

Wrocław University of Science and Technology





HR EXCELLENCE IN RESEARCH







# Wrocław University of Science and Technology

Today's Wrocław University of Science and Technology is the heir to the material legacy of the German Königliche Technische Hochschule Breslau and the intellectual and research traditions of the Lviv University of Technology.

### The university is using its current name since 1945.

It was established and organised by scientists from Lviv and Warsaw. Since the very beginning of its existence, it has been an important centre of technical education.

### Today it is one the best technical universities in Poland

21 498 students study here under the guidance
 of 2 306 academic teachers, at 14 Faculties in Wrocław
 and 3 branches in Jelenia Gora, Legnica, Walbrzych.











## Mission



Wrocław University of Science and Technology (Wrocław Tech) is an autonomous university, a research institution of a university type. Its mission is to shape creative, critical and tolerant personalities of students and PhD students, also to set directions for the development of science and technology.

The university carries out its public mission through invention and innovation, sharing knowledge, keeping the highest scientific research standards and quality of education, combine with the freedom of criticism and respect for the truth.

As an academic community, Wrocław University of Science and Technology, cherishes academic values and traditions, versatile cooperation with other universities and strives to secure a prominent position among European and world universities.



## **Doctors Honoris Causa**

José Manuel Barroso

Daniel Józef Bem

Horst Berthold

**Eckhard Beyer** 

Georgij Konstantynowicz

Boreskow

Andrzej Burghardt

Philippe Busquin

Jerzy Buzek

**Gabriel Crean** 

Eugeniusz Dembicki

Georgij Iwanowicz Denisenko

Karel Duŝek

Rafał Dutkiewicz

**Kurt Feser** 

Alfred Forchel

Elbert Kirtley Fretwell

Kardynał Henryk Gulbinowicz

Henryk Hawrylak

Stanisław Hückel

Giennadij Aleksiejewicz Jagodin

Andrzej Jellonek

Bogusława Jeżowska--Trzebiatowska Moisey I. Kaganov

Alan R. Katritzky

Igor Ignacy Kisiel

Joseph Klafter

Jan Kmita

Stanisław Kulczyński

Krzysztof Kurzydłowski

Philippe Lebrun

Stanisław Lem

Jerzy Leszczyński

Nikołaj Nikołajewicz Malinin

Marja Makarow

Achim Mehlhorn

Jean Meinnel

Angela Merkel

Anatolij Nikołajewicz

Minkiewicz

Kazuo Nakamoto

Reimund Neugebauer

Jean Nougaro

Volodymir V. Panasyuk

Zdzisław J. Pręgowski

Ilya Prigogine

Günter Pritschow

Bengt Ranby

Błażej Roga

Jurij Rudawski

Wacław Franciszek Sierpiński

Jerzy Ignacy Skowroński

Dionizy Smoleński

Joachim Klaus Strzodka

Frans Louis H. M. Stumpers

Karol Széchy

Zygmunt Szparkowski

Władysław Ślebodziński

Ryszard Tadeusiewicz

Hamadoun I. Touré

Jan Trojak

Włodzimierz Trzebiatowski

Kazimierz Urbanik

Zenon Wiłun

Andrzej Wiszniewski

Wojciech Witkiewicz

Władysław Karol Włosiński

Michel Virlogeux



**Michel Virlogeux**, year of posting: 2022, professor at École Nationale des Ponts et Chaussées



**Wojciech Witkiewicz**, year of posting: 2017, professor of medical sciences, director of the Provincial Specialist Hospital - Research and Development Center in Wrocław, president of the Polish Society of Robotic Surgery; specialization: vascular surgery, angiology, transplantation



# **Figures**

FIELDS OF STUDY	70
STUDENTS	20 725
DOCTORAL STUDENTS	773

ACADEMIC STAFF	2 306
PROFESSORS	204
WITH THE DEGREE OF HABILITATED DOCTOR	402
PHD HOLDERS	1 306





# Wrocław University Science and Technology in the rankings

## **Perspektywy University Ranking 2023**

- 8<sup>th</sup> place in the general ranking of universities
- 4<sup>th</sup> place ng Polish technical universities





## **Global Ranking of Academic Subjects 2023**

Academic Subjects: award in one field

Mechanical Engineering



## **QS Europe University Rankings 2024**

**Regional Rankings** 

- 7<sup>th</sup> place among Polish universities
- 25<sup>th</sup> place in QS Europe University Rankings Eastern Europe







