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About

Welcome to Warsaw University

- a technical research university with traditions in education dating back to the 19th century. We are a forward-thinking institution where high-quality education meets world-class research and innovation.

Located in the heart of Europe, WUT is not only the oldest, but also the best technical university in Poland. In the ranking of Polish universities, it has taken the first place in its category for nine

Our priorities are multi-layered study programmes supported by an advanced scientific research. In response to market demands, we offer an exciting range of professional and technological programmes which prepare students for their future careers. WUT authorities and the entire academic staff do their best to acquaint the students with up-to-date knowledge and skills that

WUT offers programmes at B.Sc., M.Sc. and Ph.D. levels in almost every field of technology – ranging from civil engineering and architecture to optoelectronics, materials, nanotechnology, biotechnology and biomedical technology. We provide also education complementary to technical studies, in the field of economics, social sciences, management, administration and business. For the purpose of teaching and research, WUT owns 38 buildings located in two campuses in Warsaw city centre and one campus in Płock, 320 laboratories as well as other buildings (dormitories, technical infrastructure, sports centres, medical care facilities, etc.).

Our primary aims are to educate responsible professionals, committed to the values of civic life, and to contribute to the development of research and innovation, which are the driving forces of progress in the society of the $21^{\rm st}$ century.

The mission of the Warsaw
University of Technology
always remains the same:
The knowledge and skills
imparted to its students and the
scientific studies it conducts
must always serve Man and
Mankind.





Warsaw University of Technology is the oldest and the most prestigious technical university in Poland. Its origins date back to the 19th century, to the foundation of schools for purposes of military technology and mining.

QS rankings

QS Best Student Cities 2016

Warsaw

2nd place

worldwide

in the category Affordability

QS Best Universities by subject

WUT 1st place in Poland

in the categories:

- Engineering:

 Civil & Structural
- Engineering:

 Electrical & Electronic
- Engineering:
 Engineering Mechanical,
 Aeronautical & Manufacturing

19 **X**

27 🔷

36092

2148

483

2619

38

3 ///

Facts

faculties

study programs offered in English

students

academic staff

professors

staff in administration, libraries, central institutions

buildings

campuses

ranked No. ONE in Poland among 21 universities of technology.

According to the last survey of the largest enterprises in Poland, more than 10 % of their CEO's and Presidents are graduates of WUT!

90% of our graduates find work within3 months after graduation!

The graduates of WUT are the **most wanted** by Polish employers – far ahead before other Polish universities.



Cooperation with over universities.

> prices Reasonable

Warsaw University of **Technology Development** Programme, co-financed by the EU within the framework of ESF, which ensures a high level of education and adaptation of the didactic offer to the demands of the job market.

of graduates who take The highest percentag managerial positions.

Over 100 registered student research groups, organisations and student associations.

We're the best! - title of the best Polish technical university every year for 9 years.

Over 5500 places in hall

and tourist bas

Reasons to study at the Warsaw University of **Technology:**

High-quality education

competitive costs of living in Poland

Numerous cultural and entertainment initiatives: concerts, events, festivals, exhibitions.

03 | Why?



WUT Careers and Employment

Employers seek wellrounded graduates

who can demonstrate relevant studies, work experience and extracurricular involvement.

Our dedicated Careers Services team supports students and alumni of WUT in their personal and professional development.

Students and graduates are welcome to meet Career Advisors to get information about the Polish labour market, to learn how to prepare an effective CV and Cover

Letter and how to get ready for a job interview.

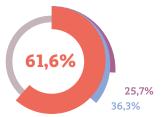
They can also take part in a career coaching session or in training courses focused on skills which are crucial for their further development (e.g.: communication skills, assertiveness, team work, self-presentation, coping with stress, time management and entrepreneurship).

To support the idea of professional networking, the Career Services' Team organises career events such as: "Meeting with Employer", "CareerDate", local job fairs, trial job interviews, etc.

A study conducted in 2016 showed that:



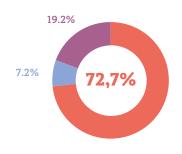
85,5% of WUT alumni see a positive influence of graduation from WUT on their career



61,6% were employed before their graduation

36,3% of those currently employed found a job within less than a month

and 25,7% did not have to look for a job, because employers found them first;



72,7% of questioned WUT graduates are employed, 7,2% run their own business, 19,2% continue their education in postgraduate studies

WUT graduates are most often employed in companies from the IT sector – 17%,

architecture / civil engineering – 10%,

power / electrical engineering - **6,4**%

WUT is international

Warsaw University of Technology puts special emphasis on its students' and workers' participation in international exchange programmes and internships, to make studies at WUT open doors to global labour markets.

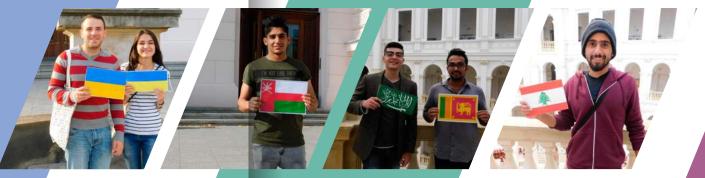
WUT offers a broad range of international and European exchange programmes for the students, teaching staff and researchers. We participate actively in various European educational programmes: Erasmus+, Erasmus Mundus, ATHENS and many others as well as hold over 30 active bilateral agreements focused on student exchange. WUT's acclaimed reputation is proved by more than 120 international academic and research cooperation agreements with universities, research centres and high-tech industries from 50 countries all around the world.

Each year around 600 international students from all around the world start their regular full-time studies at WUT. Another 300 international students come to WUT each year as exchange students, while the same number of Polish students are sent as exchange students to partner universities abroad. International students at WUT represent approximately 70 different nationalities. We place great importance on strengthening international knowledge exchange relations and stimulating understanding, tolerance and respect for different ideas and cultures.











STUDENT LIFE

Various student
organisations such as
Students Union, Erasmus
Student Network and
International Students
Association come up with
many initiatives to make
sure studying at WUT is
not just about lectures
and exams

They organise a great variety of cultural, sports and tourist activities such as concerts, sightseeing tours, trips to different cities and countries, theatre and cinema nights out, sport competitions, sailing or skiing camps, local cuisine dining, and many other social events. They are here for you to help in day-to-day issues



and to make sure your life at in Warsaw is easy and fun!

Each new international student can apply for a Mentor – a current student of WUT who will support you during your first days in Warsaw and introduce you to colleagues from the University and dormitory.

DORMITORIES

Warsaw University of Technology offers places in 12 dormitories.

Cost of dormitories varies from €100 to €150 per month.

