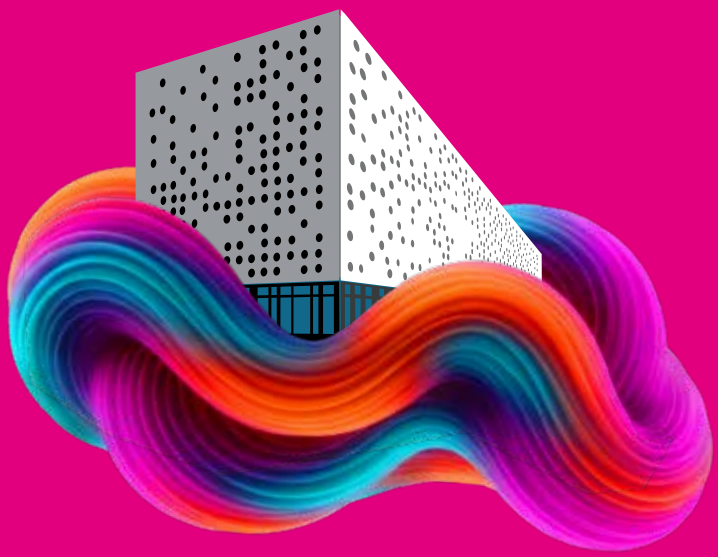
Wrocław University
of Science and Technology

PROSPECTUS



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#WrocławTECH

2025
2026

Wrocław
University
of Science
and Technology

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Wrocław University
of Science and Technology

WELCOME

to your custom Prospectus of Wrocław University of Science and Technology (Wrocław Tech). It contains information relevant to your interests in future education.

By viewing the individual course pages you will find specific information on courses available in English as a medium of instruction and admission details you will need, such as: the programme's duration, the deadline for application and the start date. You can also find sections on job prospects and courses you will attend during your studies. We hope you find it both useful and interesting.

Contact details

Wrocław University of Science and Technology
Admissions Center
Foreign Student Admissions Office
www.pwr.edu.pl
www.admission.pwr.edu.pl
e-mail: admission@pwr.edu.pl
telephone: +48 71 320 37 11
+48 71 320 31 70
+48 71 320 44 39

We look forward to seeing you at Wrocław University of Science and Technology!

Your Admission Officers

WROCŁAW – A GREAT PLACE TO BE

Wrocław is the best choice if you are looking for a place to study. A great atmosphere, a large job market, academic staff, rich cultural and entertainment offer of the city that meets students' needs – all this contributes to the strength of Wrocław.

Wrocław is a city with beautiful architecture and plentiful green areas situated on the Odra river on 12 islands connected by over 100 bridges. Wrocław, today the administrative, educational, business and cultural capital of the Lower Silesia region, is a city with a rich history. The city is situated close to the borders with Germany and the Czech Republic.

WROCŁAW TECH – A GREAT PLACE TO STUDY

Wrocław University of Science and Technology is one of the leading scientific and educational centres in Poland. Its position among technical universities in the world strengthens every year. Wrocław Tech was founded in 1945 but it has over 160 years of intellectual heritage from Lviv University of Technology and technological heritage from Technische Hohschule Breslau.

About 21 000 students study at Wrocław Tech and the number of academic staff is over 2200. There are students from over 60 countries and cooperation agreements signed with more than 120 tertiary institutions from nearly 40 countries. The university is proud to have a lot of students and staff exchanges under Erasmus+ Programme, 400 partner universities, 8 certified laboratories, 540 teaching rooms and lecture halls, over 1000 didactic and research laboratories.

At the university, there are numerous student organisations and associations. Students have an opportunity to develop their scientific and creative passions.

Thanks to Wrocław Tech the city appears to be the capital of Polish computer science. This is partly a result of the European standards of teaching and research conducted by the university employees. The world level of scientific research and excellent equipment in laboratories lead to cooperation with many Polish and foreign companies.

All of this allows you to get a degree recognized across European Union, design your study path and choose speciality, do simulating and rewarding research on new technologies such as: nanotechnology, biotechnology, telecommunications, teleinformatics and information systems, as well as gain valuable experience and technical background.

With Wrocław Tech – nothing is impossible!

OPPORTUNITIES AND POTENTIAL

Wrocław has created a favorable ground for diversified business. It is the largest R&D centre in Poland for global companies, such as: **LG, Philips, Volvo, Bosch, Hewlett-Packard, Nokia Solutions and Networks, Wabco, KGHM, Ryanair, Credit Suisse, BNY Mellon, Google, IBM.**

Wrocław Tech 's **Career Office** prepare students and graduates to enter the labour market. It provides students with job or internship offers, consults CV, supports interesting projects, organizes meetings with employers, advises in trainings and workshops.

Moreover, Wrocław Tech has contacts with many educational and research institutions which facilitates pursuing part of your studies outside Poland. Wrocław Tech is involved, among others, in the following projects: **Erasmus +, Student Exchange Programmes, the Double Degree Master Programme T.I.M.E, the Polish and American Fullbright Commission, DAAD, Vulcanus in Japan, CEEPUS.** Wrocław University of Science and Technology is in cooperation with about 200 partners from about 50 countries. All of this can enhance your future career for sure. Obviously you don't have to limit yourself to Wrocław only, our graduates can be found all over the world, working for renowned companies or having set up their own businesses.

SCHOLARSHIPS

» Study in Wrocław **www.study-in-wroclaw.pl**
» NAWA Scholarship Programmes **www.nawa.gov.pl**
» Visegrad Scholarship **www.visegradfund.org/scholarships**

TUITION-FREE STUDIES

Wrocław Tech does not charge the tuition fees for education at full-time studies from foreigners being citizens of EU / EFTA countries or having a Polish spouse, as well as from holders of one of following documents:

» Pole's Card
» Permanent residence or long-term EU-residence card
» Polish Language certificate C1 level **www.certyfikatpolski.pl**
» Refugee status or temporary protection

More information:
www.rekrutacja.pwr.edu.pl

HOW TO APPLY?

1. GET STARTED
Check out the study offer, required documents and deadlines at **www.admission.pwr.edu.pl**

2. ONLINE REGISTRATION IN THE SYSTEM
» Create an account, fill in all the required data, including personal data according to your passport, and upload a formal photo
» Attach documents required for qualification (educational documents and language confirmation)
» Sign up for the chosen field of study
» Pay the application fee to the account provided in the System

3. APPLICATION ASSESSMENT
Wait for the application assessment and check for the results.

4. TUITION FEE PAYMENT
Pay the tuition fee (if applicable) to the personal bank account provided in the System.

5. CONDITIONAL ACCEPTANCE
Once the tuition fee payment is received (if applicable), the Student Status Certificate and Decision of Conditional Acceptance will be issued.

6. VISA PROCEDURE
Check the list of necessary documents for a student visa on the Polish Embassy or Consulate website, and schedule an appointment.

7. ARRIVAL and SUBMISSION OF DOCUMENTS
Finalizing the admission process, submit hard copies and Xerox copies of all required documents in person within deadlines.

REQUIRED DOCUMENTS

» **formal photo** (only digital format 300*375 px)
» **passport / ID** (only for inspection)
» **secondary and higher secondary school certificate/degree certificate with mark-sheets/transcript of records legalized by the proper embassy or with Apostille**
» **sworn translation into Polish or English language** of documents issued in any language apart from mentioned above (including the legalized certificate mark-sheets/other document)
» **document confirming the required knowledge of Polish or English** for study purposes - medium of instruction letter / language certificate (at least B2 level IELTS, TOEFL, etc.) / Skype interview
» **medical certificate** (only for candidates applying for the Faculty of Chemistry and Faculty of Geoengineering, Mining and Geology)
» **declaration of not holding Polish citizenship**
» **application form**

CHECK OPTIONS:

STUDY OPTIONS

Bachelor programmes
duration: 3 – 3,5 years

Master programmes
duration: 1,5 – 2 years

TUITION FEES

Check out our website:
rekrutacja.pwr.edu.pl/en/for-foreigners/

Doctoral programmes are free of charge and offered at the Doctoral School: https://szd.pwr.edu.pl/en/

Intensive preparatory courses offered to international students who wish to improve their language skills and then to study in Polish or English:

» **English language course** (level: B1-B2) 1 year (600 hours)/1 semester (300 hours)
» **Summer Polish online course** (level: B2) 4 weeks, (80 hours)
» **Polish language course** (level: A1-B2) 1 year, (600 hours)

To check the tuition fee please visit our website

APPLIED COMPUTER SCIENCE

DESCRIPTION

The programme emphasises practical aspects of Computer Engineering and can be adapted to the student's interest. The final effect of studies is obtaining first-level competencies – knowledge, skills and qualifications – in accordance with "The Teaching Standards" in the field of Computer Science. The students acquire the basic knowledge of mathematics and physics, general computer science areas, such as: operating systems, algorithms and data structures, languages and programming techniques, computer architecture, project management, as well as ethical and legal aspects of computer science. The graduates will be able to: implement and deploy effective, reliable and safe information systems that meet users' requirements; comprehend, evaluate and deploy different solutions used in the scope of computer systems; maintain, install, administrate and deploy tools and problem-oriented information systems, develop system documentation.

ABOUT STUDIES

» **Duration:** 7 semesters
» **Mode of study:** Full time
» **Language of instruction:** English
» **Start date:** October 2025
» **Programme coordinator:**
Elżbieta Kukla, PhD

JOB PROSPECTS

Employment in companies that build, deploy and maintain IT tools and systems, particularly career in project teams, especially programming teams, in organisations and companies using software tools and methods, as well as continuing studies at the Master's level.

ENTRY INFORMATION

Requirements: secondary school certificate, received after the completion of a recognised secondary school (total 12 years of education), being the equivalent of Polish Matriculation certificate.
Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

» **Deadline for application**
» **Tuition fee**
» **Application fee**

See: **admission.pwr.edu.pl**

» English:
Equivalent of minimum TOEFL IBT– 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

The student is required to complete 2475 hours of courses (equivalent to 210 ECTS). The programme consists of lectures and practical activities: laboratories, tutorials, seminars and projects. Students must receive credits for all subjects and additionally from applied training. The programme of the internship must be consulted with its coordinator. Instead of an engineering dissertation, students complete a complex team project. To obtain the professional title of engineer, students must pass the diploma examination.

SEMESTER 1
» Mathematical Analysis I
» Linear Algebra and Analytic Geometry
» Logic for IT Specialists
» Structural and Object-oriented Programming
» Computer System Organisation
» Physics 1A

SEMESTER 2
» Mathematical Analysis 2
» Discrete Mathematics
» Operating Systems
» Data Structures and Algorithms
» Computer Architecture
» Physics 2B
» Basic Physics Laboratory

SEMESTER 3
» Theory of Probabilistic and Statistics
» Programming Paradigms
» Effective Programming Techniques
» Computer Networks
» Basics of Entrepreneurship
» Lectorate 1.1
» Sport Activities

SEMESTER 4
» Basics of Software Engineering
» Databases
» Script Languages
» Systems Analysis and Decision Support
» Lectorate 1.2
» Sport Activities

Modules of optional courses:
» M1. Administration of Computer Systems
» Linux Server Administration
» Managing IT Infrastructure
» Routing and Switching in Computer Networks

SEMESTER 5
» Software Engineering
» Introduction to IoT
» Cybersecurity
» Presentation Techniques

Modules of optional courses:
» M2. Web Technologies
» Web Systems Programming
» Developing Web Applications with .NET
» M3. Database Design
» Database Programming
» Database Design
» M4. Mobile Applications
» Mobile Applications for IOS
» Mobile Applications for Android

SEMESTER 6
» Artificial Intelligence
» Business Data Modelling and Analysis
» Internship

Modules of optional courses:
» Basic Physics Laboratory
» M5. Project Management Basics
» Introduction to IT Project Management
» Support for IT Project Management
» M6. Distributed Systems
» Distributed Computer Systems
» Cloud Programming
» M7. Programming Tools and Technologies
» Game Programming
» Advanced Web Technologies
» M8. Multimedia
» Computer Graphics
» Programming Multimedia Applications
» Digital Media Processing Technologies

SEMESTER 7
» IT Social and Professional Problems
» Team Project Modules of elective courses

Modules of optional courses:
» M9. Current Trends in Computer Science
» Data Science
» Neural Networks
» Metaheuristics in Problems Solving
» Human-Computer Interaction

ORGANIZATIONAL MANAGEMENT

DESCRIPTION

Undergraduate studies in the field of management (Organizational Management) allow for a broad understanding of the principles of the functioning of business organisations. They provide specialist knowledge necessary to operate in many areas of the economy. Graduates will develop their theoretical and practical knowledge in the field of management sciences and related sciences, concerning issues, principles and problems related to the functioning of the organisation, both at the national and international level. They will be ready to take on key project management roles in both commercial and administrative organisations. They will be able to communicate and negotiate effectively, interpret and use data, and work creatively in teams.

ABOUT STUDIES

- **Duration:** 6 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** October 2025
- **Programme coordinator:** Maria Hajłasz, PhD

JOB PROSPECTS

The knowledge and skills obtained give the graduates the possibility of getting a job as a management / organisation specialist. The management degree (OM) develops competences useful as a middle-level manager in public and private organisations in many sectors (industry, healthcare, education, services, commerce, central and local authority institutions, etc.). It provides a way to develop your own small enterprises or to continue your education at the Master's level.

ENTRY INFORMATION

Requirements: secondary school certificate, received after the completion of a recognised secondary school (total 12 years of education), being the equivalent of Polish Matriculation certificate.
Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

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CONTENT

» **forms of teaching:** Lectures, laboratories, tutorials, projects, research

SEMESTER 1
» Civil and Commercial Law
» Essentials of Management
» Information Technology
» Mathematics
» Microeconomics
» Psychology
» Social Philosophy

SEMESTER 2
» Descriptive Statistics
» Essentials of Finance
» Macroeconomics
» Organizational Science
» Sociology
» Work Environment Physics
» Computer Science Module
» Social Competences Module
» Sports

SEMESTER 3
» Mathematical Economics
» Financial Accounting in the Organizational Decision Making Process
» Marketing in the Information Society
» Organizational Behaviour
» Computer Science Module
» Economic Science Module
» Foreign Language I
» Management of Knowledge

SEMESTER 4
» Contemporary Organizational Methods and Techniques
» Corporate Finance
» Logistics
» Marketing Management
» Operations Management
» Legal Science Module
» Computer Science Module
» Foreign Language II

SEMESTER 5
» Diploma Seminar
» Financial Management
» Leading Projects in Modern Organizations
» Marketing Research
» Methods and Tools of Data Analysis
» Modern Human Resource Management
» Total Quality Management
» Computer Science Module
» The Microstructure of the Global Financial Market

SEMESTER 6
» Bachelor's Thesis
» Business Process Management
» Financial Analysis Supported by Computers
» Information Systems in Management
» Introduction to Risk Management
» Sport Activity
» Management Training
» Self-presentation

MECHANICAL ENGINEERING

DESCRIPTION

This programme prepares the graduates for creative engineering work in machine design, machine operation and manufacturing processes. The student will be familiar with fundamental methods, techniques, tools and materials used for solving engineering tasks in the field of Mechanical Engineering. The student acquires a directional specialty by studying mechanics, machines theory, principles of machine design, thermodynamics, computer-aided engineering techniques and manufacturing technologies. The programme gives reliable grounds to take a job in any segment of industry and services where designing, producing or maintaining machines and equipment is essential for a business.

