Silesian University of Technology
Ladies and Gentlemen!

The Silesian University of Technology, a higher education institution with more than 70-year-long tradition of operating in various social and economic conditions, is a renowned technical university recognised in the scientific and research community and in the area of higher education. The Silesian University of Technology is the oldest technical university in the region and one of the largest in Poland. It has nearly 3,400 employees and provides education to approx. 21,500 students in 58 fields of study. To date, it boasts nearly 190,000 graduates.

The main objective of our university is to train highly skilled engineering staff for the modern industry and to conduct innovative research. It is at the Silesian University of Technology that new ideas and solutions are born that enable multilateral scientific cooperation in many areas of relevance to the economy, making the Silesian University of Technology an active player with regards to innovation and new technologies required by the knowledge-based economy.

The development of our university is supported by very good facilities and well-developed socio-economic infrastructure. Those favourable conditions for the operation and development of the Silesian University of Technology are created by the local government authorities of Gliwice, Zabrze, Katowice and Rybnik, i.e. the cities in which our university has been present and respected for many years. In the entire region, there are numerous companies and special economic zones, including the Katowice Special Economic Zone with many enterprises operating in the field of advanced technologies. The result of the close cooperation of the Silesian University of Technology with the industry sector is the development of the existing specialities and fields of study and creation of new ones, including dual training. With each year, the availability of such forms of education at our university will be increasing and employers will be participating in the creation of new curricula that are modern and unique in terms of the teaching contents and ways of conveying knowledge.

Without any doubt, the greatest asset of the Silesian University of Technology is its people: both the employees and the students. It is they who stimulate the development of the university, ensuring the high quality of scientific and teaching activities and building its prestige both in Poland and abroad. I am convinced that with the engagement of all the academic community and close cooperation with the industry, the Silesian University of Technology will continue growing as a modern European technical university educating the elite of the society and supporting the dynamic development of the economy with due regard for the ethical values and the highest quality of research and teaching activities.
VICE RECTORS OF THE SILESIAN UNIVERSITY OF TECHNOLOGY

Vice Rector for Science and Development
Professor Marek Pawełczyk PhD, DSc

Vice Rector for General Affairs
Professor Bogusław Łazarz PhD, DSc

Vice Rector for Student Affairs and Education
Professor Tomasz Trawiński PhD, DSc

Vice Rector for Collaboration with Civic and Economic Environment
Professor Janusz Kotowicz PhD, DSc
THE MISSION  
OF THE SILESIAN
UNIVERSITY OF
TECHNOLOGY:

As a prestigious European technical university, the Silesian University of Technology conducts innovative research and development activities, and educates highly professional staff for the knowledge-based society and economy. It also actively stimulates the growth of the region and of the local communities. Due to the constant improvement of processes and organisation, the university is a friendly and open place for the academic community to work and develop.

THE VISION OF
THE SILESIAN
UNIVERSITY OF
TECHNOLOGY
IN 2020:

The Silesian University of Technology is a higher education institution that respects the universal values and academic traditions. It is a modern and widely recognised European technical university, one of the top Polish technical universities, educating the elite of the society and supporting the dynamic development of the economy with due regard for the ethical values and the highest quality of research and teaching activities. The high position and the prestige of the university are built through self-improvement in the climate of partnership and cooperation of the employees, students, PhD students and the social and economic environment. Those conditions favour creativity, innovativeness and transfer of technologies.
VALUES OF THE SILESIAN UNIVERSITY OF TECHNOLOGY:

As the Silesian University of Technology takes part in the development of science, technology and culture, it instils in its community the values of patriotism, civil responsibility, active citizenship, mutual respect, tolerance, integrity and fairness. It also promotes respect for good practices in science. In accordance with the principle of academic freedom, the university respects the diversity of the fields of study and differences in beliefs.
72 years of tradition

15 faculties

58 fields of studies

3,400 employees, including:
academic staff: 1,750,
non-academic staff: 1,650

164 professors

584 PhD students
A BRIEF HISTORY

The Silesian University of Technology is one of the biggest technical universities in Poland. Its rich, 72-year-old tradition makes it the oldest in Upper Silesia and one of the oldest in the country. The foundation of the Silesian University of Technology fulfilled the idea which had been germinating in the heads of the Silesian people for a long time. Because Silesia had great prospects for economic development, the first steps to set up a technical university had been taken as early as the late 1920s – a technical university would have supported this highly industrialized region through scientific research and didactic activities.

Eventually, the Silesian University of Technology was founded after World War II – on May 24, 1945 and Gliwice was chosen for its seat despite initial plans to locate it in Katowice. What made Gliwice stand out from other places in Upper Silesia was the space potential it offered. Here empty buildings, grouped in a small area, could be converted and used for didactic and administrative purposes as well as turned into halls of residence for students and teachers. Another strength of Gliwice was the fact that academic staff of the Lvov Technical University were resettled here after the War.

The inauguration ceremony of the first academic year was held in Gliwice on October 29, 1945. At the time there were 2,750 students. Educational curricula and plans were based on the standards from the Lvov Technical University. The academic staff of the Silesian University of Technology comprised almost solely the former academics from Lvov. There were four faculties: Faculty of Chemistry, Electrical Engineering, Mechanical Engineering and Civil Engineering, with almost 200 university teachers. The excellent teaching staff were one of the strongest assets of the university from the beginning.