## **Fields**

Wrocław University of Science and Technology conducts research in the following fields of engineering and technical, exact and natural, social sciences and medical and health sciences:

- Architecture and Urban Planning
- Automation, Electronics, Electrical Engineering and Space Technologies
- Information and Communication Technology
- Biomedical Engineering
- Chemical Engineering
- Civil Engineering, Geodesy and Transport
- Mechanical Engineering
- Materials Engineering
- Environmental Engineering, Mining and Energy
- Medical Sciences
- Mathematics
- Chemical Sciences
- Physical Sciences
- Management and Quality Studies





## **Faculties**

- Faculty of Architecture
- Faculty of Civil Engineering
- Faculty of Chemistry
- Faculty of Information and Communication Technology
- Faculty of Electrical Engineering
- Faculty of Geoengineering, Mining and Geology
- Faculty of Environmental Engineering
- Faculty of Management
- Faculty of Mechanical and Power Engineering
- Faculty of Mechanical Engineering
- Faculty of Fundamental Problems of Technology
- Faculty of Electronics, Photonics and Microsystems
- Faculty of Pure and Applied Mathematics
- Faculty of Medicine
- Wrocław Tech Branch in Jelenia Góra
- Wrocław Tech Branch in Wałbrzych
- Wrocław Tech Branch in Legnica

Since its very beginnings, WUST has aimed to deliver high quality education. Its multidisciplinary character goes beyond the traditional fields of engineering, interweaving technical, mathematical, natural and economic sciences with humanities.





## **Doctoral school**

The Wrocław University of Science and Technology Doctoral School began its operation on October 1, 2019. Candidates can take up education in one of thirteen disciplines:

#### Field of engineering and technical sciences

- Architecture and Urban Planning
- Automation, Electronics, Electrical Engineering and Space Technologies
- Information and Communication Technology
- Biomedical Engineering
- Chemical Engineering
- Civil Engineering, Geodesy and Transport
- Mechanical Engineering
- Materials Engineering
- Environmental Engineering, Mining and Energy

#### Field of exact and natural sciences

- Mathematics
- Chemical Sciences
- Physical Sciences

#### Field of social sciences

Management and Quality Studies





# **Education quality and accreditation**

#### **European Chemistry Thematic Network**

- Chemistry Doctorate Eurolabel Certification for studies in Chemical Engineering
- Eurobachelor Certification for studies in Chemistry and Industrial Analytics, Chemical Technology
- Euromaster Certification for studies in Chemistry and Chemical Technology

#### Science Evaluation Committee (KEN) discipline assessment 2017-2021:

#### Category A+:

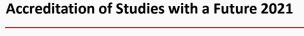
- Physical sciences
- Chemical sciences
- Mathematics
- Chemical engineering

#### Category A:

- Architecture and urban planning
- Automation, electronics and electrical engineering
- Technical informatics and telecommunications
- Biomedical engineering
- Civil engineering and transportation
- Mechanical engineering
- Material Engineering
- Environmental engineering, mining and energy
- Management and Quality Sciences

#### **European Consortium for Mathematics in Industry**

accreditation for II degree of education studies in Applied Mathematics



Management of first-cycle studies

#### **European Accreditation of Engineering Programmes**

- accreditation for studies in Electotechnics
- accreditation for studies in Civil Engineering
- accreditation for Biotechnology, Chemical and Process Engineering, Chemical Technology

#### **European University Association (EUA-IEP)**

accreditation for Wrocław University of Science and Technology

#### Association of Academic Centers for Teaching Foreign Languages (SERMO)

Foreign Language Center of Wrocław University of Science and Technology
 distinctive grade

#### IES and ICI international certificate for graduates

- accreditation for studies in Management
- accreditation for studies in Business Engineering

All graduates of the certified educational programs are entitled to receive the IES and ICI international certificates



## **HR Excellence in Research**

In June 2016 European Commission granted our University the logo "Human Resources Excellence in Research". The logo is given to those institutions that apply the principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers.



