DAAD

Deutscher Akademischer Austauschdienst
German Academic Exchange Service

INTERNATIONAL PROGRAMMES

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Bachelor's degree

Cybersecurity (BSc)

Saarland University • Saarbrücken

Overview

Degree	Bachelor of Science
In cooperation with	• CISPA Helmholtz Center for Information Security • Max Planck Institute for Informatics • Max Planck Institute for Software Systems • German Research Center for Artificial Intelligence (DFKI) • Center for Bioinformatics
Teaching language	• English
Languages	Courses are held entirely in English.
Programme duration	6 semesters
Beginning	Winter semester
Application deadline	To start your studies in October, the regular application deadline is 15 July. For early feedback on your application, you can apply earlier, submitting your application by one of the "preliminary review deadlines". Please find more details on our deadlines and the timeline here: https://cysec.uni-saarland.de/bachelor/cybersecurity, and especially here: https://cysec.uni-saarland.de/bachelor/cybersecurity/application-process/.
Tuition fees per semester in EUR	None
Joint degree / double degree programme	No
Description/content	Cybersecurity threats have become prevalent in our daily lives. Vulnerabilities in computer systems are exploited to spy on users and even sabotage the most security-critical infrastructure (e.g. energy and water supplies, healthcare systems, or transport networks). The abundance of readily available, large-scale, privacy-sensitive datasets poses unprecedented risks to user privacy. Consequently, there is an almost unlimited demand for cybersecurity professionals, both from the academic sector and from industry. This is why Saarland University has teamed up with the CISPA Helmholtz Center for Information Security to offer a unique BSc course in cybersecurity that teaches the essentials from the very

start. CISPA is the world's highest ranking research institute for cybersecurity, which attests to its high scientific standards and the broad range of topics investigated in CISPA's cutting-edge research. Best of all, courses in this programme are taught entirely in English, which makes them accessible to international students.

The standard period of study for the Bachelor of Science degree is six semesters. At the beginning of the programme, the fundamentals of both regular computer science and cybersecurity are taught. Following this, there are various elective options with topics that are inspired by research at CISPA. In addition to these in-depth cybersecurity and computer science courses, there are practical elements, such as the cybersecurity lab and supplementary elective courses. A German course is also offered to English-speaking students early in the programme, and an English course is offered to German-speaking students.

Course Details

Course organisation	A total of 180 CP (credit points) is earned during the six-semester programme, i.e. 30 CP per semester. The following courses are compulsory: 1. Mathematics for Computer Scientists 1 (9 CP), Mathematics for Computer Scientists 2 (9 CP) 2. Compulsory area of the Fundamentals of Computer Science (54 CP): a) Programming 1 (9 CP) b) Programming 2 (9 CP) c) Fundamentals of Data Structures and Algorithms (6 CP) d) Introduction to Theoretical Computer Science (9 CP) e) System Architecture (9 CP) f) Statistics Lab (6 CP) g) Elements of Machine Learning (6 CP) 3. Compulsory practical training (15 ungraded CP): a) Practical training: Software Engineering Lab (9 CP) b) Practical training: Cybersecurity Lab (6 CP) 4. Specialised compulsory area of Cybersecurity (24 CP): a) Foundations of Cybersecurity 1 (9 CP) b) Foundations of Cybersecurity 2 (6 CP) c) Cryptography (9 CP) In the elective courses, students attend lectures on core and complementary topics of cybersecurity as well as a pro-seminar and seminar on cybersecurity topics (total of at least 36 CP). Students earn 6 CP each from language courses as well as the free elective. Finally, the programme is completed with the Bachelor's thesis and the associated seminar. Have a look at examples of our curriculum: https://cysec.uni-saarland.de/bachelor/cybersecurity/#schedules-1
A Diploma supplement will be issued	Yes
International elements	• International guest lecturers • Language training provided • Projects with partners in Germany and abroad
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	Saarland University's programmes are state-funded, so there are no tuition fees for Bachelor's and consecutive Master's degree courses. Students have to pay an administrative fee of 286 EUR per semester. This includes a pass for free public transportation throughout the state of Saarland, payment of premiums for insurance coverage, and access to university facilities. This entitles students to eat at the university canteens at reduced prices.
Costs of living	There are no tuition fees, and the cost of living in this smaller city, with its vibrant cultural scene, is moderate. With an average amount of 900 EUR per month (housing and insurances included), you can easily get by.
Funding opportunities within the university	Yes
Description of the above-mentioned funding opportunities within the university	Students who are not eligible for German stipend programmes (such as "BaföG") are eligible to apply for our stipend programme, which will provide stipends from industry and academic partners. The stipends will cover your living expenses. We collaborate with a stipend foundation to select the recipients of such scholarships. You will learn whether or not you are eligible for a stipend when you receive your study programme admission confirmation. More general information: https://www.uni-saarland.de/en/study/organisation/financing.html