ABOUT STUDIES

- **Duration:** 7 semesters
- **Mode of study:** Full time
- **Faculty of:** Mechanical Engineering
- **Language of instruction:** English
- **Start date:** October 2025
- **Programme coordinator:** Sławomir Susz, PhD

JOB PROSPECTS

The graduate of the Faculty of Mechanical Engineering is a versatile educated engineer, equipped with basic and advanced knowledge as well as industrial practice.

ENTRY INFORMATION

Requirements: secondary school certificate, received after the completion of a recognised secondary school (total 12 years of education), being the equivalent of Polish Matriculation certificate. Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English: Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

SEMESTER 1
» Engineering Graphics: Descriptive Geometry
» Chemistry
» Information Technologies
» Fundamentals of Metrology
» Ergonomy and Safety
» Linear Algebra with Analytic Geometry B
» Mathematical Analysis 1A
» Physics

SEMESTER 2
» Engineering Graphics: Engineering Drawing
» Engineering Materials Technology
» Elements of Mathematical Analysis
» Thermodynamics
» Fundamentals of Materials Science
» Mechanics I
» Ecology
» Theory of Machines
» Essential of Management
» Electrical Engineering
» Electronics

SEMESTER 3
» Engineering Graphics 3D
» Electrical Engineering
» Statistics for Engineers
» Fluid Mechanics
» Materials Science
» Mechanics II
» Polymers I
» Chipless Processes -Casting
» Fundamentals of Materials Strength
» Programming in MATLAB
» Ordinary Differential Equations

SEMESTER 4
» Fundamentals of Machine Design I
» Theory of Mechanisms and Manipulators
» Chipless Processes -Plastic Forming
» Chipless Processes -Welding Metallurgy
» Geometric Metrology
» Drive Systems
» Strength of Materials
» Industrial Metrology

SEMESTER 5
» Hydraulic, Hydrotronic and Pneumatic Systems
» Finite Elements Method
» Fundamentals of Machine Design II
» Fundamentals of Automatic Control
» Manufacturing Processes - Machining
» Vehicle Engineering
» Trybology
» Computer Aided Machine Design I

SEMESTER 6
» Safety of Machines and Technological Processes
» Manufacturing Systems CNC
» Offroad Vehicles Engineering
» Hydraulic Drive Systems
» Internal Combustion Engines
» Carrying Structures
» Computer Aided Machine Design II

SEMESTER 7
» Fundamentals of Exploitation and Repair
» Management in production
» Production System Organisation
» Thesis, Seminar
» Polymers in Engineering
» Vehicles Loading Modelling
» Legal Aspects of Engineering Activities

MEDICAL INFORMATICS

DESCRIPTION

There is a growing demand for biomedical engineers with interdisciplinary knowledge of medicine, computer science, and medical devices. Such a background is indispensable to meet the demands of the rapidly changing healthcare system, which strives to accommodate the needs of patients and healthcare personnel.

This specialty is addressed to inquisitive students interested in biomedical applications of artificial intelligence, big data, mobile and wearable devices, augmented and virtual reality. We encourage students to carry out their research projects or join one of several students' science clubs.

Medical Informatics (MI) focuses on technologies, impacting patient-doctor relationship by effectively collecting, securing and understanding health data, thereby supporting medical diagnosis and treatment. The courses in this study program are oriented towards these practical aspects of MI.

ABOUT STUDIES

- **Duration:** 7 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** October 2025
- **Programme coordinators:**
  Prof. Mirosław Łątka,
  Department of Biomedical Engineering

JOB PROSPECTS

Graduates can work for:

- IT companies
- Hospitals and healthcare units
- medical device companies
- R&D companies

ENTRY INFORMATION

Requirements: secondary school certificate, received after the completion of a recognised secondary school (total 12 years of education), being the equivalent of Polish Matriculation certificate. Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT– 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

OBLIGATORY COURSES

IT COURSES

» Databases
» Introduction to Object-Oriented Programming
» Introduction to Programming
» Mobile Application Development
» Modelling of Biological Systems
» Network Technologies
» Numerical Methods
» Programming in Python
» Software Engineering

GENERAL COURSES

» Academic Writing
» Algebra and Analytic Geometry
» Anatomy for Biomedical Engineers
» Introduction to Biomedical Optics and Biophotonics
» Biochemistry
» Biophysics
» Mathematical Analysis
» Medical Imaging Techniques
» Legal and Ethical Aspects in Biomedical Engineering
» Physics
» Principles of Chemistry
» Principles of Organic Chemistry
» Propaedeutics of Medical Sciences
» Statistics and Probability Theory

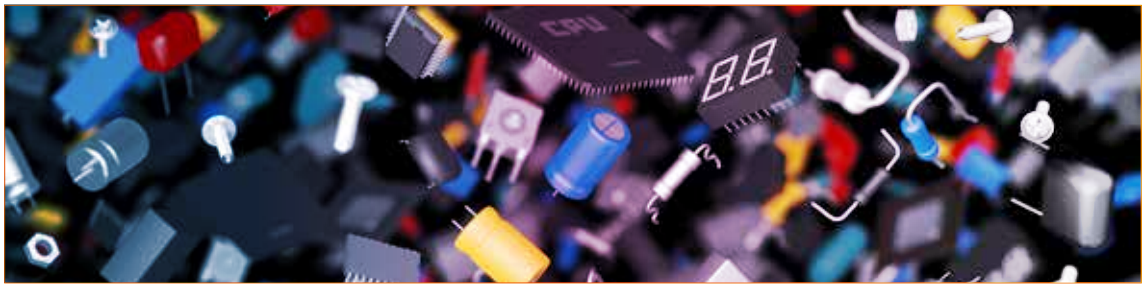
ENGINEERING COURSES

» Conversion and Analysis of Non-electrical Signals
» Digital Signal Processing
» Electromedical Instrumentation
» Introduction to Medical Electronics
» Measurement systems
» Microcontrollers

OPTIONAL COURSES

» Advanced Imaging Techniques
» Artificial Intelligence
» Complex Systems
» Computer Graphics
» Computer Science in Medicine
» Elements of Nonlinear Dynamics
» Introduction to Bioinformatics
» Statistical Methods in Bioengineering
» Time Series Analysis

ELECTRONIC AND COMPUTER ENGINEERING



DESCRIPTION

Imagine a world where technology surrounds you at every step – from smart devices in your home to advanced robots in industry. The EAC programme is your gateway to this exciting reality! We combine expertise in electronics, programming, machine learning, and robotics, preparing you to work with technologies shaping the future. Discover the secrets of the Internet of Everything and gain skills that open the door to an extraordinary career.

JOB PROSPECTS

Studying at EAC equips you with the knowledge and skills to land a job right after graduation. Our graduates are in high demand, especially in industries focused on designing, producing, and maintaining electronic systems, as well as software development. The need for specialists who can integrate analog and digital systems, including microprocessors, is rapidly growing. You'll gain expertise in: programming, AI algorithm implementation, designing advanced electronic and robotic systems. With the rise of IoT companies and smart home technologies, engineers who blend electronics and computer science knowledge are more valuable than ever. From design to production and beyond – EAC prepares you for every stage of this cutting-edge industry.

ENTRY INFORMATION

Requirements: secondary school certificate, received after the completion of a recognised secondary school (12 years of education in total), being the equivalent of Polish Matriculation certificate.
Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS.
  List of accepted language certificates can be checked online.

ABOUT STUDIES

- **Duration:** 7 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** October 2025
- **Programme coordinator:**
  Grzegorz Budzyń, PhD

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

SEMESTER 1
» Mathematics Analysis 1
» Mathematical Algebra
» Introduction to Programming
» Metrology
» Philosophy

SEMESTER 2
» Mathematics Analysis 2
» Mathematics for Electronics
» Object Oriented Programming
» Electronics 1
» Physics
» Foreign Language

SEMESTER 3
» Electronic Components
» Electronics 2
» Electronic Technology
» Scientific and Engineering Programming
» Python
» Math for Electronics

SEMESTER 4
» Sensors
» Electronic Circuits
» Software Engineering
» Fundamentals of Telecommunications
» Introduction to Logic and Microcontrollers
» Introduction to Automation
» Introduction to Robotics

SEMESTER 5
» Computer Networks
» Microcontrollers
» Elective courses (choice of 3 out of 5: Advanced Topics in Robotics, Digital Signal Processing, Artificial Intelligence & Computer Vision, Optoelectronics, Wireless Systems)

SEMESTER 6
» Selected Topics in Deep Learning
» Edge AI
» Team and Pre-engineering Project
» Elective courses (choice of 3 out of 6: Control Systems Engineering, Embedded Systems, Real-Time Operating Systems, Lasers, Fibers and Applications, Cybersecurity, Electroacoustics)

SEMESTER 7
» Internship
» Final Project
» Diploma Seminar
» Entrepreneurship
» Copyright
» Elective courses (choice of 2 out of 5: Electrotechnics, Medical Electronics, Electronics for Renewable Energy Sources, Machine Learning, Ultrasonic Technology)

ARCHITECTURE

DESCRIPTION

The study programme takes into account in a balanced way the practical and theoretical aspects of the architectural profession with an emphasis on the problem of creativity and design independence of graduates. The leading courses in the students' education are design, which is complemented by field studies related to modern construction systems, as well as theoretical (theory of architecture and urban planning, heritage protection, elements of philosophy, aesthetics) and computer-based (various types of modelling: BiM, 3D) ones. All offered courses and design studies are based on the "Research by design" model, and their wide choice allows students to pursue individual creative interests. Students have the opportunity to work with active architects, with specialists in various fields, and they can also participate in scientific programmes, international exchanges, workshops and study trips.

After completion of the Master's programme in Architecture and Urban Planning students are awarded the Master's Degree in Architecture. Graduates are equipped with knowledge and skills that enable them to enrol themselves on doctoral and specialised postgraduate programmes.

ABOUT STUDIES

- **Duration:** 3 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** October 2025

JOB PROSPECTS

In the Architecture and Urban Planning Master's programme, we train specialists who are able to think critically and independently, who are ready to implement innovative architectural solutions and who are professionally flexible with a wide range of possibilities to choose their professional path. Learning outcomes provide preparation of graduates to work in: architectural and town planning offices, public administration units related to architecture and urban planning. Due to the broad, interdisciplinary profile of the education, graduates can also undertake research-related work and continue their studies at the Doctoral School. Moreover, graduates have skills related to IT techniques, which are necessary both in the work of a designer and a manager planning the investment process. They are able to work in a team, they are aware of the social role of the architectural profession and the humanistic aspects of engineering activity.

ENTRY INFORMATION

Requirements: Architect Engineer. Portfolio. Minimum 210 ECTS. Each application is assessed individually on its merits.
If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
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SEMESTER 1

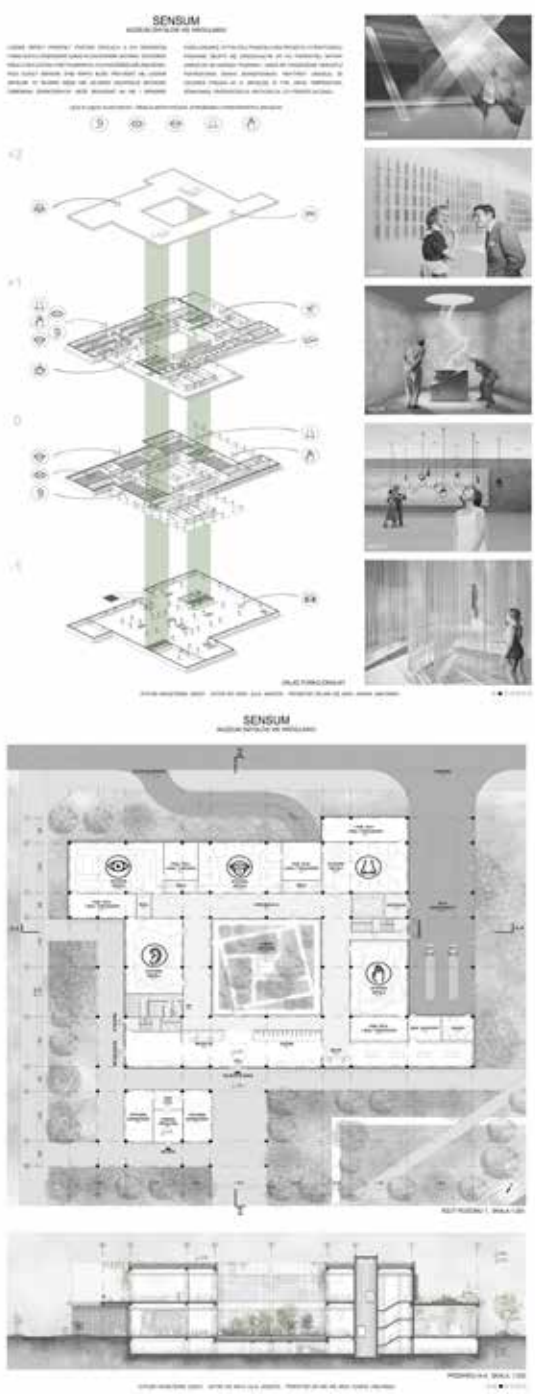
» Architectural Design (elective)
» Urban Design (elective)
» Conservation and Special Design (elective)
» Protection of Cultural Heritage (elective)
» Theory and History of Architecture
» Theory and History of Urban Planning (20c.–21c.)
» Structures in Contemporary Architecture
» Computer Aided Design BIM
» Foreign Languages (elective)
» An Introduction to Mathematical Modelling

SEMESTER 2

» Architectural Design (elective, including Studios)
» Design Workshop – Integration of Design Processes
» Ecology (elective)
» Physics (acoustics)
» Humanities (elective)
» Sociology and environmental psychology (elective)
» Foreign Languages (elective)
» Metology of Scientific Work
» Structures in Contemporary Architecture
» Modern Technologies
» Ergonomics
» Professional Ethics and Law

SEMESTER 3

» Diploma thesis
» Design workshops 2x (elective)
» Architecture and Urban Planning – Repertory
» Spatial Planning



THE AUTHOR: JULIA JANISZYN: MASTER DIPLOMA 2020/21, „SENSUM – THE MUSEUM OF SENSES IN WROCLAW"

CIVIL ENGINEERING

DESCRIPTION

The students gain theoretical knowledge and practical skills connected with structure design, construction materials and technologies as well as static and dynamic analysis of reinforced concrete, prestressed concrete, metal, wooden, ground and complex constructions. They learn how to use advanced computational models and modern IT solutions in civil engineering. In addition to participating in lectures, presentations, labs, seminars and projects the students may also take part in the student scientific groups and international exchanges. A number of courses can be selected by the students depending on their interests and professional plans. At the end of the MSc study students write master's thesis on a subject related to designing of engineering structures. The MSc diploma offers an opportunity to continue education at PhD studies.

JOB PROSPECTS

The graduates are prepared for:

» solving complex design, organisation or technological problems,
» authorisation to independent design and construction in civil engineering,
» developing and implementing research programmes,
» carrying out jobs in international enterprises,
» participation in marketing and promotion of construction products,
» continuing education, participation in research in the fields directly related to construction and construction production,
» continuous education, improving qualifications and extending knowledge,
» team work and large team management.