Most rooms are double or triple, equipped with a little kitchenette

Most **dormitories are located** around central campus (max 20 minutes distance by public transportation).



Foundation Year

Starts in: October & February

We know from experience the educational systems around the world vary a lot. We fill this gap by inviting you to Foundation Year, which will prepare you to study at WUT.

Foundation Year is a two semesters introductory course to Bachelor studies at WUT. It is addressed to students who have applied to study at Bachelor level at WUT but did not show sufficient knowledge in the diagnostic Placement Tests in Mathematics and Academic English. Foundation Year is a chance for them to fill the gap between their current level of qualification and knowledge and the level needed to begin Bachelor studies at WUT.

Foundation Year students improve skills and create a solid base in Mathematics, Physics, chemistry, IT which helps them later on during the Bachelor studies at WUT. Foundation Year is a form of entry to the University which later on makes your studies easier and help you to fit in.

Duration: 1 year



600 academic hours divided in the following modules:

- Mathematics
- Physic
- Chemistry
- Introduction to Information Technologies
- Introduction to Engineering
- Academic Englis
- Polish for Foreigners and Polish Culture



B.Sc. Environmental **Engineering Faculty of Building**

Structures, Hydro and **Environmental Engineering**

Duration: 4 years

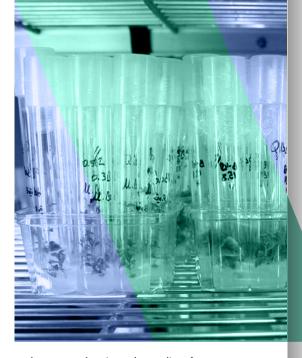


Starts in: October

The major objective of the Environment Engineering Programmes is to provide a high quality, interdisciplinary knowledge and skills to people searching for solutions to the environmental problems of today and the future, concerning: water resources protection, air pollution control, solid waste management, environmental impact assessment, renewable energy systems and others.

At the undergraduate level of Environmental Engineering, principal engineering skills are taught together with achievement of knowledge of basic subjects such as mathematics, physics, chemistry and biology. All the students of the Faculty are given general knowledge of processes in major constituents of environment as well as in basic environmental technologies, e.g.: atmospheric physics and chemistry, air pollution control, hydrology, water resources and water protection, water and sewage processing, groundwater, soil protection and land reclamation, waste management. Modern methods of natural resources protection through the use of best available technologies and production practices, recycling and reuse of wastes are thoroughly taught. In addition, environmental aspects of the energy production and use are stressed throughout all engineering courses. Students are also familiar with some global environmental issues such as climatic change, ozone layer depletion, land use changes and global water scarcity and contamination.

The first three semesters of the programme provide students with basic knowledge of mathematics, physics, chemistry and biology at the university level. In addition, several engineering basic courses are offered to give



students comprehensive understanding of environmental issues. The next four semesters cover specific topics within the field of environmental engineering. The eighth semester is devoted mostly to the professional internship, working on the final project and preparation of the B.Sc. thesis, in which students use their knowledge to analyse and find a proper solution to a given problem.

Examples of modules:

- Biology and Ecology
- Information Technology
- Strength of Materials and Structural Mechanics
- Material Engineering
- Fluid Mechanics
- Civil Engineering and Constructions
- Statistics in Environmental Sciences
- Hydrology
- Meteorology
- Soil Protection
- Engineering Hydrology and Hydrogeol-
- Environmental Chemistry
- Air Pollution Control
- Solid Waste Management
- Water Resources Protection
- Municipal and Industrial Wastewater Treatment
- Renewable Energy Systems

M.Sc. Environment **Protection Engineering**

Faculty of Building Structures, Hydro and **Environmental Engineering**

Duration: 1,5 years



Starts in: October & February

The Graduate Programme in Environment Protection Engineering focuses on research and engineering activities which aim at mitigating the negative impacts of human activity on the environment. It is primarily addressed to the alumni of the undergraduate programme in environmental engineering or other undergraduate engineering programmes, such as civil, mechanical or chemical engineering.

Broad knowledge and the system approach skills are acquired, including environmental law and economy, impact analysis, risk analysis and decision making, mathematical modelling, environment quality assessment and management, etc. These are linked either to national or the EU perspectives. Programme participants broaden their background in environmental physics. chemistry and biology, familiarize with techniques of environmental data analysis and mathematical modelling, and develop practical skills in designing and governing environment protection measures. They receive training in a wide range of environmental technologies such as water and waste water treatment technology, air pollution control, water and soil quality control, solid and hazardous waste management, environmental aspects of energy production and its use. In order to develop teamwork and collaborative skills, the professional knowledge is supplemented by training in social communication.

The first and second semesters of the programme give in-depth knowledge in mathematics, physics and chemistry. Moreover, several specialised engineering courses cover specific topics within the field of environment protection engineering. The scientific and engineering

courses are completed by social sciences topics. The third semester is mostly dedicated to work on the final project and preparation of a master thesis which should demonstrate acquired scientific and technical skills and understanding of environmental issues

Examples of modules:

- Computational Methods in Environmental Engineering
- Environmental Physics
- Monitoring of Environment
- Reliability and Safety of Engineering Systems
- Applied Climatology
- Irrigation and Drainage
- Geostatistics
- Heat and Mass Transfer
- Pro-ecological Technologies
- Global Climate Change
- Alternative Energy Sources
- Introduction to Remote Sensing of Environment

Graduate Profile - job opportunities:

The undergraduate programme in Environmental Engineering aims at a general Students are trained for positions as consulting reclamation and waste management companies, water and sewer companies, engineering ronmental agencies and services, environmen-

At Masters level, the programme in Environment Protection Engineering aims at research and engineering activities concerning the activity on the environment. Graduates receiving the Master of Science in Engineering measures in companies, maintain monitoring networks and provide expertise to local and

06 | Offer - Studies in English



B.Sc. Computer Science

(specialisation: Computer Systems and Networks

Faculty of Electronics and Information Technology

Duration: 4 years







Starts in: October & February

The field of study encompasses information technology, control and robotics, electronics and telecommunications. The program covers great varieties of subjects from diverse technology fields. The first two years are common for students of Computer Science and Telecommunications programs and constitute the area of Information and Communications Technology.

Graduates from Computer Systems and Networks specialisation have excellent

qualifications in the area of computer science basics, including basic knowledge of information processing, as well as the area of algorithms and system modelling and various aspects of computer engineering and applications. They are acquainted with the methodologies of object programming, CASE-tools-aided design, system analysis, system modelling and prototyping. They have knowledge of modern operation systems, programming languages, databases and various software applications. Graduates are self-reliant in the design, implementation and operation of complex computer systems and networks.

