



Brandenburg
University of Technology
Cottbus - Senftenberg

SHAPING THE FUTURE TOGETHER

THE UNIVERSITY AT A GLANCE



SHAPING THE FUTURE TOGETHER

At Brandenburg University of Technology Cottbus-Senftenberg (BTU), we use our scientific expertise to develop practical solutions for shaping the major issues of the future and transformation processes worldwide. We are aware of our special responsibility for progressive and sustainable development in the region. Interdisciplinary clusters and close cooperation with our partners in science and industry enable us to raise our profile, connect internationally and carry out successful projects to meet these challenges.

We offer our students a challenging education, individual support and the opportunity to learn from and with each other with curiosity and openness. Students from Germany and all over the world contribute to our diverse and inspiring campus life. Already during their studies, we offer them the chance to realise their potential and to help shape perspectives.

We see ourselves as part of the international scientific community. Internationalisation is the source of our cultural diversity. It enriches university life and funds diversity in teaching and research.

As a university community, all members of the BTU pull together. Each and every one of us is indispensable for the success of our university. We strengthen the abilities and enthusiasm of students and employees to contribute creatively, effectively and competently. Respectful and transparent exchange within the university is our principle for dealing with each other.

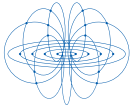
» www.b-tu.de/en

BTU IN A CHANGING REGION

As university of Technology in the heart of Lusatia, BTU is the innovation driver of structural change. On the basis of the Coal Regions Structural Strengthening Act, a number of joint projects have been initiated in the region under the leadership or with the participation of BTU. Examples include the Innovation Campus Electronics and Microsensorics Cottbus (iCampus), Center for Hybrid Electric Systems Cottbus (chesco), Energy Innovation Center (EIZ) and SpreeTec neXt - New manufacturing technologies of decentralized power engineering. Research and knowledge transfer form a solid basis for expert networks, joint appointments and strategic partnerships within the university environment.

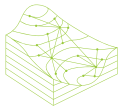
THE RESEARCH PROFILE OF THE BTU

The BTU is oriented towards the following profile lines in research, teaching, transfer of knowledge and technology and is developing into one of the most dynamic science locations in Germany. This process is characterised by close cooperation with non-university research institutes and federal institutions on site, as well as the development of the innovative science campus Lausitz Science Park.



ENERGY TRANSITION AND DECARBONISATION

The BTU researches technical solutions for climate change and integrates research topics central to the region in the areas of energy production, storage and use, but also for the mobility of the future. In its degree programmes, the university offers innovative topics in mechanical engineering, materials science, electrical engineering and computer science and interlinks them across disciplines.



GLOBAL CHANGE AND TRANSFORMATION PROCESSES

Interdisciplinary approaches ranging from Environmental Sciences and Climate Change to Urban Planning and the economic and social consequences of structural change are part of the research at the university. Study programmes such as Environmental and Resource Management, World Heritage Studies, Urban Design and Urban Planning, as well as others from the subject groups of Environmental Sciences, Social Sciences and Economics, enable students to learn about global change. The focus should be on transformation processes.



HEALTH AND LIFE SCIENCES

In the interdisciplinary network, scientists conduct basic and application-oriented research on topics of digitalised health care, inpatient and outpatient care, and the development of new technologies. Intelligent sensor technology, human-machine interaction, biomedicine, bioinformatics and active substances of the next generation. In this way, they make a supra-regionally visible contribution to scientific progress in these fields and strengthen the Lausitz health region. With its coordinated range of courses and training, the profile line makes a significant contribution to the qualification of specialists for industry and science.



ARTIFICIAL INTELLIGENCE AND SENSOR TECHNOLOGY

Artificial intelligence and sensor technology are central topics of the university across all profile lines. They are part of basic and applied research and strengthen the innovation and competitiveness of companies, research institutions and Lusatia through knowledge and technology transfer. Study programmes such as Artificial Intelligence, Artificial Intelligence Engineering, Cyber Security, Computer Science or Medical Informatics provide students with the tools to master the growing demands on IT in diverse areas of society.

RESEARCH COOPERATIONS

The BTU maintains and intensifies cooperation with non-university research institutions, partner universities, large industrial partners and small and medium-sized enterprises. These cooperations are reflected in joint appointments, joint projects or economic cooperations within the framework of technology transfer. In recent years, research institutes and federal authorities have settled in the region, with which the BTU works closely. In addition, research institutions and the university have been cooperating in the Lusatia Science Network since December 2022.

LAUSITZ SCIENCE PARK

With the establishment of the Lausitz Science Park in 2022, an innovation landscape with international appeal is to be created in Cottbus over the next few years, combining excellent basic and applied research with innovative spin-offs and numerous Company Relocations. Strong partners such as the Fraunhofer-Gesellschaft, the German Aerospace Centre (DLR), the Leibniz Association and economically powerful companies such as LEAG, BASF Schwarzheide, Deutsche Bahn and Wista are involved. Several large projects, financed with funds from the Structural Development Act (Strukturstärkungsgesetz), have already begun their work.

