

# Cybersecurity

Universität des Saarlandes  
Master of Science



## Introduction

### Solving the challenges of today and providing security for tomorrow.

The Master's Course Cybersecurity will prepare students for a career in research and industry alike. Students have the opportunity to choose their specialization in the areas of Cryptography, Privacy, Software Security, Systems and Networks, Formal Methods or legal aspects of Cybersecurity directly fueled by state-of-the-art research at CISPA Helmholtz Center for Information Security, while continuing related topics in Computer Science. This program is equally suited for students who completed a Bachelor's Degree in Computer Science, Cybersecurity or a similar area, a Bachelor in Cybersecurity is not mandatory. The program is designed for 4 semesters and you can equally start your studies in winter or summer semester.

### Particularities

- Young and dynamic research areas.
- Computer Science at Saarland University: top CHE ranking, 6 internationally renowned computer science institutions.
- Lectures and Seminars are fueled by state-of-the-art research at CISPA and other Computer Science institutions on Campus.
- Elective subjects allow students to choose specializations early on.
- Proximity to research institutions enables you to specialize early and work with leading experts in the field.
- During your studies: We are offering student helper positions to work with our researchers on current research projects.

## Course details

### Structure

The degree programme comprises modules associated with the different sections of the programme listed below:

- 27 graded credits from the core lecture courses offered. In this section, the two core lectures 'Cryptography' and 'Security' are compulsory, provided that no earlier academic coursework from previous studies can be accepted as equivalents.
- At least 30 and at most 34 graded credits shall be earned from the core lectures, the advanced lectures on cybersecurity or the seminars on cybersecurity. A maximum of one additional seminar and one additional core lecture may be included in this section.
- 7 graded credits from the seminars offered on cybersecurity.
- 12 graded credits from the Master's seminar.
- 30 graded credits from the Master's thesis.
- At least 14 ungraded credits from selectable modules from the following areas: (a.) Master's level practical assignments or projects, (b.) Selectable modules from the area of the core lectures, advanced lectures in Cybersecurity or seminars in Cybersecurity or the corresponding modules of the Master's programme in Computer Science, (c.) Tutoring and supervising undergraduate students in exercise and problem-solving classes (d.) Language courses, (e.) Soft skills seminar, (f.) Work placement or internship in industry for which an application was submitted to and approved by the Examination Board, (g.) Modules for which an application has been submitted to and approved by the Examination Board, for example student activities



UNIVERSITÄT  
DES  
SAARLANDES

### Contact

#### Course adviser

Tanja Breinig  
Phone: +49 681 302-58092  
[msc+cysec@cs.uni-saarland.de](mailto:msc+cysec@cs.uni-saarland.de)

#### Central Student Advisory Service

Phone: +49 681 302-3513  
[studienberatung@uni-saarland.de](mailto:studienberatung@uni-saarland.de)

#### [Website >](#)

(particularly assistance with university-related administrative services) or attendance at courses teaching as key career skills.

The completion period for the Master's thesis is six months. Students are awarded 30 ECTS credits for completing their Master's thesis. Students must have successfully completed a Master's seminar directly related to the topic of their Master's thesis before completing their Master's thesis. Students shall register their thesis project with the Examinations Office no later than one semester after successfully completing the Master's seminar.

For more information, please refer to the [study regulation](#).

Interested? If you like this degree programme but are not sure if it is really the right one for you, take a look at our Master's programme [Entrepreneurial Cybersecurity](#).

## Application

### Admission requirements

- A Bachelor's degree from a German university or an equivalent qualification from a foreign university in computer science, informatics or a related field. (Note: Prospective students do not need to have a Bachelor's degree in Cybersecurity.)
- Advanced proficiency in English (typically level C1 of the Common European Framework of Reference for Languages)
- Proof of knowledge and skills equivalent to those taught in the core area 'Computer science' of Saarland University's Bachelor's programme Cybersecurity, in particular in the following areas: (1) Mathematics (discrete mathematics, linear algebra, stochastics, statistics) (2) Theoretical informatics (complexity theory, computability), (3) Practical informatics (functional and object-oriented programming, data structures and algorithms, system architecture)
- To demonstrate their particular interest in the subject, applicants must also submit supporting documents and two academic references from referees who know the applicant academically.

For more information, please refer to the [subject-specific regulations](#).

### How to apply

Students can begin the M.Sc. programme at the beginning of the summer or winter semester. Applications should normally be received by 15 May for students seeking to begin studying in the winter semester and by 15 November for students looking to start their studies in summer. Applications should be submitted via the [online application portal](#) managed by the Department of Computer Science where you'll find further information about application and admission procedures.

## CISPA

### About CISPA

The CISPA - Helmholtz Center for Information Security is a German national Big Science Institution within the Helmholtz Association. Its research agenda comprises all aspects of Information Security.

With its ongoing growth, CISPA will have the critical mass of researchers (500+) to provide a comprehensive, holistic treatment of the pressing grand cybersecurity and privacy research challenges that our society faces in the age of digitalization. CISPA seeks to play a prominent international role on research, transfer, and innovation by combining cutting-edge, often disruptive foundational research with innovative application-oriented research, corresponding technology transfer, and societal outreach. Thematically, it strives to cover the full spectrum from theory to empirical research. It is deeply grounded in computer science and works interdisciplinarily with researchers in adjacent fields such as medicine, law, and the social sciences.

[Website >](#)

## Place of study

### Why Saarbruecken?

Our Computer Science courses are rated as excellent in CHE rankings. There are no tuition fees and the cost of living in a smaller city with a vibrant cultural scene is moderate. Sounds too good to be true? Saarland University's study courses are state-funded so there are no tuition fees for bachelor' and consecutive master's degree courses. Students only have to pay an administrative fee of €286 per semester. This includes a pass for free public transport throughout the state of Saarland, payment of premiums for insurance coverage as well as access to university facilities

that entitles students to eat at the university canteens at reduced prices.

Situated in the region where the borders of France, Luxembourg, and Germany meet, everyday life in Saarland has traditionally been international in character. Investigate our Center for International Students.

### Five more reasons to live and study in Saarbruecken or its surroundings:

1. The open and down-to-earth nature of the people from Saarland (the Saarländers) has always made it easy for newcomers to settle in quickly. Whether you come from Germany, an EU country or other regions of the world - you are always welcome in Saarland!
2. Saarland is located in the heart of Europe. In only 1h and 50 minutes, you can reach Paris by train and we have 4 international airports within easy reach. (Saarbrücken, Luxembourg, Frankfurt-Main, and Frankfurt-Hahn)
3. Saarland is green! It has the highest proportion of public forest with over 70% and the most natural forest in Germany. It can come up with no less than 3,545 kilometres of rivers and creeks. So: go out into nature, recharge your batteries, and simply leave the stress of everyday life behind you. With its varied landscapes and extensive forests, Saarland is the number one address for health-conscious people from everywhere.
4. We love festivals and one event follows another, no matter if you are looking for street food, French-German theater, rock music or classical music: everyone finds an event matching his or her own taste. The festival year begins in Saarbrücken with the Max Ophüls festival for talented German-language filmmakers, which marks the discovery of young talents from Austria, Germany and Switzerland for 36 years. It is followed in early summer by the PERSPECTIVES festival with theatre, acrobatics, dance and performance and in summer, there are several open-air events.
5. We are enthusiastic about sports! No surprise, because there could not be a better framework. More than 390,000 people take part in sports in app. 2,200 Saarland clubs. With 40 percent of the population, the state is the absolute leader in a nationwide comparison. Popular sports include hiking, cycling, running, tennis, horseback riding, etc.