

Bialystok University of Technology
POLAND



ENERGY of the **people
place
future**

Białystok University of Technology

- the largest university of its kind in the north-eastern region of Poland
- dynamically developing institution
- 67-year-old experience in educating scientists and technologists
- established in 1949, nationalised in 1951, university status acquired in 1974

- Faculty of Architecture
- Faculty of Civil and Environmental Engineering
- Faculty of Electrical Engineering
- Faculty of Computer Science
- Faculty of Mechanical Engineering
- Faculty of Management
- Faculty of Forestry in Hajnówka

BUT Campus - energy from nature



Great university in a great city

BIALYSTOK

- biggest city in north-eastern Poland
- capital of Podlasie region
- about 300,000 inhabitants
- 188 km distance from Warsaw airport
- region called „Green Lungs of Poland”
– numerous areas of unique natural assets

The City of Bialystok is an **important academic centre with over 50 thousand students**. It is home to 3 major public higher education institutions: Bialystok University of Technology, University of Bialystok, Medical University of Bialystok as well as Warsaw Branches of Theatre Academy and Academy of Music. There are also a dozen non-public educational institutions in Bialystok.

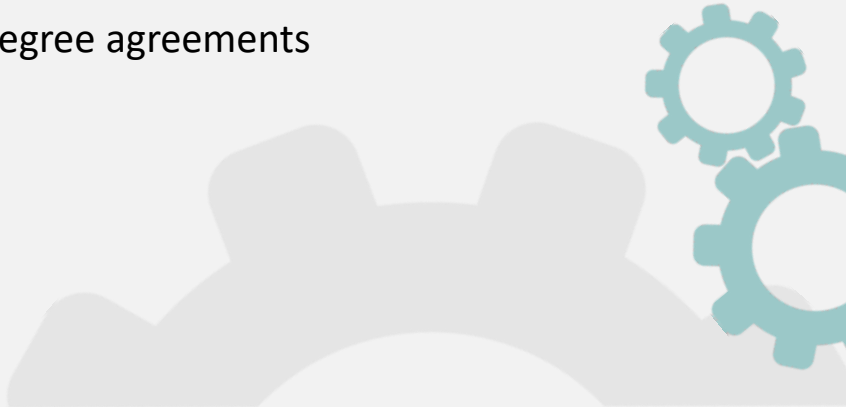


University in numbers

- academic degrees: licentiate, bachelor, master, doctorate
- 7 faculties
- 10 thous. students
- 680 academic teachers
- 27 first degree courses
- 17 second degree courses
- 11 rights to confer doctoral degrees
- 6 rights to confer post-doctoral degrees
- 114 bilateral agreements in scientific and educational cooperation with foreign partners
- over 150 Erasmus bilateral agreements
- 9 double-degree agreements



*Centre for Modern Education
– the seat of the library*



Rights to confer scientific degrees

doctoral degrees (11 scientific disciplines):

- architecture and urban planning,
- biocybernetics and biomedical engineering,
- civil engineering,
- computer science,
- electronics,
- electrical engineering,
- environmental engineering,
- environmental protection and development,
- machine design and maintenance,
- mechanics,
- management science. recently obtained

post-doctoral degrees (6):

- civil engineering,
- computer science, recently obtained
- electrical engineering,
- environmental engineering,
- machine design and maintenance,
- mechanics.

Double-degree agreements

At present, 9 double-degree agreements are being implemented. Students of environmental engineering, civil engineering, logistics, and computer science can obtain double degrees.

- **Ningbo Institute of Technology, Zhejiang University, China**
- **Tianjin Chengjian University, China**
- **Hebei Normal University for Nationalities, China**
- **Moscow State University of Civil Engineering, Russia**
- **Kyiv National University of Construction and Architecture, Ukraine**
- **Poltava National Technical Yuriy Kondratyuk University, Ukraine**
- **University of Beira Interior, Portugal**
- **Polytechnic School of Belmez, University of Cordoba, Spain**
- **Polytechnic Institute of Bragança, Portugal.**

BUT runs first, second and third degree courses:

- **First Degree Studies**
either licentiate or engineer degree studies,
take between 3 to 4 years of studying
- **Second Degree Studies**
master degree studies,
last about 1,5 to 2,5 academic years depending on the field of studies
- **Third Degree Studies**
also known as doctoral or PhD studies
- **Non-degree studies**
international students are free to select courses in English from different areas and faculties to create a non- degree study plan that best suits their needs. Students can take courses available in our offer for Erasmus students <http://elam.pb.edu.pl>. Erasmus students do not pay for their studies. Independent non-degree students pay per-semester rate
- **Intensive Polish Language Course**
for foreign students



Educational offer



taught in English

- Architecture
- Applied Mathematics
- Civil Engineering
- Computer Science
- Eco-Engineering (Environmental Protection)
- Electronics and Telecommunications
- Electronics
- Electrotechnics
- Environmental Engineering
- Landscape Architecture
- Management
- Mechatronics

taught in Russian

- Architecture

contact

studyinbut@pb.edu.pl

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International cooperation

- cooperation under scientific and technical agreements,
- student internships,
- student exchange,
- double-degree agreements,
- summer schools,
- exchange of scientific and academic staff,
- participation in Erasmus and Erasmus+ Programme.

40 ERASMUS+ PARTNER COUNTRIES	
Albania	1
Algeria	1
Armenia	1
Belarus	3
Brazil	2
China	1
Egypt	1
Georgia	5
Kazakhstan	4
Kyrgyzstan	1
Malaysia	1
Moldova	1
Morocco	1
Russia	6
Serbia	3
Taiwan	5
Tunisia	1
Ukraine	2

114 BILATERAL SCIENTIFIC AGREEMENTS	
Australia	1
Belarus	12
Brazil	4
Bulgaria	1
Canada	1
China	13
Czech Republic	2
Denmark	2
Estonia	1
Finland	1
France	3
Georgia	1
Germany	2
Greece	1
India	4
Italy	1
Japan	1
Kazakhstan	5
Latvia	2
Lithuania	5
Morocco	1
Portugal	5
Romania	1
Russia	17
Slovakia	1
South Korea	1
Spain	4
Switzerland	1
Taiwan	2
Ukraine	11
USA	5
Vietnam	2



Cooperation with Chinese higher education institutions

partnership agreement:

1. Tianjin University of Technology 天津理工大学
2. Tianjin Chengjian University 天津城建大学
3. Tianjin University of Science and Technology 天津科技大学
4. Tianjin Normal University 天津师范大学
5. Taizhou University 台州学院
6. Ningbo Institute of Technology, Zhejiang University 浙江大学宁波理工学院
7. Hebei Normal University for Nationalities 河北民族师范学院
8. Guangdong Construction Vocational Technology Institute 广东建设职业技术学院
9. Hebei University of Engineering 河北工程大学
10. Zhaoqing University 肇庆学院
11. Guangdong University of Petrochemical Technology 广东石油化工学院
12. South China Agricultural University 华南农业大学
13. Beijing Institute of Technology, Zhuhai 北京理工大学珠海学院



International China and Central-Eastern Europe Institute of Logistics and Service Science

An important dimension of cooperation between BUT - Faculty of Management and The School of Management of Zhejiang University Ningbo Institute of Technology (ZJUNIT) is a joint unit, whose intentions are to:

- education Polish and Chinese students on the basis of a double degrees agreement,
- organization of summer schools,
- exchange of academic staff and students,
- joint development of training programs,
- organization of the conferences and seminars,
- common application for grants,
- undertake joint scientific topics,
- development and publication of joint scientific work and teaching.



The Summer School on Logistics - cyclic and very successful event

The Summer School on Logistics is organized within the framework of the *International China and Central-Eastern Europe Institute of Logistics and Service Science*.

Students of logistics at the Faculty of Management of BUT attended classes organized at the Zhejiang University Ningbo Institute of Technology (or vice versa).

