

# Lodz University of Technology





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# POLITECHNIKA 1945

UNIVERSITY LEADERSHIP WHAT SETS US APART **TUL STRUCTURE** SCIENCE AND RESEARCH EDUCATION FIELDS OF STUDY SPORTS AND CULTURE HISTORY RECTORS OF THE UNIVERSITY

# UNIVERSITY LEADERSHIP



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# WHAT SETS US APART

The 37-hectare campus in the center of Łódź, featuring modern structures and revitalized post-industrial buildings, former villas and palatine residences, interspersed with pockets of greenery, a park with Oak *Fabrykant*, the European Tree of the Year 2022 – these are the hallmarks of Lodz University of Technology (TUL). But that is not all.

The campus also boasts *Zatoka Sportu* Sports and Education Center with a 50-meter Olympic swimming pool and a 30-meter diving pool. Its adjustable-depth floor makes it suitable for swimming lessons as well as physical therapy. There are multipurpose gyms for team sports, martial arts, squash, badminton, as well as fitness, strength training, and an impressive climbing wall.

To complete the picture, there is a daycare center for the children of TUL employees, doctoral candidates, and students which is a particularly colorful spot on TUL's map.

# EUROPEAN PARTNERSHIP MODEL

Lodz University of Technology is a member of the European Consortium of Innovative Universities, an alliance of 14 higher education institutions. What unites them is a strong commitment to entrepreneurship, innovative teaching and learning, and excellence in research. To address today's challenges to European higher education, the Consortium, within the framework of European University initiative, has proposed a pioneering model of higher education.

# LEADER IN INNOVATION AND SUSTAINABLE DEVELOPMENT

Lodz University of Technology is a hub of research and innovation at the European level. We develop cutting-edge technologies and patents in collaboration with leading research centers and key figures in science and business worldwide. Our university is among an elite group of institutions with the largest number of grants acquired from the prestigious Horizon Europe program.

TUL is engaged in projects and initiatives focused on sustainable development. Our researchers work to contribute to tackling critical global challenges in climate, energy, and health, which is reflected in the university's strong position in the THE Impact rankings. THE Impact rankings methodology includes assessment criteria across the 17 Sustainable Development Goals.

TUL is also the first technical university in Poland to have been awarded the HR Excellence in Research distinction. Its award has enhanced the university's visibility and strengthened its position as a valued partner in European research projects.







# TRUSTED BUSINESS PARTNER

Lodz University of Technology is a reliable partner for business and collaborates with leading companies both in Poland and internationally. Our highly qualified graduates are a valuable asset for many of these companies. Industry leaders appreciate the university's contribution as it strengthens their competitive-edge. The Forbes Diamonds award, received in 2024, is a testament to the university's dynamic growth and commitment to innovation.

TUL is the initiator and an active member of the Łódzki ICT Cluster. The cluster brings together over 40 entities, including ICT companies, business support institutions, and universities in Łódź. The university also participates in LODZistics, LODZISTICS - Logistyczna Sieć Biznesowa Polski Centralnej [the Logistics Business Network of Central Poland], which connects nearly 50 members to foster collaboration and integration within the region's transport, forwarding, and logistics (TSL) sector.

# TECHNOLOGY TRANSFER: FROM SCIENCE TO INDUSTRY

For many years now the university has been pursuing a policy of intellectual property management that focuses on the effective transfer of innovative technologies to the economy and generating revenue through intangible assets.

The mechanisms developed and continuously improved at Lodz University of Technology for the commercialization of university innovations have made it possible to effectively market many R&D projects by selling them and licensing their use. Spin-offs are another way in which the university successfully transfers novel solutions to business, at the same time encouraging and supporting academic entrepreneurship.

Researchers of Lodz University of Technology have created many world-class groundbreaking and innovative solutions (inventions, licenses, utility models, know-how, etc.), which is reflected in the many medals and awards won at prestigious trade fairs and exhibitions. The number of patent applications and patents granted secured the university's place among the top sixteen most innovative Polish universities. The University never fails to pursue business relations, and thus it can boast a large number of contracts with companies of global reach from the sector of large, small, and medium-sized enterprises. It also is a member of technological clusters, which facilitates better use of its scientific capacity and, at the same time, boosts economic growth and competitiveness.

# EDUCATIONAL PROGRAMS FOR THE LOCAL COMMUNITY

Lodz University of Technology is open to the entire local community. It provides opportunities to benefit from the knowledge and experience of its lecturers, the campus, and laboratories. The curriculum is suited for every audience, from the youngest to the oldest.

The University offers a wide range of services for seniors. Since 2006, the University of the Third Age (UTW) has been operating at TUL. It was established to include seniors in the system of lifelong learning and to strenghten their cognitive and psychosocial well-being. Currently, over 600 students attend UTW.

In 2007, a General Secondary School was established at the university. The majority of its graduates go on to become our students.

In 2008, the Children's University of Lodz was established for children aged 7-12 - the first one in Poland to operate at a technical university. It is where children develop their sense of curiosity about the world and explore the secrets of technical knowledge in a straightforward and fun way.

A Non-Public Kindergarten and Non-Public Daycare Center for children of TUL staff, doctoral candidates, and students are run at Lodz University of Technology. Both facilities are in perfect harmony with the needs of the parents, enabling their successful return to work. In an effort to foster child self-reliance and self-confidence, each classroom includes a nook arranged in accordance with the principles of Maria Montessori pedagogy.



# INTERNATIONALIZATION AT LODZ UNIVERSITY OF TECHNOLOGY (TUL)

Internationalization is a fundamental pillar of Lodz University of Technology's strategy, permeating research, education, and cooperation with the socio-economic environment. A testament to TUL's commitment to international engagement is the 30-year-long activity of the International Faculty of Engineering (IFE) – a world-renowned, innovative center offering education in 19 fields of study taught in foreign languages.

In 2017, TUL established International Cooperation Centre to dynamically implement the university's internationalization strategy and strengthen its position as an innovative academic center on the European Higher Education map. Since 2023, the TUL Welcome Point has provided friendly support to international students. It was introduced as part of the WelcomeTULodz project, funded by the National Academic Exchange Agency under the Welcome to Poland 2021 scheme and co-funded by the European Social Fund.