Examples of modules:

- Algorithms & Programming
- Circuits & Systems
- Computer Systems
- Telecommunications
- Operating Systems
- Graphical User Interfaces
- Data Bases
- Cryptography and Information Security
- Software Engineering
- Compiling Techniques
- Introduction to Artificial Intelligence

M.Sc. Computer Science

(specialisation: Computer Systems and Networks

Faculty of Electronics and Information Technology

Duration: 2 years



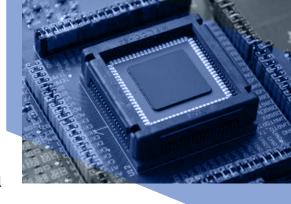
Starts in: October & February

The programme requires coursework in one specialisation and thesis preparation. Each student works with a supervisor from the faculty. The professor helps the student plan an academic programme of coursework compatible with the degree requirements and the student's educational objectives. The advisor also supervises the research and the thesis preparation. The thesis is based on a research project that partly involves the original material.

Graduates from the Computer Systems and Networks specialisation will be equipped with comprehensive qualifications in the area of computer science basics, including basic knowledge of information processing, as well as the area of algorithms and system modelling. They are proficient in computer programming and skilful in using computer tools. They are self-reliant in scheduling, implementing and verifying complex computer projects. Their knowledge facilitates quick adaptation to the rapidly changing environ-

Examples of modules:

- Discrete Random Processes
- Pattern Recognition
- Evolutionary Algorithms
- Digital Signal Processor Architecture and Programming
- Parallel Numerical Methods
- Distributed Computing and Systems
- Data Mining
- Intelligent Information Systems
- Image and Speech Recognition



Graduate profile - job opportunities

The graduate is able to:

- design IT systems and manage the with external equipment, handle the use
- analysis methods as well as modelling and prototyping methods with the use of database approach, knowledge base
- computational and expert systems, as well as decision support and optimisa-
- create computer games as well as

- turing system and utility software;

- implementing and integrating various IT

B.Sc. **Telecommunications**

Faculty of Electronics and Information Technology

Duration: 4 years







Starts in: October & February

The field of study encompasses information technology, control and robotics, electronics and telecommunications. The program covers great varieties of subjects from diverse technology fields. The first two years are common for students of Telecommunications and Computer Science programs and constitute the area of Information and Communications Technology.

Graduates of the Telecommunications specialisation are prepared for jobs related to the design of digital telecommunication circuits, digital processing of telecommunication signals (coding and compression of speech and image signals, digital modulations, redundant coding), design and operation of telecommunication (transmission, commutation and datacommunication) systems, as well as design of telecommunications (telephone, data-communication and integrated networks). Students acquire the ability to solve system problems that require comprehensive knowledge in the areas of telecommunications and computer science, combined with considerable nonengineering knowledge.

Examples of modules:

- Algorithms & Programming
- Circuits & Systems
- Computer Systems
- Telecommunications
- Signal Processing & Coding in Telecom-
- Wireless Systems and Networks
- Access and Backbone Systems and Networks
- Cryptography and Information Security
- Switching and Routing
- Communication Protocols
- Satellite Communication Systems

M.Sc. **Telecommunications**

Faculty of Electronics and Information Technology

Duration: 2 years



Starts in: October & February

The programme requires coursework in one specialisation and thesis preparation. Each student works with a supervisor from the faculty. The professor helps the student plan an academic programme of coursework compatible with the degree requirements and the student's educational objectives. The advisor also supervises the research and the thesis preparation. The thesis is based on a research project that partly involves the original material.

Graduates of the Telecommunications specialisation possess knowledge and skills necessary for the design, implementation and operation of telecommunication circuits, equipment and systems based on modern technologies. They study, in particular, the methods and techniques for transmission of information by means of radio waves using the potential of digital techniques, computers and other advanced technologies, as well as the methods of image and sound processing. Students acquire also skills necessary to solve system problems which require comprehensive knowledge in the areas of telecommunications and computer science, combined with some non-engineering knowledge.

Examples of modules:

- Discrete Random Processes
- Computational Electromagnetics for Telecommunication
- Oueuing Theory
- Adaptive Image Recognition
- Techniques and Algorithms for Signal Processing
- Adaptive Signal Processing
- IP Multimedia Subsystem
- Digital Communications
- Optical Fiber Transmission



Graduate profile: -job opportunities:

The graduate is able to:

- general use, as well as to design radio

- design systems and networks of wire as mobile systems (including satellite
- create infrastructure supporting

- operators of landline and mobile net-
- TV broadcasters and producers; radio



B.Sc. **Computer Science**

Faculty of Mathematics and Information Science

Duration: 3,5 years







Starts in: October

For the first three semesters, the programme covers the basics of mathematics, which allows for the effective learning of computer science and programming techniques in the next semesters. In this period, students receive basic information on calculus, linear algebra and geometry, discrete mathematics, logic, numerical methods, and principles of electronics. Additionally, during the first semesters, introduction courses to structural and objectoriented programming, algorithms and data structures as well as operating systems are offered. Until the fourth semester, classes are joint for all students. From the fifth semester students have the opportunity to choose elective courses which cover both theoretical and practical aspects of computer science. The last,

seventh semester is mainly devoted to team project and thesis preparation.

Students are thoroughly educated in mathematics and aquire the theoretical basics of computer science, which enables them to widen his or her knowledge in the rapidly changing field of computer science. Graduates can use IT tools, programme in various programming languages, and operate IT equipment and software. They can work as part of a team to develop and implement IT projects, as well as verify component elements of computer information systems in compliance with a given specification. Graduates can administer medium-scale computer information systems and computer networks.

Examples of modules:

- Programming (C, C++, Java, C#, .NET and
- Discrete mathematics
- Introduction to digital systems
- Algorithms and data structures
- Differential equations
- Operating systems
- Data transmission
- Databases
- Computer networks
- Multilayer application development
- Software engineering
- Artificial intelligence fundamentals

M.Sc. **Computer Science**

(specialisation: Artificial **Intelligence**

(specialisation: Business **Intelligence Systems Development**)

Faculty of Mathematics and Information Science

Duration: 1.5 (standard)



or 2 years (extended - supplemented by one semester, dedicated for students who require additional preparation)



Starts in: October & February

These Master programmes cover modern mathematics and tackle the latest trends in computer science. Studies involve a lot of individual work. Each student chooses a scientific advisor from among academic and research staff. Last semester is devoted mainly to M.Sc. thesis preparation, which is usually highly related to the on-going faculty research.

Graduates can use IT tools to write computer programs, develop and verify IT projects including advanced statistical applications which require modelling and deepened comprehension of computer science notions. Graduates are well-prepared to work in companies of diverse business profiles which make use of advanced IT solutions, in particular in companies that develop software, IT consultancy companies, in the advanced technologies sector and the financial institutions sector.