The graduates are prepared to work in design offices and construction enterprises, scientific institutions and R&D centres, institutions involved in building infrastructure management or dealing with counselling or dissemination of construction-related knowledge.

ABOUT STUDIES

» **Duration:** 3 semesters
» **Mode of study:** Full time
» **Language of instruction:** English
» **Start date:**
October 2025 or February 2026
» **Programme coordinator:**
Prof. Jan Bień, PhD, DSc

ENTRY INFORMATION

Requirements: Bachelor's or Master's Degree in Civil Engineering, Environmental Engineering, Architecture, Hydrotechnical Engineering obtained either in Poland or abroad.
Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

» **Deadline for application**
» **Tuition fee**
» **Application fee**

See: **admission.pwr.edu.pl**

» English: Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

The main study of Civil Engineering consists of obligatory and elective courses, covered as lectures, projects and seminars. In addition, some elective units are offered covering also language courses.

SEMESTER 1

» Advanced Computer Aided Engineering
» Concrete Structures - Objects
» Metal Structures - Objects
» Selected Topics in Structural Mechanics
» Theory of Elasticity and Plasticity
» Physics of Modern Materials
» Selected Topics in Mathematics
» Selected Topics in Geoengineering – Foundation
» Hydraulics in Civil Engineering
» Ethics in Engineering/Ethics in Business
» Foreign Language 1
» BIM in Civil Engineering

SEMESTER 2

» Dynamics
» Underground Structures – Urban Infrastructure
» Railways
» Roads, Streets and Airports
» Bridges
» Construction Techniques and Processes
» Apartment Building
» Computational Mechanics
» Foreign Language 2

SEMESTER 3

» Master's Thesis Seminar
» Master's Thesis
» Construction Project Management
- 2 elective courses (one from each group)

ELECTIVE COURSES 1

» Artificial Intelligence in Civil Engineering
» Modern Testing Methods for Non-destructive Inspection of Building Structures
» Advanced Building Physics
» Hydrology for Building Engineers
» Effective Properties of Composites – Introduction to Micro-mechanics

ELECTIVE COURSES 2

» Pre-stressed Concrete Structures
» Timber Structures
» Conservation and Strengthening of Monumental Heritage Structures
» Methods of Applied Statistics (Geostatistics)
» Sustainable Building

ADVANCED NANO AND BIOMATERIALS MONABIPHOT

DESCRIPTION

Advanced Nano and Biomaterials MONABIPHOT is a Master's course which offers an original qualification in the highly innovative domain of nanomaterials and molecular photonics for materials science and biology. Skills will be acquired at the strongly interdisciplinary level needed to master emerging technologies and to develop original concepts and applications, aiming at novel technological breakthroughs in this domain. We offer courses concerning synthesis and characterization of new materials on the molecular and nanoscale with the special impact on biology. The introduction of the course's subjects help the student to acquire competences as future experts in material science, with special impact on nanomaterials. The language of the Advanced Nano and Biomaterials MONABIPHOT Master's is English. Applicants must have a Bachelor's degree in Chemistry, Physics or Materials Science or related subjects, with a good background in mathematics and chemistry. The graduates could continue the career in research in nano- and/or bio-materials, as Ph.D. students or R&D associates in industrial laboratories in the rapidly emerging nanotechnology industry.
The programme is aimed at students already awarded or expecting a BSc (or a higher degree) or equivalent before the starting date of the term (September 2025 for the current applications).

ABOUT STUDIES

- **Duration:** 3 or 4 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:**
  October 2025 - 4 semesters for candidates without engineering degree
- February 2026 - 3 semesters
- **Programme coordinator:**
  Katarzyna Matczyszyn, PhD, DSc, Prof. at Wrocław Tech

JOB PROSPECTS

The graduate has extended knowledge of chemistry, materials science, natural sciences and technical skills: conduct advanced research experiments with the nanomaterials with the emphasis on biology, propose and optimize new solutions and independently analyze problems related to materials science. The graduates are prepared for creative work in the design and operation of new materials. The graduate is prepared to run the own business.

ENTRY INFORMATION

Requirements: Bachelor's or Bachelor of Engineering Degree in Materials Science, Chemistry or related domains.
Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

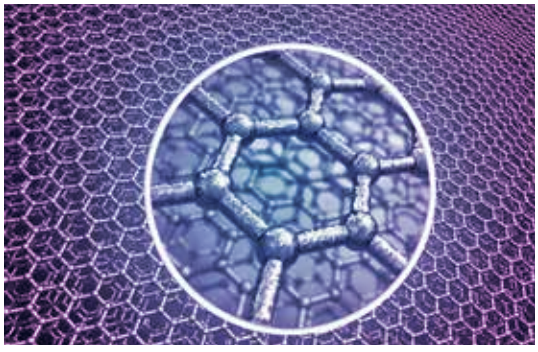
The main study of Advanced Nano- and Bio-materials MONABIPHOT consists of at least 23 units, covered as lectures, labs and seminars. In addition, some optional units are offered covering also language courses.

SEMESTER 0

» Informatics for Engineers
» Biotechnology with introduction to industrial microbiology
» Basics of Technical Drawing
» Technical Safety in Industry
» Material Recovery and Recycling
» Fundamentals of Chemical and Process Engineering
» Bioreactors
» Introduction to Materials Science and Engineering
» Fundamentals of Chemical Technology Design
» Separation and Purification of Products

SEMESTER 1

» Liquid Crystals for Photonics
» Modern Polymers
» Modern Spectroscopy
» Bioorganic Chemistry
» Fluorescence Spectroscopy and Bioimaging
» Biophotonics
» Mathematical Methods in Planning and Analysis of Experiment
» Graduation proseminar
» Managerial course
» Foreign Language I
» Foreign Language II



SEMESTER 2

» Laser and Microscopic Techniques in Materials Analysis
» Nonlinear Optics for Chemists
» Nanoscale Physics
» Advanced Functional Materials
» Nanomaterials
» Organic Electronics
» Advanced Research Methods in the Engineering of Materials
» Optional course
» Graduate Laboratory I

SEMESTER 3

» Advanced Functional Materials
» Optional course
» Graduate Laboratory II
» Graduation Seminar

OPTIONAL COURSES

» Biomaterials
» Nonlinear Optics for Chemists
» Metallic Materials
» Basics Molecular Dynamics

BIOINFORMATICS

DESCRIPTION

Field of study:
BIOSCIENCES
The BioSciences major offers a rigorous exposure to the modern experimental and computational disciplines within Bioinformatics and Medicinal Chemistry fields. The curriculum includes upper-level coursework in chemistry, physics, applied informatics, or bioinformatics allowing students to deepen their understanding of the intricate world of (nano) bio-oriented chemistry. Students have the opportunity to experience cutting-edge modern research within the faculty. Our curriculum is designed to provide students with a broad and well-rounded education that will enable them to pursue a career in academia and pharmaceutical or IT industry.

Speciality:
Bioinformatics
Bioinformatics constitutes an interdisciplinary research area, covering applications of computer science, chemistry and biochemistry to solve biological problems, usually at the molecular level.
Typical activities include analysis of information contained in literature, genetic and structural databases, prediction of protein structure, drug and biocatalyst or biosensor design. The curriculum introduces programming skills necessary for automation of database searches and analysis of numerical and bioinformatics data, including analysis of new genome sequencing (NGS) results. The study programme includes advanced computer programming as well as specialized molecular biology techniques which are highly valued on present job market.

ABOUT STUDIES

- **Duration:** 3 or 4 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** October 2025 - 4 semesters for candidates without engineering degree
  February 2026 - 3 semesters
- **Programme coordinators:**
  - Prof. Tadeusz Andruniów, PhD, DSc

JOB PROSPECTS

The combination of computational skills and basic knowledge of biotechnology aims to prepare the graduates for work in research and development sectors, manufacturing chemical software or databases, developing modern bioinformatics diagnostic services in medical laboratories, conducting quality control in environment protection pharmaceutical or food industry laboratories. Our graduates typically continue level III (Ph.D.) education in renowned academic institutions or are employed by national and international companies.

ENTRY INFORMATION

Requirements: Bachelor's or Bachelor of Engineering Degree in Chemistry or related domains (3-semester programme). Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

The curriculum is composed of at least 25 units, covered as lectures, labs or seminars.

SEMESTER 0

» Informatics for Engineers
» Biotechnology with Introduction to Industrial Microbiology
» Basics of Technical Drawing
» Technical Safety in Industry
» Material Recovery and Recycling
» Fundamentals of Chemical and Process Engineering
» Bioreactors
» Introduction to Materials Science and Engineering
» Fundamentals of Chemical Technology Design
» Separation and Purification of Products

SEMESTER 1

» Bioinformatics
» Molecular Dynamics
» Networks and Workstations with UNIX System
» Applied Informatics
» Theoretical Chemistry
» Graduation Proseminar
» Managerial Course I
» Foreign Language I
» Elective course

SEMESTER 2

» Molecular Modeling
» Bionanotechnology
» Rational Drug Design
» Advanced Bioinformatics
» Advanced Programming and Numerical Methods
» Data Mining
» Retrieval of Scientific and Technical Information
» Managerial Course II
» Graduate Laboratory I
» Foreign Language II

SEMESTER 3

» Machine Learning for Chemistry and Biology
» Computational Genomics
» Molecular Engineering in Genomic Analyses
» Graduate Laboratory II
» Graduation Seminar

ELECTIVE COURSES

» Medicinal and Biological Chemistry
» Methodology of Experimental Research
» Bioprocess Project
» Advanced Polymers for Chemical and Medical Applications

MEDICINAL CHEMISTRY

DESCRIPTION

Field of study:
BIOSCIENCES
The BioSciences major offers a rigorous exposure to the modern experimental and computational disciplines within Bioinformatics and Medicinal Chemistry fields. The curriculum includes upper-level coursework in chemistry, physics, applied informatics, or bioinformatics allowing students to deepen their understanding of the intricate world of (nano)bio-oriented chemistry. Students have the opportunity to experience cutting-edge modern research within the faculty. Our curriculum is designed to provide students with a broad and well-rounded education that will enable them to pursue a career in academia and pharmaceutical or IT industry.
Speciality:
Medicinal Chemistry
Medicinal chemistry is a scientific discipline at the intersection of chemistry and computational science, connected with designing, synthesizing and developing new pharmaceuticals. At the beginning, medicinal chemistry was involved in screening of natural sources like plants or animals for bioactive compounds. Now, natural products serve as the lead structures in the synthesis and development of new chemical entities dedicated for therapeutic use. Medicinal chemistry includes preparation and analysis of existing and new potential drugs, evaluation of their biological properties, analysis of structure-activity relationships. It is a highly interdisciplinary discipline widely using advanced, synthetic, spectroscopic, computational methods and machine learning. Thus, medicinal chemists cooperate with theoretical chemists, synthetic chemists, medical doctors, microbiologists and pharmacologists.
The graduation document certifies the degree in chemistry with the notification of a deepened specialization in Medicinal Chemistry. The study for applicants without engineering degree lasts 2 years, otherwise 1.5 years only.

ABOUT STUDIES

- **Duration:** 3 or 4 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** October 2025 - 4 semesters for candidates without engineering degree
  February 2026 - 3 semesters
- **Programme coordinators:**
  - Prof. Rafał Latajka, PhD, DSc

JOB PROSPECTS

The students are educated in the field of chemistry, mainly synthesis, structure analysis including spectroscopic methods, molecular modeling, machine learning and they have training in medicinal chemistry. Some students, depending on their Master thesis topic, may accomplish part of their research and/or graduate laboratory at Medical University, under supervision of medical doctors or in the Institute of Immunology and Experimental Therapy in Wrocław. Master's Degree programmes provide many skills and abilities demanded in scientific laboratories as well as in modern chemical and pharmaceutical industry, especially in R&D units.

ENTRY INFORMATION

Requirements: Bachelor's or Bachelor of Engineering Degree in Chemistry or related domains (3-semester programme). Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

The main study of Medicinal Chemistry consists of at least 22 units, covered as lectures, labs and seminars. In addition some optional units are offered covering also language courses.

SEMESTER 0

» Informatics for Engineers
» Biotechnology with Introduction to Industrial Microbiology
» Basics of Technical Drawing
» Technical Safety in Industry
» Material Recovery and Recycling
» Fundamentals of Chemical and Process Engineering
» Bioreactors
» Introduction to Materials Science and Engineering
» Fundamentals of Chemical Technology Design
» Separation and Purification of Products

SEMESTER 1

» Theoretical Chemistry
» Spectroscopic Methods in Medicinal Chemistry
» Crystallography and Structure of Solids
» Analytical Methods in Drug Design and Technology
» Introductory Statistics
» Isolation and Identification of Bioproducts
» Metabolomics
» Managerial Course I
» Foreign Language I

» Graduation Proseminar
» Elective course

SEMESTER 2

» Metabolomics
» Molecular Modeling
» Retrieval of Scientific and Technical Information
» Medicinal Natural Products
» Modern Pharmaceuticals and Biopharmaceuticals
» Rational Drug Design
» Managerial Course II
» Foreign Language II
» Graduate Laboratory I

SEMESTER 3

» Multistep Organic Synthesis
» Inorganic Drugs
» Machine Learning for Chemistry and Biology
» Graduate Laboratory II
» Graduation Seminar

ELECTIVE COURSES

» Medicinal and Biological Chemistry
» Methodology of Experimental Research
» Bioprocess Project
» Advanced Polymers for Chemical and Medical Applications

ADVANCED CHEMICAL TECHNOLOGY

DESCRIPTION

Field of study:
CHEMICAL ENGINEERING AND TECHNOLOGY
The Master of Chemical Engineering and Technology Program aims to provide students with advanced knowledge, practical skills, and innovative thinking in the field of chemical engineering and technology to solve complex industrial challenges. The program will focus on cutting-edge technologies, emphasizing the practical application of engineering principles in solving the problems of modern society. Graduates will be well-prepared to take on leadership positions in the industry or pursue further studies at the PhD level.Speciality:
Advanced Chemical Technology
Advanced Chemical Technology aims to provide students with advanced knowledge and practical skills in the field of chemical technology. The program emphasizes the practical application of technology principles to address complex industrial and societal problems, preparing graduates for careers in the industry as well as engaging them with the latest research in the field.
The program will consist of core and elective courses in the following areas:
- Advanced chemical process design and optimization
- Chemical reaction engineering
- Separation processes
- Bioprocess engineering
- Surface chemistry
- Materials science and engineering
- Product design and development
- Environmental engineering and sustainability
- Industrial plant design, modelling and simulation.

In addition to coursework, students will undertake a research team project and graduate thesis in a specialized area of chemical technology. The research project and thesis requirement will allow students to gain hands-on expertise in applying theoretical and practical methodologies to real-world challenges in the field.

ABOUT STUDIES

- **Duration:** 3 or 4 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** October 2025 - 4 semesters for candidates without engineering degree
  February 2026 - 3 semesters
- **Programme coordinator:**
  Piotr Rutkowski, PhD DSc, Prof. at Wrocław Tech

JOB PROSPECTS

Graduates of the program will be equipped with advanced knowledge, practical skills, and innovation thinking in chemical technology, and be well-prepared for careers in industrial manufacturing,research and development, and technology consulting firms. Potential career paths include chemical technologist, product development engineer, process engineer, environmental engineer, research scientist, and quality assurance specialist. Graduates will be able to work within diverse industries, including pharmaceuticals, biorefineries, chemicals, energy and fuels, and materials science.