Currently, TUL hosts over 350 full-time international students and nearly 400 exchange students per semester, all of whom have the opportunity to participate in various forms of mobility. They may also pursue a double degree through partnerships with prestigious higher education institutions worldwide. As a leader in Erasmus+ student exchange, TUL proudly holds the title of a *Mobility Friendly University*. It also excels in long-term international summer traineeships, including IAESTE placements.

Since 2000, TUL has served as the national coordinator of the Baltic University Programme, connecting more than 30 Polish universities. Its international cooperation spans science, research programs, and student exchange with over 520 centers in 65 countries, including more than 200 strategic partners. This cooperation extends to education, facilitating the exchange of best practices and modern learning methods while enabling TUL to adapt its curricula to the evolving global job market.

TUL actively engages in international projects with foreign partners. In 2017, IFE launched the prestigious French Academy of Young Engineers (FAMI) in collaboration with the French Embassy in Poland and Agence Universitaire de la Francophonie (AUF). This multiyear initiative encourages young people to participate in international projects focused on modern technologies and social challenges.

As a member of the European Association for Engineering Education, TUL contributes to advancing engineering education in Europe. The university holds 11 EUR-ACE<sup>®</sup> Label program accreditations (Bachelor and Master level) and is one of nine Polish universities to complete the EUA's International Institutional Evaluation Program, earning the EUA Quality Label – IEP. In 2020, TUL became the first Polish university to receive the French international HCERES accreditation.

TUL's excellence in education is further validated by prestigious program accreditations. In 2022, its Information Technology and Computer Science programs (taught in English) earned ABET accreditation. In 2023, the Faculty of Chemistry's Chemistry and Chemical Technology programs were accredited by the European Chemistry Thematic Network Association (ECTN). Additionally, TUL's Foreign Language Center is accredited by EAQUALS.

In 2021, TUL became the sole Polish member of the European Consortium of Innovative Universities (ECIU), joining 13 universities from across Europe and Mexico. This collaboration promotes research and innovative educational offerings, including micromodules and challenge-based learning. ECIU aims to build a transnational European university model rooted in strong ties with the socio-economic environment. To learn more, please visit eciu.p.lodz.pl and eciu.eu.

Internationalization at TUL also involves the exchange of teaching and administrative staff, which is essential for enhancing the professional competencies of the university's workforce.

# STRONG POSITION IN RANKINGS

In the 2024 Perspektywy university ranking, published annually by the Perspektywy Education Foundation, Lodz University of Technology ranked among the top five technical universities and among the top eight public universities in Poland.

Lodz University of Technology (TUL) has been recognized in some of the world's most prestigious university rankings. It is among 37 Polish universities featured in the Times Higher Education (THE) World University Rankings and among 22 Polish institutions listed in the QS World University Rankings. In the QS World University Rankings – Europe, TUL achieved outstanding results in student mobility, ranking 1st in Poland and 89th in Europe in the Outbound Exchange Students category, 2nd in Poland and 62nd in Europe in the Inbound Exchange Students category.

Additionally, TUL is recognized in the THE Impact Rankings, which assess universities based on their contributions to the 17 United Nations Sustainable Development Goals (SDGs). In specific SDG categories, TUL was ranked 101–200 worldwide for SDG 8: Decent Work and Economic Growth, 301–400 worldwide for SDG 9: Industry, Innovation, and Infrastructure, 401–600 worldwide for SDG 17: Partnerships for the Goals.

Furthermore, TUL made its debut in the QS World University Rankings: Sustainability, placing in the 881–900 range globally.



# TUL STRUCTURE

Lodz University of Technology is a robust higher education institution with a highly evolved structure. Students study at nine faculties, however, the university comprises other organisational units where interfaculty education is provided, sports and social activities take place, and other student services are delivered.

Faculty of Mechanical o Engineering	International Faculty of Engineering
Faculty of Electrical, Electronic, Computer and Control Engineering	Library
Faculty of Chemistry	Computing and Information Services Centre
Faculty of Material Technologies and Textile Design	Centre of Mathematics and Physics
Faculty of Biotechnology and Foods Sciences	Language Centre
Faculty of Civil Engineering, Architecture and Environmental Engineering	Sports Centre
Faculty of Technical Physics, Information Technology and Applied Mathematics	Information Technology Centre
Faculty of Organization and Mangement	TUL Sports and Education Centre Zatoka Sportu
Faculty of Process and Enviornmental Engineering	Centre of Papermaking and Printing

# FACULTY OF MECHANICAL ENGINEERING

The Faculty is proud to be a hive of innovation. It has made considerable contributions to the development of technical training in Poland and today it is one of the best faculties of mechanical engineering in the country. The many years of research into advanced technologies have resulted in the development of a technology for production of polycrystalline graphene; a device for continuous real-time control of surface quality during abrasive-blasting treatment; measurement micromanipulator for measuring hip bone displacement during hip replacement procedure. New solutions for Eurocopter's X3 hybrid helicopter have also been developed, which allowed the machine to claim the unofficial speed record in helicopter level flight by reaching the speed of 472 km/h. Included in the portfolio of the Faculty's successes are its student scientific circles which, owing to the implementation of futuristic research projects (HyperLoop, Eco Shell Marathon, Solar Challenge, and Generative Urban Small Turbine) generate future human capital for the Faculty. The Faculty of Mechanical Engineering provides a perfect environment to acquire utilitarian knowledge and to pursue one's passions.