The second edition of The Summer School was dedicated to the *New Silk Route*. Students analyzed possible variations of the route and their transport possibilities.

great opportunity to study and to get to know the culture and traditions of foreign country



Hao Wang becomes Honorary Professor of Bialystok University of Technology

On 14th June 2016 **Professor Hao Wang**, Associate Dean of the School of Management at the Zhejiang University Ningbo Institute of Technology, an international authority in logistics engineering, co-funder and - on the Chinese side - Director of the International China and Central-Eastern Europe Institute of Logistics and Service Science, was granted the title of an Honorary Professor of Bialystok University of Technology.

...for all initiatives and activities that helped to develop the cooperation between our universities, giving our relationship a global dimension



Ceremony was held in Bialystok, on 14 June 2016

Confucius Institute in Bialystok

Bialystok University of Technology together with University of Bialystok, Tianjin Normal University and the Euro-Asian Business Education Foundation send in 2014 proposal for establishing of the Confucius Institute in Bialystok.

There is a big interest in knowledge about modern China, it's culture and language in the society. Especially that in a near future north-east part of Poland could be a "eastern gate to EU" for chinese companies (New Silk Road/ Euroasian Rail Landbridge).



Liu Wansheng Director of the Education Department of the Embassy of the People's Republic of China in Poland visited Bialystok University of Technology in August 2014

Secondary School at Bialystok University of Technology

Young people from Secondary School at Bialystok University of Technology (opened September 1st, 2016) have opportunity to learn the Chinese language from a native speaker from China.

...to give talented and ambitious young people a chance to develop their talents under the supervision of the best teachers and owing to the use of the teaching resources of our University.



Class of Secondary School at Bialystok University of Technology

University development

The last years were an unprecedented **investment period** for Bialystok University of Technology. Owing to the enhanced laboratory and research infrastructure, our students and employees have access to the latest knowledge in different areas of technology.

We have **created appropriate conditions** for making the best use of the knowledge, intellectual potential, ideas and energy of young people, students, graduates and also scientific staff.

Our new investments provides better conditions for cooperation with the business sector and **increases** activities that are classified as R&D.

within the last 4 years,
our university has implemented
28 European Union-funded
projects whose total value was
nearly 300 million Polish zlotys
(over 71 million Euros)



Centre for Modern Education

University development

In 2015 we opened **INNO-EKO-TECH - The Innovative Research and Education Centre for Alternative Energy Sources, Energy-efficient Construction and Environmental Protection**. The project improved the quality of education at Bialystok University of Technology.

Thanks to this and our recent investments, both students and university staff have now access to **well-developed laboratory facilities**.

Therefore, the growth of Bialystok University of Technology as an **R&D centre** is crucial, as the activities of our University are focused on educating people and carrying out research work to initiate and promote innovativeness.





Centre for Modern Education

Faculty of Electrical Engineering



Main Library



Faculty of Mechanical Engineering

Educating students

We **support** the implementation of projects created by members of student research groups. There are over 60 student research groups at Bialystok University of Technology, and they are a rich source of new ideas which – after being appropriately strengthened – can function in the economic system.

While **implementing their ideas**, our students learn organizational skills as well as the principles of working in groups and engineering responsibility; students also make new contacts and cooperate with the business world.

the greatest strength of our university are creative students who have achieved significant national and international successes

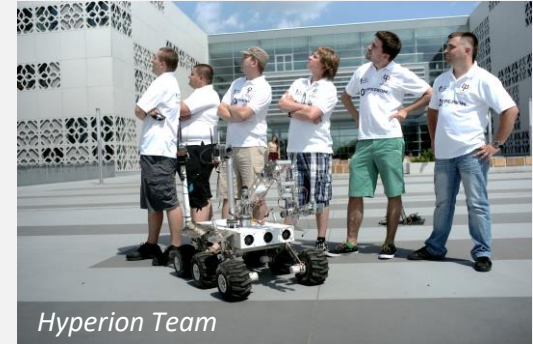


Our students' achievements

Students of the Faculty of Mechanical Engineering of Bialystok University of Technology have been building Mars rover analogues since 2010. So far, they have constructed 6 of them. Our students have competed in the prestigious University Rover Challenge in the USA five times, winning the competition 3 times (in 2011, 2013, and 2014), and taking the third prize in 2010 and the fourth prize in 2015.