Students of Artificial Intelligence specialisation gain a deep theoretical and practical comprehension of artificial intelligence and computational intelligence methods, neural networks and knowledge representation.

Students of Business Intelligence Systems Development specialisation become experts designing and programing of business intelligence systems (SAS) and statistical systems using advanced computational methods.

Examples of modules:

M.Sc. AI

- High performance computing
- Advanced algorithms
- Software testing
- Knowledge representation and reason-
- Neural networks
- Programming in logic and symbolic programming
- Image and speech recognition
- Calculus advances
- Data compression



M.Sc. BISC

- High performance computing
- Advanced algorithms
- Software testing
- Advances in computer statistics
- Enterprise data management
- Introduction to SAS system
- Business analytics programming
- Data mining advances
- Business intelligence and web applica-
- Computational intelligence in business applications

Graduate Profile - job opportunities

graduates may find employment in companies with diverse business profiles, in particular in the advanced technology sector or in financial institutions. They can work as software system administrators, computer network security or managers of projects related to

Career opportunities

- IT advisory services in companies of
- self-employment within the scope of





B.Sc. Electric and Hybrid Vehicles Engineering

Faculty of Automotive and Construction **Machinery Engineering**

Duration: 3,5 years







This field of study is dedicated to those who want to become engineers and meet the challenges of modern designing, operating and servicing of state-of-the-art recently emerged electro-mechanical vehicles, which have been dominating the ecologically conscious automotive market. The programme provides students with multidisciplinary knowledge in complex technical far-transportation structures with systems of energy recuperation and accumulation. Analysis of fundamental physical and chemical processes,



selection of nonconventional materials and control methods are taught in classes and laboratories. A novel approach to realisation of the educational offer gives the graduate vital skills in the engineering of ecologically friendly electric and multi-source hybrid automobiles, including special and autonomic vehicles.

- Mechatronics Systems Design
- Computer Systems in Mechatronics
- Mechatronic Sensor and Actuator
- Construction of Autonomous Vehicles
- Automation Systems
- Ionics and Photovoltaics
- Ultralight Vehicle Bodies
- Vehicle Structures and Crashworthiness
- Navigation of Autonomous Vehicles
- Vehicle Information Systems
- Energy Harvesting in Vehicles
- Diagnosis of Electric and Hybrid Vehicles
- Advanced Control of Electric and Hybrid Drives
- Vehicle Recycling

Graduate profile - job opportunities:

The graduate is able to:





B.Sc. Electrical Engineering

Faculty of Electrical Engineering

Duration: 4 years







Starts in: October

The area of study encompasses electrical materials technology, electrical measurements, circuits and systems, electromagnetic field, electrical machines, electrical power engineering, converter drives control, high voltage technology and IT. The programme embraces a great variety of subjects. Two specialisations

are currently offered: Control and Computer Engineering and Electrical Power Engineering

- CAD Methods
- Computer Science
- Circuits and Systems
- Mechanical Engineering
- Mathematics
- Electrical Measurements Instrumentation and Signal Transmission
- Electronics
- Numerical Methods
- Electrical Machines
- Introduction to Electrical Power Engi-
- Microprocessor Engineering
- High voltage technology
- Converter Drives Control
- Electrical Machines in the power engineering and automatization
- Electric Traction

M.Sc. Electrical **Engineering**

Faculty of Electrical Engineering

Duration: 1,5 years



Starts in: October

Students of M.Sc. Electrical Engineering acquire comprehensive qualifications and knowledge in the area of: power system (planning, optimisation and control), electrical power quality, electromagnetic compatibility, electromechanical drive systems, electrical traction, measurement systems (hardware and software), intelligent electrical installations and IT (artificial intelligence in power engineering, computational methods and algorithms, microprocessor engineering).

Examples of modules:

- Electrical Measurement of Non-Electrical Parameters
- Electromechanical Drive Systems
- **Energy Conversions**
- Selected Problems of Circuit Theory
- Short Circuits in Power Systems
- Numerical Methods in Technics

Graduate profile - job opportunities:

The graduate is able to:

- design industrial plants supply systems

Career opportunities:



06 | Offer – Studies in English



B.Sc. Mechatronics

(specialisation:

Photonics Engineering)

Faculty of Mechatronics

Duration: 3,5 years



Starts in: October

The profile of the first cycle full time studies within Photonics Engineering was developed to provide educational offer in the area of optomechatronics, especially in: building of optical and optoelectronic equipment and its applications in opto-numerical methods of inspection, e.g. holographic cameras, spectrometers, multimedia devices and multi-functional interferometers for different scale objects testing (from microelements of MEMS/MOEMS type up to large engineering structures). Students are equipped with knowledge on fundamentals of engineering

and basis for designing, manufacturing, testing and operating optomechatronic systems and devices. The graduates are prepared for work in the industry and SMEs and ready to tackle engineering problems. They can also support services based on optomechatronics equipment used in the fields such as multimedia, medicine, lighting, metrology and others.

Examples of modules:

- Material Engineering and Computer Techniques
- Engineering Graphics
- Fundamentals of Electronics and Electrotechniques
- Strength of Material
- Design of Fine Mechanism (CAD) and Optomechatronics
- Basics of Photonics
- Instrumental Optics
- Optoelectronics Technology and Image Processing
- Laser Techniques
- Machine Vision
- Fiber Optics Technology (Telecommunications and Sensors)
- · Photonics Devices and Systems
- Lighting Technology

M.Sc. Mechatronics

(specialisation:

Photonics Engineering)

Faculty of Mechatronics

Duration: 1,5 years



Starts in: October & February

The programme of the second cycle full-time studies in the field of Photonics Engineering specialisation is developed as a high-quality educational offer in the area of modern optics, photonics and optomechatronics. After graduation students will pursue their professional career in the diverse areas of photonics, especially: mathematical and numerical modelling, design of opto-mechanical systems, image processing and recognition, optical methods of testing, diffraction optics and microoptics. The profile of a graduate corresponds with the challenges of the 21st century. The unique knowledge, delivered during courses, enables

the graduate to pursue a promising career as engineers and researchers in modern fields of science, technology and industry, which are dynamically developing.

Examples of modules:

- · Design of Optical Systems
- · Diffraction and Fourier Optics
- · Image Processing and Recognition
- Medical Optics
- Optical microsystems
- · Optical full-field measurements
- Mechatronic Systems
- Numerical Methods in Optical Techniques

Graduate profileJob opportunities

- operation maintenance departments at production plants
- quality control departments at production plants.
- construction and design bureaus:
- representatives of international concerns manufacturing precise equipment.