ul. Stefanowskiego 1/15 90-537 Łódź tel. 42 631 22 00 www.mechaniczny.p.lodz.pl





# FACULTY OF ELECTRICAL, ELECTRONIC, COMPUTER AND CONTROL ENGINEERING

Installations, automatic control systems, robots, ICT systems, mechatronic devices, computers and their software crammed full of machine learning and artificial intelligence algorithms are all integral parts of the modern world. "Elektryczny" is the largest faculty of Lodz University of Technology. It offers inżynier, magister inżynier and doctoral degree programmes in technical sciences. Its graduates are in demand in all branches of the economy, health care and administration. Faculty researchers together with students and businesses create innovative solutions, examples of which include: a system facilitating mobility of the visually impaired in the terrain, humancomputer interfaces, robots for various tasks, e.g. physical therapy, textronic systems for monitoring physiological parameters, methods enhancing diagnostic imaging in medicine, mobile military robots for reconnaissance and mine detection, participation in great experiments in nuclear physics, renewable energy sources, and energy storage. The Faculty also runs a number of innovative projects addressed to secondary school students, including competitions in physics, mathematics, and computer science, which enjoy great popularity, as well as programming and IT training.

ul. Stefanowskiego 18/22 90-537 Łódź tel. 42 631 25 02 www.weeia.p.lodz.pl

#### FACULTY OF CHEMISTRY

It is an internationally renowned scientific center, equipped with advanced apparatus for research in line with the LORIS 2030 Regional Innovation Strategy of the Łódzkie Voivodeship and essential technologies for regional development. This includes research on nanomaterials, functional, polymeric and hybrid materials, natural and synthetic compounds with therapeutic potential, as well as adsorbents and catalysts. The Faculty has pioneered innovative optical and laser diagnostic techniques, analytical methods for environmental, medical, and forensic studies, and the synthesis of biologically active compounds, organocatalysts, and heterogeneous catalysts. It also develops methods for producing modern functional materials, nanomaterials, and composites utilized in chemical technology, environmental protection, and the automotive, aerospace, and space industries. The Faculty is distinguished by its research in specialized areas such as radiation chemistry, rubber and elastomer technology, and dye technology. In its educational approach, the Faculty employs modern teaching methods that actively engage students, with study programs co-developed in collaboration with the Business Council.

ul. Żeromskiego 116 90-543 Łódź tel. 42 631 31 00 www.chemia.p.lodz.pl



# FACULTY OF MATERIAL TECHNOLOGIES AND TEXTILE DESIGN

The Faculty trains specialists in design, technology, evaluation and marketing of textiles for industry, research institutes, and business. New interactive fabrics and new technologies of woven and knitted fabrics production are created here. The latest generation of dressing materials and hybrid alginate-based implants for bone regeneration are also under development. The Faculty has designed, among others, a textronic technology for electro stimulation of human limb muscles, textile electrodes made of conductive materials. A prototype therapeutic underwear for women has been proposed to support the prevention and treatment of lower urinary tract infections. Textile charger for electronic devices is being developed. The Faculty also trains design specialists and cooperates with the world of fashion designers.

ul. Żeromskiego 116 90-537 Łódź tel. 42 631 33 00 www.style.p.lodz.pl

# FACULTY OF BIOTECHNOLOGY AND FOOD SCIENCES

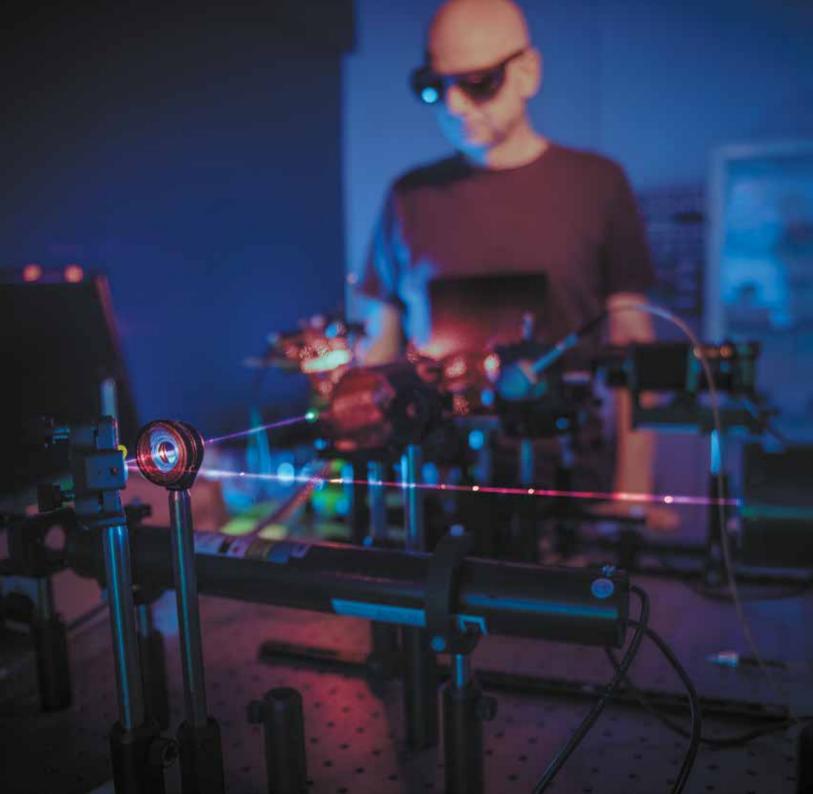
As the only faculty among universities of technology, it harmoniously integrates three fields of knowledge: biological sciences, chemical sciences, and engineering and technical sciences with a view to improving technological processes in the food industry, biotechnology, and environmental protection. Dynamic advancement of research in the field of food and nutrition technology goes hand in hand with the development of cooperation with the business environment. During their studies, students learn about and gain practical skills in molecular, industrial, and environmental biotechnology, food technology and analysis, fermentation technology and microbiology, bioeconomy, and cosmetic technology by participating in internships and completing their final theses in collaboration with companies. They also have the opportunity to conduct experiments, if they choose to join one of the three student scientific circles operating within the Faculty.

ul. Wólczańska 171/173 90-537 Łódź tel. 42 631 34 00 www.binoz.p.lodz.pl

# FACULTY OF CIVIL ENGINEERING, ARCHITECTURE AND ENVIRONMENTAL ENGINEERING

The Faculty offers degree programs in Civil Engineering, Architecture, Environmental Engineering in Civil Engineering, and Spatial Planning. Students gain expertise in building and engineering structure design, installation systems, urban planning, as well as architectural and interior design. They also explore sustainable development and energy efficiency in buildings and urban environments. The Faculty conducts both theoretical and experimental research on structural building components and their reinforcement, including polymer composites. Research also focuses on the durability of materials in chemically and thermally aggressive environments. Students have the opportunity to engage in this cutting-edge research, further expand their interests by joining over a dozen student research groups, as well as take part in international exchange programs, expanding their knowledge and skills on an international scale.

