Technische Universität Braunschweig

A look at

TU Braunschweig

Photo credit: Simone Fürst/TU Braunschweig

www.tu-braunschweig.de

Our University

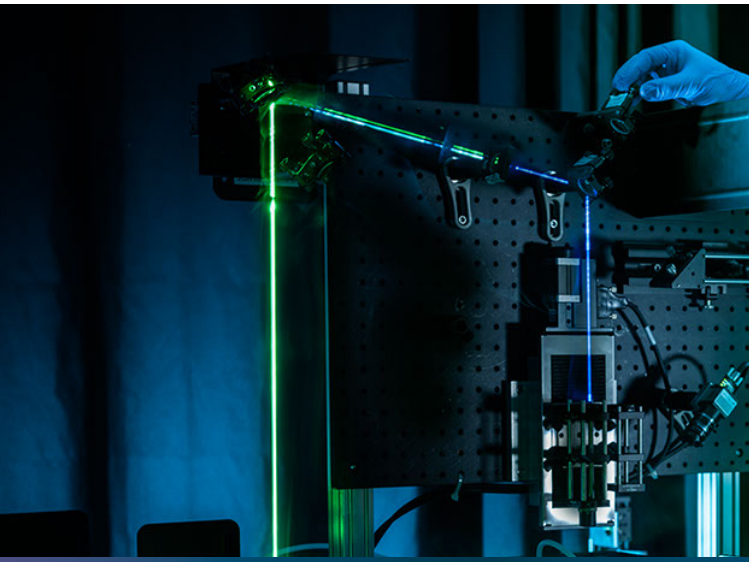
At Technische Universität Braunschweig we live up to our standard as an open-minded and international university into practice. We are proud to be one of the leading universities of technology in Germany and a member of TU9 (German Universities of Technology e. V.).

Social responsibility
We always think about technical innovations and social progress in terms of people. We ask ourselves: What are the social consequences of our teaching and research? And what impetus can society, on the other hand, give to teaching and research?

Future-oriented and creative degree programmes
We combine the competences of engineering and natural sciences with those of economics, social sciences, humanities and educational sciences in order to find sustainable solutions for the global challenges of today and tomorrow.

Inspiring research environment
Our university is located in the heart of Europe's most research-intensive region. Our students have the opportunity to conduct research inside and outside of university while they are studying. To this end, we maintain interdisciplinary partnerships with the Helmholtz Centre, the Fraunhofer Institutes, the Leibniz Institutes, federal research institutions, museums and large industrial companies.

By the way: Braunschweig is a city that attracts young people in particular – a so-called "swarm city". A strong research and science landscape, good jobs, a young cultural scene and old parks make Braunschweig a good place to live for its more than 250,000 inhabitants.



You are welcome
We work with 310 partner universities worldwide: in EU countries, the USA, Canada, South America, China, Japan and Singapore. In addition to around 3,000 students from 110 countries, we also welcome academics from all over the world.

Campus life
With our around 16,000 students and 3,800 staff, we are large enough for international research and teaching, but not too large for personal interaction between staff and students. In addition to an active campus life, the city of Braunschweig has a lot to offer: Water sports on the River Oker, cafés, restaurants and a young cultural and pub scene.

The best jobs on your doorstep
We offer the best opportunities: those who study with us can stay. Over over eight percent of jobs in Braunschweig are in scientific and technical academic professions. That is more than in any other region in Germany.

Photo credit:Jan Kosan/TU Braunschweig

Shaping tomorrow sustainably
With the University Development 2030, TU Braunschweig is on its way to excellence in a comprehensive process. What is special about our university concept is that it comprises four performance dimensions on which the university of tomorrow is based and four strategic overarching themes, which are reflected in all performance dimensions.

Our performance dimensions:
Research, Study & Teaching, Transfer,
and Governance & Administration

Our strategic overarching themes:
Digitalisation, Internationalisation,
Equality and Diversity, and Knowledge Exchange

We have a responsibility to think comprehensively about sustainability in education. For us this means that our actions are ecologically, economically and socially oriented towards the well-being of future generations.