Our students took part in Imagine Cup 2016 finals held in USA. The PSYLLOSOFT team presented their MATIA system in the category of World Citizenship. MATIA is an automated vision system that can compensate for the loss of sight as it can see and describe objects in front of its user. Our representatives took the national preliminaries by storm, participated in the semi-finals, and then they were invited to the main headquarters of Microsoft in Redmond, Washington, for the worldwide finals.

Our students have received the second prize in the prestigious International Contest of Applications in Nano-micro Technology (iCAN), held in a Japanese city of Sendai. Representatives of the BUT Faculty of Electrical Engineering and Faculty of Mechanical Engineering went to Japan with their **RECON project**, a wireless teleinformatic system for monitoring the natural environment.

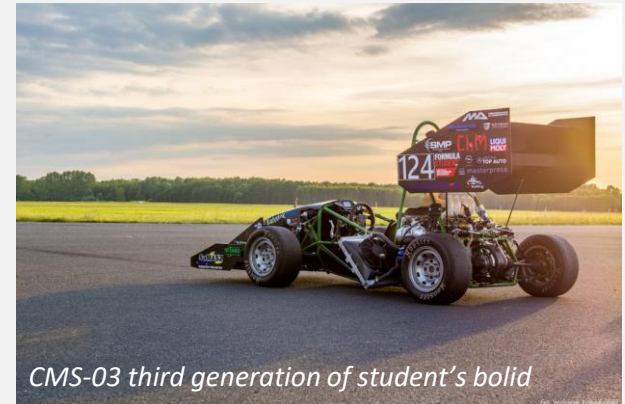


Our students' achievements

Cerber MotorSport is a team of students of the Faculty of Mechanical Engineering of Bialystok University of Technology, who developed a racing car that competed in many editions of the Formula Student. They raced with student teams from around the world on the tracks in UK, Italy, Czech Republic and Hungary.

A prize for young inventors from the organisers of BRUSSELS INNOVA-International Exhibition of Invention, Research and New Technologies, a special prize of Thailand Award for Best International Invention, Podlachian Consumers' Make and many other rewards were granted to students of Bialystok University of Technology. They invented **Photon** – an interactive robot developing together with a child. Integrated with a Smartphone or tablet, it creates an innovative system that supports education through entertainment or competition.

The authors of the project are now establishing their own company while at the same time improving their robot, and in spring next year they are planning to introduce it to the market. Bialystok University of Technology is the subject matter partner of the project and supports its students in their efforts.



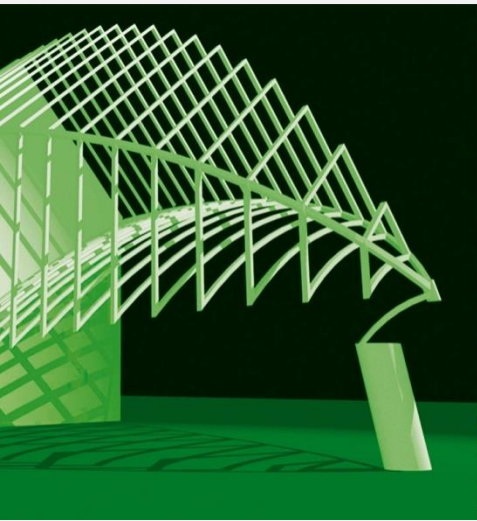
CMS-03 third generation of student's bolid



Photon



scientific and research areas



Faculty of Architecture

main research areas:

- Modern housing estates – architecture, standards, spatial and design solutions in housing environment of urban and suburban
- Natural materials sustainable building technologies
- Computer-aided conceptual structural design, ICT technologies, CAD 3D Scanning
- Transformations of functional and spatial forms and structures in architecture of local borderline cultures
- Structure and landscape transformations in towns and villages of north-eastern Poland
- Architecture in the face of historical challenges – selected issues of 20th century Polish architecture from cultural, social and anthropological perspectives