al. Politechniki 6 93-590 Łódź tel. 42 631 35 00 www.bais.p.lodz.pl



#### FACULTY OF TECHNICAL PHYSICS, INFORMATION TECHNOLOGY AND APPLIED MATHEMATICS

The Faculty research staff is comprised of specialists who conduct basic research, industrial research, and R&D in the fields of engineering and technical sciences, exact sciences, and natural sciences. Research in the discipline of Information Technology and Telecommunications concerns methods of artificial intelligence, data science, computer vision and graphics, human-computer interaction, quantum computing, software engineering, security of information systems, fuzzy systems, spatial localisation algorithms, and many further topics related to broadly defined information technologies. Research in the physical sciences focuses on the following three key issues: computer modelling of physical phenomena in photonic structures to improve their applicability; development of computational methods to explain properties of well-known molecules and design new materials with specific properties, and study of the physical properties of various crystals, crucial, for example, in the diagnosis and treatment of kidney stones. Research in applied mathematics includes effective control of drug therapy in neoplastic disease, and more general problems of modelling in biology. An important achievement has been proving the existence of classical solutions to fragmentation coagulation equations. New risk-switching models have been introduced into ruin theory and their properties have been studied. Optimal rules of risk sharing between the insurer and the reinsurer have been found in several models describing reinsurance. New types of insurance premiums have also been developed.

ul. Wólczańska 215 93-005 Łódź tel. 42 631 36 03 www.ftims.p.lodz.pl

#### FACULTY OF ORGANISATION AND MANAGEMENT

The Faculty staff represent, in most cases, the disciplines of management and quality sciences. Their research is concentrated around the following four priority areas: organisational management from a relational perspective, analysis of the social, economic and financial environment, management and its relevance for sustainable development, and the importance of technology in organisational management in the age of Industry 4.0 and Smart World. The Faculty offers attractive degree programmes taught in Polish and English, incorporating modern and active learning methods. In cooperation with Klub 500, the Faculty carries out Certification of Managers of Łódzkie Voivodeship. It is the only project of its kind in Poland and its aim is to validate the competences of managers from the region. In 2017, the Business Council was established at the Faculty, composed of companies from central Poland with a proven reputation and a strong economic position. Together with its business partners, it runs several unique internship programmes: diamond, amber, and emerald, intended for the best students.

ul. Wólczańska 221 93-005 Łódź tel. 42 631 37 68 www.woiz.p.lodz.pl



# FACULTY OF PROCESS AND ENVIRONMENTAL ENGINEERING

The pillar of the Faculty's scientific activity is research conducted in the field of chemical engineering: this involves not only classical processes of heat and mass transfer, important in chemical, energy, and food industry, but also new paradigms of this discipline, such as biochemical engineering (use of microorganisms), molecular engineering (production of catalysts and surface treatment by plasma methods), and biomedical engineering (drug delivery and biocompatible implants). At the same time, the Faculty is a scientific unit that actively supports the development of industrial technologies and pro-environmental projects, their safety and mitigation of their environmental impact with a particular emphasis on combating climate change. The training is offered in three fields of study and delivered at the most modern teaching and research facility in Poland. The Faculty conducts research related to important environmental engineering problems such as water and wastewater treatment, reduction of harmful gas and dust emissions into the atmosphere, waste management, processing and energy efficient use of biomass, energy efficiency of buildings and smart city solutions. In the field of occupational safety, strategies have been developed for the safe operation of industrial production and storage facilities. The National Centre of the Baltic University operates at the Faculty, which coordinates the work of about 60 Polish and foreign universities, runs educational programmes for students and promotes the idea of sustainable development.

ul. Wólczańska 213 93-005 Łódź tel. 42 631 37 00 www.wipos.p.lodz.pl

# INTERNATIONAL FACULTY OF ENGINEERING

Known internationally as the International Faculty of Engineering (IFE), this university-wide unit has been organizing education in technical fields, taught in English and French, for over 30 years. On July 1, 2017, IFE became part of a larger unit – International Cooperation Centre. Thanks to extensive collaboration with European universities, IFE students have the opportunity to go abroad for several months of study and internships. The primary goal of IFE is to educate engineers who can take on leadership roles in the international job market. Today, IFE means nearly 400 new students enrolled each year across various study programs, over 1,000 students in total, approximately 10% of whom are foreigners from nearly thirty different countries, more than 4,000 graduates, close to 600 courses taught in foreign languages, and last but not least, 500 partner universities in 70 countries, where students can complete their exchange semesters. For many years, IFE has prioritized innovative education and has successfully implemented a student-centered learning model known as FLIPPED TUL. This approach incorporates a variety of knowledge transfer methods, putting students at the heart of the learning process (Student-Centered System).

ul. Żwirki 36 90-539 Łódź tel. 42 638 38 00 www.ife.p.lodz.pl



# LIBRARY

Housed in the restored factory building of the Schweikert family originally constructed at the beginning of the 20th century, the library serves as a modern center for scientific and technical information. It holds a vast collection of scientific literature covering disciplines represented at the university and related fields, along with seminal works of general interest. The printed collection, consisting of approximately 250,000 books and over 130,000 journal volumes, is available in both open access and storage areas. Additionally, electronic resources, including Polish and foreign online services and databases, are accessible through the library's website. These resources provide access to over 500,000 books and nearly 60,000 magazine titles and other publications, most of which can be accessed from any computer. Some of the printed materials have been digitized and are available through the Lodz Regional Digital Library CYBRA. The university's research output is made available and archived in the Lodz University of Technology Repository and the TUL Research Data Repository. The library features individual and group workspaces, relaxation zones, general access to computers, scanners, printers, and internet access (including wireless access via eduroam). The TUL library network comprises the Main Library and several branch libraries: the Jan Samujłło Library of Structural Engineering and Architecture, the Olga Achmatova Library of Chemistry, the TUL university press and bookstore, and the University Personalization Point. Additionally, the Biblio-Art Gallery operates within the library premises.