RESEARCH PERFORMANCE

The BTU is currently home to 194 professors, including visiting professors, junior professors and professorial representatives (as of 05/2024). The number of doctoral students at the BTU amounts to an annual average of around 900. In addition, a total of more than 830 scientific papers were published in 2023.

In 2023, third-party funding income of 76.1 million euros was achieved. With this new record, the university has met its revenue targets for the fourth year in a row. At 32.5 million euros, project funding from the Structural Development Act (Strukturstärkungsgesetz) makes up almost 40 percent of all revenue. The approximately 44 million euros from the other funding lines are also a record.

PROMOTION OF YOUNG TALENT

With its Graduate Research School, the BTU offers its doctoral candidates targeted funding and qualification opportunities for the doctoral phase. PhD programmes in the fields of Heritage Studies, Environmental and Resource Management and Power Engineering are also part of the university's international strategy for promoting young researchers. In addition, the BTU is involved in the „Postdoc Network Brandenburg“, the network of Brandenburg universities for career development of doctoral researchers.

KNOWLEDGE AND TECHNOLOGY TRANSFER

The exchange of scientific findings, innovations and solutions with regional, national and international partners from business and society focuses on current and future challenges.

TRANSFER DATABASE

The transfer database is an offer for companies and institutions to quickly and clearly find suitable chairs and contacts and equipment for possible cooperation, research or development projects.

www.b-tu.de/en/transfer/business-research-cooperation/transfer-database

BTU TRANSFER DAYS

At the annual Transfer Day, science and business meet with a changing thematic focus to exchange information on innovative technologies and cooperation opportunities - the ideal opportunity for networking. www.b-tu.de/en/transfer/get-to-know-us/transfer-day

RECRUITING ACADEMIC PROFESSIONALS

The BTU Career Center is the central interface for the placement of internships, student traineeships, thesis or jobs for graduates. www.b-tu.de/en/careercenter

CONTINUING EDUCATION

Our continuing education and qualification programmes for professionals and managers as well as the general public have a practical orientation through close contact with the business community. Training courses, certificate programmes, study programmes providing further education, guest auditor studies or open lecture series shape the transfer of knowledge to the region. www.b-tu.de/weiterbildung (German only)

CreativeOpenLab (COLab)

»Ideas.Creating.Future.« Under this motto, the COLab offers 600 square metres of future technologies in a creative hands-on area and five high-tech workshops. Here you can develop prototypes, make start-up ideas tangible, realise research projects and try out new technologies. The Makerspace is open to everyone and is the region's central think tank, which actively strengthens Lusatia's innovative power. www.b-tu.de/en/colab

BTU ON THE GROUND

The BTU presents itself at several locations for the direct exchange between science, business and society, including at the offices in Spremberg and Finsterwalde and at the start-up center STARTBLOCK B2 in Cottbus.

» www.b-tu.de/en/transfer

FACULTIES AND INSTITUTES

FACULTY 1

MINT – Mathematics, Computer Science, Physics, Electrical Engineering and Information Technology

- › Institute of Electrical Engineering and Information Science
- › Institute of Computer Science
- › Institute of Mathematics
- › Institute of Medical Technology
- › Institute of Physics

FACULTY 2

Environment and Natural Sciences

- › Institute of Biotechnology
- › Institute of Environmental Science and Environmental Technology
- › Institute of Materials Chemistry

FACULTY 3

Mechanical Engineering, Electrical and Energy Systems

- › Institute of Digital Production Quality and Logistics
- › Institute of Electrical and Thermal Energy Systems
- › Institute of Lightweight Design and Value-added Management
- › Institute of Process and Material Sciences
- › Institute of Smart Systems – Internet of Things
- › Institute of Transport Technology

FACULTY 4

Human Sciences

- › Institute of Health
- › Institute of Instrumental and Vocal Performance and Teaching
- › Institute of Social Work
- › Institute of Educational Science

FACULTY 5

Business, Law and Social Sciences

- › Institute of Business and Economics
- › Institute of Law
- › Institute of Philosophy and Social Sciences

FACULTY 6

Architecture, Civil Engineering and Urban Planning

- › Institute of Architecture
- › Institute of Civil and Structural Engineering
- › Institute of Construction and Art History
- › Institute of Urban Planning

FACULTY OF HEALTH SCIENCES

This faculty emerged from the »Brandenburg Healthy Campus« initiative and is run by three different universities: the University of Potsdam, the Brandenburg University of Technology Cottbus-Senftenberg and the Brandenburg Medical School Theodor Fontane.

www.fgw-brandenburg.de (German only)

STUDY PROGRAMMES

Educational pathways are more heterogeneous today and the BTU has adapted to these requirements and needs. It therefore offers a range of academic profiles and forms of study, including dual study programmes and certificate programmes for the further education of specialists and managers. The individually selectable time models make it possible to combine studies, career and family.

The range of courses offered at the BTU includes natural sciences and engineering as well as economics, education, health and cultural studies. With the latest technical equipment, excellent supervision and innovative teaching concepts, our young university guarantees future-oriented studies.