M.Sc. Management and Production **Engineering**

(specialisation: Global **Production Engineering and** Management

Faculty of Production Engineering

Duration: 2 years



Starts in: October & February

The idea of the programme is based on an extensive research done among top managers in industrial multinational enterprises and internationally operating SMEs. The results of the research indicated a growing demand for graduates with integrated knowledge of production engineering and production management, supported by the ability to operate within multinational teams and within the global business environment.

Students of GPEM receive education in both organization and management, economy, legal and social science, as well as technical sciences. They acquire practical skills in design of business processes using state-of-art software. They also learn the basics of programming and algoritmisation of organizational issues in enterprises, development of database application for management support, preparation of investment projects evaluation in the field of implementation of management information systems such as ERP, CRM and BI, and the design of such systems.

Examples of modules:

- Quality Engineering & Management
- ICT & CAx in Production
- Design & analysis of manufacturing systems
- International Industrial Marketing
- Modelling of Production Systems and Supply Chains
- Maintenance Management
- International Trade, Business & Econom-
- Industrial Technologies
- Project, Innovation, Technology, Engineering & PLC Management
- Techniques of Industrial Engineering
- Global Operations Strategy and Logistics
- International Accounting & Finance for Production Engineers

Graduate profile - job opportunities:





06 | Offer - Studies in English



B.Sc. Aerospace **Engineering**

Faculty of Power and Aeronautical Engineering

Duration: 3,5 years



Starts in: October

During the first year studies focus on mathematics, physics, mechanics, thermodynamics and computer science. The core subjects for the second year are fundamentals of mechanical design, control engineering and foreign language. Students of aerospace program learn also their specialization subjects like aeronautics and astronautics. The third year is again more specialized. Aerospace program focuses on aeronautical systems, mechanics of flight, materials for aerospace technologies, propulsion systems and rotorcrafts. The last half of the year in 3.5 years program is devoted to the supervised work on engineering diploma thesis.

Graduates from Aerospace Engineering demonstrate expertise required in modern aerospace industry, in the airlines and in other industries applying novel technologies. They are also prepared to respond to the needs of research institutions in the field of research, design, development and maintenance of aircraft and spacecraft. Besides of basic electronics and information sciences including CAD, they possess solid knowledge in mechanics, thermodynamics - together with understading of combustion processes - materials and manufacturing technologies which are used in aerospace industry.

Examples of modules:

- Electric Circuits
- Mechanics of structures
- Thermodynamics
- Basics of automation and control
- Fluid mechanics
- Machine design
- Introduction to aerospace
- Materials in aerospace technology
- Integrated CAD/CAM/CAE system
- Mechanics of flight
- Aircraft Engine Design
- Aircraft Design
- Aeronautical System
- Risk and reliability in aviation
- Rotorcraft Aeromechanics

M.Sc. Aerospace **Engineering**

Faculty of Power and Aeronautical Engineering

Duration: 1,5 years



Starts in: October & February

At M.Sc. Aerospace Engineering students gain knowledge about recent achievements in the field and the methods and tools that prepare them for taking management positions in industry, or to undertake the research activity. The third semester of the 3-semester-study is devoted to the solution to a research problem. The problem statement and solution are put into the master diploma thesis.

Students of the Aerospace Engineering program are provided with a knowledge allowing for scientific research and design, optimisation, modernisation as well as maintenance of flying vehicles. Graduates are well prepared to work for aviation engine design offices, research laboratories and maintenance centres as well as to deal with all types of internal combustion engines (automobile, railway and power plant engines).

Examples of modules:

- Advanced Computational Fluid Dynam-
- Aircraft systems laboratory
- Composite Materials in Aerospace
- Control in Aerospace
- Dynamics of Flight
- Heat Transfer in Aerospace
- Physics of the Atmosphere
- Mechanics of Thin-Walled Structures
- Attitude and navigation systems
- Aircraft maintenance management
- Fatigue and aircraft diagnostic systems
- Structural analysis of aero engines
- Signals and identification methods



The graduate is able to:

design and construct the main as-

Career opportunities:

- domestic and international companies of
- aviation and space sector research and
- and IT technologies.



06 | Offer - Studies in English



B.Sc. Power Engineering

Faculty of Power and Aeronautical Engineering

Duration: 3,5 years



Starts in: October

During the first year studies focus on mathematics, physics, mechanics, thermodynamics and computer science. The core subjects for the second year are fundamentals of mechanical design, control engineering and foreign language. Students of Power Engineering learn advanced thermodynamics, fluid mechanics, heat transfer theory of heat machines, electric machines, electronics, fundamentals of combustion processes and fuels, theory of flow machines, electric power systems. The third year is again more specialized. In the third year of Power Engineering students learn thermal power systems, energy sources and energy conversion, technologies of environmental protection, renewable energy systems, control of heat processes, they also learn about turbines, pumps, steam boilers, reciprocating engines and heat pumps. The last half of the year in 3.5 years program is devoted to the supervised work on engineering diploma

The objectives of the study is to create the solid fundamental engineering knowledge during the first year of the study, then learn deeply the problems devoted to the subject of the study. Graduates are prepared to work in industry and to solve engineering problems. They have wide knowledge in the area of thermal engineering, electrical power engineering, information technologies, and economics. The programme provides them with knowledge and skills that are important for sustainable development of energy sources, ecological production of energy, transmission, and distribution of electricity. Students are prepared for creative work within the area of design, commissioning, and operation of power systems, as well as energy production, conversion, transmission and distribution.

Examples of modules:

- Mechanics of structures
- · Thermodynamics
- · Basics of automation and control
- · Machine design
- · Fluid mechanics
- Heat transfer
- · Theory of heat machines
- Electric Power Systems
- · Combustion and Fuels
 - Measurements and technique of experiment
- · Energy systems
- Electric Power Systems
- Energy sources and conversion
- · Internal Combustion Engines
- Steam Boilers
- Turbines
- Power Engineering Machines and Systems

M.Sc. Power Engineering

Faculty of Power and Aeronautical Engineering

Duration: 1,5 years



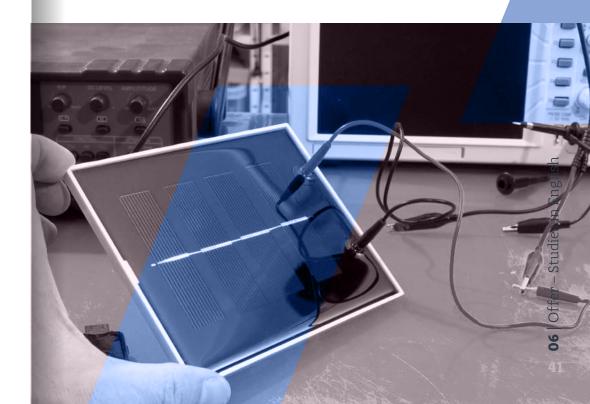
Starts in: October & February

At M.Sc. Power Engineering students gain knowledge about recent achievements in the field and the methods and tools that prepare them for taking management positions in industry, or to undertake the research activity. The third semester of the 3-semester-study is devoted to the solution to a research problem. The problem statement and solution are put into the master diploma thesis.