ul. Wólczańska 223 93-005 Łódź tel. 42 631 29 59 www.bg.p.lodz.pl

# **COMPUTING & INFORMATION SERVICES CENTER**

The latest services provided by the Centre include services of reliable and secure remote work and learning based on a webinar system and the Microsoft cloud environment. In order to provide access to modern computing technologies, UCI develops and manages a highperformance computing and data storage environment based on virtual server and cloud technologies. The technologies are available nationwide and are implemented within the European projects PRACE LAB and PIONIER LAB. As a leader of the LODMAN metropolitan computer network, UCI is continuously developing the infrastructure of the metropolitan network serving the entire scientific community in Łódź as well as many commercial clients.

ul. Wólczańska 223 93-005 Łódź tel. 42 638 35 00 www.uci.p.lodz.pl

# CENTER OF MATHEMATICS AND PHYSICS

The Center (CMF) is a university-wide unit established in 2003. It runs classes in mathematics and physics for the Faculties including the International Faculty of Engineering (IFE). Its academic staff includes 50 academic teachers: 14 physicists and 36 mathematicians. Teaching responsibilities are performed at the CMF by three teams of mathematicians and one team of physicists. The GeoGebra Academy, which is part of the International GeoGebra Institute, operates at the Centre. IT infrastructure and high qualifications allow for conducting classes using innovative teaching methods (e-learning, blended learning, PBL, gamification). The Centre also carries out extensive promotional and popularization activities as regards applications of mathematics and physics by participating on a regular basis in the International Science Picnic in Warsaw, Festival of Science, Technology, and Art in Łódź, and bestowing patronage to secondary school students in the Łódzkie Voivodeship. Every year, in September, the CMF organizes a "Week with Mathematics and Physics at Lodz University of Technology" for secondary school students. The participating youth stay for a week at TUL halls of residence and attend lectures and laboratory classes as university students would. Workshops for students of the Children's University and preparatory courses for national school leaving exams in mathematics and physics at the advanced level complete the Centre's offer.

al. Politechniki 11 93-590 Łódź tel. 42 631 36 14 www.cmf.p.lodz.pl

# LANGUAGE CENTRE

The Centre offers foreign language courses in 7 foreign languages (English, French, Spanish, German, Russian, Italian, Polish as a foreign language) for students and PhD candidates of Lodz University of Technology. It also organises courses preparing for trips abroad within the ERASMUS+ programme and IAESTE, and provides language training for students of the University of the Third Age, participants of exchange programmes, and foreigners. The Center also runs Commercial courses and provides support during university projects and organises interviews of international applicants. It also undertakes its own independent initiatives such as regular conferences for teachers Lektor High Tech, foreign language competitions for secondary school students Lang Tech, and the mock exam project Matura Próbna. As of 2005, the Centre has been based in a revitalised post-industrial building with interiors adapted to the requirements of modern teaching. In 2017 the Language Centre received international EAQUALS accreditation for the quality of language education. The Center is a TELC, LCCI, BULATS and TOEIC examination centre and has the status of NILE Language Teacher Education Partner.

al. Politechniki 12 93-590 Łódź tel. 42 631 28 10 www.cj.p.lodz.pl





# SPORTS CENTRE

As a university-wide unit the CS runs physical education classes obligatory for undergraduate students over three terms of study. Each academic year, about 5,500 students from all Faculties attend them. The CS has facilities for team games, martial arts, aerobics, as well as 2 gyms and multifunctional playgrounds. The Centre also provides a range of specialised classess such as fitness, aerobics, cross training, TRX, flat belly, pilates/body art, football, volleyball, stretching and stabilisation, judo, self-defence, volleyball, and football. Some of the activities including badminton, basketball, floorball, swimming and sport climbing are held at the ACSD ,Sports Bay', while others, e.g. tennis, at the MKT tennis courts. These facilities are also where the sports sections of the TUL Academic Sports Association train, coached by qualified CS staff and instructors who continually improve their skills to meet the needs of students, employees, and the developing infrastructure. Apart from education, the Centre is also involved in the promotion of physical activity among TUL's employees. The regular offer includes activities such as: swimming lessons, fitness, healthy body, stretching and stabilization, body art/pilates, and strength training. The CS hosts many sports and leisure events, is involved in community outreach, and provides activities for people with disabilities.

al. Politechniki 11 93-590 Łódź tel. 42 631 28 21

# INFORMATION TECHNOLOGY CENTER

The Information Technology Centre (CTI) is a university-wide teaching and learning support facility. Each year, over 2,000 students take advantage of 30 modern ICT laboratories. Each laboratory has different, unique equipment - from network laboratories related to cyber security, through computer graphics and game labs, the Internet of Things and mobile applications laboratories to low-level DSP, FPGA and industrial controllers programming laboratories. The Centre's resources also include: a 3D film screening room, videoconferencing studios, a server room with a computational cluster and rooms for group work. Nearly 5,000 m2 area is home to 500 laboratory workstations for students. CTI cooperates with over 100 lecturers who represent a variety of scientific disciplines. At the Centre, many dissertations are developed, doctoral theses are researched, open lectures, demonstrations and conferences are held for the benefit of the entire university, student IT competitions are organised, and EU grants, including Erasmus+ and POWER, are implemented. In addition, a student science club called the Geek Group is based there. The Centre is also an active player in building an ecosystem of IT.

ul. Wólczańska 217/221 93-005 Łódź tel. 42 631 27 17 www.cti.p.lodz.pl



# TUL SPORTS AND EDUCATION CENTRE

*Zatoka Sportu* Lodz University of Technology Sports and Education *Centre* is a modern sports facility for amateur, student, and professional athletes. It houses two swimming pools: a 50-metre pool and a 25-metre pool. The longer one is the only indoor 50-metre pool in Łódź. Swimmers, triathletes train in the pool, whereas water polo teams play league matches there. If required, the Olympic distance of 50m can be divided with bulkheads into two sections of 25m each. More than 1,700 spectators can cheer athletes on from the stands. The biggest advantage of the shorter pool is its movable floor. Depending on the needs, it can be positioned at a level from 0 to 5 meters. It is at this pool that swimming, diving, aqua fitness, and scuba diving training sessions are held. The complex also includes a 17-metre climbing wall, a gym, badminton and squash courts, a martial arts gym, a multi-purpose sports hall for team games with a capacity of 600, conference rooms, and a restaurant.