ENTRY INFORMATION

Requirements: Bachelor's or Bachelor of Engineering Degree in Chemical Engineering or related domains (3-semester programme). Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

The main study of Advanced Chemical Technology consists of at least 23 units, covered as lectures, labs and seminars. In addition, some optional units are offered covering also language courses.

SEMESTER 0

» Informatics for Engineers
» Biotechnology with Introduction to Industrial Microbiology
» Basics of Technical Drawing
» Technical Safety in Industry
» Material Recovery and Recycling
» Fundamentals of Chemical and Process Engineering
» Bioreactors
» Introduction to Materials Science and Engineering
» Fundamentals of Chemical Technology Design
» Separation and Purification of Products

SEMESTER 1

» Advanced Chemical Technologies – Biorefinery Technologies for Chemicals and Fuels
» Industrial Plants Design Principles
» Environmental Protection in Chemical Industry
» Trends in Chemical Engineering and Technology
» Surface Phenomena and Heterogenous Catalysis
» Retrieval of Scientific and Technological Resources
» Mathematics for Engineers
» Managerial Course I
» Managerial Course II
» Foreign Language I
» Graduation Proseminar

SEMESTER 2

» Advanced Chemical Technologies – Modern Macromolecular Engineering Materials
» Chemical Sensors and Biosensors – Fundamentals and Applications
» Chemical Reactors and Bioreactors
» Green Chemistry and Sustainable Technology
» Scientific Team Project
» Foreign Language II
» Graduate Laboratory I

SEMESTER 3

» Advanced Chemical Technologies – Nanotechnologies and Energy
» Elective course
» Graduate Laboratory II
» Graduation Seminar

CONCLUSION

The Master of Advanced Chemical Technology Program will provide students with advanced knowledge, practical skills, and innovation thinking in the field of chemical technology. The program's curriculum and research requirements have been tailored to equip graduates with a thorough grounding in theoretical and practical aspects of chemical technology, preparing them for leadership roles in the industry or advanced study in the field. Graduates would be well-positioned with skills and knowledge for problem-solving and adapting to evolving global trends in science,technology and business to meet the growing challenges of the industry.

ADVANCED CHEMICAL ENGINEERING

DESCRIPTION

Field of study:
CHEMICAL ENGINEERING AND TECHNOLOGY
The Master of Chemical Engineering and Technology Program aims to provide students with advanced knowledge, practical skills, and innovative thinking in the field of chemical engineering and technology to solve complex industrial challenges. The program will focus on cutting-edge technologies, emphasizing the practical application of engineering principles in solving the problems of modern society. Graduates will be well-prepared to take on leadership positions in the industry or pursue further studies at the PhD level.
Speciality:
Advanced Chemical Engineering
The programme of studies directly reflects the current needs of the labour market in the field of Chemical and Process Engineering, providing employment opportunities. It is designed to provide the graduates with the following learning outcomes: knowledge on developments and new developments in the field of chemical engineering, ability to use new advances in the field of chemical engineering, basic understanding of the processes of governance, knowledge of the functions, principles and management instruments, including quality management and identification of the main problems of management, knowledge of the design of process devices and systems, integration and process intensification, performing a complete process design, the use of computer technology, including tools for exploring and simulating the dynamics of various processes. Advanced Chemical Engineering combines classical chemical engineering with bioprocess engineering, nanoengineering, chemical technology and environmental engineering. The graduation document certifies the degree in engineering chemistry with the notification of a deepened specialization in Advanced Chemical Engineering. Study for applicants without engineering degree study lasts 2 years, otherwise 1.5 years only.

ABOUT STUDIES

- **Duration:** 3 or 4 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** October 2025 - 4 semesters for candidates without engineering degree
  February 2026 - 3 semesters
- **Programme coordinator:**
  Piotr Rutkowski, PhD, DSc, Prof. at Wrocław Tech

JOB PROSPECTS

The graduate has extended knowledge of mathematics, natural sciences and technical skills: professional solving of problems in the field of chemical engineering, conduct advanced research experiments, propose and optimize new solutions and independently analyse problems related to chemical and process engineering. The graduates are prepared for creative work in the design and operation of processes in the chemical industry. The graduate is prepared to run the own business.

ENTRY INFORMATION

Requirements: Bachelor's or Bachelor of Engineering Degree in Chemical Engineering or related domains (3-semester programme). Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

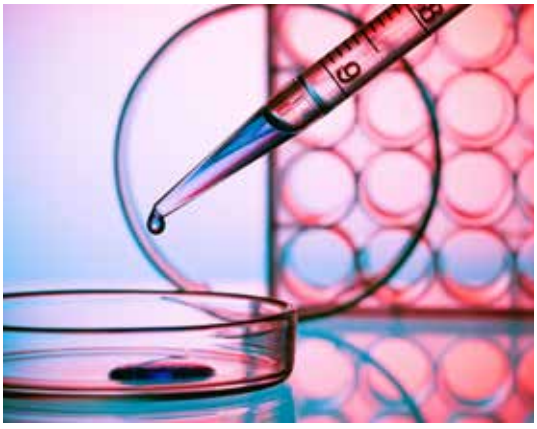
The main study of Advanced Chemical Engineering consists of at least 23 units, covered as lectures, labs and seminars. In addition, some optional units are offered covering also language courses.

SEMESTER 0

» Informatics for Engineers
» Biotechnology with Introduction to Industrial Microbiology
» Basics of Technical Drawing
» Technical Safety in Industry
» Material Recovery and Recycling
» Fundamentals of Chemical and Process Engineering
» Bioreactors
» Introduction to Materials Science and Engineering
» Fundamentals of Chemical Technology Design
» Separation and Purification of Products

SEMESTER 1

» Trends in Chemical Engineering and Technology
» Membrane Processes
» Chemical Processes Equipment
» Heterogeneous Reactors
» Retrieval of Scientific and Technological Resources
» Mathematics for Engineers
» Managerial Course I
» Managerial Course II
» Foreign Language I
» Graduation Proseminar

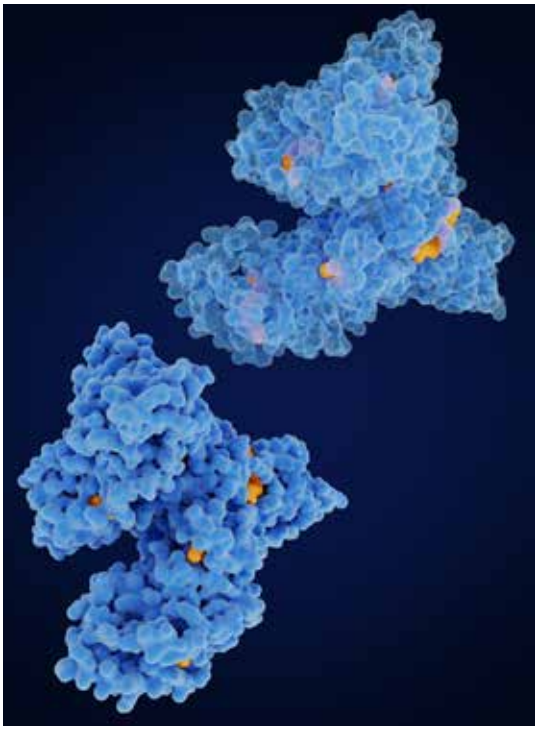


SEMESTER 2

» Chemical Processes Project with CFD Calculations
» Biocatalysis in Food, Brewery and Pharmaceutical Industry
» Numerical Applications in Nanoengineering
» Nanotechnology
» Green Chemistry and Sustainable Technology
» Foreign Language II
» Graduate Laboratory I

SEMESTER 3

» Chemical Process Optimization and Management
» Elective course
» Graduate Laboratory II
» Graduation Seminar



COMPUTER ENGINEERING

DESCRIPTION

The final effect of studies at the Master's level is obtaining knowledge, skills and qualifications in according to "Teaching Standards" in the field of Computer Science. Students receive extended knowledge in specialisation. Graduates will be able to: use various methods and techniques, formulate and solve specific problems related to computer science, become teamwork leaders. Additionally, they will have obtained fluent and creative knowledge application in the area of the specialisation, which means mathematical models designing, problem formulating and solving, problem-oriented information systems analysis and testing.

ABOUT STUDIES

- **Duration:** 3 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** February 2026
- **Programme coordinator:** Elżbieta Kukla, PhD

JOB PROSPECTS

Employment in IT companies and organisations which apply informatics tools and systems at the specialists and manager positions.

ENTRY INFORMATION

Requirements: Bachelor's Degree, preferably in Computer Science or in a related field. Applicants with a Bachelor's Degree outside of Computer Science must demonstrate significant proficiency in computer science. Any area of requirements can be satisfied through courses completed at the bachelor level or by relevant experience.
Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 37 19, +48 71 320 44 39

CONTENT

Forms of teaching: lectures, laboratories, tutorials, projects, seminars, research.

SEMESTER 1

» Advanced Cybersecurity Issues
» Advanced Databases
» Analysis of Web-based System
» Foundations of Knowledge Engineering
» Software System Development
» Methods of planning and analyzing experiments
» Physics of Contemporary Computer Science
» Lectorate 2.2

SEMESTER 2

» Advanced Topics in Artificial Intelligence
» Project Management
» Recent Advances in Computer Science
» Research Methodology
» User Experience
» Monograph Project
» Fundamentals of Business and Intellectual Property
» Lectorate 2.1

SEMESTER 3

» Mobile and Multimedia Systems
» Video Game Design
» Diploma seminar
» Master Thesis
» Ethics of New Technologies

ADVANCED COMPUTER SCIENCE

DESCRIPTION

The ACS studies' programme is focused on delivering multidisciplinary knowledge and developing theoretical and practical skills in modern areas of computer science (Machine Learning, Neural Networks, optimisation, etc.), information technology and computer systems. We believe that students gain the most when they are involved in research (working on projects) individually and as a team while the lecturer is ready to advise and guide. Therefore, more than 65% of the course's programme is focused on active forms of learning like group projects, seminars, classes (tutorials) and laboratory training. ACS (formerly known as AIC - Advanced Informatics and Control) shapes many successful PhD candidates and researchers. Historically speaking, we have had 25 double diploma students and 11 PhDs with the cooperation of foreign universities.

JOB PROSPECTS

The graduates will gain deep knowledge in computer science (Machine Learning, algorithms, optimisation) and software engineering. They will be prepared to solve real-life IT and computer science problems, conduct proper research and learn how to gain information from the literature and other available sources. The alumnus will be prepared for a role of a team leader and have extensive teamwork skills (critical thinking, collaboration, communication etc.). They will have experience in both organising and participating in workshops/conferences. They will acquire the experience necessary for a professional career at research units, universities, colleges, and industry. In addition, they will develop English communication skills that are well above industry standards.

ENTRY INFORMATION

Requirements: Bachelor's Degree in Informatics, Computer Science, Computer Engineering, Information Technology, Teleinformatics, Computer Systems, Robotics, Control, Control Engineering, Systems, Electronics, Telecommunications. Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

ABOUT STUDIES

- **Duration:** 3 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** February 2026
- **Programme coordinator:**
  Wojciech Kmiecik, PhD

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

SEMESTER 1

» Research Skills and Methodologies
» Optimisation Methods: Theory and Applications
» IT Applications: Electronic Media
» in Business and Commerce
» Information Systems Modelling
» Computer Project Management
» Discrete Mathematics
» Social Communications
» Foreign Language/Polish Language I
» Physics

SEMESTER 2

» Machine Learning
» Neural Networks
» Research Project
» Secure Systems and Networks
» Modelling and Optimisation of Computer Networks
» Information and Storage Management
» ACS Diploma Seminar 1
» Foreign Language/Polish Language II

SEMESTER 3

» Research Project 2
» Natural Language Processing
» Introduction to Computer Vision in Quality Control
» Entrepreneurship
» ACS Diploma Seminar 2
» Final Project (MSc Thesis)

INTERNET ENGINEERING

DESCRIPTION

The programme is focused on delivering knowledge and developing skills needed for a successful career in Computer Science and Engineering, particularly in designing and maintaining complex service-oriented information systems. It develops abilities to solve non-routine problems and to formulate opinions based on incomplete information. The programme covers professional topics as well as R&D teamwork. Special attention is given to the ability to work in multinational industrial teams. The curriculum covers software development and analysis, networking, web services, human interfaces, and security of complex information systems.

ABOUT STUDIES

- **Duration:** 3 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** February 2026
- **Programme coordinator:**
  Prof. Czesław Smutnicki, PhD, DSc, Eng

JOB PROSPECTS

The graduates will have knowledge and skills needed for a career in computer and software organisations, research units, industry, government administration, and education. They will be particularly well prepared to work on the implementation and maintenance of new-generation web services. They will have the experience necessary for a professional career and undertake level III (Ph.D.) education. In addition, they will possess well above standard skills in communication in multinational teams.

ENTRY INFORMATION

Requirements: Bachelor's Degree in Computer Science, Computer Engineering, Information Technology, Informatics, Teleinformatics, Telecommunication or related. The degree must be obtained in an engineering programme of studies of at least 3.5 years duration (equivalent to 210 ECTS).

Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail:

admission@pwr.edu.pl

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

The programme includes traditional lectures and hands-on study forms (mainly laboratories and design projects). In the 3rd semester, the student is also required to complete a final individual project and write a thesis on its basis. The diploma examination, the passing of which is required to obtain the Master's title, covers topics of the completed courses and the thesis presentation. The courses delivered in each semester are as follows:

SEMESTER 1

» Research Skills and Methodologies
» Optimisation Methods: Theory and Applications
» IT Applications in Business and Commerce
» Information Systems Modelling
» Computer Project Management
» Discrete Mathematics
» Social Communications
» Foreign Language/Polish Language I
» Physics

SEMESTER 2

» Multimedia and Computer Visualisation
» Application Programming - Java and XML Technologies
» Information Systems Analysis
» Advanced Databases
» Secure Systems and Networks
» Softcomputing
» Foreign Language

SEMESTER 3

» Application Programming: Data Mining and Data Warehousing
» Application Programming: Mobile Computing
» IE Seminar
» Final Project
» Entrepreneurship

CONTROL IN ELECTRICAL POWER ENGINEERING

DESCRIPTION

The students can spend full duration of the studies at Wrocław University of Science and Technology (Wrocław Tech) or benefit from the Double-Degree option. The joint double degree programme is run together with Toronto Metropolitan University (TMU) in Toronto, Canada (possibility of exchange for Polish and Canadian citizens only) and Brandenburg University of Technology (BTU) in Cottbus, Germany, University of Palermo (UNIPA), Italy, RWTH Aachen University, Aachen (Germany). The goal of the programme is to improve the quality of graduate-level education and training in the field of control engineering. It is focused on new and challenging issues of power system automation and control. The programme offered by the Faculty of Electrical Engineering is split up into four semesters, including a Master's Thesis semester and a 4-week industrial placement. Students have the opportunity to spend either their first or second year at a partner university, depending on their chosen institution. During their second year, they will undertake the writing of their thesis at the host university.

