

AGH

UNIVERSITY
OF THE FUTURE



The AGH University of Krakow is one of the largest and best universities in Poland. Our excellent reputation is reflected in the number of study candidates, which grows year by year. The AGH University diploma opens doors to the best companies and enterprises in the world. Hundreds of thousands of graduates were educated in the walls of the university. As of late, we have been part of the European Universities initiative. Its ideas and actions are constantly expanding and undoubtedly constitute the future of science and didactics. For us, this is a mission of creating a new university model.

Although we have found ourselves in arduous times, and maybe owing to that, we are determined to dynamically grow as a university of science and technology, while simultaneously undertaking a mission on creating and transferring values. We stand against new challenges resulting from social, technological, and institutional changes of scale and meaning difficult to foresee and forecast. Therefore, the AGH University action strategy must be directed at, above all, the internal development and nurturing strengths in order to build an increasingly better national and international scientific and educational position.

The AGH University develops as university of the future, based on a more than century-long tradition of studying and explaining the reality, rising to scientific challenges, as well as reach-

ing technological and technical solutions that serve the economy. As a research university, we strive to ensure the highest quality of scientific cognition, enriching knowledge in the fields of technical, scientific, social, and humanities studies by conducting research in accordance with the highest international standards.

The university is continuously strengthening its social role due to the development of science, education, and creative activity, solving real problems of the economy. What social responsibility also entails for us is the commitment to fostering and maintaining lasting relationships with different professional environments, economic entities, public administration, and the entire society.

We create favourable conditions for various forms of social, cultural, artistic, and sports ventures of student environment. Our ambition is to raise leaders capable of presiding over different types of scientific, economic, and civic activities.

Our ambition is to further develop the university as one of the leading research universities in the country and to constantly improve our position in international rankings.

Prof. Dr hab. Eng. Jerzy Lis

Rector of the AGH University of Krakow



1st place according to
among Polish international rankings*
technical universities

17 faculties
68 fields of study
19,400 students
over 200,000 alumni
800 laboratories
170 student organisations



Research university One of 10 Polish universities
with the status of Research University



Campus in the centre One compact complex
of Krakow with the AGH University
Student Campus

* Academic Ranking of World Universities (the Shanghai Ranking)
Center for World University Rankings
CWTS Leiden Ranking

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UP-TO-DATE SINCE 1919



LABORE CREATA,
LABORI ET SCIENTIAE SERVIO
(Created in labour,
I serve labour and science).

from the Statute of the AGH University
of Krakow



We conduct **scientific research** and **educate** primarily in:

- technical sciences,
- natural sciences,
- Earth related sciences,
- social sciences,

taking into account **current priorities of the economy and business** in the fields such as:

- digitalisation,
- energy transformation and zero emissions,
- climate change,
- circular economy,
- industry 4.0.

We also conduct extensive research in numerous other fields, including economics, management, and humanities.

Each year, we develop and launch a few **new fields of study** as well as modify the programmes of the remainder. Practically all of the fields contain new content.

Our **main assets** are, among others:

- scientific potential,
- close relationship with industry and business world,
- recognition among employers,
- modern didactic and scientific facilities,
- care for the well-being of students and employees,
- continuously expanding academic campus with the largest student campus in Poland.

INPUT IN THE DEVELOPMENT OF AI

Recently, the Center of Excellence in Artificial Intelligence was established at the AGH University. Its main goal is to conduct research on efficient and effective learning, optimisation, and data representation and transformation algorithms. The results of scientific objectives constitute the basis for the implementation (research and development) tasks, whose practical application concerns fields such as virtual reality, autonomous vehicles, robotics, medicine, and the analysis of extreme phenomena occurring on Earth.

THE POWER OF SUPERCOMPUTERS

At the AGH University Academic Computer Centre CYFRONET, there are three supercomputers, used in almost all fields of science: Athena, Ares, and Prometheus. Athena reaches a theoretical computing power of 7.7 PFlops, which makes it the fastest supercomputer in Poland. However, in artificial intelligence computing, Athena's theoretical computing power amounts to even 240 PFlops! Athena and Ares are on the TOP500 list of supercomputers with the highest computing power in the world.