al. Politechniki 10 93-590 Łódź tel. 42 631 29 77 www.zatokasportu.pl

#### **CENTRE OF PAPERMAKING AND PRINTING**

It is a university-wide unit of Lodz University of Technology and the only independent university research unit in Poland specialising in research in the broadly defined fields of cellulose technology, paper materials, packaging and printing. The Centre research interests also include the study of cellulose-based composites, the life cycle and recycling of paper materials, as well as the design and systems of control of papermaking, converting, and printing machines. The Centre provides degree programmes in papermaking and printing. Their interdisciplinary character allows students to learn both theoretical knowledge and practical skills that make it easy for them to find attractive jobs. The Centre maintains strong ties with industry, design firms, and other companies operating in the papermaking and printing sector, which provides students with excellent opportunities for internships and networking with future employers. The methods of teaching and doing science applied at the Centre facilitate involvement in research projects from the conception, through laboratory research and equipment design to prototype construction and testing. The Centre also provides research and expert services. Specialised laboratories and research facilities, also on a semi-technical scale, ensure high quality research and teaching activities.

ul. Wólczańska 221 93-005 Łódź tel. 42 631 38 03 www.inpap.p.lodz.pl

# LODZ UNIVERSITY OF TECHNOLOGY HALLS OF RESIDENCE

The University student residential area includes health care facilities, a cafeteria and convenience shops, as well as an entertainment hall where many cultural and scientific events are held. It is also the seat of student organisations. Students who are not from the city of Łódź may choose between nine halls of residence that provide almost 3,000 beds. All students residing in the halls have free access to the Internet. The estate boasts modern sports facilities.



# SCIENCE AND RESEARCH

Lodz University of Technology actively participates in the economic and social life of the region. Rapidly changing environment presents the university with new challenges, therefore science and modern technologies are among the strategic goals of its development. Business has been increasingly interested in closer cooperation with Lodz University of Technology, as well as in innovations developed by the university researchers.

#### INTERNATIONAL AND NATIONAL PROJECTS

Lodz University of Technology conducts a great deal of research in collaboration with international research groups. The university effectively participates in the EU Framework Programs, e.g., HORIZON EUROPE 2020, which are the largest European mechanisms of financing research and development. The university is one of the national leaders in grant applications to EU-funded international programs, which puts it at the forefront of Polish research and development institutions.

20 Lodz University of Technology projects received funding under the new Multiannual Financial Framework for 2021-2027. Importantly, in five of them – four Horizon Europe-funded projects and one LIFE-funded project, TUL is the coordinator.

The university also takes part in projects funded by national and international programs that support basic and applied research, as well as development work, e.g., the Polish-Singapore Research Program, national programs of the National Science Center, as well as projects funded from strategic programs and the National Center for Research and Development.

One way in which the university supports its researchers in seeking research funding is through the activities of the Research Support Center. Further support, including financial, for the most active research groups are provided through the university internal competition for the Rector's Award, scholarships for the most promising scientists from the University Scholarship Fund, and from external funds through the European Institute of Innovation and Technology (EIT) in the area of health (EIT Health) and food (EIT Food).

The fact that Lodz University of Technology holds the status of a finalist of the program *The Excellence Initiative - Research University* allowed the university to expand its offering of incentives for researchers by introducing programs to advance scientific excellence of academic staff, doctoral candidates, and students, e.g., YES - Young Excellent Scientists Programme and FU<sup>2</sup>N – The Fund for Enhancing the Skills of Young Scientists.





# SUPPORT FOR RESEARCHERS

Lodz University of Technology creates and supports academic entrepreneurship by actively engaging in the process of establishing and developing new innovative companies based on the university intellectual property (e.g. spin-off and start-up companies). Bold economic initiatives undertaken by TUL scientists have led to the establishment of companies which are successful in their markets, dynamically expand their machinery, increase their range of services, and develop further technologies of commercial potential.

The University regularly holds conferences to establish a dialogue between the world of academia and the world of business, which contributes to a more effective transfer of knowledge through direct and indirect commercialisation.

The University pursues an active policy of managing projects, R&D output, and intellectual property at the stage of conception, development, and implementation. The University puts great emphasis on educating students, doctoral candidates, and staff and raising their awareness of what is meant by innovation, commercialisation, and technology transfer.

Lodz University of Technology is authorized to confer doctoral and postdoctoral degrees in 12 disciplines. In the evaluation of the 12 scientific disciplines pursued at TUL, the university boasts three A+, six A, and three B+ ratings.



# EDUCATION

High standard of education provided by Lodz University of Technology ensures that our students earn qualifications that are appreciated by Polish and foreign employers.

# CAREER DEVELOPMENT

As the needs of the external environment change, the university continues to improve its system of teaching and learning. We use modern teaching and learning methods and techniques, e.g. Project Based Learning, Case Teaching, Flipped Education. For our students and staff, we have created a Design Thinking Lab, a creative thinking space, where people from different faculties and pursuing different degree programmes have the opportunity to work collaboratively on projects combining many, seemingly far-flung domains. In each faculty, active teaching studios have been established, where project classes are carried out.

The University takes the care to ensure that students during their studies are exposed to practical problems faced by enterprises and business. To this end, we offer traineeship opportunities in Poland and abroad, study visits, open days for companies, lectures and classes conducted by future employers. We want students of all faculties to develop an understanding of the industries they see themselves in in the future. We focus on developing soft skills: communication, creativity, initiative, flexibility, teamwork, and time management.

TUL is committed to facilitating continued development of outstanding individuals. One way this is done is through innovative 2 programmes such as E<sup>2</sup>TOP (Excellence in Engineering: Talents in Research with Opportunities Programme), a programme for students planning to conduct their research projects in an international environment.