ABOUT STUDIES

- **Duration:** 4 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:**
  - October 2025 at Wrocław Tech or BTU (Double Degree Programme),
  - September 2025 at TMU (Double Degree Programme)
  - September 2025 at UNIPA (Double Degree Programme)
- **Programme coordinator:** Prof. Robert Lis

JOB PROSPECTS

The programme is devoted to the candidates interested in work related to electric power system control, reliability, transmission and distribution of electrical energy, protection and decision-making in power systems, energy market issues, etc.

ENTRY INFORMATION

Requirements: Bachelor's Degree in Electrical Engineering or related field.
Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- Deadline for application for full programme at Wrocław Tech: **www.admission.pwr.edu.pl**
- Deadline for application for double degree programme:
  - https://weny.pwr.edu.pl/en/candidates/application-deadlines

- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English: Equivalent of minimum TOEFL IBT – 87 points or 6,5 (7,0 at RU) points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

COURSES AT WROCŁAW TECH:

SEMESTER 1

» Numerical and Optimisation Methods
» Power Quality Assessment
» Power Systems Faults
» Fault Calculations
» Dynamics and Control of AC and DC Drives
» Circuits and Systems
» Advanced Technology in Electrical Power Generation
» Foreign Language – A1 or A2
» Foreign Language – B2+ or C1+

SEMESTER 2

» Digital Control Techniques
» Simulation and Analysis of Power System Transients
» Digital Signal Processing for Protection and Control
» Power System Protection
» Fibre Optics Communications and Sensors
» Renewable Energy Sources
» Electric Power System Operation and Control
» Diploma Placement 4 Weeks
» Elective Course from Management Block

SEMESTER 3

» Advanced High Voltage Technology
» Artificial Intelligence Techniques
» Power System Automation and Security
» Electrical Power Systems Management
» Electromagnetic Compatibility
» Measurement Methods and Techniques
» Diploma Project
» Elective Courses from Law Block

SEMESTER 4

» Diploma Seminar
» Master's Thesis
» Elective course from Social Sciences and Ethics Block
» Elective Course from A Block and B Block

COURSES AT UNIPA:
https://wroclaw.tech/UNIPA-courses

COURSES AT RWTH:
https://wroclaw.tech/RWTH-courses

COURSES AT TMU:
https://wroclaw.tech/RU-courses

COURSES AT BTU:
https://wroclaw.tech/BT-courses

RENEWABLE ENERGY SYSTEMS

DESCRIPTION

The students of the programme can spend full duration of the studies at Wrocław University of Science and Technology (Wrocław Tech) or benefit from the Double-Degree option. The DD option is a proposal for a limited number of the best applicants. Students spend one year in Wrocław and one year at a partner university (depending on the institution, this may be the first or second year). They write their thesis at the university where they spend their second year. They can choose the double degree option with the University of Palermo (UNIPA), Italy, the Otto von Guericke University Magdeburg (OVGU), Germany, or Lappeenranta-Lahti University of Technology (LUT), Finland. In each case, the thesis is written at the institution where they spend their second year. The programme is focused on the modern issues related to renewable energy sources and their integration in power system.

ABOUT STUDIES

- **Duration:** 4 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:**
  - October 2025 at Wrocław Tech or OvGU (Double Degree Programmes)
  - September 2025 at UNIPA (Double Degree Programme)
- **Programme coordinator:**
  Prof. Robert Lis

JOB PROSPECTS

The programme is devoted to the candidates interested in work related to renewable energy systems, reliability, transmission and distribution of electrical energy, protection and decision-making in power systems, energy market issues, etc.

ENTRY INFORMATION

Requirements: Bachelor's Degree in Electrical Engineering or related field.
Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- Deadline for application for full programme at Wrocław Tech: **www.admission.pwr.edu.pl**
- Deadline for application for double degree programme:

  https://weny.pwr.edu.pl/en/candidates/application-deadlines

- **Tuition fee**
- **Application fee**

  See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

courses at WROCŁAW TECH:

SEMESTER 1

» Numerical and Optimisation Methods
» Power Quality Assessment
» Power Systems Faults
» Fault Calculations
» Dynamics and Control of AC and DC Drives
» Circuits and Systems
» Advanced Technology in Electrical Power Generation
» Foreign Language – A1 or A2
» Foreign Language – B2+ or C1+

SEMESTER 2

» Power Electronics
» Simulation and Analysis of Power System Transients
» Protection and Control of Distributed Energy Sources 1
» Renewable Energy Sources
» Water Power Plants 1
» Integration of Distributed Resources in Power Systems
» Electromechanical Systems in Renewable Energy
» Modelling of Electrical Machines
» Diploma Placement 4 Weeks
» Elective Course from Management Block
» Energy Storage Systems

SEMESTER 3

» Photovoltaic Cells
» Protection and Control of Distributed Energy Sources 2
» Water Power Plants 2
» Industrial Ecology - Selected Problems
» Artificial Intelligence Techniques
» Legal Regulations and Investments in Power Systems with Distributed Energy Sources
» Electromagnetic Compatibility
» Measurement Methods and Techniques
» Diploma Project
» Elective Courses from Law Block

SEMESTER 4

» Diploma Seminar
» Master's Thesis
» Elective Course from Social Sciences and Ethics Block
» Elective Course from A Block and B Block

courses at OvGU:

SEMESTER 3

» Power Electronics
» Power Network Planning and Operation
» Digital Info Processing
» Electromagnetic Field Theory
» Power System Economics and Special Topics
» Project

SEMESTER 4

» Master's Thesis

COURSES OVGU:
https://www.ovgu.de/unimagdeburg/en/Study/

COURSES LUT:
https://www.lut.fi/en/studies/technology/

COURSES UNIPA:
https://offertaformativa.unipa.it/offweb/public/

MINING ENGINEERING

DESCRIPTION

Graduate's profile: A graduate will possess abilities to use in-depth knowledge of problems within the domain of basic sciences, main-field-of-study and specialisation subjects. The graduate will be able to manage and supervise teams, deal with high-risk situations and decisions, and use competently the knowledge of law and economics. The graduate will be prepared to design technological processes, carry out research work and work creatively.

ABOUT STUDIES

- **Duration:** 3 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** October 2025 and February 2026
- **Programme coordinator:**
  Gabriela Paszkowska, PhD, DSc,
  Prof. at Wrocław Tech
  gabriela.paszkowska@pwr.edu.pl

JOB PROSPECTS

The Mining Engineering graduate will be prepared to work for enterprises, engineering supervision bodies, state administration, design offices and research units, where in-depth specialised knowledge of mining engineering and geology is demanded.

ENTRY INFORMATION

Requirements: Bachelor's Degree – Bachelor of Science or Bachelor of Engineering (any incl. Geology Engineering, Mining Engineering, Mechanical Engineering, Energy-related Engineering studies etc.).
Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS.
  List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

Knowledge will be provided in the form of lectures, tutorials, laboratories, computer labs, project works and seminars.

SEMESTER 1

» Theory and Practice in Geomechanics
» Computer-Aided Geological Modelling & Geostatistics
» Project Management, Appraisal and Risk Evaluation
» Engineering Geophysics
» Integrated Analysis of Deformations in Geomechanical Engineering
» Occupational Health and Safety
» Excavation Design in Open Pit Mining

SEMESTER 2

» Machinery Systems
» Tunnel and Underground Excavation Design
» Computer-Aided Mine Design
» Ventilation and Mine Fires
» Issues in Nuclear Physics
» AutoCAD
» Foreign Languages
» Free Elective

SEMESTER 3

» Mineral Processing Systems
» Environmental Management
» Digital Mine
» Operations Research
» Free Elective
» Diploma Seminar, Master's Thesis

GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

DESCRIPTION

This is a joint MSc programme of Wrocław Tech and University of Miskolc (Hungary) formatted as a structured student mobility. Wrocław Tech students study two semesters in Wrocław (the first and the third semesters) while the second semester is offered by University of Miskolc. Students apply for an Erasmus Plus grant for the mobility period. In the third semester, the students write and defend their Master's thesis at Wrocław Tech.

Graduate profile: An alumnus becomes a specialist in two fields: geotechnical and environmental engineering, which is a very unique profile. Besides that, a graduate will be able to apply in-depth knowledge of basic sciences. The graduate will be able to manage and supervise teams, deal with high-risk situations and decisions. The graduate will be prepared to design technological processes, carry out research work, and work creatively.

ABOUT STUDIES

- **Duration:** 3 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** February 2026
- **Programme coordinator:**
  Gabriela Paszkowska, PhD, DSc,
  Prof. at Wrocław Tech
  gabriela.paszkowska@pwr.edu.pl

JOB PROSPECTS

The graduate will be prepared to work for enterprises, engineering supervision bodies, state administration, design offices and research units, where in-depth specialised knowledge of mining, geology and geotechnical engineering is demanded.

ENTRY INFORMATION

Requirements: Bachelor's Degree – Bachelor of Science or Bachelor of Engineering (any incl. Geology Engineering, Mining Engineering, Mechanical Engineering, Energy Related Engineering Studies, etc.).

Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

Knowledge will be provided in the form of lectures, tutorials, laboratories, computer labs, project works and seminars.

SEMESTER 1

» Theory and Practice in Geomechanics
» Computer-Aided Geological Modelling & Geostatistics
» Project Management, Appraisal and Risk Evaluation
» Engineering Geophysics
» Integrated Analysis of Deformations in Geomechanical Engineering
» Occupational Health and Safety
» Environmental Chemistry

SEMESTER 2

» Methods of Environmental Assessment
» Waste Incineration and Air Quality Protection
» Water and Wastewater Treatment
» Environmental Geotechnics
» Chemical Technologies in Environmental Protection
» Environmental Risk Assessment and Remediation
» Soil Chemistry
» Numerical Methods and Optimisation
» Quality Management
» Basics of Waste Management
» Environmental Geology
» Foreign Languages

SEMESTER 3

» Mineral Processing Systems
» Excavation Design in Open Pit Mining
» Digital Mine
» Free Elective
» Foreign Languages
» Diploma Seminar, Master's Thesis

GEOMATICS FOR MINERAL RESOURCE MANAGEMENT

DESCRIPTION

Geomatics for Mineral Resource Management focuses on the process of resource modelling and mine management. Students will be taught in a variety of subjects related to the field mining and mineral resources. This includes financial, environmental, political as well as the legal aspects of national and international mining projects. In addition to the standard courses taught by staff from partner universities and industry experts, massive open online courses (MOOC's) are offered for the students. The MOOC's consist of a series of web-videos, which cover the content of an individual course. The educational content focuses on the following pillars: (1) Sensing technologies for mine data gathering, (2) Spatial (big) data management and visualisation and (3) Spatial (big) data analysis and modelling. The aim of the programme is to enable students to integrate these three pillars into innovative Geomonitoring concepts.
Students, who decide on the specialisation Geomatics for Mineral Resource Management, are, on default, set to study 2 semesters at Wrocław University of Science and Technology (1st and 4th semesters) and 2 semesters at TU Bergakademie Freiberg in Germany or two semesters at Montanuniversität Leoben in Austria (2nd and 3rd semesters) and are going to graduate with a double MSc diploma.

ABOUT STUDIES

- **Duration:** 4 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** February 2026
- **Programme coordinator:**
  Jan Blachowski PhD, DSc, Prof. (at Wrocław Tech)
  Jörg Benndorf PhD, DSc, Prof. (at TUBAF)
  Alexander Tscharf PhD (at MUL)

JOB PROSPECTS

Thus graduate of this master program will be prepared to work in an international and multicultural environment in mining and exploration companies, technical supervision authorities, public administration offices, research and development institutions, everywhere where advanced and state of the art Interdisciplinary knowledge of mining and geology, computer aided design, geomatics are required.

ENTRY INFORMATION

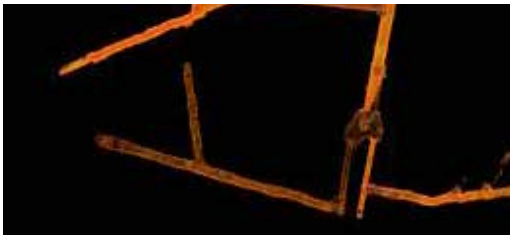
Requirements: the programme is meant for holders of a Bachelor's Degree in Mining and Geology as well as a Bachelor's Degree in Geodesy and Cartography or related engineering disciplines.

Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.



Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

Knowledge will be provided in the form of lectures, tutorials, laboratories, computer labs, project works and seminars.

SEMESTER 1 (WROCŁAW TECH)

» Principles and Application of InSAR and GIS in Mining
» Computer Aided Geological Modelling & Geostatistics
» Project Management, Appraisal and Risk Evaluation
» Engineering Geophysics
» Integrated Analysis of Deformations in Geomechanical Engineering
» Occupational Health and Safety
» Foreign language
» Elective course
» Mine Operation Scheduling and Costing

SEMESTER 2 (TUBAF)

» Applied Remote Sensing in Geosciences
» Underground Mine Surveying
» Geomonitoring
» Operations Management
» Geomodelling – Geostatistics for Natural Resource Modelling
» Foreign language

SEMESTER 2 (MUL)

» Spatial Planning
» Deposit Modelling and associated Software
» Underground Mining
» Mining Subsidence Engineering
» Geotechnical Monitoring and Instrumentation
» CAD-Constructions in Tunneling
» Mine Surveying Project Study

SEMESTER 3 (TUBAF)

» Special Topics Geokinematics
» Applied Spatial Data Analysis and Modelling - Case Study
» Geomatics for Mineral Resource and
» Reserve Management
» Reclamation
» Human Resources Management & Organizational Behaviour
» Elective courses

SEMESTER 3 (MUL)

» Rock Mechanics – Open Pit, Slopes, Dams
» Lab in Rock Mechanics
» Applied Geodesy
» Selected Aspects of Engineering Surveying in Mining and Tunneling
» Mine Mapping
» Regulation of Mining Damages and Ensuring Land Use
» Risk Management in Mines
» Environmental Aspects of Mineral Extraction
» Internship
» Elective courses

SEMESTER 4 (WROCŁAW TECH)

» Master's Thesis
» Diploma Seminar

GEOMATICS

DESCRIPTION

Geomatics is an interdisciplinary scientific and technical discipline that combines aspects of surveying and sensor technology with data processing, geoinformatics and geomodelling. It deals with the acquisition, analysis, interpretation, dissemination and practical application of geoinformation. Geomatics analyses and synthesises information about spatial processes and phenomena and their changes. Geodata is used to create precise computer models that help us to better understand spatial processes and shape future activities. Geodata is an element of almost every intelligent IT system. Stimulating the demand for geoinformation may affect the innovativeness of the economy and allow the entrepreneurs and science to play a significant, more noticeable role of on the global market.

The universality of geoinformation and the prospect of a further increase in its use (processing and analysing large collections of geodata) generate a demand for specialists in the field of development and management of geoinformatics knowledge. Education in the field of Geodesy and Cartography with a specialisation in Geomatics at the Faculty of Geoengineering, Mining and Geology of Wrocław University of Science and Technology meets this demand.