www.wa.pb.edu.pl

employed 31 doctors and 16 professors

*The Laboratory of Energy-Efficient
Architecture and Renewable Energies*



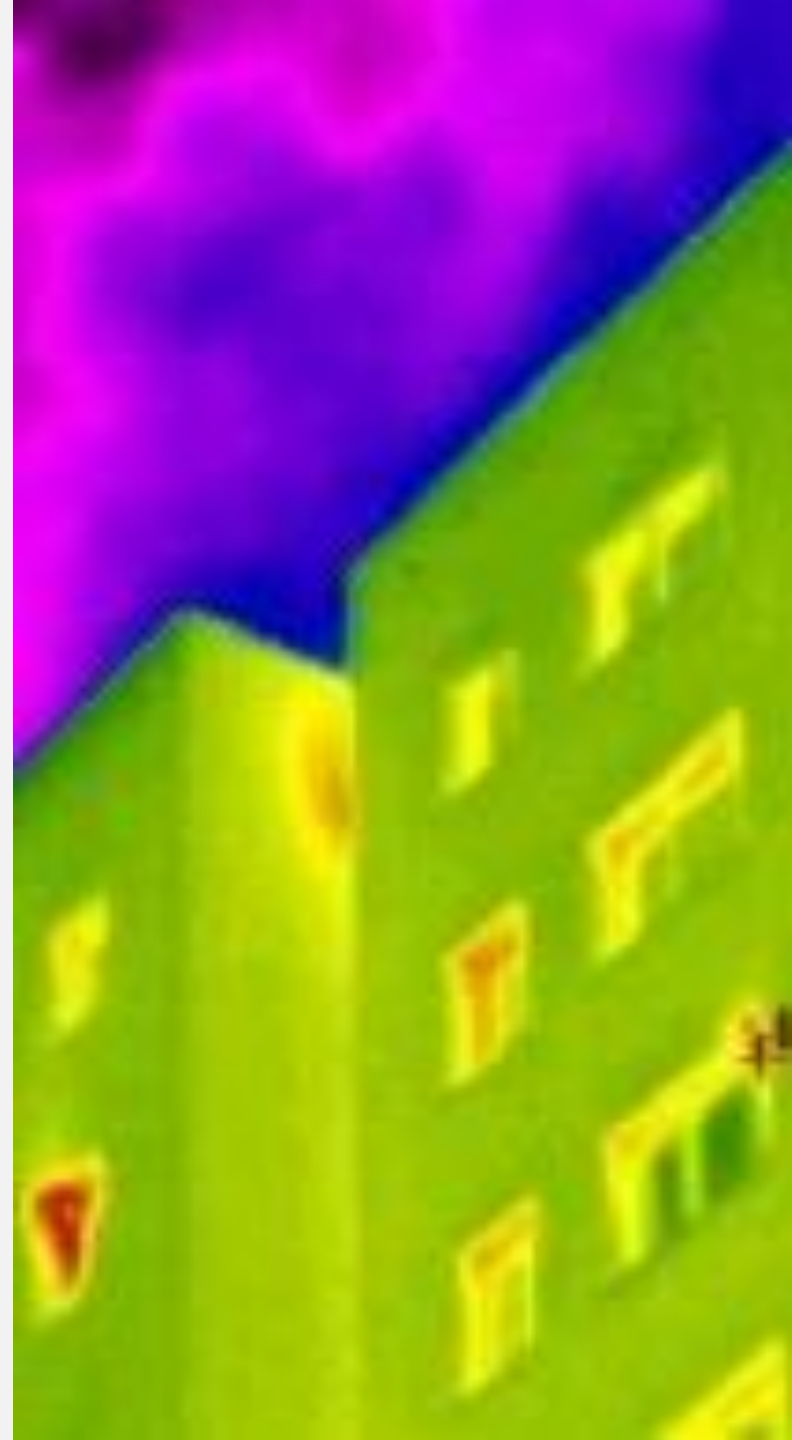
Faculty of Civil and Environmental Engineering

main research areas:

