



**UNIVERSITY
OF WEST
BOHEMIA**

Who are we?

History

- 1948** The Pedagogical Faculty was founded.
- 1949** The emergence of the Institute of Mechanical and Electrical Engineering (VŠSE).
- 1960** VŠSE: the founding of the Faculty of Mechanical Engineering and the Faculty of Electrical Engineering.
- 1990** VŠSE: The founding of the Faculty of Economics and the Faculty of Applied Sciences.



History

28. 9. 1991 The University of West Bohemia was founded

- ▶ as a result of a merger of VŠSE with the Faculty of Education.
- ▶ At the time of the founding, the university had five faculties.
- ▶ Today, the university has nine faculties and two independent university institutes.
- ▶ In the academic year 2021/2022 UWB celebrates 30 years since its founding.



**ZÁPADOČESKÁ
UNIVERZITA
V PLZNI**



Present

- ▶ The university draws on its tradition of technical specializations that are complemented and enriched by disciplines from the humanities, arts and health care.
- ▶ Special emphasis is placed on the quality and the high degree of expertise of its graduates.
- ▶ Excellent basic, applied and contractual research is carried out, in close collaboration with industrial partners.
- ▶ The university is part of the European area of higher education.



Faculties and institutes of higher education

- ▶ Faculty of Applied Sciences
- ▶ Ladislav Sutnar Faculty of Design and Art
- ▶ Faculty of Economics
- ▶ Faculty of Electrical Engineering
- ▶ Faculty of Philosophy and Arts
- ▶ Faculty of Education
- ▶ Faculty of Law
- ▶ Faculty of Mechanical Engineering
- ▶ Faculty of Health Care Studies

- ▶ Institute of Applied Language Studies
- ▶ New Technologies – Research Centre



What do we offer?

Studies

- ▶ We educate about **11 033** students in Bachelor's, Master's and doctoral programmes in both regular full-time and distance study programmes.
- ▶ We offer **302** study programmes.
- ▶ The credit system ensures compatibility of the UWB education system with the requirements of the European Credit Transfer System and the possibility of engaging in interdisciplinary study programmes across faculties.
- ▶ The **ECTS Label** (European Credit Transfer and Accumulation System) and **Diploma Supplement** certificates confirm that our learning environment fully complies with European standards.



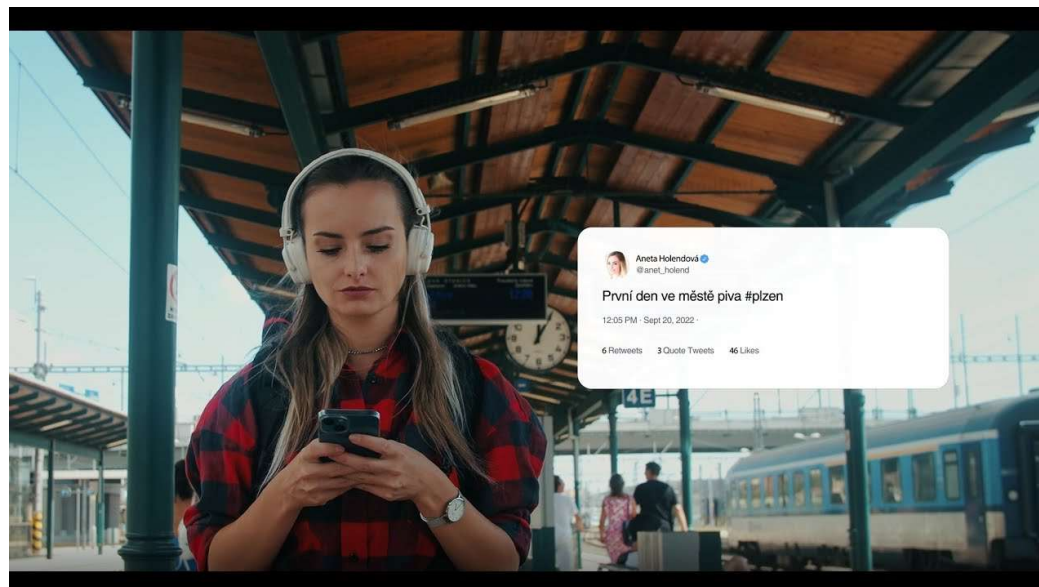
Admissions

- ▶ We offer a simple and convenient application process using an electronic application form.
- ▶ In 2021, we received **14 567** applications for study.
- ▶ Entrance exams are held in the form of a written tests, or possibly SCIO tests.
- ▶ In certain disciplines, successfully passing an oral or aptitude test is required for admission.