Requirements / Registration

| Academic admission requirements | Our programme aims to train the next generation of elite cybersecurity experts and is therefore competitive. We select the best of the best, which also creates a great atmosphere for learning once you start your studies here. Since our course is taught in English, good proficiency in English (level C1) is required. Students have to submit their application documents via an online application system. The best candidates will then be selected by our admissions panel. Admission Requirements 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 (UEQ), which enables direct access to study programmes at German universities. Without a UEQ, it is legally impossible to enrol. What constitutes a UEQ depends on various aspects. (Please see the appendix below.) 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 will need to provide additional qualifications. You can do this in one of the following three tracks:

1. You provide documentation of successful participation in a science/informatics/mathematics Olympiad and results from an English test. (Please refer to the appendix for the requirements of the English test and the Olympiads we accept.)
2. You provide the results of an aptitude test and an English test. (Please refer to the appendix for the requirements of the English test and the aptitude tests we accept.)
3. You participate in a two-day (online) 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://cysec.uni-saarland.de/bachelor/cybersecurity/application-process/

Language requirements	Please provide an English proficiency test. Standardised test results (IELTS Academic Test, TOEFL iBT Test, TOEFL Essential, Cambridge Certificate) are required (minimum level C1). 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	To start your studies in October, the regular application deadline is 15 July. For early feedback on your application, you can apply earlier, submitting your application by one of the "preliminary review deadlines". Please find more details on our deadlines and the timeline here: https://cysec.uni-saarland.de/bachelor/cybersecurity, and especially here: https://cysec.uni-saarland.de/bachelor/cybersecurity/application-process/.
Submit application to	Please upload your application via the application portal for Computer Science and Cybersecurity after reading the details regarding the application process and our frequently asked questions (FAQ): https://cysec.uni-saarland.de/bachelor/cybersecurity/application-process/

Services

Possibility of finding part-time employment	Work as a student helper or tutor: CISPA as well as other institutions on campus offer part-time employment in research or part-time positions for teaching assistants. Check out the Welcome Center's guide with general information on working in Germany: https://www.uni-saarland.de/en/global/welcome-center/living-working.
Accommodation	If you aren't living in Germany yet, 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'll 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://www.uni-saarland.de/en/global/welcome-center/accommodation.html

Support for international students and doctoral candidates	• Buddy programme
	• Welcome event
	• Cultural and linguistic preparation
	• Visa matters
	• Tutors
	• Pick-up service

| **Supervisor-student ratio** | 1:4 |

©CISPA

Christian Rossow
Prof Dr

Learning cybersecurity from the world's top-ranked researchers creates outstanding academic and industrial career opportunities. And best of all, there are no tuition fees.

Our Partners

Professor Christian Rossow Presents Three Reasons to Study Cybersecurity at Saarland University

Saarland University offers four study programmes in Cybersecurity in cooperation with CISPA Helmholtz Center for Information Security. Have a look at our Cybersecurity Bachelor's programmes (German or English). Afterwards, you can pursue one of our Master's programmes, which will prepare you to continue your career on-site or anywhere in the world. More information: https://cysec.uni-saarland.de

» more: https://www.youtube.com/watch?v=TkGEo1rCWI4

Saarland University

University campus surrounded by forest

© Saarland University

Saarland University is home to several top research centres that have a direct influence on the departments of informatics, engineering, and life sciences. This gives this medium-sized university a strong and research-driven reputation.

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 international 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, which is surrounded by forest.

The department of Computer Science is among the best computer science departments in Germany (CHE ranking). CISPA Helmholtz Center for Information Security is the world's highest ranking research institute for cybersecurity, which attests to its high scientific standards and the broad range of topics investigated in CISPA's cutting-edge research. This all feeds into the curriculum of the degree programmes in cybersecurity at Saarland University, ensuring that seminars and lectures will cover the very latest research topics.

Working and studying with an international focus and transcending boundaries is a hallmark of Saarland University – whether these are geographical borders, cultural boundaries, barriers between academic disciplines, or outdated divisions between academia, economic, and cultural life.

📍 University location

As the state capital, Saarbrücken is the regional centre of the Saarland, and it is situated in the heart of 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 zone at the St. Johanner market square.

Saarbrücken has a lot to offer 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/

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International Programmes in Germany - Database

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