CYBERSECURITY CENTRE

The AGH University Cybersecurity Centre, the first of its kind in Poland, conducts expert and educational activities, research and development work in the field of cybersecurity technology. Its aim is to provide innovative solutions and services to strengthen the development of capabilities necessary for the national cybersecurity system and to build the cyber resilience of the country and the region. The

Centre's team consists of scientists and external experts who cooperate with security services officials, but also with researchers from the AGH University Institute of Computer Science, as well as alumni and doctoral students performing research, analytical, and programming tasks.

TOWARDS SPACE ENGINEERING

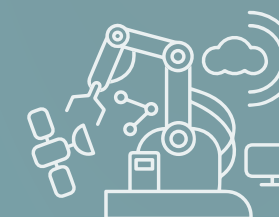
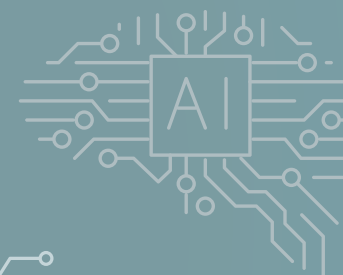
One of the AGH University's ambitions is to develop education and technological and scientific research related to space exploration, extraction of space resources, as well as studying Earth from the orbit. For this purpose, the AGH University has been participating in the UNIVERSEH project (European Space University for Earth and Humanity) since 2020 along with a few European universities. At the university, there is a Space Technology Centre, established with the aim to develop and train future staff for the space engineering sector.

NEW ENERGY ENGINEERING

The development of nuclear industry, especially small SMR reactors, requires educated personnel. For many years, relevant education has been provided at the AGH University. Now we intensify it with the support of experts in the field. The cooperation with Polskie Elektrownie Jądrowe, a developer of nuclear power plants in Poland, gives our students a chance, as they will be deployed by specialists in the process of launching the first nuclear power plant in Poland while still studying. We have also committed ourselves to the development of ecological hydrogen energy. Researchers from the AGH University devise, for example, low-emission methods for the production of high purity hydrogen.



LEARN ABOUT
OUR HISTORY



RESEARCH UNIVERSITY



The AGH University is one of 10 Polish higher education institutions distinguished in a ministerial project titled Excellence Initiative – Research University (IDUB).

The status of a research university comes with additional funds that can be spent on:

- study visits and internships at international research centres,
- university grants,
- awards for scientific achievements,
- purchase of research equipment,
- visits of scientists and researchers from all over the world,
- funding open-access feature and publications in commercial scientific journals.

The money allows academic staff to focus more extensively on scientific activity and improve the quality of education.

The IDUB project supports academic career at each stage, offering:

- substantial scholarships for the best students in the AGH University Doctoral School,
- minigrants to support research for doctoral students and young scientists,
- postdoctoral packages including financing of research costs and trips, internships in Poland and abroad, translation and publication processes, as well as possible discounts and periodic bonuses to compensation,
- grants to employees with postdoctoral qualifications for assembling a research team,
- the sabbatical programme for experienced scientists.

The beneficiaries of additional funds are, in the first place, research teams that work in the field of the so-called “Priority Research Areas”.

PRIORITY RESEARCH AREAS AT THE AGH UNIVERSITY



Sustainable energy technologies, renewable sources of energy, and energy storage



New technologies for the circular economy



Water-energy-climate: interdisciplinary approach to sustainable development



Technical solutions: from fundamental research, through modelling and design, to prototypes



Materials, technologies, and processes inspired by nature



Intelligent information, telecommunication, computer, and control and operation technologies



Design, production, and testing of modern materials and the technologies of the future



Crossing boundaries: experimental high energy physics, extreme states of matter, advanced radiation detection technologies, transdisciplinary research and applications

The additional subsidy provides the opportunity to cooperate with universities from the top of international rankings, as well as to strengthen research-related collaboration with scientific institutions that enjoy a high reputation on the international arena.

The IDUB project means additional benefits to student development, such as:

- research path of education,
- individual tutors,
- assortment of innovative courses,
- additional funds for projects by student research clubs.