ABOUT STUDIES

- **Duration:** 3 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** February 2026
- **Programme coordinator:**
  Jan Blachowski PhD., DSc, Prof. at Wrocław Tech

JOB PROSPECTS

The Geomatics graduate will be prepared to work for enterprises, engineering supervision bodies, state administration, design offices and research units, where in-depth specialised knowledge of modern geodetic and remote sensing techniques of spatial data acquiring, as well as further advanced analyses in Geographic Information Systems and visualisations are required.

ENTRY INFORMATION

Requirements: the programme is meant for holders of a first-degree diploma in engineering studies, especially in the field of geodesy and cartography.

Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail:

admission@pwr.edu.pl

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

SEMESTER 1

» Physics - the structure of matter
» Advanced Numerical Calculation Methods
» Advanced Geospatial Analysis
» Geostatistics
» Special Measurements
» Selected Topics in GNSS
» GIS Programming
» Foreign Language I

SEMESTER 2

» Selected Topics in Geospatial Modelling
» Financial Analysis
» Physical Geodesy
» Digital Cartographic Models
» GIS Programming II
» Remote Sensing and Processing of Digital Images
» Hydrology II
» Selected Topics in Displacement Monitoring
» Foreign Language
» Elective course
» Humanistic-managerial course
» Graduate Seminar

SEMESTER 3

» Geoinformation Project Management
» Selected Topics in Information Technologies
» Distributed Spatial Databases
» Management of Company Development
» Graduate Seminar
» Elective course
» Master's thesis

ENVIRONMENTAL QUALITY MANAGEMENT

DESCRIPTION

Environmental Quality Management – is a versatile field of study created for students eager to extend environmental protection general knowledge to higher level of proficiency. It offers their graduates possession of the comprehensive knowledge developed simultaneously with practical skills, focusing on the environmental protection issues with the engineering – related taste. Graduates are able to solve environmental engineering problems associated with sustainable development, circular economy, renewable energy resources, the pollution of environment and climate changes. Engineering skills possessed in planning, designing and conducting research projects allows our alumni to exploit their knowledge as highly skilled professionals solving problems related to water supply and sewer systems, wastewater processing, air protection, solid waste management and even materials science. We focus on biodegradable materials as a substituents for petroleum based plastics, smart renewable energy sector and other emerging technologies and processes being a huge step forward to existently utilised ones.

ABOUT STUDIES

- **Duration:** 3 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** October 2025
- **Programme coordinator:** Martyna Grzegorzek, PhD Eng

JOB PROSPECTS

The graduates will be qualified for working in research and development institutes, enterprises and governmental units related to environment protection issues. Knowledge and skills allows to take advantage to work in design offices and enterprises which are involved in: water supply, wastewater treatment, waste management, contaminated land remediation, broad spectrum of renewable energy technologies, air pollution control and abatement.

ENTRY INFORMATION

Bachelor's Degree in either of the following: Environmental Protection, Environmental Engineering, Chemistry, Earth Sciences.
Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

Forms of teaching: lectures, laboratories, seminars, classes, computer classes, projects.

SEMESTER 1

» Environmental Chemistry
» Engineering Application of Mathematical Statistics
» AutoCAD
» Water Treatment Technology
» Raw Materials Management
» Sanitary Biology
» Water Quality Management
» Water Supply Systems
» Automation in Environmental Engineering
» Polish Language A1 or English Language C1+
» Elective Subject
» Ethics of New and Emerging Technologies
» Strategic Management

SEMESTER 2

» Environmental Management
» Membrane Separation Processes in Environmental Protection
» Environmental Toxicology
» Waste Gases Purification
» Solid Waste Management
» Wastewater Treatment Technology
» Biodegradable Materials
» Sewage Systems
» Environmental Health Hazards
» Polish Language or Another Language
» Spatial Planning
» Reliability of Engineering Systems

SEMESTER 3

» Organization of Construction Works
» Building Regulation
» Renewable Energy Systems
» Elective Subject
» Diploma Seminar
» Diploma Project

BUSINESS INTELLIGENCE

DESCRIPTION

Businesses today collect an incredible amount of data, from market transactions, customer service interactions, social media reviews, search engine entries, to demographics, and many more. Businesses also experience a rapid and continuous development of technologies and organizational behaviour that require high skills in ICT and data analytics. The Master of Business Intelligence (BI) programme is designed to provide students with cutting edge managerial knowledge and a strong foundation in both analytics – including computational statistics and machine learning – and core business areas, building a solid platform for a successful career. The BI curriculum focuses on how to analyse data in order to identify and predict patterns and on how to visualise and present results to support managerial decisions and lead to innovative thinking in today's organisations.

The Master of Business Intelligence programme is tailored for current Bachelor of Engineering students and recent graduates who plan to pursue a career in business analytics and management information systems, as well as computer programmers, mathematicians, physicists and engineers seeking career advancement or change. We not only welcome students from different backgrounds and cultures, but also see them as critical for developing innovative ideas. Set up and run by a team of top-ranking scientists, award-winning early stage researchers and successful professionals, the BI curriculum answers the market demand for tech-savvy graduates who can apply advanced computational tools to solve business challenges.

ABOUT STUDIES

- **Duration:** 3 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** February 2026
- **Programme coordinator:** Katarzyna Maciejowska, PhD
- **Contact person:** Yash Chawla, PhD

JOB PROSPECTS

The demand for business analytics is high. Graduates who complete the Business Intelligence programme will acquire computational skills and management expertise that the business world is actively seeking. Our programme prepares students for data-driven decision support that is crucial for today's business activities across a broad range of industries, including ICT, financial, energy and healthcare. The BI curriculum provides the skills to fill positions not only as business intelligence analysts, but also data analysts and consultants, revenue optimisation analysts, risk managers, market analysts and many more. Given that the students will have the opportunity to conduct research with affiliated faculty and senior staff, the programme also prepares for academic careers, offering a unique set of competences and invaluable experience related to decision support for energy markets and renewable generation, e-business logistics and trade, and healthcare systems.

ENTRY INFORMATION

Requirements: Bachelor of Engineering Degree. Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English: Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

The program is build up from three blocks:

» Data description and analysis, where students learn how to visualize, and explore datasets using econometric tools, data mining and artificial intelligence
» Simulation techniques, where students learn how to simulate paths of business processes
» Management, where students learn how to use modern management techniques, such as product management or design thinking

The lectures are accompanied by laboratories and workshops (no traditional classes!).
Students apply BI methods using advanced programing environments such as Python, R and Matlab.

ACQUIRED SKILLS AND COMPETENCES

Students will learn how to:

» Use data analytics to stimulate business growth with quantitative and qualitative skills.
» Stay on top of the latest methods and approaches in computational statistics and machine learning.
» Use visualization software to identify trends, explore hypotheses, challenge assumptions, and create a more detailed, data-driven understanding of business activities.
» Simulate realistic future paths of all kinds of business processes.
» Leverage the power of data to make informed business decisions and thrive in a rapidly changing environment
» Conduct top-tier research and report the results to managers, peers and the public.
» Reach the right customers with the right products and communications.

HUMAN RESOURCE MANAGEMENT

DESCRIPTION

People are the most important resource in every organization. Machines and technology can be purchased or replicated, but without knowledgeable and skilled individuals, they hold little value. In today's world, competition is primarily between teams of people, and Human Resource Management (HRM) serves as a modern framework for managing such teams. This "soft technology" enables organizations to transform individual intellectual capital into HRM capital.

The HRM specialisation equips students with both theoretical knowledge and practical skills in strategic and operational human resource management across various types of organizations, including smaller teams within them. It also fosters expertise in leadership and team-building, all grounded in contemporary management, economics, and finance theories.

Additionally, students will develop the ability to utilize IT tools that support HRM processes. Emphasis will be placed on understanding business dynamics and effectively applying management techniques and tools. Furthermore, students will gain the skills to analyze economic and financial phenomena in a rapidly changing environment.

As part of the HRM specialization, students will also acquire hands-on experience in using IT tools and conducting data analysis to enhance HRM processes.

ABOUT STUDIES

- **Duration:** 4 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** October 2025
- **Programme coordinator:** Prof. Agnieszka Bieńkowska
- **Contact person:** Jolanta Maj, PhD

JOB PROSPECTS

By completing the second-degree HRM specialization, graduates will gain the knowledge and competencies needed to lead various types of teams across different organizations—from international corporations to startups—as well as to work as human resource specialists.

The primary goal of this educational path is to equip graduates and professionals from various technical fields, including IT, mechanics, electronics and telecommunications, chemistry, construction, and other engineering disciplines, with the skills to manage and lead teams in their respective industries.

Graduates of this specialization will acquire both theoretical knowledge and practical experience through workshops and hands-on training, focusing on team dynamics and group functioning. Additionally, they will develop expertise in using human resource management tools to optimize team performance—not only in achieving business and project goals with high efficiency and effectiveness but also in ensuring the well-being of team members.

ENTRY INFORMATION

Requirements: Bachelor's Degree or Bachelor of Engineering Degree. Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English: Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

Forms of teaching: lectures, laboratories, tutorials, projects, seminars, research.

1ST GROUP OF COURSES:

modern concepts of human resource management in the field of selection, assessment and remuneration of personnel using the competency approach; management of the development and potential of employees, as well as their motivation and engagement; modern trends in the human resource area (strategic and international HRM, evidence-based approach, diversity management, and employer branding).

2ND GROUP OF COURSES:

a set of socio-managerial competences that are essential in working with and managing people, including: communication, public speaking and work on one's own image, working in a group and understanding group dynamics, social intelligence and the ability to predict and evaluate the behaviour of other people, leadership competences, including motivating, coordinating the work of a group and strategic thinking.

3RD GROUP OF COURSES:

General study courses that systematize and expand knowledge in modern management methods and concepts, as well as in economics and finance. The program also includes humanities courses to enhance critical thinking and communication skills.

IMPORTANT!

While studying the HRM specialisation, students have the opportunity to work both individually and in a team. The practical forms of classes (i.e. projects, laboratories or workshops) cover over 50% of ECTS credits. Methods such as case study and problem-based learning are used.
Students have the opportunity to build specific tools supporting HR processes. Individual or group research projects are carried out to solve specific problems in the field of HRM.
The development of managerial and personal competences is based on the “learning by doing” approach, in practice it assumes the workshop nature of classes. Students develop specific skills, working in small groups on problems and projects, take part in simulations of situations and group processes.

Lectures are conducted in innovative interactive mode, some are conducted remotely.

At the end of the studies, students are obliged to prepare an MSc dissertation and pass a final (diploma) exam.

RENEWABLE SOURCES OF ENERGY

DESCRIPTION

A graduate possesses knowledge and skills in the design, testing, and operation of power plants utilizing nonconventional energy sources, encompassing a wide range of conversion rates and energy storage methods.

ABOUT STUDIES

- **Duration:** 3 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** February 2026
- **Programme coordinator:**
  Dorota Nowak-Woźny, PhD, DSc, Ass. Prof.

JOB PROSPECTS

The graduate will be prepared to work in the energy industry. In particular, our graduate will have a solid foundation to:

- work on the design of equipment using renewable energy,
- contribute to the development of innovative solutions in renewable energy power,
- supervise the operations of renewable and hybrid energy systems,
- assess the effectiveness of utilizing renewable energy sources, considering the location of investments,
- contribute to the determination and assessment of local and global energy strategies.

ENTRY INFORMATION

Requirements: Bachelor's Degree in a related field.
Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail:

admission@pwr.edu.pl

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

SEMESTER 1

» Applied Mathematics
» Physics - Selected Issues
» Mechatronics and Control Systems
» Selected Problems of Thermal-flow Processes
» New Generation Energy Technologies
» Physics of Renewable Energy
» Modeling of HVAC Systems
» Low-temperature Technologies
» Finite Element Analysis
» Foreign Language min. B2+

SEMESTER 2

» CFD Simulations of Power Generation Units
» Modeling of Energy Systems
» Biomass and Biofuels in Energy Production
» Solar Energy Conversion System
» Fuel Cells and Hydrogen Production
» Water Power Engineering
» Wind Power Plants
» Management Course (Elective)
» Foreign Language (Next Language, Any Level)

SEMESTER 3

» Heat Pumps
» Thermonuclear Power Generation
» Geothermal Power Engineering
» Humanities Course (Elective)
» Master Seminar
» Master Thesis

REFRIGERATION AND CRYOGENICS

DESCRIPTION

A graduate possesses detailed knowledge of devices and installations dedicated to cooling, reaching temperatures as low as -150°C. In the field of cryogenics, they are adept at handling temperatures below 120 K, even down to fractions of a Kelvin. They have skills in the design, implementation, and operation of both refrigeration and cryocooling systems. Additionally, a graduate can creatively apply modern design methods and is well-prepared to undertake PhD studies.

ABOUT STUDIES

- **Duration:** 3 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** February 2026
- **Programme coordinator:**
  Stefan Reszewski, PhD

JOB PROSPECTS

The graduates of the Refrigeration and Cryogenic program will be prepared to work in all industrial branches that apply refrigeration and cryogenic technologies. In particular, our graduates will have a solid foundation to:

- design modern refrigeration and cryogenic units and installations,
- develop new solutions and methods for lowering the temperature,
- supervise operations in food cold stores, refrigeration and air conditioning installations, air rectification, technical gas production plants, natural gas liquefaction plants, and other refrigeration and cryogenic systems.

ENTRY INFORMATION

Requirements: Bachelor's Degree in Power or Mechanical Engineering or any related field. Each application is assessed individually on its merits. If In doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

SEMESTER 1

» Applied Mathematics
» Physics - Selected Issues
» Mechatronics and Control Systems
» Selected Problems of Thermal-flow Processes
» New Generation Energy Technologies
» Physics of Renewable Energy
» Modeling of HVAC systems
» Low-temperature Technologies
» Finite Element Analysis
» Foreign Language min. B2+

SEMESTER 2

» CFD Simulations of Power Generation Units
» Modeling of Energy Systems
» Cooling Systems
» Applied Cryogenics in Power Engineering
» Air Conditioning Systems
» Vapor-compression Refrigeration Systems
» Cryogenics
» Management Course (Elective)
» Foreign Language (Next Language, Any Level)

SEMESTER 3

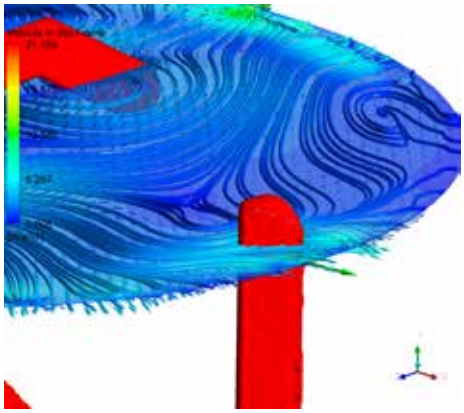
» Sorption Refrigeration

» Cryogenic Systems and Applied Superconductivity
» Cold Chain
» Humanities Course (Elective)
» Master Seminar
» Master Thesis

COMPUTER AIDED MECHANICAL AND POWER ENGINEERING

DESCRIPTION

A graduate possesses the knowledge and skills in numerical methods for a wide range of energy/power applications. This knowledge will be very useful for performing complex thermal–flow simulations using both commercial and open-source software. Additionally, the graduate can utilize artificial intelligence, as well as the conventional approach, to solve energy/power problems.