Graduates of M.Sc. Power Engineering are prepared for creative work and research within the field of processes control in power industry and in related industries. They can develop techniques of energy conversion and maintain power systems. They can also perform modernisation of machines, implement new technologies, as well as establish and manage small enterprises in power energy sectors. Graduates are also prepared to undertake Ph.D. studies in power engineering and in other related fields.

Examples of modules:

- · Computational fluid dynamics
- Energy efficiency
- · Energy Policy and Law
- Numerical methods in heat transfer
- Algorithms and Program of Heat Balances
- · Advanced Heat Transfer
- · Advanced Renewable Energy Sources
- Future Power Technologies
- Statistical and Non-equilibrium Thermodynamics
- Neural networks
- Project Management



Studies in English

M.Sc. Power **Engineering**

Nuclear Power Engineering

Faculty of Power and Aeronautical Engineering

Duration: 2 years



Starts in: October & February

The programme of the studies is based on advanced theory and engineering methods. The students learn about recent achievements in the field of nuclear power and the methods and tools that prepare them for taking managing positions in industry, or to undertake research activities. Special attention is given to modelling and simulation methods and codes. The programme is realised in close collaboration with foreign and national universities, research institutes and companies, and is supported by visiting professors and industrial specialists. The last semester of the 4-semester study is devoted to a researchbased internship at a nuclear installation, directly connected with the preparation of the master diploma thesis.

Graduates of Nuclear Power Engineering receive profound education in the area of nuclear reactor physics, nuclear reactor modelling and simulation, nuclear instrumentation and control, contemporary and future nuclear reactor systems, and nuclear power plant safety, operation and maintenance. They are prepared for creative work and research in the field of design, operation and control of nuclear power and other nuclear installations, as well as of classical power and related installations. This work could be focused on energy conversion processes in power machines and equipment, conducting modernisation of systems and facilities, implementation of new technologies, establishing small enterprises and their management.

Examples of modules:

- Elements of Nuclear Physics
- Nuclear Reactor Physics
- Contemporary Nuclear Reactor Systems
- Nuclear Fuels and Fuel Cycles
- Nuclear Instrumentation and Control
- NPP Safety
- NPP Operation and Maintenance
- Gen IV Nuclear Reactor Systems
- Thermonuclear Synthesis
- Nuclear Energy and International
- Modelling and Simulation

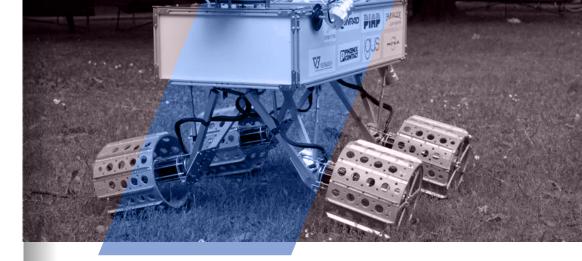
Graduate profile - job opportunities:

The graduate is able to:

- as regards energy processing, starting and ending with economic matters
- the growing role of problems related to

Career opportunities:

- Energy companies (including
- generation, distribution and sale of
- companies, public administration related
- Suppliers of equipment and services for



M.Sc. Robotics

Faculty of Power and Aeronautical Engineering

Duration: 2 years



Starts in: October

Students gain both knowledge and abilities necessary for creative work in design, construction, programming and analysis of automation and control systems, and can operate industrial and service robot systems. They are capable of solving complex, interdisciplinary problems related to control and design. Graduates possess enough knowledge to conduct research in RTD centres or pursue doctoral studies. They can be also employed as senior management staff in mechanical, electrotechnical, chemical and related industrial sectors. They can design and analyse complex robotics systems using advanced design and analytical tools.

Examples of modules:

- Signal processing
- Neural networks
- Mechanical design methods in robotics
- Robot programming methods
- Mobile robots
- Artificial intelligence
- Optimisation techniques
- Embedded systems
- Bio-robotics

- Advanced mechanical design
- Dynamics of multi-body systems
- Biomechanics

Graduate Profile - Job opportunities:

The graduate is able to:

- of modern engineering tools

- and automatic control systems, computer and controller programming and combine ments and actuating devices

- Development and consulting centres for
- ing medicine and labour protection





B.Sc. **Civil Engineering**

Faculty of Civil Engineering

Duration: 4 years





Starts in: October

Civil engineering deals with construction of such facilities as buildings, bridges, tunnels, airports, railways, highways and environmental systems. Planning, design, construction/reconstruction, operation and maintenance of these facilities are generally carried out by civil engineers. Education in the area defines knowledge and skills in execution, operation and modernisation of buildings and civil engineering structures, cost pricing, and knowledge of legal and administrative issues in the construction industry, as well as skills in computer methods supporting design and investment

The following subject areas of study are covered during the 4-year Bachelor program

- mathematics, physics, mechanics and chemistry, on which much of engineering knowledge is based;
- social sciences and humanities, to broaden study perspectives as well as

- to prepare students for professional interaction with people;
- a core of basic civil engineering subject areas, including courses in structures, surveying, transportation, materials science, management and environment:
- integrated sets of optional and elective courses in areas selected by students.

After completing the 3rd year of the programme students choose specialisation for the 4th year. Depending on the number of students interested in particular field of study two of the following specialisations are available each year: Civil Engineering Structures, Construction Engineering and Management, Energy-saving Construction, Transportation Engineering.

Examples of modules:

- **Building Materials**
- Theoretical Mechanics
- Technical Drawing
- Strength of Materials
- Mechanics for Structures
- Technology and Organization of Building
- Transportation Engineering
- Soil Mechanics and Geotechnical Engineering
- Concrete Structures
- Metal Structures
- Bridge Engineering
- Underground Structures
- Electrical and Sanitary Installations
- Hydraulics and Hydrology

M. Sc. **Civil Engineering Structures**

Faculty of Civil Engineering

Duration: 1,5 years



Starts in: October

A three-semester programme and preparation of the final M.Sc. thesis under the guidance of the Faculty supervisor allows students to acquire comprehensive knowledge and qualifications in the area of civil engineering. Graduates of the Master programme can handle design problems with a high degree of complexity and investment projects of a unique nature. They are prepared to carry out research projects and can manage design projects or run construction companies. Graduates of Civil Engineering programme are offered engineering and administrative posts in industry, construction, research, government and consulting companies.