The Silesian University of Technology was founded as the scientific and didactic base for the most industrialized region in Poland and one of the most industrialized areas in Europe: Upper Silesia. Eleven faculties of the Silesian University of Technology are located in Gliwice – the main seat of the University, two in Katowice and two in Zabrze. The University employs 1,750 academics, including 164 professors and 341 assistant professors with DSc degree. So far, the university has to its credit almost 190,000 graduates. The main strength of the Silesian University of Technology is the wide range of courses it offers and the superior quality of training it provides. The university has invariably been the top of Polish technical universities and it has been classified high in the ranking of higher education institutions. Its strong position has been confirmed by considerable academic achievements of its outstanding specialists and their numerous successes.

The superb quality of teaching is ensured by the qualified academic staff, close ties with a lot of scientific centres in Poland and abroad, and by scientific research aimed at active cooperation with industry. Favourable conditions for such cooperation have arisen from the fact that the university is right in the centre of the biggest industrial region in the country and one of the biggest in Europe, which enables close scientific cooperation in a range of fields. The Silesian University of Technology is a key player as far as new technologies and innovations are concerned. It is here that new ideas and solutions are being brought into life and when applied in industry they boost competitiveness of Polish firms.

The studies at the Silesian University of Technology give an excellent basis for a future career. There are students in 58 fields of studies which encompass the whole range of engineering activities. Six faculties run courses in English, thus adjusting to the European educational market and encouraging foreign students to join. Thanks to the student exchange scheme, our students can study in almost any country in Europe, in one of 200 universities which cooperate with the Silesian University of Technology.
Construction of the building of the Faculty of Mining, 1951
COOPERATION WITH THE INDUSTRY

The Silesian University of Technology closely cooperates with its business environment. This follows from its main objective, which is to train highly skilled engineering staff for the modern industry and to conduct and implement innovative research.

The connection between business and science is established via the Innovation and Technology Transfer Centre (CITT) of the Silesian University of Technology, which has an extensive experience in the commercialisation of knowledge and technologies, and in effective protection of intellectual property. The team of specialists has developed a wide variety of contacts with the business environment, which makes it possible to undertake efficient actions in this respect and to effectively promote scientific research. CITT employees are willing to support companies in the search for research teams meeting their specific needs, but also to help them define the possible directions of development with regards to investing in innovation.

The Silesian University of Technology is a university that pays special attention to developing entrepreneurship in its students. Those skills often help them later in making decisions concerning their professional future. The Student Career Office and the Academic Entrepreneurial Incubator are also very active at our university. As a result, students can obtain help in finding a job, setting up their own company and getting information about available training, courses and internships. The Silesian University of Technology regularly organises job fairs, numerous training courses and workshops, including programmes promoting academic entrepreneurship.

The activities aimed at boosting entrepreneurship among the students of the Silesian University of Technology are actively supported by the industrial partners of the university who regularly take part in the above-mentioned events, offering students and graduates not only attractive training and internships, but very often providing them with practical knowledge in the area of setting up a company or implementing new technologies in the industry.

For many years, the Silesian University of Technology in cooperation with its business partners has organised the contest entitled “My idea for a business” (Mój pomysł na biznes). The contest aims to stimulate innovativeness and entrepreneurship among students and employees of the university. The winning projects are ready-to- implement ideas that involve the use of modern technologies.

The Silesian University of Technology regularly cooperates with the representatives of many industries in the development of unique curricula, and in increasing the industry’s participation in the entire educational cycle. As a result of those activities, we improve the existing fields of study and create new ones, including dual training, conducted in strict cooperation with our industrial partners.
INTERNATIONAL COOPERATION

International cooperation is one of the key strategic points of interest for the Silesian University of Technology. Main fields of international cooperation are: research, education, networking and mobility.

The Silesian University of Technology (SUT) is an active player on the international market of research and innovation. SUT has over 200 active bilateral agreements with universities from all over the world. Our scientists actively participate in various international research programmes (e.g. Framework Programmes, Visegrad Funds, etc) making SUT a scientific partner or project coordinator.

The Silesian University of Technology has been offering international educational programmes on all levels (bachelor, master, doctoral) for many years. For the last few years the offer of studies in English has been growing and at the beginning of 2017 it has reached the number of 18. Moreover, our university cooperates also in terms of joint diplomas, double diplomas, and joint doctoral studies. A high level of education is assured by regular domestic and international accreditations. For citizens of the European Union the studies are offered free of charge. The Silesian University of Technology organizes also a wide range of Polish and international summer schools.

The Silesian University of Technology is a member of several international educational and scientific organisations and networks. The most recognized are: Alliance of Universities for Democracy (USA), European Society for Engineering Education SEFI (Brussels), European Universities Association (EUA), European Association for International Education (EAIE), CEEPUS Networks. Scientists from SUT are also personally involved in several scientific and organizational boards of international organisations, commissions and conferences.

The Silesian University of Technology strongly and actively supports international mobility of students and staff. There have been signed over 200 mutual Erasmus+ Programmes agreements with foreign universities and each year hundreds of students and academic teachers travel within the programme, to and from our university.
AWARDS AND RANKINGS

- The Silesian University of Technology was granted the ELSEVIER Research Impact Leaders 2016 Award in the Engineering and Technology category as one of the higher education institutions whose publications had the greatest impact on the perception of Polish science in the world.