JOB PROSPECTS

After graduation, the student will be prepared to solve problems in practically every area related to thermal and flow processes. Upon completing the specialization, you will be able to:

» program in a high-level structured language,
» perform mechanical and thermal-flow simulations using software such as ANSYS,
» conduct numerical analyses using open-source tools like OpenFOAM software,
» utilize artificial intelligence to control the operation of energy devices,
» analyze investments not only in technical terms but also in economic terms.

ENTRY INFORMATION

Requirements: Bachelor's Degree in a related field. Each application is assessed individually on its merits.
If in doubt, please contact an Admission Officer, e-mail:
admission@pwr.edu.pl

» **Deadline for application**
» **Tuition fee**
» **Application fee**

See: **admission.pwr.edu.pl**

ABOUT STUDIES

» **Duration:** 3 semesters
» **Mode of study:** Full time
» **Language of instruction:** English
» **Start date:** February 2026
» **Programme coordinator:**
Sławomir Pietrowicz, PhD, DSc, Ass. Prof.

» English:
Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

SEMESTER 1

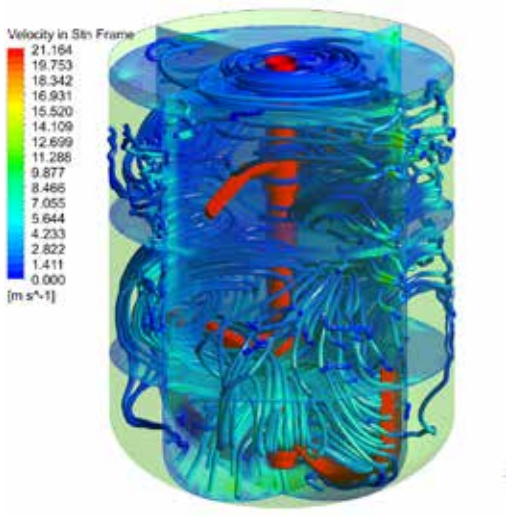
» Applied Mathematics
» Physics - Selected Issues
» Mechatronics and Control Systems
» Selected Problems of Thermal-flow Processes
» New Generation Energy Technologies
» Physics of Renewable Energy
» Modeling of HVAC Systems
» Low-temperature Technologies
» Finite Element Analysis
» Foreign Language min. B2+

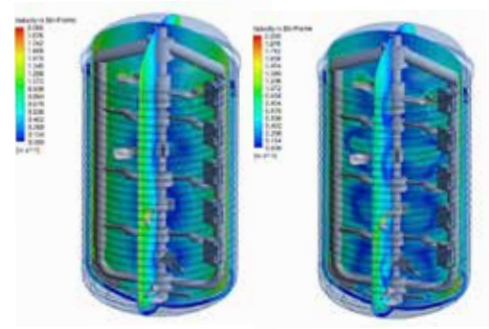
SEMESTER 2

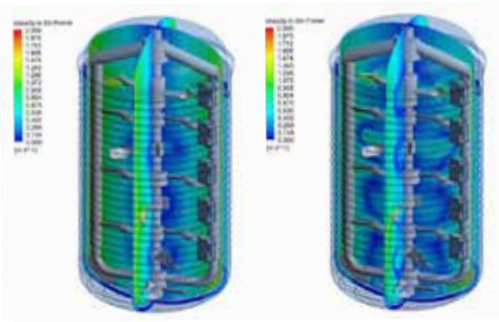
» CFD Simulations of Power Generation Units
» Modeling of Energy Systems
» Modeling of Combustion Processes
» Advanced Numerical Modeling Using OpenFOAM
» Fundamentals of Programming
» Advanced Data Processing
» Numerical Methods
» Management Course (Elective)
» Foreign Language (Next Language, Any Level)

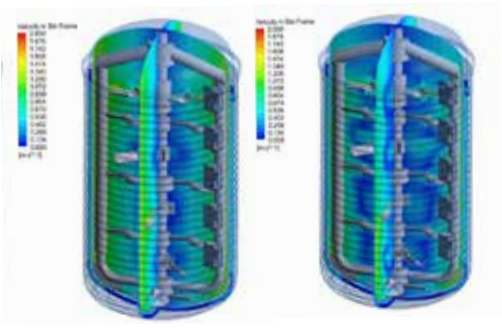
SEMESTER 3

» Integrated Production Systems
» Thermodynamic Analysis of Energy Processes
» Artificial Intelligence
» Humanities Course (Elective)
» Master Seminar
» Master Thesis









AUTOMOTIVE ENGINEERING

DESCRIPTION

At the end of the Master's programme the students will have a sound base of general scientific knowledge in the field of Automotive Engineering. The curriculum encompasses contemporary issues related to automotive industry including innovative design, materials science, quality, safety and ecology. The students will be sufficiently equipped and motivated for a life-long qualification in the field of Automotive Engineering. They will be prepared to implement their knowledge and to cooperate within an organisation. In making decisions and performing their tasks, they will be guided by social, economical and ecological principles.

JOB PROSPECTS

The graduates will have the professional knowledge in the range of automotive engineering with particular concern in the latest trends in vehicle and engine construction as well as the standards of ecology and operation. The unique programme is designed to foster the development of the professional skills and to enable the graduates to work in the international and interdisciplinary teams in the field of automotive engineering.

ABOUT STUDIES

- **Duration:** 3 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** February 2026
- **Programme coordinator:** Sławomir Susz, PhD

ENTRY INFORMATION

Requirements: Bachelor's Degree. Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

SEMESTER 1

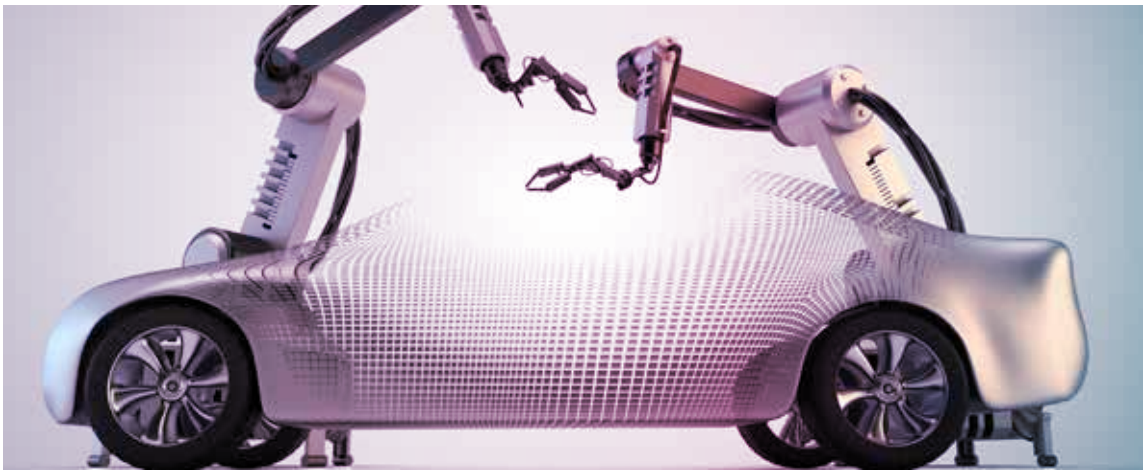
» Analytical Mechanics
» Applied Mathematics - Operational Methods in Automotive
» The basis of negotiations
» Communication for Engineers
» Design of Engineering Materials
» Energy Efficiency Design of Powertrain and Body
» Fatigue of Materials and Fracture Mechanics
» Machine and Device Control Systems
» Machinery Design Process
» Modelling of Multi-Body Systems
» Surface Engineering
» Testing of Vehicle Elements and Assemblies
» English language

SEMESTER 2

» Developing Engine Technology
» Fluids Mechanics in Automotive Design
» Management for Engineers
» Non Destructive Evaluation in Contemporary Manufacturing
» Master Thesis I
» Alternative Drive Systems
» Chemistry and Green Fuels E
» Electronics in Car Vehicles
» Foreign Language II
» BLOCK: Project CAD/FEM

SEMESTER 3

» Automotive Expertises
» Diploma Seminar
» Ecology of Road Transportation
» Master Thesis II
» Safety of Vehicle



PRODUCTION MANAGEMENT

DESCRIPTION

The goal of these studies is to provide the students with knowledge and skills necessary to manage a production company. The curriculum encompasses issues related to company management, planning, organisation and control of manufacturing processes. The students learn about the latest methods of production management and IT techniques essential for the use of computer systems in company management. The knowledge and skills from many various disciplines such as: production organisation, quality management, logistics, computer science, economics, basics of law, mechanics and construction of machines, means that their education is universal and useful in production engineering and services in all sectors of the economy.

ENTRY INFORMATION

Requirements: Bachelor's Degree in: Control Engineering and Robotics, Mechanical Engineering and Machine Building, Transport, Management and Manufacturing Engineering or related.
Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

JOB PROSPECTS

The graduate of the programme has:
• extended knowledge about the management of production enterprises, including innovative companies of a global nature, knows the latest production technologies and development trends of modern production enterprises, knows the methods and techniques of production organisation as well as methods and tools for optimising production systems,
• the ability to design new production systems and improving existing companies, is able to effectively manage production resources as well as plan and control the implementation of production orders using advanced IT tools,
• the competence to undertake tasks in enterprises typical for such functions as: production manager, product manager, process manager, production engineer, process analyst, process development manager.

ABOUT STUDIES

- **Duration:** 3 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** February 2026
- **Programme coordinator:**
  Sławomir Susz, PhD

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

SEMESTER 1

» Digitization and Robotization in Industrial Processes
» Factory Layout Design
» Invention Engineering
» Management and Engineering of Systems Reliability
» Modeling of Processes in the Enterprise
» Physicochemical Aspects of Manufacturing Processes
» Social Psychology
» Development of Enterprises Based on Digital Transformation
» Flexible Manufacturing Automation
» Foreign Language I
» Modern Trends in Production
» Project Management
» Research Methodology
» Reverse Engineering
» Simulation of Manufacturing Processes

SEMESTER 2

» Innovative Manufacturing Technologies
» Intelligent Methods in the Organization of Production
» Methods of Estimating the Carbon Footprint
» Selected Data Analysis Methods
» Social Product development
» Digitization and Robotization in Industrial Processes
» Foreign Language II
» Lean Manufacturing Methods and Tools
» Production Optimization Methods
» Quality Management in Production
» Thesis I

SEMESTER 3

» Diploma Seminar
» Financial Analysis
» Innovative Manufacturing Technologies
» Strategic Management
» Additive Technologies in Production Engineering
» Knowledge Management
» Monitoring and Visualization in Manufacturing
» Product Life Cycle Management
» Thesis II

ADVANCED APPLIED ELECTRONICS

DESCRIPTION

This course will give the students multidisciplinary knowledge of electronics, optoelectronics, microwaves and telecommunications. It will enable them to obtain theoretical and practical knowledge in designing applied electronic systems based on analogue and digital techniques, lasers, fibres and microwave electronics as well as gain expertise in microprocessors, programmable logic applications and signal processing. Additionally, the students will gain laboratory experience and become familiar with work practices of research laboratories.

ABOUT STUDIES

- **Duration:** 3 semesters
- **Mode of study:** Full time
- **Language of instruction:** English
- **Start date:** February 2026
- **Programme coordinator:** Jerzy Witkowski, PhD

JOB PROSPECTS

The graduate will acquire the experience necessary for a professional career in industry, research units and universities, and will be prepared for 3rd level studies (PhD). They will gain substantial international experience working together with highest class scientists in the environment of prestigious laboratories. They will possess well above standard skills in English communication.

ENTRY INFORMATION

Requirements: Bachelor's Degree in Electrical, Electronic, Computer Engineering or related disciplines.
Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- **Deadline for application**
- **Tuition fee**
- **Application fee**

See: **admission.pwr.edu.pl**

- English:
  Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

SEMESTER 1

» New Appr. in Electronics and Photonics
» Microcontrollers Programming
» Numerical Methods and Optimization
» Numerical methods in differential equations
» Optical Fibers and Optocommunication
» Social Communication
» Foreign language

SEMESTER 2

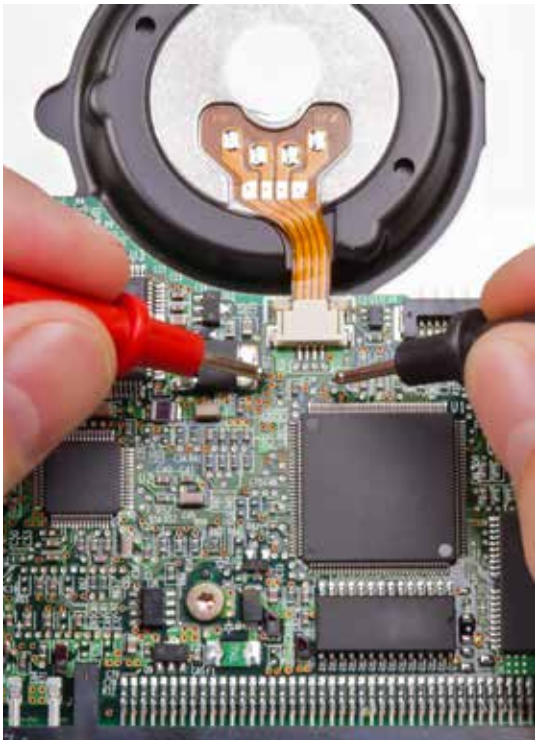
» DSP Architectures
» Hardware Programing
» Lasers and Applications
» Analog Peripherals of Digital Systems
» RF Circuits Design
» Machine Learning Methods
» Specialization seminar

SEMESTER 3

» Master Thesis
» Lab View Programming
» Computer Networks and Systems
» Entrepreneurship
» Diploma seminar
» Elective courses

ELECTIVE COURSES:

» Real Time Operating Systems
» Optics and Nonlinear Optics
» IoT Modules
» Electrotechnics
» Advanced Objective Programming



EMBEDDED ROBOTICS

DESCRIPTION

The Embedded Robotics programme combines the fields of robot control and design with digital electronics and embedded circuits. The goal is to provide the scientific skills and the practical ability to analyse, develop and deploy systems for the broad field of robotics: low and high-level control systems, perception, in particular robot vision, intelligence, motion and task planning, communication, and human-robot interaction. The courses are meant to provide an in-depth understanding of theory and the principles, methods, and processes, allowing the graduates to achieve the competences required in their future job responsibilities. Typical activities include solving problems in the analysis, design, development, integrating, deployment, debugging, and maintenance of robotic and/or embedded systems.

JOB PROSPECTS

The graduates of Embedded Robotics are prepared for creative engineering activities in the field of industrial and service robotics, embedded electronics, and also for research and scientific work including the PhD degree studies. Specifically, the graduates can pursue an industry, research and development, business or administration career as:

» design engineer and/or programmer of embedded systems and circuits,
» implementation/deployment specialist of industrial robotic systems, robotics systems specialist, integrator, project manager,
» control systems engineer, embedded control devices and systems specialist, building and home automation systems design engineer,
» expert/consultant for robotic systems deployment, including intelligent and social robots.