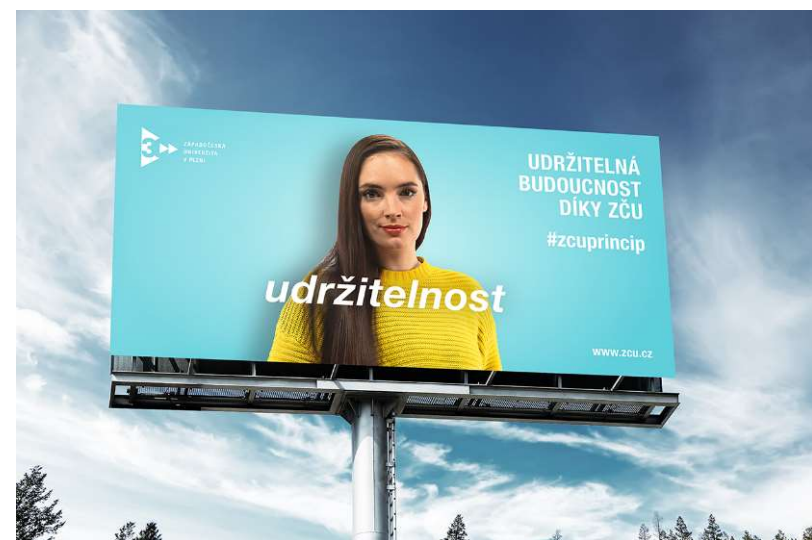
Applicants

- ▶ December 2022: a video spot for study applicants charts the search for a place in life and self-discovery. The University of West Bohemia presents itself as an ideal space for inspiration, broadening horizons and moving forward.
- ▶ Motto: UWB – forever a part of you
- ▶ The campaign was created in cooperation with the Pilsen City Council. The spot represents not only the university, but also Pilsen as a university city with a rich history, culture, entertainment and sports.



The **UWB Principle** campaign

- ▶ Autumn 2021: The **UWB Principle** campaign, which was based on the ideas of the UWB Strategic Intent for the Period 2021-2025, worked with concepts of interdisciplinarity and sustainability. This campaign introduced UWB to applicants as a university which teaches students to know and think in context, which creates space for interdisciplinary cooperation and allows students and graduates to participate in projects contributing to sustainable development. The campaign's title and motto are the following: “Choose UWB”.
- ▶ Motto: In order to make the future of the world sustainable, we need to educate specialists with interdisciplinary knowledge and skills.



Graduates

- ▶ In the academic year 2020/2021, **2,040** graduates successfully completed their studies.
- ▶ UWB graduates do not have difficulties finding employment. This is especially true for graduates in technical fields.
- ▶ The university has an active Alumni Club (3,744 members), which organizes a biennial Festival of Graduates since 2010. In November 2021, the 6th Festival was held, on the occasion of the of the 30th anniversary of UWB.



Graduates

- ▶ June 2018 and 2019: a campaign aimed at the graduates to make them join the Alumni Club (outdoor – advertisements at bus and tram stops in the city centre, social networks)



**We cooperate
with universities
worldwide**

International relations

Inter-institutional agreements – Erasmus+ programme

- ▶ 28 countries of the EU + Norway, Turkey, Macedonia
- ▶ 358 partner universities
- ▶ 562 agreements on cooperation

Other Memoranda of Understanding

- ▶ 52 countries worldwide
- ▶ 161 partner universities
- ▶ 231 agreements on cooperation

In 2021: **275** UWB students study abroad /
301 international students study at UWB



**We pay attention
to lifelong learning**

Lifelong learning

Department of Lifelong Learning – activities during 2020:

- ▶ 103 webinars, full-time courses and on-line courses for a total of 1,049 participants
- ▶ professional conference for teachers Učitel IN (280 participants)
- ▶ regional competitions for secondary school students on understanding English texts Kontext and in mathematics mKontext

University of the Third Age

- ▶ 19 branches in the Pilsen, Karlovy Vary and South Bohemian regions
- ▶ 1,904 participants in the academic year 2021/2022

Lifelong Learning courses are offered through the faculties and other constituent parts of the university.



**We are a barrier-free
university**

Studies with disability

- ▶ We provide equal opportunities to all students.
- ▶ Our buildings are wheelchair accessible.
- ▶ As part of The Information and Counselling Centre of UWB, there is an **Advisory and Support Services Centre** dedicated to students with special educational needs.
- ▶ We provide personal, social, legal and academic counseling, assistance services, and the possibility of renting compensatory aids.



