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INTERNATIONAL PROGRAMMES
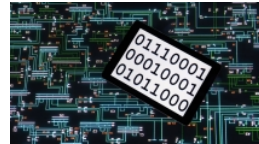
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Master's degree

Cyber Security

Brandenburg University of Technology Cottbus-Senftenberg • Cottbus

Overview

Degree	Master of Science
Teaching language	• English
Languages	All courses are held in English.
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	• Applicants without European Union/European Economic Area citizenship:**probably 15 May** for the following winter semester • Applicants with European Union/European Economic Area citizenship:**probably 15 August** for the following winter semester Please be sure to check https://www.b-tu.de/en/cybersecurity-ms/admission for updates and further details.
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	Cyber Security is a scientific programme in which you learn to understand how the Security Building Blocks work and what their limits are (including mathematics behind cryptography). Based on this, you gain knowledge needed to design and develop new algorithms/approaches against specific cyber threats as well as critically evaluate their limits. The programme is not about how to configure a firewall or run a pen-testing tool, it is about academic content with in-depth understanding of underlying techniques and principles. The goal of the international Master's programme in Cyber Security is to train qualified graduates in the field of IT security so that they can meet the growing demands of society. With its foundation in computer science and engineering, this programme focuses on both the theoretical and practical aspects of cyber security, which are conveyed to the students in small groups with a teacher-student ratio that is optimal for supervision.

This programme equips graduates with the skills needed to design, implement, and manage cyber security concepts. Students will not only gain knowledge of the most important principles and methods of cyber security (as well as methods that are typically applied by hackers) but will also be taught how to apply this knowledge in the real world. Upon graduation, students will be able to develop new approaches and methods aimed at protecting IT systems and critical infrastructures.

These approaches and methods will correspond to the state of the art and will consider various organisational aspects and legal regulations. Furthermore, they will be qualified to implement cyber security strategies, contribute to the further development of the subject area, and take on the many challenging tasks facing the industry and research community today.

For further information, please visit: https://www.b-tu.de/en/cybersecurity-ms

Course Details

Course organisation	The Master's programme consists of four semesters with 30 credit points each. The curriculum distinguishes between basic and specialised studies, which are supplemented by general studies, an industrial internship, and the Master's thesis. Basic studies (Cyber Security Basics) are mandatory modules and comprise of 22 credit points. Specialised studies are divided into two compulsory elective modules (Cyber Security Methods and Computer Science) and the study project, comprising of 54 credit points. Within the scope of the compulsory elective modules, students must choose a minimum of 28 credit points from "Cyber Security Methods" and at least 12 credit points from "Computer Science". An internship offers students the opportunity to implement the subject-related and methodical knowledge gained through their courses in an industrial environment. It serves to link practical experience with research and teaching. » PDF Download
A Diploma supplement will be issued	Yes
International elements	• Projects with partners in Germany and abroad • International comparisons and thematic reference to the international context
Integrated internships	The programme includes a mandatory internship.
Course-specific, integrated German language courses	No
Course-specific, integrated English language courses	No

Costs / Funding

Tuition fees per semester in EUR	None
Semester contribution	Apart from a few degree programmes, education offered at the BTU Cottbus-Senftenberg is without tuition fees. However, the university does charge a semester fee of around 135 EUR each semester.

	This covers costs for the student services organisation (Studentenwerk) and the Student Council (StuRa).
Costs of living	Studies abroad often have different types of expenses from the ones you know from your home country. You are responsible for covering your own living expenses. Accommodation and other essential living expenses will amount to around 600–900 EUR/month. Of course, this amount depends entirely on individual lifestyle. The following list gives you an idea of some fixed and variable costs that you should take into account for your stay in Germany. Monthly costs: rent (including utilities): 200–400 EUR public transportation: 49 EUR groceries: approx. 170 EUR health insurance, medical fees, medication: approx. 120 EUR miscellaneous (clothing, study materials, other activities): 200–300 EUR total: 700–950 EUR The so-called "Deutschlandticket" allows you to travel using all local public means of transportation throughout Germany.
Funding opportunities within the university	Yes
Description of the above-mentioned funding opportunities within the university	Studying at BTU is mostly free of (study) fees. Because of this, there are only limited scholarship opportunities for international students. The International Relations Office is nonetheless pleased to be able to award a limited number of scholarships to international students already enrolled at BTU. You can find more information on BTU scholarship opportunities on our websites: https://www.b-tu.de/en/international/international-students/during-studies/scholarships

Requirements / Registration

Academic admission requirements	Admission requirements include a first qualifying degree (at least Bachelor's degree) or equivalent in computer science or a programme closely related to it (e.g., cyber security, applied mathematics, artificial intelligence, data science, electrical engineering) with a strong focus on computer science. The content of theoretical, applied, and technical computer science and mathematics degree courses should be comparable to the Bachelor's programme in computer science offered at BTU.
Language requirements	A certificate of proficiency in English must be provided. Accepted tests and minimum scores are: • a TOEFL certificate, minimum score of 79 points (iBT) • an IELTS certificate, minimum 6.0 • a Cambridge Certificate in Advanced English (min. grade B) • a Cambridge Certificate of Proficiency in English (min. grade C) • a UNIcert certificate, minimum grade II Applicants with a higher education entrance qualification from Australia, Canada, Ireland, New Zealand, Great Britain incl. Northern Ireland, or the United States of America do not have to submit a separate proof of English language skills. Applicants who completed a secondary level degree in English in Germany or in one of the above mentioned countries are also exempted from presenting a formal English language certificate. Applicants who have acquired their higher education entrance qualification in Germany or at a German school abroad can also submit a certificate of higher education entrance qualification that shows English language skills at least at level B2 of the Common European Framework of Reference for Languages (CEFR). This proof can be provided, for example, by presenting an A-level certificate with corresponding confirmation from the school or by providing a document issued by the Ministry of Education in the respective federal state. This certificate must confirm that the required level of English (minimum of B2/CEFR) has been achieved.