Study and Teaching

Studying at our university – means being trained to think and act in a future oriented way and to play an actibe role in shaping a constantly changing society and working world. Studying in Braunschweig mean learning through research, exchanging ideas with other students, setting up joint scientific projects and actively sharing knowledge. Studying and teaching with us – means learning and teaching with innovative methods. As a university of technology, we offer, among other things:

Interdisciplinary Degree Programmes
- Environmental Sciences
- Biochemical, Chemical and Pharmaceutical Engineering
- Sustainable Energy Engineering
- Transportation Engineering

Traditional degree programmes
- Engineering
- Natural Sciences
- Humanities and Educational Sciences
- Social Sciences

Degree programmes taught in English
- Sustainable Engineering of Products and Processes
- Data Science
- Computational Sciences in Engineering
- Solar System Physics
- Quantum Technologies in Electrical and Computer Engineering

Fostering synergies is part of our scientific mission. For example, in cooperation with the renowned Physikalisch-Technische Bundesanstalt we offer a master's programme in metrology and measurement technology that is unique in Germany.

But there is also a lot to learn about everyday university life. Our Study Service Centre can help with everything from enrolment to academic and social advice to international affairs.

Research

We are aware of the great social responsibility that science has for present and future generations. That is why we have been working for years on the issues of our future in interdisciplinary and cross-faculty research centres.

Our core research areas
- Mobility
- Metrology
- Engineering for Health – from Molecules to Processes
- Future City

Mobility
We research mobility—from cars to aerospace to rail transport. Our vision is of a future where everyone drives and flies more safely and with lower emissions.
Research centres: Aeronautics Research Centre Niedersachsen (NFL), Automotive Research Centre Niedersachsen (NFF), Open Hybrid LabFactory (OHLF), and Battery LabFactory (BLB)
Cluster of Excellence SE²A: The **Cluster of Excellence SE²A – Sustainable and Energy-Efficient Aviation** is to enable ecologically sustainable and at the same time efficient aircraft and air transport systems.

Photo credit: Frank Bierstedt/TU Braunschweig

Metrology
Metrology is the science of measuring things. The **research centre Emerging Nanometrology (LENA)** for example is working with the **Physikalisch-Technische Bundesanstalt** on technologies based on structures that are a millionth of a millimetre in size.
Cluster of Excellence QuantumFrontiers: Unprecedented measuring precision in the smallest dimensions: The **Cluster of Excellence QuantumFrontiers** brings together top metrology researchers in the Hanover-Braunschweig region to push the boundaries of what can be measured.
With our core research area of metrology, the Cluster of Excellence and LENA, we are playing a key role in the Quantum Valley Lower Saxony alliance, which is building a quantum computer, that is scheduled to go into operation in 2025.

Engineering for Health – from Molecules to Processes
Pharmacy and the engineering work together at a high level to research effective medicines. This core research area covers the entire value chain, from understanding the molecular basis of infection, potential drug targets, drug development, production and formulation to packaging.
Research centres: The **Braunschweig Integrated Centre of System Biology (BRICS)** combines the natural sciences, engineering and computer science. The **Center of Pharmaceutical Engineering (PVZ)** works the development of tailor-made affordable medicines.

Future City
Globalisation, urbanisation, resource depletion and climate change. How do we meet the future needs of people living in cities? Our research seeks to understand cities comprehensively: historically, literarily, philosophically, socially and ecologically. With **ZeBra**, we have a **centre for fire safety research** that is unique in Europe, investigating the fire behaviour of environmentally friendly products in order to make innovative construction methods safer in the energy transition safer.

Transfer und cooperation

In the Transfer- und Kooperationshaus (TuK-Haus) we bundle services for knowledge and technology transfer as well as relationship management and work in a network with other universities, research institutions, companies as well as state-wide and city institutions.

In the TransferHub, in cooperation with the Ostfalia University of Applied Sciences, we offer services especially for small and medium-sized enterprises (SMEs). We are also in the process of setting up structures for the social engagement of students and early career researchers, especially with a focus on social innovation.

Ideas lead to spin-offs
At the TuK-Haus and the Entrepreneurship Hub, we work together with the Ostfalia University of Applied Sciences to help ideas and research results find their way into application. The Entrepreneurship Hub and TuK-Haus are the driving force behind spin-offs and pave the way for the region's young start-up scene.

Knowledge Exchange
We research and act transparently and purposefully for global challenges and the world of tomorrow. Knowledge transfer is firmly anchored in our University Development Initiative 2030. We are convinced that this will enable us to fulfil our social mission as a university of the future.