We care about students

Student facilities

- ▶ 10 student dormitories in Pilsen with a total capacity of 2,568 beds.
- ▶ 2 university cafeterias, 3 snack bars, 4 cafés.
- ▶ 5 branches of the University Library.
- ▶ Modern facilities available in the main library on the university campus in Bory; individual and group study rooms.
- ▶ The Kulturka Club and Co-Working Centre – a support facility available to students in the city centre.
- ▶ Družba – The University Cafe for the academic community and general public supporting socially and ecologically responsible businesses.
- ▶ A wide variety of sports and sports facilities; sports equipment for hire.



We are a research university

Research and development

Popularisation of science

- ▶ Science and Technology Days (the 17th anniversary in 2022)
- ▶ The festival of science European Researchers' Night
- ▶ Summer schools, Children's University and activity camps
- ▶ Olympic games of technology and thematic days (e.g. A Day with Physics)
- ▶ Cooperation with the Techmania Science Centre

Over 70 scientific research and development teams.

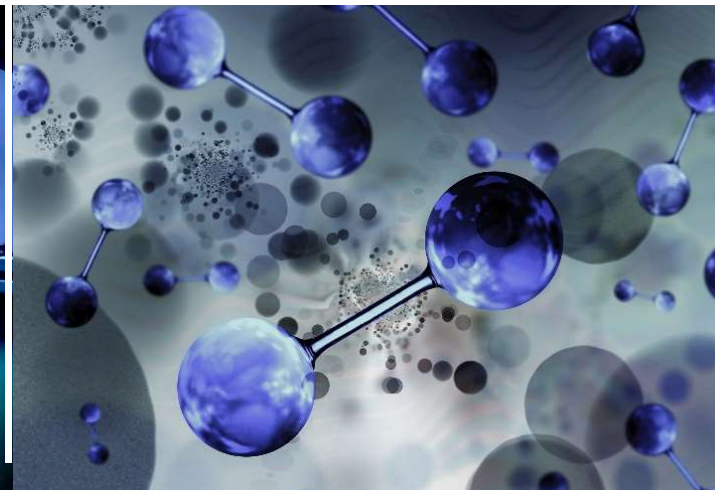
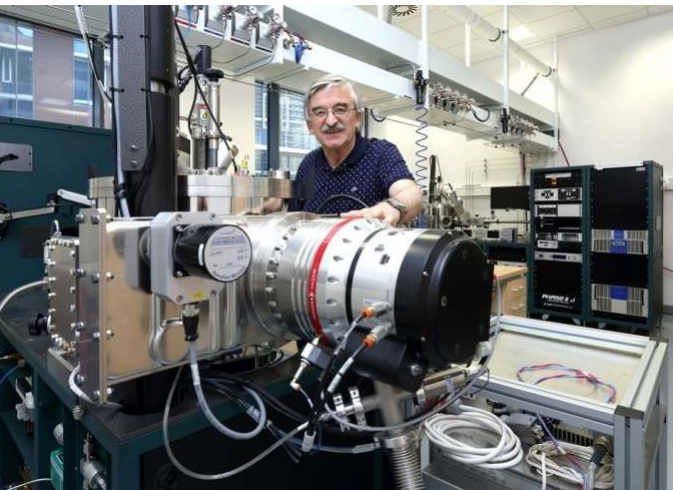
The University of West Bohemia received the **HR Excellence in Research Award**, which demonstrates that it is a trusted employer who complies with high European requirements on in relation to human resources.



Research and development

Achievements in the field of applied research and collaboration with industrial partners

- ▶ We focus on the development of so-called **smart windows** with thermochromic films which regulate the passage of solar radiation in relation to temperature. This phenomenon radically transforms the use of air conditioning in buildings and cars.
- ▶ We deal with technologies for green energy sources. For example, we are involved in the European HIGREEW project, which aims to develop a low-cost **redox flow battery** with water-based organic electrolytes that will be environmentally friendly, have high energy and power density, and at the same time have maximum lifetime and efficiency at minimum cost.
- ▶ Our scientists are focused on the issue of **hydrogen storage** and are developing a material that will be able to absorb hydrogen under the most favourable conditions.



Achievements in the field of applied research and collaboration with industrial partners

- ▶ We cooperate with Czech Television on **automatic subtitling** of live television broadcasts for the deaf.
- ▶ We are involved in the development of a software which **automatically generates news**. The system is being tested by the Czech News Agency and by the Czech Television news department. Currently, it is used by the Prague Stock Exchange. The software significantly speeds up the publishing of news and enables journalists to create content with added value.
- ▶ We cooperate **with the Czech National Marrow Donor Registry** and with the **Bone Marrow Transplant Foundation**. Our researchers are engaged in the development of methods and tools for clinical research and practice in the field of haemato-oncology. Moreover, they focus on the development of diagnostic technologies enabling specific measurements of leukaemia cells.