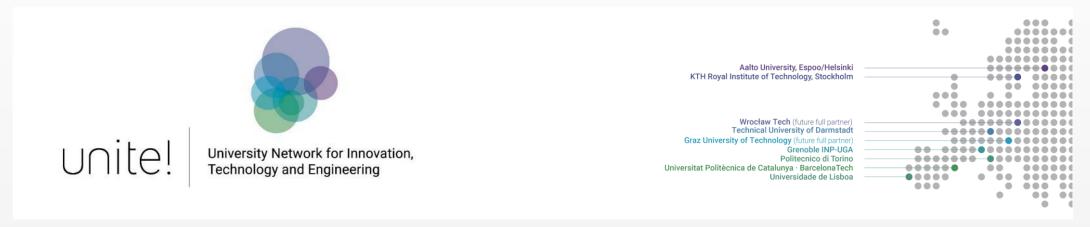
Logo "HR Excellence in Research" is awarded, among others, in international grant competitions of the European Commission, national grant competitions of the National Center for Science and the National Centre for Research and Development and competitions and funding programs of the Ministry of Science and Higher Education.

Logo "HR Excellence in Research" emphasises the Wrocław University of Science and Technology importance as an institution which creates the best working conditions for scientists, implementing research and scientific development in accordance with the European standards.





# University Network for Innovation, Technology and Engineering



In September 2022 Wrocław University of Science and Technology joined the prestigious European network of universities. The aim of this elite organization, uniting universities from nine EU countries, is to create a model of education that responds to the challenges of the modern world.

Unite! network was established in 2019 thanks to the initiative of the European Commission, assuming the creation of a European Education Zone by 2025. Currently in part of Unite! nine leading European universities enter. WUST is the first to represent in Unite! eastern part of the Old Continent.

The member universities focus on continuous improvement of the teaching process, development of joint research projects and a flexible study path, and combining science and humanities in the process of educating students.







# Research and teaching facilities

- 116 buildings with modern laboratories, libraries and multimedia teaching rooms
- 586 didactic laboratories
- **522** research laboratories
- 467 teaching rooms and lecture halls
- sports centre
- computer laboratories and reading rooms with 24h Internet connection







# **Current international agreements**

- Bilateral cooperation agreements inter-university and inter-faculty
  251 partners from 41 countries
- Bilateral student exchange agreements (student exchange)
  - **37** partners from **16** countries
- Double diploma agreements
  14 partners from 4 countries
- Agreements regarding academic mobility in the Erasmus + program
  650 active European agreements and 322 with partners from other countries of the world.

INTERNATIONALISATION	2023/2024
Foreign students on I and II study degree	1 376
Foreign students on III study degree and in Doctoral School	70
Incoming students including ERASMUS+	324
Students exchange including ERASMUS+	239





# **Program ERASMUS+**



## Participation of the WUST students and doc.

PROGRAM	2023/2024
Erasmus+ studies	239
Erasmus+ student internships	11
Erasmus+ short-term mobility	59
Erasmus+ graduate internships	13
Exchange	9
Double Diploma	8
TOGETHER	339

### **Arrivals of students and doctoral students**

Erasmus+ studies	2023/2024
Erasmus+ KA 131	204
Erasmus+ KA 171	1
Visiting Student	0
Exchange	18
Erasmus Mundus	23
Double Diploma	1
TOGETHER	247





# **Program ERASMUS+**



## **Staff arrivals**

PROGRAM	2023/2024
Erasmus+ KA103 (lectures)	3
Erasmus+ KA103 (training arrivals)	17
Erasmus+ KA107 (lectures)	0
Erasmus+ KA107 (training arrivals)	0
TOGETHER	20

## **Staff travels**

PROGRAM	2023/2024
Erasmus+ KA103 (wykłady)	4
Erasmus+ KA103 (wyjazdy szkoleniowe)	15
Erasmus+ KA107 (wykłady)	0
Erasmus+ KA103 (wyjazdy szkoleniowe)	0
TOGETHER	19







# Wrocław University of Science and Technology for the youth

- Open days
- Team programming contests
- Competition in maths and logic games
- Chemistry contest
- Young Researchers Academy
- Courses for candidates
- Cooperation with secondary schools
- Lower Silesian Festival of Science
- Polilab
- Studium talent