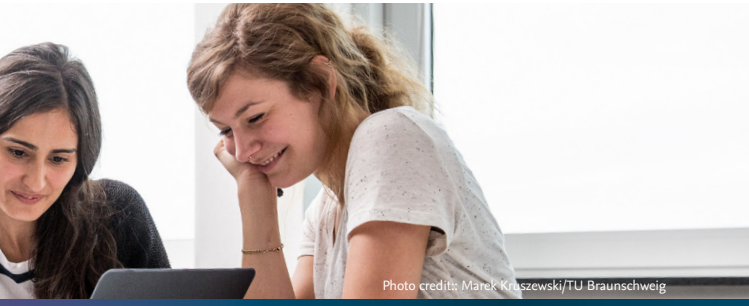


Photo credit: Marek Kruszewski/TU Braunschweig

Equality and diversity

The world is colourful
And so are we. As a cosmopolitan university, we are committed to equal opportunities for all. Everyone is allowed to live and show their individuality. We celebrate diversity on TU **Diversity Day** and promote respectful interaction.

For more diversity
We are committed to social diversity and the reduction of inequalities. With our **focus theme 2023:** *queer@TU*, we show through events and projects how diversity belongs in our everyday lives and make queer diversity visible.

Living equal opportunities
Whether you are a staff member or a student, any time is a good time for family planning. We support family-friendly working and studying conditions and stand for a family-friendly university – emphasising our community spirit.

University development – our responsibility
We oppose discrimination. Our university should be a place where as many opportunities as possible are open to everyone. That is why we have made equality and diversity central elements of our University Development Concept 2030. We recognise the diversity and uniqueness of each individual.

Campus Life

For us, a vibrant campus is as much a part of studying as the River Oker is to Braunschweig. Whether it's culture, sports or community projects – there's a lot going on here.

Sports. With over 160 courses, around 100 sports and a campus gym, there are few excuses not to get active. Our **Health4You** programme offers students courses in stress management, nutrition and mental strategies.

Music and culture. Music lovers will find a university orchestra, a big band, the TU Choir and the ‚AkaBlas' brass band. Those who feel more at home on or behind the stage can join the TUBS Players.

Student projects. The ‚Sandkasten' platform, seeks and finds volunteers for new ideas and projects, such as the weekly farmers' market on the University Square, the campus cinema and countless others.

Green Office. Our Green Office promotes awareness of sustainability in study and teaching. Our TUmorrow Days are three days dedicated sustainability and campus life.

The **Carolo-Wilhelmina Foundation** supports students and improves our teaching and study conditions. Thanks to other supporters, we are able to support students with **Deutschlandstipendium** scholarships and award **numerous prizes to academics in the qualification phase.**

TU figures

16,077 Students

87 Degree programmes

417.4 € million overall budget

3,162 Graduates

3,238 First year students

132.6 € million in external funding

6,848 Female students

6 Faculties

3,237 International Students

2,060 Researchers

242 Professors

3,795 University staff

270 Doctorates

Our university – science with a long tradition

Historical foundations
Our university looks back on centuries of history: Duke Carl I of Braunschweig-Lüneburg founded the Collegium Carolinum in 1745 as a modern educational institution between school, academy and university. With a mixture of traditional humanistic education, technical subjects and modern applied sciences, the Collegium became the foundation of today's Braunschweig as a centre of science. In 1878, under Duke Wilhelm von Braunschweig, the Herzoglich Technische Hochschule Carolo-Wilhelmina, with its impressive main building on today's central campus, was founded and renamed Technische Universität in 1968.

Global Alumni Network
Our alumnae and alumni are shaping the future all over the world. What they have in common are very special memories of their alma mater, inspiring professors, student parties and the traditional city of Braunschweig.

We want to be a place where every one of our alumni wants to come back to, even after their studies: to get new impulses or to exchange knowledge and experiences.

Stay in touch with us
Would you like to hold a lecture for students, get involved with the university or network with former fellow students?
The TU Braunschweig Alumni Team can help you:
alumni@tu-braunschweig.de

Imprint: Technische Universität Braunschweig, Communications and Press Service, Universitätsplatz 2, 38106 Braunschweig, Phone: +49 531 391-4125, presse@tu-braunschweig.de, status: 11/2023