- The Silesian University of Technology was granted the HR Excellence in Research logo, which is a sign of recognition by the European Commission of the university’s efforts to implement the principles adopted in the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers.

- The university ranked 4th in the ranking of universities educating the managerial staff of the country (ranking of the Rzeczpospolita, December 2016).

- It ranked 7th among the best technical universities in Poland (ranking of the Perspektywy magazine, 2016).

- It ranked 4th in the TOP10 ranking of the most Ph.D.-friendly domestic universities, which was issued by the National Representation of Ph.D. Students (November 2016).

- It ranked 4th among universities whose graduates are most sought-after by employers (ranking of higher education institutions by the Wprost magazine, 2015).

- Graduates of the Silesian University of Technology are the biggest earners among the graduates of all higher education institutions of the Silesian Voivodeship (Nationwide Remuneration Survey, Sedlak&Sedlak, 2015).

- The university ranked 4th among universities whose graduates earn most in the first year after graduation (Nationwide Remuneration Survey, Sedlak&Sedlak, 2015).
STUDENT LIFE

The Silesian University of Technology offers its students the possibility of pursuing diverse passions and interests. As a result, student life at the university is exceptionally rich throughout the academic year and even during holidays.

Students who want to develop in the area of science participate in the activities of over 150 student associations, which are the cradle of the future creators of unusual theories, robots and technological solutions. It is worth mentioning such student associations as: Silesian Greenpower, Smart Power, High Flyers and Concrete, whose members are highly successful on the national and international front.

The “Mrowisko” Student Culture Centre was created to promote various activities among students. Within it, the largest students’ club in Silesia was opened, under the name of “Spirala”. The “Mrowisko” Student Culture Centre is also the seat of the student self government and of all student and cultural organisations operating within the Silesian University of Technology.

All the organisations are managed by a student self-government, which supports all initiatives related to science, culture, sports and tourist activity. The most spectacular event organised by the student self-government of the Silesian University of Technology is the popular annual student festival called “Igry”. This event is looked forward to not only by students, but also by the residents of Gliwice and other Silesian towns. The evening concerts can attract over ten thousand spectators. The standing item on the agenda of Igry is the traditional costume procession, which affords the students of the Silesian University of Technology an opportunity to display their creativity.

Student organisations (like BEST, IAESTE, AEGEE or Erasmus Student Network SUT) always focus on student development, improving their practical skills and activity in the area of science or culture.
CULTURAL INSTITUTIONS

The cultural life thrives at the Silesian University of Technology. During the academic year, there are plenty of festivals, exhibitions, concerts and theatre plays organised at the university.

The “Mrowisko” Student Culture Centre regularly plays host to various performances, concerts, variety shows, music and film festivals and many other events, always attracting large audiences. The cultural life at the university also includes the Club of Employees of the Silesian University of Technology. Apart from numerous concerts, the club also organises meetings popularising art, science and travelling, offers lectures and other events. The gallery, which operates within the club, always offers numerous vernissages and exhibitions of paintings and photographs by artists with ties with the Silesian University of Technology, Gliwice or Silesia.

There are also several cultural institutions at the university in which students and employees can develop their talents. Those with a flair for acting will be welcomed by the “Remont” Academic Theatre. For those students who like singing we recommend the Academic Choir of the Silesian University of Technology or the Academic Musical Ensemble. Apart from that, the Silesian University of Technology also has the “Dąbrowiacy” Dance Ensemble.
The Silesian University of Technology is a perfect choice for sports enthusiasts. It has nearly 30 sports sections, representing various disciplines such as aerobics, badminton, curling, judo, karate, running, mountain biking, women's and men's basketball, alpine skiing, handball, football, swimming, chess, women's and men's volleyball, modern dance, table tennis, tennis and powerlifting.

The physical education of students is managed by the Sports Centre of the Silesian University of Technology. Future engineers use modern equipment and train in well-equipped sports facilities managed by the unit. Those facilities include three sports halls, the “Tafla” ice rink, which is also used by the residents of Gliwice, three tennis courts, three beach volleyball courts, two streetball courts and two perfectly equipped gyms.

At the university, we also have the University Sports Association (AZS) of the Silesian University of Technology, which closely cooperates with the Sports Centre, gathering students in competitive sections. The members of the University Sports Association regularly represent our university in the Polish University Championships, Silesian University Championships and the Polish Championships of Technical Universities, achieving great results and sometimes beating physical education universities. As a result, the Silesian University of Technology has been ranked among the very top of the most sports-oriented universities in the country for many years.

At the Silesian University of Technology, we also celebrate Sports Day, which is usually organised in May. There are no classes on that day, and both students and employees of the university participate in a sports and recreation festival. The most important attraction of this event is the multi-discipline fitness contest in which the deans compete for the title of the fittest. A Sports Day tradition includes a handball match between the representatives of the City Council of Gliwice and the Silesian University of Technology.
FACULTIES

The Silesian University of Technology currently has 21,500 students, including approx. 15,500 full-time students. It offers 58 fields of study and about 200 specialities covering the entire scope of engineering activities. Studies are provided within 15 faculties located in Gliwice (the main seat of the university), in Katowice and Zabrze.