Examples of modules:

- Engineering of Building Materials
- Theory of Elasticity and Plasticity
- Design Methodology of Construction Processes
- Computer Methods for Structural design
- Mechanics of Structures
- Concrete, Metal, Timber Structures
- Reliability of structures
- Computer-aided design of structures

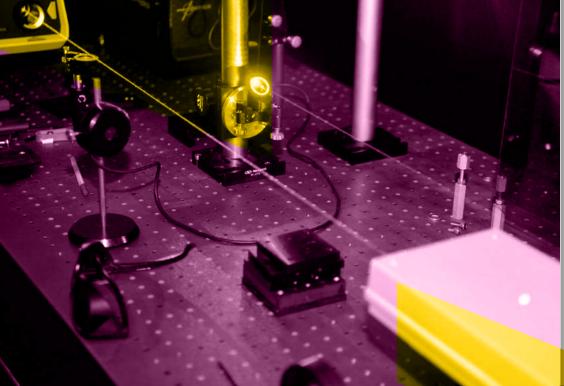
Graduate Profile - Job opportunities:

The graduate is able to:

- for residential, municipal, industrial buildings and transport infrastructure;
- process, calculate costs and arrange legal and administrative affairs in the
- organise and supervise the production of

- read cartographic and site surveying

- central and local government adminis-



Examples of modules:

- Photonics
- Optoelectronics
- Principles of Optics
- Fourier Optics
- Wave Optics
- Nonlinear Optics
- · Theory of Optical Imaging
- Ouantum Photonics
- · Optical Information
- Solid State Optics
- · Laser Physics and Technology
- · Photonic Systems and Devices
- Theory of Waveguides
- Fiber Technology
- Photonic Crystal Fibers
- · Liquid Crystal Photonics
- Displays Technology
- Holography
- · Photovoltaics

Graduate profilejob opportunities:

Graduates are expected to be offered a broad range of future opportunities, including: research in high technology companies, in particular photonics related companies; research in academic laboratories and research institutes (possibly in PhD context); development of new photonic products in industry; technical support in a company for its products or services; technical marketing and sales.

- Companies using modern optoelectronic and photonic technologies
- · Companies from the information technology and data communication sector.
- Research and development laboratories of high-tech companies.
- · Research laboratories of universities, research institutes and industry.

M.Sc. Photonics Faculty of Physics

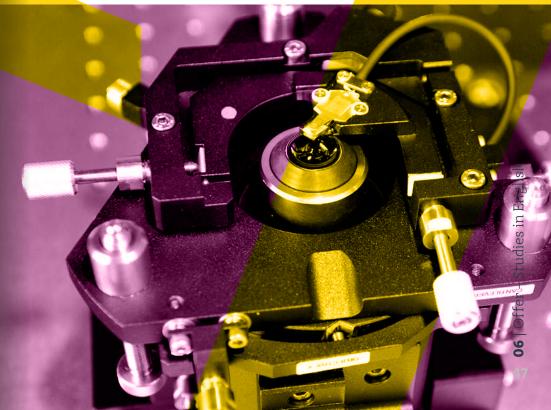
Duration: 2 years



Starts in: October & February

Photonics is the science and technology of generating and controlling photons. The science of photonics includes the emission, transmission, deflection, amplification, manipulation, detection and utilization of light. In principle it enables the use of light in different areas that are essential to society and economy. Photonics is of great importance in many industrial sectors and areas that use photonic technology for research, data- and telecommunication, business, education, security and defense, imaging, medicine, process control, biotechnology, quantum computation, energy generation, environmental sensing, etc.

The two-year Master program in the area of Photonics provides students a unique opportunity to become familiar with the applications of light in fields that range from fundamental research to technological applications. Graduates of the program represent excellent knowledge in mathematics, physics, electronics, and information technologies and have high level of qualifications to work for various institutions. During studies they may learn both: theory and practice, and they are following the core photonic courses as Electromagnetism Theory, Principles of Optics, Fourier Optics and Nonlinear Optics, as well as Optical Imaging Theory. The Faculty offers also advanced and specialized courses in optics and photonics covering all relevant fundamental research and applications including training in lasers, optical and photonic crystal fibers, liquid crystal photonics, optical waveguides, displays, holography, optoelectronics, optical sensing, data and telecommunication, terahertz technology, new material technology, ultra-fast and nonlinear optical phenomena, photovoltaics. Photonics course offers advanced laboratories.





M.Sc. Architecture

(specialisation: **Architecture for Society of Knowledge**)

Faculty of Architecture

Duration: 2 years



Starts in: October

Architecture for Society of Knowledge is a new professional programme focused on the digital design and crucial aspects of architecture and urban planning. Students can explore contemporary design practices as well as media and digital technologies applied in the design and construction of the 21st century city.

ASK is dedicated to those who wish to extend their practical understanding of contemporary architecture and urban planning. The programme covers digital media in design, prototyping with computer controlled machines, distributed design collaboration, and agendas for sustainable, intelligent building. At the same time, it acquaints students with basics of architecture: cultural heritage, history and theory paradigms, social aspects of space creation, and education through interacting.

Examples of modules:

- Design Studio (Algoritmisation of the creative process)
- Advanced CAD Techniques
- History of Space Shaping
- · Knowledge Management in Architecture
- Building and Modelling Materials
- · Information Processes in Architecture
- · Contemporary Theory of Architecture
- 3D Visualisation Techniques
- · Digital Fabrication
- Contemporary Urban Planning
- Advanced Visual Communication
- · Image Interpretation in Architecture

Graduates profile:

ASK aims to equip young practicing architects with the formative experience required in active participation in the global architectural knowledge society, and critical interpretation of the creative aspects of design and design collaboration, collaborative and interdisciplinary practice of architecture as well as architectural research exploring new design technology and theory.

- private enterprises
- state-owned enterprises
- central government administration authorities
- local government administration authorities
- · cooperative, professional administration;
- own business:

M.Sc. Management

(specialisation: Management of Sustainable Enterprise)

Faculty of Management

Duration: 2 years



Starts in: October

MSE is a fulltime graduate programme offered by Faculty of Management. The programme is designed to promote financial responsibility, ecological sustainability and social integrity in businesses and organisations of all types - from start-ups to global corporations. Our graduates are equipped with practical multinational management skills and experience, and are prepared to apply innovative tools in order to fulfil global challenges. MSE is a programme designed to become a bridge between Eastern and Western management ideas and practice. MSE curriculum integrates management of financial, human, and natural capital. The collaborative, project-oriented approach integrates the development of entrepreneurial skills with critical creative thinking and fostering leadership capacities.