INTERNATIONALITY

The offers of the European University Alliance EUNICE, mobility semesters and joint degrees with international partner universities enable students to expand their professional and social competences in a globalised world.

INTERDISCIPLINARITY

A special feature of the BTU is the »FÜS« (Fachübergreifendes Studium), the Interdisciplinary Studies. In the belonging modules, students come into contact with fellow students from other study programmes and faculties and learn to work in an interdisciplinary manner. With an understanding of interdisciplinary projects and holistic approaches to solutions, they are equipped for the challenges of the future.

GETTING TO KNOW STUDYING

The BTU's numerous information and orientation offers give pupils the chance to explore their own inclinations and abilities. The aim is to arouse interest in studying, in particular STEM subjects, at an early age. The portfolio covers every age group and includes, among other things, student labs, support for particularly gifted students and the children's university for the youngest.

PREPARATION PROGRAMMES FOR GERMAN STUDY PROGRAMMES

In order to allow applicants to improve their linguistic skills and experience an extensive insight into living in Germany and studying at our university, the BTU offers various preparatory programmes. Our programmes are designed to provide the ideal study setting for the different needs of our students and combine intensive German language courses, preparatory courses for specific study fields and supporting courses about studying and living in Cottbus and Senftenberg.

ARCHITECTURE, CIVIL ENGINEERING AND URBAN PLANNING

	Language of instruction	Bachelor	Master	
Architecture	de	B.Sc.	M.Sc.**	
Building History and Art History	de	B.A.		
Civil Engineering	de	B.Sc.***	M.Sc.	☺
Climate-adapted Construction and Operation	de		M.Sc.	
Heritage Conservation and Site Management	en		M.A.**	🌐
Urban and Regional Planning	de		M.Sc.	
Urban Design and Sustainable Revitalization *	en		M.Sc.**	🌐
Urban Planning and Urban Development	de	B.Sc.		
World Heritage Studies	en		M.A.**	🌐







HUMAN SCIENCES

	Language of instruction	Bachelor	Master	
Instrumental and Vocal Performance and Teaching	de	B.A.		
Midwifery Science	de	B.Sc.***		☺
Nursing Science	de	B.Sc.***		☺
Social Work	de (de - pl ro)	B.A.**	M.A.	
Teaching Degree for Primary Education	de	B.Ed.		
Therapy Science	de	B.Sc.***		☺
Vocational Education in Healthcare Professions	de		M.A.	



MECHANICAL ENGINEERING, ELECTRICAL AND ENERGY SYSTEMS

	Language of instruction	Bachelor	Master	
Business Administration and Engineering	de	B.Sc.***	M.Sc.	☺
Electrical Engineering	de	B.Sc.***	M.Sc. · M.Eng.	☺
Energy Technology and Economics	de	B.Sc.	M.Sc.	
Hybrid Electric Propulsion Technology *	en		M.Sc.	🌐
Lightweight and Material Technology	de		M.Sc.***	☺
Mechanical Engineering	de	B.Sc.***	M.Sc.***	☺
Medical Engineering	de	B.Eng.***		☺
Power Engineering	en		M.Sc.**	🌐
Transfers-Fluids-Materials in Aeronautical and Space Applications	en		M.Sc.**	🌐



STEM – MATHEMATICS, COMPUTER SCIENCE, PHYSICS, INFORMATION TECHNOLOGY

	Language of instruction	Bachelor	Master	
Applied Mathematics	de		M.Sc.	
Artificial Intelligence	en		M.Sc.	
Artificial Intelligence	de	B.Sc.		
Artificial Intelligence Engineering	de	B.Sc.	M.Sc.	
Computer Science	de	B.Sc.	M.Sc.	
Cyber Security	en		M.Sc.	
Economathematics	de	B.Sc.***		
Mathematics	de	B.Sc.***		
Medical Informatics	de	B.Sc.		
Micro- and Nanoelectronics	en		M.Sc.	
Physics	de	B.Sc.		
Physics	en		M.Sc.	

ENVIRONMENTAL AND NATURAL SCIENCES

	Language of instruction	Bachelor	Master	
Biotechnology	de	B.Sc.**		
Biotechnology	en		M.Sc.	
Environmental and Resource Management	en	B.Sc.	M.Sc.**	
Environmental Engineering	de	B.Sc.	M.Sc.	
Forensic Sciences and Engineering	de		M.Sc.	
Land Use and Water Management	de	B.Sc.		
Natural and Applied Sciences	de	B.Sc.		

BUSINESS, LAW AND SOCIAL SCIENCES

	Language of instruction	Bachelor	Master	
Business Administration	de	B.Sc.***	M.Sc.	
Business Law for Technology Companies	de		M.B.L.	
Business Informatics *	de	B.Sc.		
Digital Societies	de	B.A.		
Transformation Studies *	en		M.A.	

* subject to approval by the Ministry of Science, Research and Cultural Affairs of the State of Brandenburg

** study programmes partly optional with degree in cooperation with universities in other countries

*** dual study programme

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