The Silesian University of Technology offers first-degree, second-degree and third-degree full-time and part-time studies. It also provides a wide range of postgraduate studies, workshops and courses.
FIELDS OF STUDIES

- administration
  - applied computer science and computational materials science
  - applied physics
  - architecture and urban planning
  - automatic control and robotics
  - automatic control and robotics, electronics and telecommunication, informatics
  - automatics and industrial informatics
  - biomedical engineering
  - biotechnology
  - business intelligence
  - chemical technology
  - chemistry
  - civil engineering
  - computer science
  - electrical engineering
  - electronics and telecommunication
  - environmental engineering
  - environmental protection
  - industrial and engineering chemistry
  - industrial informatics
  - informatics
  - information and communication technology
  - interior architecture
  - logistics
  - management
  - management and production engineering
  - materials engineering
  - mathematics
  - mechanics and machine design
  - mechatronics
  - metallurgy
  - mineral resources management
  - mining and geology
  - nanotechnology and materials processing technologies
  - pedagogy
  - philology
  - power engineering
  - process engineering and industrial equipment
  - project management
  - railway transport
  - safety engineering
  - sociology
  - transport
Faculty of Applied Mathematics

ul. Kaszubska 23
44-100 Gliwice
Tel.: +48 32 2372029

Fields of studies:
- informatics
- mathematics

The Faculty was founded in 1969, due to the decision of the Minister of Science and Higher Education. It was formed from the departments of Physics, Mathematics and Descriptive Geometry already existing at the various faculties of the University. In those days it was the first and the only such faculty at technical universities in Poland.

The faculty employees cooperate with several foreign research centres as part of both joint research projects as well as bilateral agreements. The Institute of Mathematics cooperates with the Ukrainian Academy of Sciences, Kiev (Ukraine), University of Campinas (Brazil), University of Central Florida (USA), University of New York (USA), University of Waterloo (Canada), York University, Toronto (Canada), University of Manitoba, Winnipeg (Canada), Texas A&M University (USA), University of Kiev (Ukraine), universities in Athens (Greece), Barcelona (Spain), Oulu (Finland), Wurzburg (Germany) and Technical Universities in Grenoble (France) and Copenhagen (Denmark). This cooperation results with science research contacts for the employees, joint publications in international journals and student exchange.

The Faculty also cooperates with some national research and industrial centers such as The Institute of Theoretical and Applied Informatics of the Polish Academy of Sciences, Central Mining Institute (post-diploma studies) and IT companies from the region.
Faculty of Architecture

ul. Akademicka 7
44-100 Gliwice
Tel.: +48 32 2371210

Fields of studies:
- architecture and urban planning
- interior architecture

Faculty of Architecture implements projects and undertakes research work on modern urban and spatial planning, on the theory and history of architecture, on revitalization of municipal areas, on restoration and conservation of historic buildings, and on quality assessment and management of such buildings. Artistic projects include interior and furniture design, functional graphics, sculpture, painting and drawing.

The Faculty is a member of the European Association for Architectural Education /EAAE/, the European Council of Landscape Architecture Schools /ECLAS/.

It also cooperates with organizations and institutions in many countries, e.g. with IAPS /International Association for People-Environment Studies/, Internationale Bauausstellung /IBA/ Furst-Puckler-Land in Germany, Romualdo Del Bianco Foundation in Italy, National Preservation of Cultural Heritage Old Halich in Ukraine. Our students participate in international design workshops and, within the framework of ERASMUS program, they can study at 23 partner universities.

Fruitful collaboration of the Faculty with creative professional organizations is being developed, among others with Union of Polish Architects, Society of Polish Town Planners, Chamber of Polish Architects, Chamber of Polish Town Planners and local self-governments.
Fields of studies:
- automatic control and robotics
- biotechnology
- electronics and telecommunication
- informatics
- information and communication technology
- automatic control and robotics, electronics and telecommunication, informatics

The faculty consists of three institutes. The Institute of Automatic Control carries out research in the field of automatic control, robotics, systems analysis and signal processing. Research is focused on the following areas: theory of control with missing data, adaptive and predictive control, expert systems, artificial intelligence, intelligent control systems, visual systems with applications in robotics, computer-integrated manufacturing systems, modeling, simulation and control of industrial processes, modern measurement problems, control in biomedical and biotechnological systems.

The Institute of Electronics carries out research into analysis, synthesis and design of electronic and telecommunication systems, microelectronic technologies, digital signal conversion, applications of signal processors, programmable systems and electromagnetic field engineering. The Institute also conducts research on synthesis and automatic recognition of Polish speech, biomedical image analysis, non-destructive testing, design of new sensors and easily testable electronic systems.

The Institute of Computer Science carries out research in all the major fields of information technology, including software engineering, database and data warehouse design, data analysis and data mining, automata theory, embedded systems, Internet of Things, computer networks, communication protocols, security in information technology.
Faculty of Biomedical Engineering

ul. Roosevelta 40
41-800 Zabrze
Tel.: +48 32 2777434

Field of studies:
- biomedical engineering

The Faculty of Biomedical Engineering has a well-qualified academic staff and modern research laboratories equipped with new generation apparatus, ensuring high level of research. Main research is conducted in the following fields:
- developing and using experimental methods to study the states of mechanical strain and stress in biomechanical objects in stimulated laboratory conditions,
- optimization of shape, mechanical properties and performance of implants for prosthodontics and reconstructive and interventional surgery,
- testing the corrosion and biodegradation resistance of metal, polimer, ceramic and composite biomaterials,
- research of new generation of rehabilitation equipment with the use of rehabilitation supervision and control,
- application of model tests to the analysis of loads acting on the human skeletal and muscular system with the use of MES and dynamics of mutal-partial system
- support of sports training with the use of bio-mechanical tests
- biomedical signals and image processing
- computer aided systems for image diagnosis and therapy,
- supporting system for laparoscopic therapy,
- using imaging navigation when supporting minimally invasive surgery.