- **Renewable energy use**
Energy-efficient construction, alternative energy sources and environmental protection are some of the important future specialisations at Bialystok University of Technology.
- **Biochemical and physico-chemical analysis of possibilities of biodegradation of selected phenolic compounds**
- **Experimental and theoretical modelling of non-linear characteristics of building structures behaviour**
- **Shaping the properties of building materials**
- **Analysis of the influence of physico-technical, climatic and economic factors on optimal solutions concerning energy-efficient buildings**
- **Analysing selected problems in spatial management and engineering**
- **Efficient methods and algorithms in numerical analysis of building structures, including feasibility, design, implementation and usage phases**

www.wbis.pb.edu.pl

employed 99 doctors and 40 professors



Faculty of Civil and Environmental Engineering

main research areas:

- Reactions of wetland ecosystem habitats and plants to active protection measures
- Modelling and optimisation of water purification, sewage treatment, and sewage sludge processing
- Advanced technologies in water protection and treatment and in waste neutralisation
- Research on and simulation of energy-efficient heating and ventilation systems as well as areas of human presence
- Shaping road infrastructure elements in terms of their durability, traffic safety, environment protection and construction costs
- Innovative technologies in compaction, combustion, gasification and processing of agri-food materials
- Analysis of the influence of beneficial and harmful microorganisms on the natural environment
- Podlachian landscape identity

www.wbis.pb.edu.pl

employed 99 doctors and 40 professors

INNO-EKO-TÉCH

*The Innovative Research and Education
Centre for Alternative Energy Sources,
Energy-efficient Construction
and Environmental Protection*



Faculty of Electrical Engineering

main research areas:

- Modern methods of analysis, synthesis, control and diagnostics of dynamic systems
- Selected mathematical and experimental methods applied for analysing electrical and thermal phenomena
- Power electronics systems in propulsion applications, renewable energy sources and renewable energy sources conditioning systems
- Technologies of active optical fibres and semi-conductive radiation sources application
- Research on and designing of teleinformatic devices and systems in terms of electromagnetic compatibility

www.we.pb.edu.pl

employed 52 doctors and 19 professors



Faculty of Computer Science

main research areas:

- Selected problems of theoretical and applied mathematics
- Data representation and processing methods in multimedia systems
- Methods of exploration and modelling of multi-dimensional data sets
- Intelligent systems
- Selected issues of pure and applied mathematics using information technology tools

www.wi.pb.edu.pl

employed 48 doctors and 19 professors



Faculty of Mechanical Engineering

main research areas:

- Research on components and algorithms for intelligent technical systems
- Issues in mechanics of heterogeneous and anisotropic materials
- Analysis of durability and reliability of mechanical structures in their operation processes
- Research on heat and flow processes in stream systems and densely packed developed surfaces
- Development of biomaterials, biomedical constructions and computer-aided methods in medicine
- Manufacturing technologies and qualitative studies of spatial objects shaped with subtractive and additive methods

www.wm.pb.edu.pl

employed 57 doctors and 32 professors



Faculty of Management

main research areas:

- Modern methods of manufacturing and logistics management
- Technical, economic and environmental aspects of innovations in industry
- Asset and liability management in business entities and public sector entities
- Foresight study
- Methods of solving modern problems in organisation management
- Management of regional and local development
- New trends in tourism management in the region
- Chinese-Eastern European logistics

www.wz.pb.edu.pl

employed 74 doctors and 27 professors



*Grand Hall Berlin
of the Management Faculty*

Faculty of Forestry in Hajnówka

main research areas:

- Identification of secondary metabolites in vascular plants and fungi found in Białowieża Primeval Forest
- Research on biological activity of plant and fungi extracts
- Innovative methods of extracting active substances from vascular plants and fungi
- Identifying physical and chemical properties of forest materials and products
- Analysing physical and chemical properties of surface waters in Białowieża Primeval Forest

scientific cooperation with University of Mississippi (USA)
and New Chemical Syntheses Institute in Pulawy (Poland)

www.zwl.pb.edu.pl

employed 9 doctors and 5 professors

*Laboratory for Monitoring
of Forest Environment*



You are warmly welcome at Bialystok University of Technology

Politechnika Białostocka / Białystok University of Technology
45 A Wiejska Street, 15-351 Białystok, Polska

phone +48 85 746-90-00 to 09/fax. +48 85 746-90-15

website: www.pb.edu.pl

e-mail: studyinbut@pb.edu.pl



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