Searching for new technologies that can be applied in industry and developing innovative solutions leads to the implementation of a number of projects funded by: the Ministry of Education and Science, the European Commission, the National Science Centre, the National Centre for Research and Development, and the Polish National Agency for Academic Exchange.

A strategy to increase the research potential of the AGH University includes establishing and joining networks of associated universities and research institutes.

PROJECTS

The university carries out national research projects, research and development projects for industry, as well as projects conducted jointly with international partners within the framework of the following programmes: EU HORIZON 2020, Horizon Europe, KIC InnoEnergy, KIC RawMaterials, POLONEZ, HARMONIA, MOTOROLA grants, International Visegrad Fund, Research Fund for Coal and Steel, ERA, bilateral cooperation programmes, Erasmus+, and Structural Funds.

In 2022, the AGH University conducted:

469 RESEARCH PROJECTS

- 314 national projects, including 37 funded by the Structural Funds,
- 155 international projects, including 27 within the HORIZON 2020 and Horizon Europe programmes;

67 EDUCATION PROJECTS

- 44 projects funded by the Structural Funds and 2 projects by national programmes,
- 21 international projects.

RESEARCH CENTRES

At the AGH University, there are specialised research centres, whose objective is to integrate a given science field inside the AGH University, obtain grants, and cooperate with third party partners. These AGH University centres include:

- Centre of Energy,
- Academic Centre for Materials and Nanotechnology,
- Space Technology Centre,
- Cybersecurity Centre,
- Center of Excellence in Artificial Intelligence.

800 LABORATORIES

Modern equipment constitutes an enormous support for any research activity. At our disposal, we have one of the most powerful microscopes in the world – Titan Cubed G-2 60-300, measuring equipment, including cleanroom devices with apparatus for nanotechnology and materials nanodiagnostics, and a specialised computed tomography scanner used to examine building materials. Moreover, the AGH University has one of the quietest places in Poland – an anechoic chamber. Our laboratories are equipped with top-notch apparatus; here are but a few examples of our finest research facilities: Laboratory of Energy Efficiency and Building Automation – Aut-BudNet, RWE AGH Solar Lab, LTE Laboratory, AGH-KGHM Polska Miedź SA Laboratory of Critical Elements, AGH-Aptiv Laboratory of Autonomous Vehicles, and Industry 4.0 Laboratory. Some of the most important latest acquisitions include: a set for scanning electron microscopy (worth almost PLN 7.4 million), a selective laser sintering 3D printer (almost PLN 3 million), an imaging and analytics techniques platform for research on the heritage and history of technology (PLN 3.4 million), a system for measuring flow parameters of a two-phase flow in a medium (PLN 3.4 million), a servo-hydraulic simulator for the determination of thermomechanical characteristics of materials in complex load conditions (PLN 4.4 million), and an ultra-performance liquid chromatography system with tandem double quadrupole mass spectrometry (PLN 2.1 million).



SEE OUR
EQUIPMENT DATABASE

SUPERCOMPUTERS AVAILABLE TO RESEARCHERS

The AGH University Academic Computer Centre Cyfronet supports Polish scientists by providing world-class resources and IT solutions. Essentially, these include three supercomputers: Athena (theoretical computing power of 7.7 PFlops, currently the fastest supercomputer in Poland), Ares (3.5 PFlops), and Prometheus (2.65 PFlops). In 2022, they performed over 6 million tasks with a total calculation time of over 420 million computing hours, which is over 48,716 years.

Cyfronet is the initiator and coordinator of the PLGrid Programme, within which the national computing infrastructure has been built for the needs of scientific circles in Poland. It encompasses supercomputers as well as unique IT platforms and dedicated computing environments, including specialist science software packages – tailored to the needs of researchers representing different scientific disciplines.

Cyfronet also coordinates work connected with offering access for Polish scientists to the resources of LUMI, a supercomputer with the computing power of 375 PFlops, assembled in Finland by a consortium of 10 countries (Poland included) and available through the PLGrid Portal.

In 2022, Cyfronet was selected to host and operate one of five new-generation supercomputing systems currently under construction, which will create a European data processing infrastructure within the EuroHPC Joint Undertaking. PLGrid will provide Polish scientists with access to the system.