The Faculty cooperates with numerous industrial partners and medical centres.
Faculty of Chemistry

ul. ks. Marcina Strzody 9
44-100 Gliwice
Tel.: 32 2371549

Fields of studies:
- biotechnology
- chemistry
- process engineering and industrial equipment
- chemical technology
- industrial and engineering chemistry

Research and scientific activity is focused on bioorganic chemistry, industrial biotechnology, chemistry of heterocyclic compounds, chemistry of oxidation processes and peroxide compounds, physical chemistry and polymer technology, synthesis and modification of polymers, transport of gases and ions in polymeric membrane, catalytic processes in technology and environmental protection, processing of coal derived raw materials, industrial waste management. Our employees have had considerable achievements in work on substances of special purity and properties. Detailed research is also carried out into new solutions for bioprocess engineering, into technologies of obtaining nano- and ferro-fluids, and into enzyme biocatalysts for biotransformation technologies.

Other fields of research covered by our Faculty include: corrosion and corrosion prevention; pneumatic transport; gas purification; dynamics of chemical reactors; optimization of technical solutions for industrial processes; industrial chemical analysis; eco-analysis and biological material analysis.

Faculty staff cooperates with other scientific centers in Poland and several foreign Universities, e.g. University of Cambridge (UK), University of Wollongong (Australia), Loyola University Chicago (USA), Queen's University Ionic Liquid Laboratories (QUILL) Research Centre (UK), University of Hyogo (Japan), Ecole Normale Supérieure de Cachan (France), Institut Nanosciences et Cryogénie (France), Technische Universität Eindhoven (Netherlands), Centre for Nanotechnology and Smart Materials (Portugal), Technische Universität Bergakademie Freiberg (Germany), Kauno Technologijos Universitetas (Lithuania).

The cooperation involves joint scientific research in a lot of areas and exchange of professors, junior lecturers with PhD, PhD students and students.
Faculty of Civil Engineering

ul. Akademicka 5
44-100 Gliwice
Tel.: +48 32 2371410

Field of studies:
- civil engineering

Academic staff of the faculty carry out research into all the fields of construction design, building materials, building technologies, transport services engineering and infrastructure. They are also interested in the latest developments of building engineering, especially the computer simulation of structures under load /using MES and MEB/, elastic-plastic modelling of construction materials and soil, applied rheology of 3-phase media /mainly mortar and concrete mix/, probabilistic methods and theories of stochastic processes used for design analysis, artificial intelligence systems combining fuzzy sets, genetic algorithms and neural networks. The Faculty has a strong track record of collaborating with the construction industry of the Silesia region and it interacts with industry and commerce in a variety of ways: it prepares the expert opinions on the types of building and engineering constructions while taking into account mining deformations, it supervises and offers consulting services on building projects, reconstruction, strengthening and modernization of building and engineering constructions, designing transport systems in urban areas and motion engineering and environmental protection. The Faculty actively cooperates with many trade organizations. Student and academic staff exchange program is run in cooperation with universities in England, Germany, Italy, Spain, France, Denmark, Portugal, Slovakia, Turkey, Norway, Kazakhstan, South Korea and Brazil. Foreign students can take structural engineering course /entirely in English/. Moreover, students of structural engineering and architectural construction can obtain Polish-Danish diploma in engineering as part of bilateral agreement with VIA University College Horsens in Denmark.
Faculty of Electrical Engineering

ul. Bolesława Krzywoustego 2
44-100 Gliwice
Tel.: +48 32 2371625

Fields of studies:
- electronics and telecommunications
- computer science
- mechatronics
- power engineering
- electrical engineering

Scientific research carried out at the Faculty includes the following subjects: information and telecommunications systems in the field of production, transmission and distribution of electrical energy, the diagnosis of electric power devices, electrical metrology, calibration and electric quantity comparators, automatics and control, digital circuit and microprocessor engineering, the basics of electronics, electromagnetic compatibility, projects of electric and electronic systems, signal processing methods, electric and hybrid cars, the analysis of electromagnetic fields of electric machines, application of signal processing in control systems, modernization of the construction of electric engines, power electronics, electric drives, electrothermal systems, microprocessor control of drive systems, energy generation in wind and solar power stations, mobile, walking and industrial robots, mechatronics and computer science in electric systems.