## **Student activities**

### 193 Scientific organizations

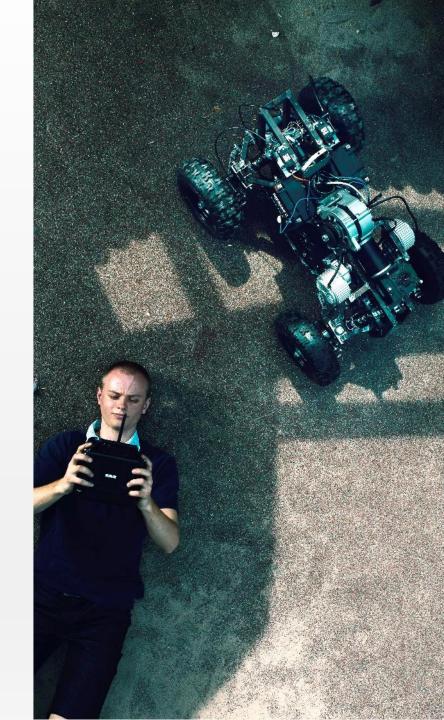
Among others: PWR Racing Team, PIRM Mobile Vehicles and Robots Scientific Circle, Students Scientific Society KoNaR, Academic Aviation Club, Bio-Top, ALLIN, Wireless Group, PWR Solar Boat Team, LabVIEW Fan Group

#### 29 Student associations

Among students' organizations, the ones with national or international span are the most distingushing and active: BEST Wrocław, AIESEC, NZS, IAESTE, SEP, Erasmus Student Network FSN.

#### 21 Student culture centres

Among others: POLITECHNIKA Film Discussion Club, Wrocław University of Science and Technology Academic Choir, BIG BAND music group, FOSA Academic Filmmakers Club, SpAF Association of Para-artistic Photography, University's Orchestra, STYK Students Television.





## **Modern University**

## **Prospective students:**

- on-line registration at: rekrutacja.pwr.edu.pl/en
- official website: pwr.edu.pl

### **Students:**

- electronic student ID
- electronic student record book
- cooperation with companies and institutions, opportunities for internships and trainings

## **Teaching:**

studying in foreign languages







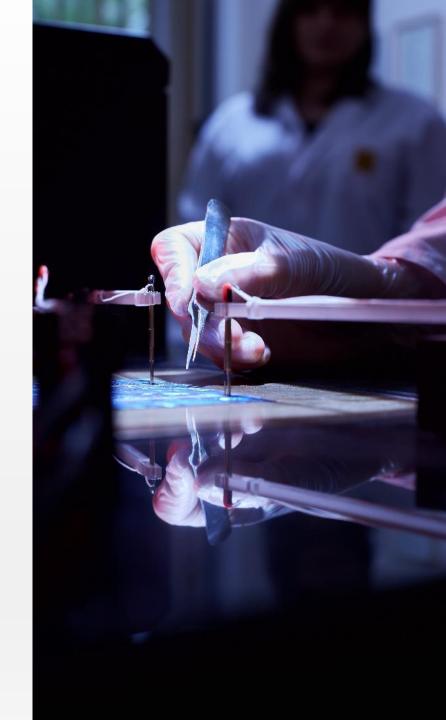
## Research

### Scientific research results

- 23 067 publications in journals on the ISI Master Journal List
- 21 285 publications in JCRI indexed journals
- 6 182 registered inventions, including utility models
- 2 780 patents obtained

#### **Commercialisation of research results:**

- hundreds of original technical solutions, research and technology methods used in industry
- numerous license agreements to use inventions





## **Cooperation with industry**











**TRAINING** 

**RESEARCH** 

**TECHNOLOGY** 

**EXPERTISE** 

Goals

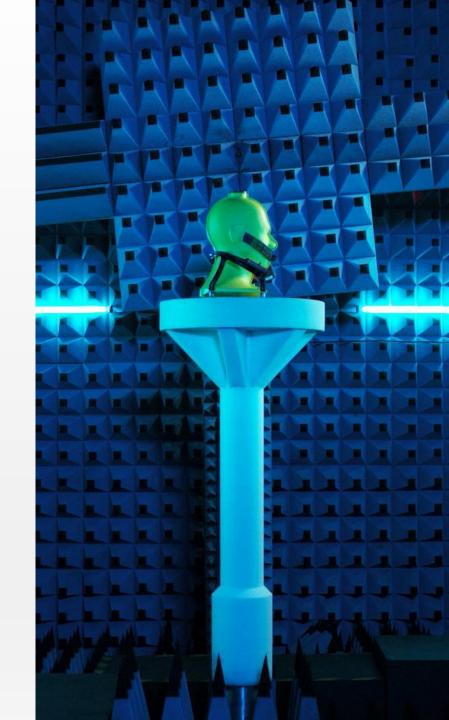
- joint research and implementation work in various industry sectors
- development of new technologies
- teaching and engineering staff; upgrading their professional skills
- cooperation on using research, teaching and training facilities
- opportunities for internships, student stays and diploma theses
- alumni career support
- development of academic entrepreneurship
- commercialization of research results
- preparation and implementation of projects financed from domestic and foreign funding
- promotion of modern technologies