	German language skills are not required for admission to this study programme.
Application deadline	- Applicants without European Union/European Economic Area citizenship:**probably 15 May** for the following winter semester - Applicants with European Union/European Economic Area citizenship:**probably 15 August** for the following winter semester Please be sure to check https://www.b-tu.de/en/cybersecurity-ms/admission for updates and further details.
Submit application to	International applicants must submit their application via the uni-assist online application platform: my.uni-assist.de The application is submitted entirely online. Thus, no hard copies are required.

Services

Possibility of finding part-time employment	There are job opportunities both in town and on campus. Nevertheless, please do not come to Germany expecting to be able to finance your entire studies by working. The study load is high, and it is not always easy to find a part-time job. Students from non-European countries are allowed to work either 120 whole days or 240 half days annually. The 120-day rule is not affected by mandatory internships or student assistance jobs at university. Students from EU member countries, the European Economic Area (EEA) and Switzerland can work without restrictions during their studies in Germany.
Accommodation	BTU Cottbus-Senftenberg is a university with three locations where numerous student dormitories are provided. Students can choose between different room types. In Germany, it is also very common for students to live alone or with friends. If three or more people share an apartment together, this is called a "WG" in German ("Wohngemeinschaft", which means a shared flat).
Support for international students and doctoral candidates	- Welcome event - Specialist counselling
General services and support for international students and doctoral candidates	Programme coordinator for international study programmes

Study and Research at a High Level in Germany: BTU Cottbus-Senftenberg

At BTU Cottbus-Senftenberg, we are passionately researching the questions of the future. Good teaching conditions are as important to us as conducting outstanding basic research and facilitating effective knowledge transfer into practical applications for industry and medium-sized businesses.

» more:
https://www.youtube.com/watch?v=cQ7klU54eM4&t=2s

Brandenburg University of Technology Cottbus-Senftenberg

The BTU welcomes you to start your academic journey!

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Located on three campuses and with about 60 study programmes, BTU Cottbus-Senftenberg offers a broad spectrum of market-oriented programmes as well as traditional degree programmes.

From the natural sciences and engineering to economics, cultural studies, and even health sciences, BTU offers a wide range of courses. Our 13 study programmes taught exclusively in English are very popular among both German and international students from all over the world.

BTU is partnered with over 220 universities throughout the world, which provides students with a multitude of excellent opportunities to spend part of their time studying or conducting research abroad. Furthermore, in cooperation with our international partner universities, BTU offers a wide range of double-degree and joint-degree programmes.

📍 University location

Cottbus is located in the north-east of Germany, between the country's capital, Berlin (100 km), and Dresden (120 km). With a population of approx. 100,000 inhabitants, Cottbus is the second largest city after Potsdam in the federal state of Brandenburg. The Polish border is only approx. 30 km away. The location of Cottbus offers a convenient starting point for trips into the picturesque region of Lower Lusatia. The landscape of Lower Lusatia is characterised by the Spreewald with its small canals and waterways as well as by the Slavonic minority called Sorbs or Wends. Their language, similar to Polish, is still used and spoken in Lower Lusatia. For this reason, many of the road signs and informational boards in Cottbus and the surrounding region are written in both Sorbian and German. Cottbus gained importance as a trade centre in the 12th century. Parts of the original city wall from the 14th century as well as the beautiful townhouses around the old

market square are proof of the city's early splendour. Additionally, the city is characterised by buildings from the "Wilhelminian" times of rapid industrial growth in Germany, which occurred towards the end of the 19th century. The city that first rose to prominence with its cloth and linen weaving industry soon evolved into a growing centre of brown coal mining. Today, Cottbus is in the midst of a structural transformation. The BTU supports this development with its engagement in the Lausitz Science Park megaproject, which aims to build an appealing innovation landscape.

Senftenberg is the centre of the Lusatia Lake District. Former excavation and mining pits have been flooded in order to create the largest artificial lake system in Europe, with a total of 23 large lakes. The water sports area "Senftenberger See", with its water surface of 1,300 hectares, offers exceptional sailing and surfing opportunities, and it is suitable for all kinds of water sports. Senftenberg has thus become a tourist attraction within the region.

Contact

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🌐 Course website: https://www.b-tu.de/en/cybersecurity-ms

🅕 https://www.facebook.com/btucs/

⬤ https://twitter.com/BTU_CS

🅲 https://www.linkedin.com/school/btu-cottbus-senftenberg/

🅞 https://www.instagram.com/btucs/

🅨 https://www.youtube.com/c/btucottbussenftenberg

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International Programmes in Germany - Database

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Federal Ministry of Education and Research