The Faculty cooperates with universities and scientific centres on all the continents. They include SVST Bratislava – Slovakia, Vysoka Skola Banska, Ostrava, University of Technology in Brno – The Czech Republic, University of Technology in Madgeburg, Fachhochschule Trier, Fachhochschule Darmstadt, Fachhochschule Regensburg, University of Technology in Duisburg – Germany, PGTU Mariupol – Ukraine, Cork Institute of Technology, Cork – Ireland, Wright State University Dayton OH – the USA, University of Windsor, Windsor – Canada, State University of Technology of Novosibirsk, Novosibirsk – Russia, University in Katania – Italy, Electric Power Research Institute – the USA, Physikalische Technische Bundesansalt, Braunschweig - Germany, Aristotle University of Thessaloniki – Greece, University of Tokyo – Japan, Visvesvaraya National Institute of Technology, Nagpur – India, Universidad Técnica Federico Santa María, Valparaiso – Chile, Cujae – Instituto Superior Politécnico José Antonio Echeverría, Hawana – Kuba, ITS University Centre for Systems and Control Engineering, Johannesburg – The Republic of South Africa.
Faculty of Energy and Environmental Engineering

ul. Konarskiego 18
44-100 Gliwice
Tel.: +48 32 2371770

Fields of studies:
- biotechnology
- safety engineering
- environmental engineering
- mechanics and machine design
- environmental protection
- power engineering

The Faculty staff are very actively involved in international scientific research centres cooperation and international cooperation projects within the European Commission framework programs. The Faculty units coordinate a few of European research projects. Furthermore, the Faculty cooperates with Russian Academy of Science and American Industrial Hygiene Association. It has also carried out collaborative research projects with other foreign centres: Polish-German agreement on cooperation (No-Border University), IEA Cooperation Agreement in Paris, cooperation with European Research Community on Flow, Turbulence and Combustion ERCOFAC, Marie Curie research project (together with European and American universities), EUREKA program dealing with the development of technologies based on waste to energy systems in small and medium enterprises.

Other forms of staff international cooperation include permanent contacts with a number of foreign research centres including universities in Berlin, Dresden, Stuttgart, Clausthal, Zittau, Halle, Wittenberg, Magdeburg, Bohum, Merserburgh, Munich, Gent, Lyngby, Orlando(USA), Ijmuiden, Cottbus, Erlangen, Wessex, Florence, Athens, Kassel, Louvain, Coleraine, Brunnel, Vienna, Ostrava, Prague, Brno, Glasgow, Sophia. The cooperation involves collaborative research, participation in conferences and student and staff exchange programs.

The faculty is a national leader in strategic programs, e.g. ‘Advanced Technologies for Energy Generation’, ‘Integrated System for Reducing Energy Consumption in the Maintenance of Buildings’. It also participates in Knowledge and Innovation Community – KIC InnoEnergy project.
Faculty of Materials Engineering and Metallurgy

ul. Krasińskiego 8
40-019 Katowice
Tel.: +48 32 6034102

Dean: Professor Jerzy Łabaj
PhD, DSc

Fields of studies:
- industrial informatics
- materials engineering
- metallurgy
- management and production engineering

The research carried out at the Faculty involves materials engineering and metallurgy. The research studies focus on the following: waste-free technologies, development and utilization of waste materials, mathematical modeling and optimization of metallurgic processes, environment management, computer-aided design processes, theory and technology of metallic materials, cracking mechanics, modeling of heat flow processes, kinetics of welding processes, kinetics of waste formation and destruction, technologies of composite formation, surface engineering, foundry, structure analysis and properties, designing of chemical composition and technologies of materials subjected to complex mechanical and thermal load and corrosion environment, ceramics technologies of special properties ceramics, stereological methods.

The Faculty maintains didactic and scientific cooperation with about 30 overseas universities and research institutes from the Czech Republic (e.g. Vysoka Skola Banska-Ostrava), Estonia, France (e.g. Ecole Centrale Paris), Holland (e.g. Technical University-Eindhoven), Lithuania, Germany (e.g. Martin Luther University, TU Bergakademie Freiberg, TU Dersden, TU Magdeburg, FH Muenster, FH Osnabrueck), Russia, Slovakia (e.g. Technicka Univerzita Kosice), Sweden, Ukraine, USA (e.g. University of Minnesota, University of Tennessee), United Kingdom (e.g. Brunel West London University) and Italy. The cooperation with overseas research centers involves also such European programs as Erasmus+, French-Polish ‘Formation Recherche Est’ Inco-Copernicus and Ceeptus.

Additionally, the Faculty cooperates with many domestic universities and institutes, as well as with production plants of automotive industry, aircraft industry, metallurgy and power industries.
Fields of studies:
- automatic control and robotics
- applied computer science and computational materials science
- materials engineering
- mechanics and machine design
- mechatronics
- nanotechnology and materials processing technologies
- management and production engineering

The Faculty enjoys the wide scientific and didactic cooperation with over 150 universities located on every continent. Moreover, it has one of the greatest foreign students exchange system (almost 100 students and PhD students join annually one-semester studies in almost all European countries, mainly within ERASMUS programs). The Faculty participates in the most important science research and didactic programs. The Faculty has long term cooperation agreements, students and PhD students exchange with numerous foreign centres. Every year the number of scientific and didactic partners of the Faculty increases.

The Faculty prides on traditionally good collaboration with numerous firms and companies operating in the field of industrial automation and robotics, machinery design, production engineering, as well as scientific research centres. This collaboration is one of the factors that determines the motivation to develop the faculty laboratory which gives students access to the latest technologies and facilities applied in industrial production, including those used in the biggest companies in the world. It also enables the faculty staff to verify theoretical knowledge and carry on interesting scientific research.