Lodz University of Technology Career Service provides advisory services. It supports students in their job search and decision-making concerning their career development and encourages them to set up their own business.

Lodz University of Technology is well prepared to provide education for students with disabilities. The Office for Persons with Disabilities (BON), which operates at the University, is dedicated to helping students in their regular academic activities. Its purpose is to ensure equal educational opportunities for people who require individual support. BON is responsible for coordinating study assistants and transport aid, transporting people in wheelchairs, individual tuition, renting specialist equipment to aid the process of education, digitization of teaching and learning materials, psychological support, and career advice. It has been recognized for "breaking barriers". In 2013, it was awarded the Lodołamacz statuette [*Icebreaker*] - a special award for companies and institutions welcoming people with disabilities.



### CONTENT-RICH CURRICULA

Each year, the range of degree programs offered at Lodz University of Technology (TUL) expands to meet the evolving needs of industry and the job market. This growth is driven by close collaboration with businesses seeking highly qualified specialists across various fields. Currently, TUL offers 68 degree programs, each with specialized tracks tailored to industry demands and informed by the latest scientific advancements.

Strong industry partnerships play a key role in shaping our curricula. Many projects and diploma theses are carried out in collaboration with companies, which allows students to work on real-world challenges and gain hands-on experience.

Since the 2019/2020 academic year, doctoral training has been offered through the Interdisciplinary Doctoral School (ISD). ISD offers 12 educational paths, a flexible and innovative curriculum delivered in English, lectures by visiting professors, opportunities for mobility, summer schools, and research projects. Doctoral candidates benefit from statutory scholarships, as well as incentive scholarships awarded to the most outstanding candidates.

For professionals looking to enhance their expertise, TUL offers a broad range of postgraduate certificate programs and specialist training, ensuring continuous professional development.

#### **HIGH-QUALITY EDUCATION**

At Lodz University of Technology, we place great emphasis on the quality of teaching, which is reflected in the positive evaluations awarded by the Polish Accreditation Committee (PKA) for all assessed programs. Notably, TUL has received an outstanding assessment and holds Certificates of Excellence in Education for three programs: Computer Science – recognized in the Partner for Development category, Power Engineering – awarded in the Always for the Student category, Chemical Technology – distinguished in the Excellent Program category. Additionally, TUL holds KAUT accreditation for seven first-cycle and seven second-cycle programs.

Our strong collaboration with leading universities in Poland and abroad provides access to the latest scientific and technological advancements, which enriches both teaching and research. These efforts contribute to TUL's growing recognition and strong position in prestigious university rankings.

A degree from Lodz University of Technology is a mark of quality, recognized and valued by employers in Poland and worldwide, paving the way to exceptional career opportunities.



## FIELDS OF STUDY

ADVANCED BIOBASED AND BIOINSPIRED MATERIALS ADVANCED DESIGN AND TECHNOLOGY APPLIED COMPUTER SCIENCE APPLIED MATHEMATICS ARCHITECTURE ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING AUTOMATIC CONTROL AND ROBOTICS AUTOMATION AND ROBOT CONTROL **BIOMEDICAL ENGINEERING BIOMEDICAL ENGINEERING AND TECHNOLOGIES** BIOTECHNOLOGY BUSINESS STUDIES BUSINESS, SOCIETY AND TECHNOLOGY CHEMICAL ANALYTICS CHEMICAL TECHNOLOGY CHEMICAL AND BIOCHEMICAL ENGINEERING CHEMISTRY CHEMISTRY IN FORENSICS\* CHEMISTRY OF BUILDING MATERIALS **CIVIL ENGINEERING** COMPUTER SCIENCE COMPUTER SCIENCE AND INFORMATION TECHNOLOGY CONTROL SYSTEMS OF INTELLIGENT BUILDINGS COSMETICS TECHNOLOGY DESIGN ECOTECHNOLOGIES AND BIOPROCESSES ELECTRICAL ENGINEERING ELECTRONIC AND TELECOMMUNICATION ENGINEERING ELECTRONICS AND TELECOMMUNICATIONS ENERGY SYSTEMS IN THE BUILT ENVIRONMENT ENVIRONMENTAL ENGINEERING IN CIVIL CONSTRUCTION FOOD TECHNOLOGY AND HUMAN NUTRITION FUTURE MATERIALS AND TECHNOLOGIES FUTURE MOBILITY

INDUSTRIAL BIOTECHNOLOGY INDUSTRIAL PROCESS ENGINEERING **INFORMATICS** INFORMATION TECHNOLOGY INFORMATION IN ENVIROMENTAL LOGISTICS MANAGEMENT MANAGEMENT AND PRODUCTION ENGINEERING MANAGER OF FOOD AND NUTRITION MARKETING IN THE INDUSTRY MASTER IN MECHANICAL ENGINEERING MASTER OF BUSINESS STUDIES MATERIALS AND TECHNOLOGIES MATHEMATICAL METHODS IN DATA ANALYSIS MECHANICAL ENGINEERING MECHATRONICS MODELLING AND DATA SCIENCE NANOTECHNOLOGY NUCLEAR POWER ENGINEERING AND RENEWABLE ENERGY SOURCES OCCUPATIONAL SAFETY ENGINEERING PAPER AND PRINTING TECHNOLOGY POWER ENGINEERING PRODUCTION MANAGEMENT SMART MANUFACTURING SUSTAINABLE BIOECONOMY **TECHNICAL PHYSICS** TECHNOLOGIES OF MODERN FUNCTIONAL MATERIALS **TEXTILE ENGINEERING TEXTILES AND FASHION INDUSTRY TEXTRONICS** TRANSPORT **URBAN PLANNING** 



## SPORTS AND CULTURE

Lodz University of Technology is the hub of many events and various cultural activities. For many years, it has been hosting concerts, meetings with interesting personalities from the world of art and culture, art exhibitions, shows, screenings, and festivals. It is home to Radio Żak, a non-commercial student radio station that - for over 60 years to date – has been broadcasting for students. You can tune in at 88.8 MHz in Lodz and the surrounding area or listen to it online anywhere in the world. Its original programmes are concerned with culture, social issues, music, sports and current events. The Radio also takes part in the organisation of many events and festivals. Classical music concerts have a 30-year long tradition at the University. The concert series titled ,Music at Lodz University of Technology' dates back to 1992 and to Professor Jan Krysiński, who at the time served as Rector of the University. According to the music critics of our city, the series is a prominent music salon of the city.