RESEARCH FOR CERN

For more than two decades, the AGH University scientists have been participating in projects within the framework of LHC experiments (Large Hadron Collider) and other programmes related to fundamental research carried out at CERN. The main experiments in which they participate are ATLAS, LHCb, and ALICE. The physical analyses concern pioneer measurements of an extremely rare phenomenon of photon-photon scattering or an infrequent decay of the Higgs boson into leptons and a photon and also seeking the so-called “new physics”, that is, effects transcending beyond the description offered by the Standard Model of Particle Physics. These studies are enormously significant for explaining the asymmetry between matter and antimatter that brought about the era of matter after the Big Bang. AGH University scientists and students have also participated in IT work supporting the TOTEM experiment (currently part of the CMS experiment). In 2021, the research team working on the project announced the discovery of the quasi-particle odderon. In addition to developing and ensuring good quality of the software for data reconstruction and detector response simulations, the AGH University team also focuses on multifarious aspects of parallel computing used to process large data collections. The employees and doctoral students also participate in the ALICE experiment (as part of the ALICE-PL Consortium), which, in 2022, managed to assess quark masses. What is more, there is research conducted for technologies dedicated to future linear colliders e^+e^- , ILC and CLIC.

EUROPEAN UNIVERSITY – SPACE UNIVERSITY

One of the AGH University’s ambitions is to develop education and technological and scientific research related to space exploration, extraction of space resources, as well as studying Earth from the orbit. For this purpose, the AGH University has been participating in the UNIVERSEH project (European Space University for Earth and Humanity) since 2020 along with a few European universities. The institutions which constitute UNIVERSEH have obtained the status of a European University, awarded by the European Commission to international partnerships of higher education institutions across the EU.

The AGH University has a Space Technology Centre whose tasks include:

- carrying out research and establishing interdisciplinary research teams),
- developing equipment and laboratory base,
- expanding the AGH University research and implementation offer,
- initiating and developing collaboration with industry, as well as with space institutions and agencies,
- developing specialised space technology education programmes.

In the new seat of the Space Technology Centre, a space habitat is being created. It will be the first such laboratory in a Polish university, in which students will be able to test solutions in practice in conditions similar to the Moon and Mars missions.

In 2022, the AGH University concluded an agreement on cooperation with the Polish Space Agency. As a result, AGH University students have gained an opportunity to do a practical training in POLSA.

The space engineering sector at the AGH University is developed by student research clubs with great success. In 2023, the AGH Space Systems team won the International Rover Challenge. Whereas, the AGH University SpaceTeam took the 1st place in a competition to design and build a regolith transport solution for the Moon, organised in the USA.



The highest **QUALITY** **OF EDUCATION**



Education at the AGH University is closely related to research practice. We encourage students to take active part in conducted research projects. We believe in innovation and cooperation in the area of technology exchange, and we actively collaborate with renowned Polish and international companies, which highly appreciate our graduates.

The AGH University offers unique, often interdisciplinary programmes of study. Every year, the university launches new fields of study, whose programmes take into account the needs of the labour market that arise from the economic transformations and the demand for highly-qualified specialists. We also try to tailor our offer to the changing expectations of the next generations, which prioritises the possibility of individual development. Our students can gain knowledge as part of the “research education path”, as well as within the framework of “dual studies”, offered jointly with industry.

The AGH University offers study programmes at three cycles (levels) of education:

- 1st cycle – leads to obtaining a bachelor’s or engineer’s degree,
- 2nd cycle – leads to obtaining a degree of a Master or a Master of Science in Engineering,
- Doctoral schools – lead to obtaining a doctor’s degree.

EDUCATION AT THE AGH UNIVERSITY IN NUMBERS

- 68 fields of study in the 1st cycle,
- 76 fields of study in the 2nd cycle,
- 23 degree programmes in English,
- 90 postgraduate programmes.

TOP-QUALITY SCIENTIFIC ACTIVITY

As a result of the evaluation of scientific activity between 2017 and 2022, carried out by the Polish Ministry of Education and Science, the AGH University received high scores and has the right to confer academic degrees in 17 disciplines.