Current cooperation with industry embraces among others the following assignments: carrying out mutual research and development works, developmental and goal oriented projects, participation of firms in delivering equipment to the research and didactic laboratories at the Faculty, transfer of new technologies from science to industry and from industry to didactics, organizing post-diploma studies for all candidates willing to raise their professional qualifications, giving expertise and doing research in the laboratories at the Faculty and giving opinions concerning the innovative character of undertakings carried out by business enterprises, carrying joint projects within the mid-semester projects and BSc and MSc theses, organizing production placements. This versatile cooperation results in very profound preparation of the Faculty graduates to work in modern industry, ease in finding a good job, and chances of fast promotion. Over the last few years there has been growing demand on the labour market for well qualified specialists in automation, robotics, mechanical and material engineering.
Faculty of Mining and Geology

ul. Akademicka 2
44-100 Gliwice
Tel.: +48 32 2371283

Fields of studies:
- automatics and industrial informatics
- mineral resources management
- mining and geology
- safety engineering

The Faculty runs the scope of researches concerning modern mining which covers appropriate geological identification of mineral deposits, economically effective extraction of raw materials, use of energy-saving and fail-save machines, meeting requirements of safety and environmental protection. Scientific and research achievements of the Faculty concern among other things: automation and control of working processes, application of fuzzy sets in modelling and simulation researches, monitoring injury risk and fire precautions, control of dangers of stray currents, construction of modern mining machinery, experimental and computer research of dynamic and tribological phenomena in mining machines, rationalization of structure and organization of mining companies, earth surface protection at mining sites, removal of mining damage and revitalization of postindustrial areas, mining below facilities on the surface of the area or in the conditions of bounce danger, ventilation and air-conditioning of mines, firefighting, control of dust and gas explosions, industrial safety in mining, control and determination of preventive treatment of water dangers in active and liquidated mines, flood hazard assessment, examination of coal quality and protection of coal resources in a deposit and assurance of energy safety of the country, designing of digital mining maps, application of clean coal technologies, estimation of utilization possibility of mineral wastes, crisis management, new technologies using gravity and other physical methods, research on physical chemistry of mineral processing principles and use of results in new technology development and modification of existing methods of coal flotation processes with focus on steam coals, analysis of water-coal slurry fuels properties and its production, industrial testing of new flocculants in water-sludge circuits of mineral processing plants.
Faculty of Organization and Management

ul. Roosevelta 26
41-800 Zabrze
Tel.: +48 32 2777314

Fields of studies:
● administration
● business intelligence
● logistics
● management
● management and production engineering
● project management
● sociology

The Faculty carries out research in the following fields: Strategic Management in Company and Economic Regions; Values in Contemporary Company Management; HR Management; Personnel Marketing Theory and Practice; Financial Services Marketing; Company Assets Management; International Expansion of Companies; Urban Logistics; International Logistics; Project Management; Product Technology and Quality Management; Processes of Change and Strategies of Company Development; Computer – Aided Engineering Tasks; Creation and Exploitation of Acoustic Maps; Political and Legal Problems of Upper Silesia Region; Promotion of Employment in Local Government; Public Safety; Rescue Systems and Emergency Management; Quality Management in Manufacturing, Service and Administrative Companies; Management of Environmentally Friendly Processes; Safe Work Conditions in Industry and Health Services; Access to Public Spaces for Disabled People; Knowledge Transfer in Product Life Cycle.

International cooperation is a vital element of scientific and didactic activity of the Faculty of Organization and Management. The employees join different forms of professional training in France, Greece, Germany, Spain, Great Britain where they give lectures and cooperate in research work. The Faculty has signed continuous cooperation agreements with numerous foreign scientific centres like: Ecole de Mines de Saint Etienne, France; Fachhochschule Bielefeld, Germany; Bergische Universitat – Gesamthochschule Wuppertal, Germany; VIA University College, Horsens, Denmark; Karel de Grote Hogeschool, Antwerp, Belgium; Copenhagen University College of Engineering, Denmark; Technische Universiteit Eindhoven, Faculty of Technology Management, Holland;Technische Universitat Bergakademie Freiberg, Germany.
Faculty of Transport

ul. Krasińskiego 8
40-019 Katowice
Tel.: +48 32 6034108

Fields of studies:
- transport
- railway transport

The Faculty conducts scientific research in the following areas: transport nets optimization, transport logistics, microprocessor technique and simulation tests in transport, mathematical modelling of combustion processes in engines, alternative fuels usage, wearing out of transport machines' elements, supporting computer designing transport machines' units, vibroacoustic diagnosis of machines and vehicles, dynamics of vehicles' suspensions, applying numerical methods in designing and optimizing wheel units and wheel-rail system, telematics and transport safety, environmental and human exposure on transport system, comfort and safety in transport, maintenance and reliability models in transport, noise and vibration in transport, research on welding in means of transport, research on gear transmission, eco-mobility, electro-mobility, research on materials for automotive.