## **Certified laboratories**

- Accredited Laboratory of Standards and Metrology of the Electromagnetic Field (research and calibration laboratory),
- Accredited Acoustics Testing Laboratory,
- Accredited Belt Transport Laboratory,
- Accredited Work Safety Laboratory,
- Accredited Testing Laboratory for Transport Infrastructure
  Facilities,
- Accredited Laboratory for Electromagnetic Compatibility,
- Accredited Laboratory of the Department of Machine Design and Testing,
- Accredited Chemical Laboratory for Multi-element Analyzes.

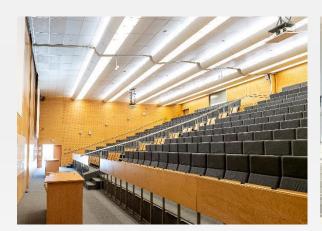




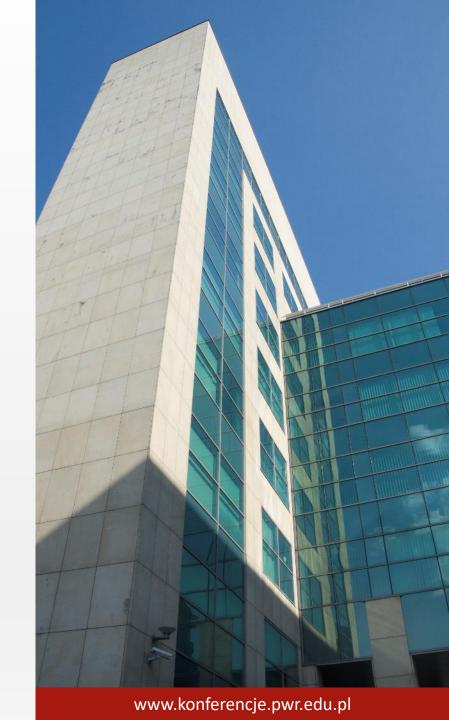
# The Wrocław University of Science and Technology Congress Centre

The Congress Centre comprises three conference halls with a total capacity of 620 seats. The centre can be divided into modules in a theatre-style arrangement, in the following ways: one hall with 620 seats, one hall with 320 seats, one hall with 300 seats, hall with 460 seats, 2 halls with 160 seats each.

- 3 conference hall+ 3 smaller seminar rooms
- Professional equipment, including a system for simultaneous translations
- Sound recording of the conference
- Wireless internet
- Variable lighting system
- Exhibition complex
- Professional event service









## Third generation

Third Generation Universities are the idea of a modern university which, in addition to teaching and research, also implements research results into the economy. These types of universities have developed technology transfer centers, business incubators and are conducive to the creation of specialized research groups, where English is the basic language of work.

Main goals of Wrocław University of Science and Technology as the Third Generation University:

- education
- research
- commercialization of knowledge
- cooperation with the region and the city.





# Strategy of Wrocław University of Science and Technology 2023-2030

#### Mission

Through research, teaching, and collaboration we inspire and support the development of individuals who, based on knowledge, ethical standards and displaying sensitivity to the needs of society and global challenges, shape the future with courage and responsibility.

#### **Vision**

 Vision As a European comprehensive technical university affirming freedom, truth, curiosity, and joy of science, we conduct interdisciplinary education and research in response to the aspirations and challenges of the society and economy.

#### **Values**

- Excellence in education, research and knowledge transfer, and in personal development of our community members.
- Collaboration understood as combining individual talents to achieve common goals, mutual support in achieving individual goals, and the University's cooperation with its environment.
- Openness to new ideas and challenges and in relation to University community members.





Wrocław University of Science and Technology









HR EXCELLENCE IN RESEARCH



# Thank you for your attention

T.I.M.E. Top International Managers in Engineering



More information: pwr.edu.pl/en