 inhabitants and is strongly influenced by its proximity to France and the chequered history of a French-German border town. The university, trade fair, and conference city is set amidst vast woods. It enchants visitors with its French charm, which is reflected in the narrow alleys at the foot of the castle and in the pedestrian precinct at the St. Johanner market square.

Saarbrücken has a lot to offer for tourists and businesspeople alike: the French flair, the picturesque old part of the city, an extraordinary cultural life, a high quality of life, and a diversity of culture and nature – but above all, its warm and open people.

https://www.saarbruecken.de/en https://www.visitsaarland.co.uk/

### **Contact**

#### **Saarland University**

**Computer Science** 

Barbara Schulz-Brünken

E13

66123 Saarbrücken

#### Tel. +49 6813026582

- bscen+cs@cs.uni-saarland.de

   bscen-college 
   bscen-college
- Course website: https://saarland-informatics-campus.de/en/computerscience-course/
- f https://www.facebook.com/sic.informatik.saarland/
- https://twitter.com/sic\_saar
- in https://www.linkedin.com/company/saarland-informatics-campus
- https://www.instagram.com/saarland\_informatics\_campus/

Last update 07.01.2025 06:37:26

# International Programmes in Germany - Database

www.daad.de/international-programmes www.daad.de/sommerkurse

#### Editor

DAAD - Deutscher Akademischer Austauschdienst e.V. German Academic Exchange Service Section K23 – Information on Studying in Germany Kennedyallee 50 D-53175 Bonn www.daad.de

#### **GATE-Germany**

Consortium for International Higher Education Marketing www.gate-germany.de

#### Disclaimer

The data used for this database was collected and analysed in good faith and with due diligence. The DAAD and the Content5 AG accept no liability for the correctness of the data contained in the "International Programmes in Germany" and "Language and Short Courses in Germany".

The publication is funded by the German Federal Ministry of Education and Research and by contributions of the participating German institutions of higher education.