Every year the Faculty employees carry out approximately 100 scientific projects including grants financed by the Ministry of Science and Higher Education, the Ministry of Infrastructure and the European Commission; they carry out implementing activities as well as service work and they also participate in designing new communications solutions in the region. The Faculty also organises more than ten cyclic national and international conferences. A number of scientific works conducted by our employees have been awarded prizes by the Polish Prime Minister, the Minister of Education and Sport and companies such as Fiat and ABB. Faculty of Transport cooperates with many foreign universities such as: Technical University of Ostrava, Glasgow Caledonian University, Manchester Metropolitan University, Chalmers University of Technology, State Transport University in Sankt Petersburg, Ruhr-Universität Bochum, Kaunas University of Technology, Lviv Polytechnic National University, East-Ukrainian National University.

Faculty also cooperates with numerous Polish universities, institutes and scientific research centres and many companies from the sectors of automotive, transport services, producers and distributors of components for automotive vehicles and automotive equipment technical support. Faculty has signed cooperation agreements with over 50 business entities of all sizes.
Institute of Physics – Center for Science and Education

ul. Konarskiego 22B
44-100 Gliwice
Tel.: + 48 32 2372216

Field of studies:
- applied physics

Research investigations of the Institute are associated with the four main scientific disciplines: solid state physics, physics of semiconducting nanostructures along with magnetoelectronics, generally understood applied physics and physics of radioisotopes. Thus, research efforts are carried out in four Departments.

Moreover, research excellence of the Institute is realized within five scientific layers:
- new concepts and innovations (simulations, modelling, complex systems, econophysics);
- basic and innovative investigations of nanomaterials (graphene and single wires);
- technology (sonochemical, sputtering, thin-layers);
- measurements capabilities (optical, electronical, morphology, thermal, isotopic);
- sensors (from a very applied perspective: gases, photovoltaics, UV).

Research efforts of the Department of Solid State Physics are conducted on: technology of $A_B\text{C}_{\text{III}}$ compounds as nano-wires and filled carbon nanotubes, technology of temperature-electrically tunable photonic crystals, laser beam interactions with composite materials, impedance spectroscopy measurements of nanomaterials, mono- and poly-crystals, a photo-magneto-electro effects in graphene.

Research efforts of the Department of Surface Physics and Nanostructures are conducted on: computer simulations of energy levels in near-surface and interface regions in semiconductors, Auger spectroscopy of chemical profiles in materials, optical spectroscopies of micro- and nano-electronic wide-gap devices, micromagnetic simulations of nano-magnetic structures, Kerr-effect spectroscopy of patterned ferromagnetic structures, simulations of textile magnetism and surface image processing of textile materials.

Research efforts of the Department of Applied Physics are conducted on: determination of thermal properties of materials, including the local ones at micrometer scale and investigation of thermal properties at nanometer scale with the use of thermal atomic force microscopy, analysis of electronic properties of metal-insulator-semiconductor structures in hetero-junctions, and semiconducting devices in general, using Deep-Level Transient Spectroscopy (DLTS) and Isothermal Capacitance Transient Spectroscopy (ICTS) methods, gas sensor design and construction with the use of surface acoustic waves.

Research efforts of the Department of Radioisotopes are conducted on: radiocarbon dating of residual concentrations of naturally occurring $^{14}\text{C}$ in materials containing organic or inorganic carbon using Liquid Scintillation Counting (LSC) and Accelerator Mass Spectroscopy (AMS), absolute dating by luminescence methods in geology, geomorphology, palaeogeography and archaeology in order to determine ages of geological sediments and archaeological objects, alpha and gamma spectrometry used to study processes occurring in the natural environment such as soil erosion or lake sedimentation.
University College of Social Sciences and Philologies is a humanities department of SUT. The BA and MA intramural and extramural study programmes offered by the College comprise the areas of pedagogy and foreign philologies. The philologies include English, French, German, Italian and Spanish study programmes, with two elective specialisations: teaching a foreign language at early education level and the translation and business programme. The former is intended for teaching a chosen foreign language at nurseries and primary schools, the latter for various administrative work in an international business environment requiring translation skills and a practical knowledge of a foreign language. The practical profile of the BA studies is ensured by an extended internship component which gives the hands-on experience both to prospective teachers and business-oriented translators.

Pedagogical studies include BA and MA study programmes for pre-school and early school education, with special education components, such as revalidation pedagogy with IT in oligophrenopedagogy (special education and rehabilitation of individuals with intellectual disability) and in surdopedagogy (education of individuals with various manners of hearing impairment). Moreover, students may choose to study educational therapy including early support in child’s development and educational therapy with neuroeducation elements. The practical profile of studies is ensured by an extended range of practical professional training classes, which guarantees educating competent teachers, pedagogues and therapists. Moreover, the College offers a platform for research on the common ground shared by humanities and technology. Regularly organized conferences and interdisciplinary seminars bring together technical, social and philological researchers who give an insight into the modern world seen from several angles. Cultural studies provide a reflection on the modern world shaped by an advanced technology and rapid progress.
OTHER UNITS OF THE SUT

- Academic Entrepreneurial Incubator
- Biomedical Engineering Centre
- Biotechnology Centre
- Central Library
- Centre for Advanced Security and Defence Technology
- Centre of Science and Education for Railway Transportation
- Centre for Science Popularization
- Civil Aviation Personnel Education Centre for Central and Eastern Europe
- Engineering Education Centre
- Foreign Languages Teaching Centre
- Innovation and Technology Transfer Centre
- Project Management Centre
- Prosumer Energy Centre
- Sports Centre
- Student Career Office
- SUT Press
- SUT Television

University campus