ENTRY INFORMATION

Requirements: Bachelor's or Bachelor of Engineering Degree in Electrical Engineering or related field. Minimum 210 ECTS.
Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail:

admission@pwr.edu.pl

» **Deadline for application**
» **Tuition fee**
» **Application fee**

See: **admission.pwr.edu.pl**

» English:
Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

ABOUT STUDIES

» **Duration:** 3 semesters
» **Mode of study:** Full time
» **Language of instruction:** English
» **Start date:**
February 2026
» **Programme coordinator:**
Elżbieta Roszkowska, PhD, DSc

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

SEMESTER 1

» Control Theory
» Embedded Systems
» Artificial Intelligence and Machine Learning
» Applied Logic
» Physics
» Foreign language A1
» Applications of Artificial Intelligence Models in Automation

SEMESTER 2

» Control Theory for Embedded Systems
» Event-based Control
» Mobile Robotics
» Sensors and Actuators
» Modelling and Identification
» Theory and Methods of Optimization
» Intermediate Project
» Specialization Seminar
» Foreign Language B2

SEMESTER 3

» Advanced Robot Control
» Social Robots
» Task and Motion Planning
» Master's Thesis Project
» Diploma Seminar
» Entrepreneurship
» Social Communication

APPLIED MATHEMATICS

DESCRIPTION

The programme, offered by the Faculty of Pure and Applied Mathematics and run in cooperation with the Hugo Steinhaus Center, is based on educational standards of the European Consortium for Mathematics in Industry (ECMI) as confirmed by the status of ECMI Teaching Centre obtained by Wrocław University of Science and Technology in 2014.
The curriculum is oriented towards real-life applications and industrial problems in educational style and contents. The goal of the studies is the real world applied mathematics education of specialists who are well prepared not only for work in the international financial institutions or enterprises, but also for any situation in which the creative thinking is needed. The graduates have no problems with finding good jobs in the finance and insurance or industrial sectors in Poland and abroad. The MSc diploma offers an opportunity to continue education at PhD studies.

The programme offers three main specialties:

» Financial and Actuarial Mathematics
» Industrial Mathematics
» Data-Driven Modelling

ENTRY INFORMATION

Requirements: Bachelor's or Master's Degree in Applied Mathematics, Control Engineering and Robotics, Economics, Electronics, Electronics and Telecommunications, Computational Physics, Technical Physics, Physics, Computer Science, Computer Science and Econometrics, Industrial Computer Science, Applied Computer Science, Data Engineering, Quantum Engineering, Systems Engineering, Mathematics, Mathematics and Statistics, Mathematics in Technology, Computational Mathematics, Teleinformatics, Telecommunications and related domains obtained either in Poland or abroad. Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

» **Deadline for application**
» **Tuition fee**
» **Application fee**

See: **admission.pwr.edu.pl**

» English: Equivalent of minimum TOEFL IBT – 87 points or 6.5 points IELTS. List of accepted language certificates can be checked online.

JOB PROSPECTS

The graduates will have obtained in-depth knowledge in mathematics and economics/finance; experience in pricing financial and actuarial contracts, modelling, simulation and optimisation, computational methods, data science and artificial intelligence.
They will be prepared for solving problems in the financial/actuarial and industrial sectors and gaining information from the literature and other sources. They will possess organizational skills and experience necessary for a professional career in research units, industry and at universities and colleges.

ABOUT STUDIES

» **Duration:** 3 semesters
» **Mode of study:** Full time
» **Language of instruction:** English
» **Start date:** February 2026
» **Programme coordinator:**
Janusz Szwabiński, PhD, DSc

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

SEMESTER 1

» Economathematics
» Partial Differential Equations with Applications in Physics and Industry
» Computer Modelling and Simulation of Stochastic Processes
» Elective Course
» Elective Course
» Social Science Elective Course
» Foreign Language

SEMESTER 2

» Optimization Theory
» Applied Functional Analysis
» Elective Course
» Elective Course
» Elective Course
» Humanities Elective Course
» Foreign language

SEMESTER 3

» Diploma Thesis
» Diploma Seminar
» Elective Course

ELECTIVE COURSES

» Financial Risk Management
» Computational Finance
» Non-life Insurance Mathematics
» Risk Management in Insurance
» Actuarial Mathematics for Life Contingent Risks
» Numerical Methods in Differential Equations
» Nonlinear Dynamics, Chaos and Fractals
» Introduction to Inverse Problems
» Operations Research
» Perturbation Methods
» Physics Informed Neural Networks for Forward and Inverse Problems
» Data Processing with Rust
» Machine Learning for Data Analytics
» Analysis of Unstructured Data
» Estimation Theory
» Advanced Topics in Dynamic Games
» Large Language Models
» Reinforcement Learning in Multi-Agent Systems
» Biomathematics
» Stochastic Processes in Natural Sciences I
» Stochastic Processes in Natural Sciences II

PREPARATORY POLISH LANGUAGE COURSE

DESCRIPTION

The Department of Polish Language for Foreigners offers courses in Polish language and Polish culture on different levels – A1, A2, B1, B2, C1. They are intended for candidates who wish to prepare for future studies at all academies in Poland as well as for those who want to learn Polish intensely. They include 20 lessons of Polish language per week (5 times a week, 4 lessons a day). The first term contains 300 hours of Polish language, and so does the second term. The students also learn supplementary subjects preparing them for their further studies. The supplementary subjects can be selected according to the students' needs out of the following: mathematics, physics, computer sciences, geography, knowledge of Polish culture and history. The students start learning the specialisation courses on the advanced level in the winter term and on the elementary level – in the summer term. The specialisation subjects are taught in Polish.

The courses, thanks to the fact that they are carried out on different levels, guarantee a communicative dexterity in both official and unofficial situations. At the same time, the courses prepare the candidates for studying on different faculties. The students improve basic linguistic competences: listening comprehension, reading comprehension, speaking and writing different kinds of text. Additionally, some lectures and classes on Polish history and culture are carried out in Polish and English.

The course finishes with a written and oral examination in Polish language and with examinations in all chosen subjects. The Department of Polish Language for Foreigners provides also additional activities, such as: tourist tours to the most interesting regions of Poland, visiting some historical places in Wrocław and participating in different cultural events. Taking part in the course, the students learn about important traditions and customs of the Poles.

ENTRY INFORMATION

The university admission procedure based on secondary education certificate or degree certificate. Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- Mode of study:
  Full time, 600 hours
- Duration; start date:
  1 academic year (2 semesters)
  - October 2025
- Tuition fee*:
  admission.pwr.edu.pl
- Deadline for application:
  admission.pwr.edu.pl
- Language of instruction:
  Polish
- Application fee:
  e-mail: admission@pwr.edu.pl
- Contact:
  e-mail: admission@pwr.edu.pl

*** Fee also includes:**
Textbooks, trips to the ZOO, water knowledge centre „Hydropolis", the Four Domes Pavilion, tours around Wrocław and hiking trips and much more.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

The curriculum of learning Polish as a foreign language on the elementary level A includes individual-connected topics primarily (personal data, education, general look, family relations, leisure time activities, health, etc.). Subsequent subjects include: one's surroundings (both immediate: living place, students' hostel, etc., and more distant: city and its institutions), everyday routines, plants, animals, the weather and climate.

THE GRAMMATICAL MATERIAL INCLUDES:

» declination of nouns, adjectives, pronouns and numerals;
» verb inflexion, transitive and intransitive verbs, voices and moods of verbs, impersonal forms of verbs, modals and verbs connected with movement;
» comparison of adjectives and adverbs;
» classifying words into different parts of speech;
» syntax of a single and compound sentence, double negation, punctuation.

The curriculum includes also typical communicative situations.

COURSES:

» Polish history has been presented from the oldest to the contemporary times. The course has been divided into parts determined by dates of great significance to the society and the state.

» Introduction to computer science and basic programming includes understanding syntax, variables, and fundamental data types in Python.

» Participants of mathematics classes will have an opportunity to get to know the language and terminology used in mathematics. They will also have a chance to make up for the secondary school knowledge they miss (e.g. digits, geometric figures, fractions, mathematical actions, functions, sequences, etc.).

» The purpose of the physics course is giving participants an opportunity to understand the phenomena of the surrounding world and nature, the structures of physics and its connections with other natural sciences (kinematics, dynamics, thermodynamics, electrostatics, optics, contemporary physics, electric current).

PREPARATORY ENGLISH LANGUAGE COURSE

DESCRIPTION

The Department of Foreign Languages at Wrocław University of Science and Technology offers preparatory courses to foreigners who want to study BSc and MSc courses in English at Wrocław University of Science and Technology. The course includes 600 hours of English (20 hours of English per week 5 times x 4 hours a day). The students can also learn suplementary subjects preparing them for their further studies as well as Polish language and culture.

To start the course of English students should be at intermediate level B1 as set forth in Common European Framework for Language, Teaching and Assessment. The aim of the course is to help the students improve their language skills and reach B2 level and to introduce English for academic purposes in order to enable them to follow the university courses in English.

The preparatory English course lasts for the whole academic year (from October to June) and is divided into two semesters. In the first semester the students learn general English with professional language elements. The second semester covers a balance of language skills (speaking, listening, reading, writing), grammar and vocabulary with a special focus on academic language.

In addition to language training, students can select supplementary subjects based on their academic needs. These subjects include mathematics, physics, computer science, and Polish language. Specialization subjects are taught in English.

The course builds the skills required for understanding lectures, tutorials, research papers and written assignments in English. At the end of the course students take examinations in English, selected supplementary subjects. The English examination is at B2 level and consists of two parts, a written test and an interview. The participants will be provided with coursebooks and other teaching materials to be used at the preparatory English course all free of charge. The final examination tests listening and reading skills, speaking, writing, knowledge of grammar and vocabulary.

The exam registration fee is included in the price of the course. Throughout the academic year the students will be provided with an opportunity to go on 1-2 day trips to discover the most beautiful places in the region.

The students will also be able to take part in talks and lectures about history of Wrocław and Poland, cultural events, technical English and more.

ENTRY INFORMATION

The university admission procedure based on secondary education certificate or degree certificate. Each application is assessed individually on its merits. If in doubt, please contact an Admission Officer, e-mail: **admission@pwr.edu.pl**

- Mode of study:
  Full time, 600 hours
- Duration; start date:
  1 academic year (2 semesters)
  - October 2025
  or 1 semester - February 2026
- Deadline for application:
  admission.pwr.edu.pl
- Tuition fee*:
  admission.pwr.edu.pl
- Application fee:
  admission.pwr.edu.pl
- Contact:
  e-mail: admission@pwr.edu.pl

*** Fee also includes:**
Textbooks, trips to the ZOO, water knowledge centre „Hydropolis" and the Four Domes Pavilion, tours around Wrocław, hiking trips and much more.

Questions? Please contact the Admission Officers e-mail: admission@pwr.edu.pl, phone: +48 71 320 37 11, +48 71 320 31 70, +48 71 320 44 39

CONTENT

ENGLISH COURSE SYLLABUS 1ST TERM

SPEAKING

» communicating in social situations
» communicating in professional and intercultural environment
» telephoning: making enquiries, making arrangements, complaining
» focusing on functions: agreeing and disagreeing, giving opinions, interrupting and dealing with interruptions, asking for clarification
» discussing a wide range of personal and study/work-related topics: culture and cross-cultural relations, university and business-related environment, training and development, describing innovative products and services, business travel, buying and selling
» focusing on pronunciation: word and sentence stress, sound linking

LISTENING

» understanding real life situations
» following instructions
» listening for general meaning, details, pronunciation, stress and intonation reading
» understanding written instructions
» understanding story sequence
» understanding authentic writing

WRITING

» organising writing
» using a range of styles
» writing formal and informal letters and emails
» writing CVs and letters of application

GRAMMAR

» revision of tenses
» conditionals
» question forms
» comparatives
» dependent prepositions
» relative clauses
» indirect speech

VOCABULARY

» building a personal lexicon based on topical vocabulary
» business vocabulary
» formal and informal vocabulary

ENGLISH COURSE SYLLABUS 2ND TERM

ACADEMIC SPEAKING

» communicating in seminars and tutorials
» delivering an oral presentation
» focusing on functions: expressing and justifying opinions, explaining, suggesting, speculating, analysing, summarising, narrating
» recognising a range of styles
» speaking without hesitating

ACADEMIC LISTENING

» understanding lectures and tutorials
» following presentations
» note taking

ACADEMIC READING

» understanding specialist and non-specialist academic writing
» identifying text types
» scanning and skimming

ACADEMIC WRITING

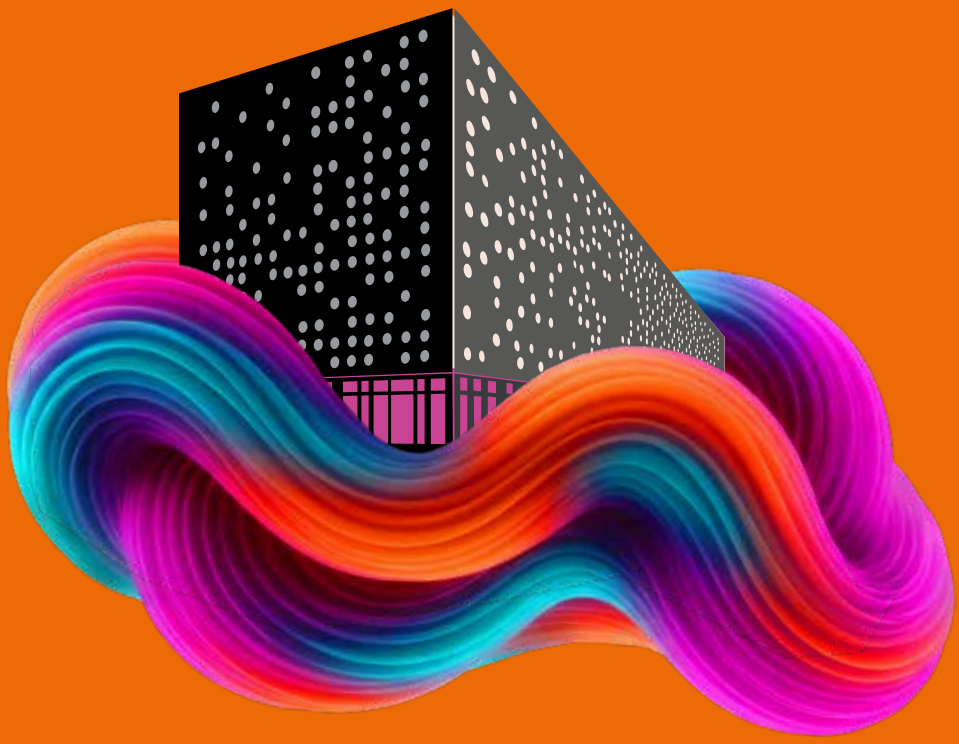
» organising writing
» expressing fact and opinion
» describing and comparing graphs and tables
» describing processes
» writing a report
» writing a summary
» writing an argumentative essay
» using quotations
» paraphrasing
» recognising levels of formality

GRAMMAR FOR ACADEMIC PURPOSES

» understanding choice of tense
» impersonal style and passive constructions
» modal verbs
» forming complex noun phrases
» changing emphasis in a sentence
» expressing causality and purpose

VOCABULARY FOR ACADEMIC PURPOSES

» language for classifying
» word formation
» confusable words
» technical and semi-technical vocabulary
» researching specialist vocabulary



● Wrocław University of Science and Technology
● Admissions Center ● Foreign Student Admissions Office
● www.pwr.edu.pl ● www.admission.pwr.edu.pl ● e-mail: admission@pwr.edu.pl
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