Examples of modules:

- · Macroeconomics
- Economic Law
- · Management Accounting
- Management Visions
- · Organisation and Management Methods
- · Strategic Management
- Modelling of Management Processes
- Logistics
- Market Analysis
- Decision-Making Support Systems
- Business Forecasting and Simulations
- · Business Negotiations
- Sustainable Marketing

Graduate profilejob opportunities:

 lower and mid-level managerial positions, financial analysts, members of staff of IT and R&D institutions of any profile of central and local government administration conducting any form of economic activity, self-employment,

possibility of continuing education at graduate studies level in any social science discipline, such as Management, Economics, Administration, as well as in the area of technical sciences and related disciplines such as Logistics, Management and Production Engineering National Security.







Graduate profile – job opportunities:

Applied Biotechnology programme is focused on education of specialists prepared for employment in many biotechnological branches of industry (e.g. pharmaceutical, food or composting industry). Our graduates can expect to be competent to carry out scientific research in biotechnology laboratories as well as to work at planning or consulting companies.

- Small, medium and large enterprises of the biotechnology industry and related industries.
- Units of research facilities of the biotechnology industry and related industries.
- Research, testing and diagnostic laboratories.
- Design and business units, including companies trading in biotechnology equipment.
- Institutions providing consulting services and disseminating knowledge in the field of chemistry and biotechnology.

M.Sc. Biotechnology

(specialisation: **Applied Biotechnology**)

Faculty of Chemistry

Duration: 1,5 years



Starts in: February

The programme contains a wide range of specialist subjects (modelling of bioprocesses, regulation of biotechnological processes, separation processes in biotechnology, laboratory of technological and

biotechnological processes, biotechnology of natural resources, etc.), which, together with bioanalytical and selective subjects (bioanalytics, sensors and biosensors, microbioanalytics) constitute a comprehensive offer for all graduates interested in the field of biotechnology.

Examples of modules:

- Bioinformatics
- Environmental Biotechnology
- Data Treatment in Chemical Analysis for Biotechnology
- Bioreactors
- Clean Technologies
- Biomaterials
- Implantable Medical Devices
- · Microbioanalytics
- Separation Processes in Biotechnology
- Sensors and Biosensors



06 | Offer – Studies in English

HOW TO APPLY

The whole application process is run online!

B.Sc. CANDIDATES

DEADLINES FOR APPLICATION:

Middle of July

- for studies starting in October

Middle of December

- for studies starting in February



HOW TO APPLY:

STEP 1: Upload Entry Documents in the Online Application System:

- Passport
- → €200 application fee
- Higher Secondary School certificate
- → Transcript of records from high school

STEP 2: Complete Online Placement Tests in Mathematics and English

The results enable to us to assign you to appropriate study path: fulltime studies or Foundation Year

STEP 3: Wait for the decision of the Faculty

STEP 4: Upload Admission Documents:

- → Legalisation/Apostille on your Higher Secondary School certificate
- → Eligibility Statement a document certifying you are entitled to continue education at university level
- an appropriate English B2 certificate
- tuition fee for the first semester of studies

STEP 5: Register personally at the University and start your studies OR Foundation Year ●

M.Sc. CANDIDATES

DEADLINES FOR APPLICATION:

Middle of July

- for studies starting in October

Middle of December

- for studies starting in February

For Architecture: end of June



HOW TO APPLY:

STEP 1: Upload Entry Documents in the Online Application System:

- Passport
- → €200 application fee
- B.Sc. Diploma
- Transcript of records from B.Sc. studies

STEP 2: Wait for the decision of the Faculty

STEP 3: Upload Admission Documents:

- Legalisation/Apostille on your B.Sc. Diploma
- Eligibility Statement a document certifying you are entitled to continue education at master level
- → an appropriate English B2 certificate
- tuition fee for the first semester of studies

STEP 4: Register personally at the University and start your studies ●

Please follow our website for more updates at

www.students.pw.edu.pl

ENGLISH B2 CERTIFICATE

Candidates must have good knowledge of English confirmed by:

a document proving their previous education was conducted fully in English

7 or 3

- one of the recognised English B2 certificates:
 - **♦ IELTS Academic** at least 6 points.
 - ◆ TOEFL IBT at least 87 points in Internet-Based Test (iBT)
 - TOEFL CBT— at least 180 points in Computer-Based Test (CBT), supplemented by at least 50 points from Test of Spoken English (TSE)
 - TOEFL PBT at least 510 points in Paper-Based Test (PBT) supplemented by at least 3,5 points from Test of Written English (TWE) and at least 50 points from Test of Spoken English (TSE)
 - ...and many more
 - full list to be found on our website **www.students.pw.edu.pl**

Need more information about studies in English?



www.students.pw.edu.pl students@cwm.pw.edu.pl

08 | Language courses

Language School Offer

Warsaw University of Technology offers intensive courses of English language. They can be attended by candidates who either wish to continue their education at WUT later on or those who would like to learn English and apply to other universities in Poland or abroad.



Summer English Course

Duration: July - September

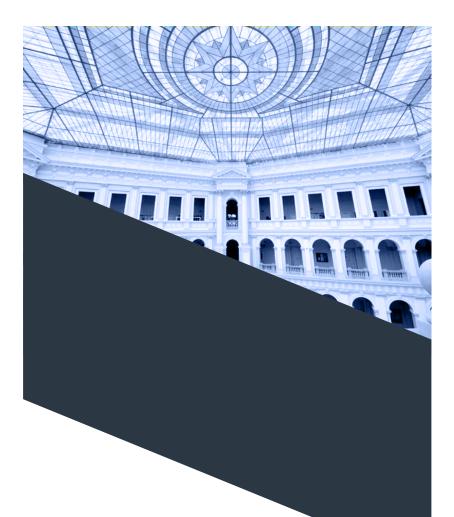
- → 4 or 5 lessons of 45 min a day, five days a week, a total of 240 hours
- > course schedule **adjusted to the needs** of a particular group
- course run by two or more teachers (both Polish and native speakers)
- optionally, at the end of the course students can sign up for International English
 Language Testing System IELTS exam

1 Year

English Preparatory Course for International Students

Duration: October - June

- 4 lessons of 45 min a day, five days a week, a total of 600 hours, divided into 3 separate modules
- course schedule **adjusted to the needs** of a particular group
- course run by two or more teachers (both Polish and native speakers)
- course ends with Pearsons Test of English (PTE) General, an internationally recognised English language assessment exam
- → additionally classes of Polish language and culture



08 | Language courses









You will **Warsaw University** of Technology