Achievements in the field of applied research and collaboration with industrial partners

- ▶ We deal with additive technologies. We have one of the most modern technologies in the field of metal printing. Our experts have developed a patent-protected **bar tool – Kraken – for cutting difficult-to-machine materials**. Its design brings significant savings in weight while maintaining stiffness. Moreover, it uses a revolutionary method for the supply of coolant to the front and back of the tool based on a system of internal canals.
- ▶ In collaboration with industry partners, we have developed the **smartPRO smart firefighting suit**, which can measure the temperature on the surface and inside the garment, is equipped with active lighting and allows the firefighter to summon help in the event of danger. Smart suits with active protection have been used in the field since 2022.

We have obtained **73** patents in the Czech Republic, **7** European patents and **42** patents in the USA, out of which last year **9** in the Czech Republic and **2** in Europe.



Research centres

NTIS New Technologies for the Information Society

RICE Research and Innovation Centre for Electrical Engineering

RTI Regional Technological Institute

- ▶ New research centres built between 2010–2014 with EU support from the operational programme Research and Development for Innovations.

NTC New Technologies – Research Centre

- ▶ An independent university institute established in 2000.



Research centres

We are focused on research, experimental development and innovations

- ▶ Materials research
- ▶ Sustainable power production
- ▶ Transportation systems
- ▶ Industrial technologies
- ▶ Control systems
- ▶ Informatics and Cybernetics
- ▶ Bioengineering



Research centres

Biggest achievements

- ▶ Experts from the New Technologies for the Information Society centre (NTIS) developed the software **application Lisa** (Liver Surgery Analyzer), which serves as a platform for research and treatment of liver cancer. Thanks to this application, it is possible to determine the size of the residual liver volume after tumour surgery and adjust the treatment strategy.
- ▶ Experts from the Regional Innovation Centre for Electrical Engineering (RICE) have developed a **unique technology for separating plastics**. It is an energy-saving electrostatic separation process that sorts plastic pulp with up to 99% purity. The high-quality separated plastic can then be reused.
- ▶ A team of scientists from the New Technologies for the Information Society centre (NTIS) developed a **speech system** which may help people who have undergone some operation on their vocal cords to communicate using their own voice. Thanks to this system, patients do not lose their voice identity.



Research centres

Biggest achievements

- ▶ Experts from the New Technologies Research Centre (NTC) tested the possibilities of the **lossfree transmission of an electrical signal**, which can be used, for example, in quantum computer processors. Experimental work dealing with the characterization of properties of so-called topological insulators, i.e. materials that conduct an electric current only on the surface and otherwise behave as insulators, was published in the journal Nature in December 2019.
- ▶ Our scientists developed a system that helps people with limited mobility to express their basic needs and to use the machines in their household. The system is based on **brain wave scanning**. By concentrating on a particular symbol on a computer screen, it is possible to control various household appliances.
- ▶ A team of scientists from the RICE Research Centre has developed a **unique system for compensating for ground faults**, which is a major step towards improving the reliability and security of electricity supply. Protected by two European patents, the technology won the GOLDEN AMPER Award for the exhibit providing the greatest benefit at the AMPER International Fair in May 2022.



We do not live only for ourselves

The third role

- ▶ In the city centre of Pilsen, we established **the Ladislav Sutnar Gallery** which presents some of the most interesting exhibits from the world of art, especially from the world of contemporary design and applied arts. The gallery hosts exhibitions created by local and visiting professors and students and acquaints the public with the creations of international artists, designers and institutions.
- ▶ We run **a training and recreation centre in Nečtiny castle**. Participants in conferences, school trips and corporate events find a quiet place here, without tourists. In addition, the surroundings offer a network of interesting cycle paths, for example, with a Baroque theme. Pedal bikes and electric bikes can be rented directly at the castle.
- ▶ For 27 years we have been organizing **a Job Fair**, which is the largest trade fair of this kind in the Czech Republic (in 2022: **120** exhibitors, over **4,000** visitors).



UWB and its future

Visions

- ▶ **To educate young people so that they understand the wider context of the 21st century world and can themselves make a significant contribution to its positive and sustainable development.**
- ▶ We foster interdisciplinarity in education and creative activities. We have the advantage of a symbiosis between the technical sciences and the humanities: humanities and the artistic disciplines bring a human dimension to new technologies.
- ▶ We place emphasis on linking education and creative activities with their applications. We ensure that our study programmes are in line with the requirements of students' professional practice and development trends.
- ▶ We intensively develop international cooperation.
- ▶ We are an accelerator of the region's economic growth.



An aerial photograph of a university campus, rendered in a monochromatic blue color. The image shows various academic buildings, parking lots, and green spaces. The text "Thanks for your attention." is overlaid in the center in a white, bold, sans-serif font.

Thanks for your attention.