Thursday Cultural Forum has been regularly held for over 15 years. The Forum provides a wonderful opportunity to meet outstanding writers, intriguing personalities, well-known and respected artists.

The Choir of Lodz University of Technology has been entertaining people for over seventy years. It is one of the best amateur choirs in Poland. Students and alumni who make it share a passion for singing, working on the repertoire which includes compositions in different genres and from different historical eras. Part of the Choir's rich repertoire has been recorded and is available on CDs.

The Academic Orchestra of Lodz University of Technology has been active since 2005. The ensemble has performed in many prestigious venues. Its repertoire includes classical music as well as original music scores and other popular musical compositions. Sports is one of the strengths of Lodz University of Technology. We are proud to have world and European champions among our students. The University hosts many international sports events. In 2022, the university hosted the largest event of its kind in the country - the European University Games (EUG).

EUG 2022 was also a prominent university sports event in Europe. 5 000 international athletes competed in 20 sports disciplines during the Games. They represented 450 universities from 37 countries. 700 volunteers helped out. 500 official guests and hundreds of spectators cheered for the young athletes.

#### **DISCOVERING THE WORLD**

For those who want to travel the world, are curious about other cultures, want to make international contacts and gain valuable experience, international student organisations and associations are the perfect place. They facilitate the process of landing placements and training programmes in many different parts of the world. Among the major international student organisations operating at Lodz University of Technology there are the Board of European Students of Technology BEST, Erasmus Student Network, European Youth Exchange Łódź ESN EYE, European Students Forum AEGEE, International Student Association of Economy and Trade - AIESEC.

#### PASSIONATE ABOUT SCIENCE

There are more than 50 student scientific societies at Lodz University of Technology. They are perfect platforms for students who have a passion for science and want to enrich their knowledge and understanding of an area of science, work on their ideas for scientific projects, get ready for competitions, share and discuss the results of their own research during various scientific events.

# HISTORY

The origins of Lodz University of Technology are inseparably linked to the history of the city of Lodz which at the end of the 19th century, due to its rapid growth and development, was the second most densely populated city in Poland. Engineers were in great demand.

Citizens of Lodz had to wait long for the opportunity to study at a technical university in their home town. It was not before the end of the Second World War that the idea started to take shape. As a result of intense efforts of the City authorities, The Ministry of Education acknowledged the need and took the decision to establish a technical university in Lodz.

Professor Bohdan Stefanowski of Warsaw University of Technology, who would become the first rector of the University, arrived in Lodz at the beginning of May, 1945. Assisted by a team of his closest associates, he coordinated organisational activities leading to the establishment of the University.

Former Rosenblatt factory buildings located in the vicinity of the city center were the first seat of the University. Authorities of the city of Lodz provided interim teaching rooms and office space for the University employees.

The decree which officially established Lodz University of Technology was signed on May 24, 1945. The Faculties of Mechanical Engineering, Electrical Engineering, Chemical and Textile Engineering were the first ones to open their doors to students.

The University developed vigorously. Further buildings of the former Rosenblatt factory were adapted at an accelerated rate. Every year, the University premises grew larger and larger, more and more students enrolled, the number of academic staff increased, new faculties and departments were created, new buildings erected.





- 1947 Faculty of Textile Engineering, currently Faculty of Material Technologies and Textile Design,
- 1950 Faculty of Food Chemistry, currently Faculty of Biotechnology and Food Sciences,
- 1956 Faculty of Civil Engineering, currently Faculty of Civil Engineering, Architecture and Environmental Engineering,
- 1969 Bielsko-Biala branch of TUL,
- 1970 Institute of Chemical Engineering with faculty rights-currently, the Faculty of Process and Environmental Engineering,
- 1970 Interfaculty Institute of Papermaking and Papermaking Machines, currently Center of Papermaking and Printing,
- **1976** Faculty of Technical Physics and Applied Mathematics, currently Faculty of Technical Physics, Information Technology and Applied Mathematics,
- 1981 Faculty of Engineering Design in Bielsko-Biala branch,
- 1991 Faculty of Organisation and Management,
- 1991 Computer Centre, currently TUL Computing & Information Services Center,
- 1992 Faculty of Textile Engineering and Environmental Protection in Bielsko-Biala branch,
- 1993 International Faculty of Engieering
- 1994 Laser Diagnostics and Therapy Centre, currently PoliClinic Medical Centre of the Foundation of Lodz University of Technology
- 2001 Bielsko-Biala branch is transformed into an independent university
- 2015 Information Technology Centre,
- 2017 TUL Sports and Education Centre Sports Bay,
- 2017 TUL International Cooperation Centre,
- **2019** Centre of Papermaking and Printing, formerly: Institute of Papermaking and Printing



## RECTORS OF THE UNIVERSITY

- 1945 1948 prof. dr hab. Bohdan Stefanowski
- 1948 1952 prof. dr hab. Osman Achmatowicz
- 1952 1953 prof. dr inż. Bolesław Konorski
- **1953 1962** prof. Mieczysław Klimek
- 1962 1968 prof. Jerzy Werner
- 1968 1975 prof. dr inż. Mieczysław Serwiński
- 1975 1981 prof. dr hab. inż. Edward Galas
- 1981 1987 prof. dr hab. inż. Jerzy Kroh
- 1987 1990 prof. dr hab. inż. Czesław Strumiłło
- 1990 1996 prof. dr hab. inż. Jan Krysiński
- 1996 2002 prof. dr hab. inż. Józef Mayer
- 2002 2008 prof. dr hab. inż. Jan Krysiński
- 2008 2016 prof. dr hab. inż. Stanisław Bielecki
- 2016 2020 prof. dr hab. inż. Sławomir Wiak
- 2020 2028 prof. dr hab. inż. Krzysztof Jóźwik







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