ACCREDITATIONS

The fields of study offered by the AGH University obtained, among others, the accreditation of the European Network for Accreditation of Engineering Education (ENAE) and the accreditation of the American organisation ABET (Accreditation Board for Engineering and Technology).

RESEARCH EDUCATION PATH

One of the initiatives dedicated to the most gifted students is the “research education path”. This form of education allows for the flexibility of combining studies with scientific research work. For example, students can be awarded a portion of the ECTS credits based on their participation in projects carried out within the framework of the “AGH University Rector’s Grant”, the grants of their tutors, or through participation in the activities of student research clubs.

WIDE CHOICE OF ELECTIVE COURSES

The AGH University Database of Electives comprises around 360 courses divided by field into three blocks: foreign languages, humanities and social sciences, and innovation. Students have the opportunity to choose from obligatory modules within their programmes of study and take additional courses, all according to their personal interests and passions.

EDUCATION IN FOREIGN LANGUAGES

The AGH University offers more than 20 programmes of study taught in English. Furthermore, thanks to the AGH University International Courses, our students can master technical vocabulary in foreign languages.

TUTORING

Students participating in the programme have the opportunity to choose a tutor among plenty of academics with various interests and then, to embark together on a scientific journey, the direction and aim of which they set individually with their tutor.

Tutoring means the return to the formerly followed teaching tradition – the master/disciple relationship. Students work with their tutors one-on-one or in a small, at most three-person group. During the meetings, the tutor focuses on the student’s advantages and adapts the forms of work to their needs.

E-LEARNING

Our educators take advantage of modern technologies and teaching methods, and the Open AGH – Open Academic Resources repository provides students with educational materials in mathematics, physics, chemistry, photovoltaics, and social communication.

DUAL STUDIES

What can also be found in the AGH University offer are the dual studies co-conducted with economic partners. Their aim is to prepare graduates with specialist professional qualifications with regard to a selected enterprise.

TRAININGS AND INTERNSHIPS

Our students have practical trainings and internships that can be undertaken in domestic and foreign companies, industrial plants, and public institutions. The most talented students have the opportunity to participate in prestigious internships at the best universities in the world.



POSTGRADUATE PROGRAMMES

The AGH University offers nearly 90 postgraduate courses aimed at both professional engineers (programmes in the field of ceramics, electrical engineering, drilling, gas engineering, geology, geophysics, geodesy, mining, computer science, telecommunications, robotics, and power engineering), as well as people who are interested in obtaining a new specialisation, for example, in the field of digital marketing, employer branding, social media, talent management, computer graphics, cybersecurity, environmental engineering, accountancy, occupational health and safety (OHS), property management, project management, quality management, sales management, and management in the HR and IT sectors.

The AGH University also runs a postgraduate programme within the Intercollegiate Climate Academy (MAK). This is a unique initiative on a Polish scale undertaken by three universities (AGH University, SGH Warsaw School of Economics, University of Wrocław) with significant support from the banking and business sector.

MBA PROGRAMME

The educational offer at the AGH University has expanded to include studies in Master of Business Administration, directed mainly at managerial staff of companies, enterprises, and administration. What makes the AGH University MBA programme unique is the focus on educating in strategic fields for the development of Polish economy with regard to the technological aspect.

EDUCATION OF DOCTORAL STUDENTS

The AGH University Doctoral School offers education in all disciplines in which the university is entitled to award the doctor's degree:

IN THE FIELD OF ENGINEERING AND TECHNOLOGY

- Automation, electronics, electrical engineering and space technologies,
- Information and communication technology,
- Biomedical engineering,
- Chemical engineering,
- Civil engineering, geodesy and transport,
- Materials engineering,
- Mechanical engineering,
- Environmental engineering, mining and energy;

IN THE FIELD OF NATURAL SCIENCES

- Computer and information sciences,
- Mathematics,
- Chemical sciences,
- Physical sciences,
- Earth and related environmental sciences;

IN THE FIELD OF SOCIAL SCIENCES

- Economics and finance,
- Management and quality studies,
- Sociology;

IN THE FIELD OF HUMANITIES

- Culture and religion studies.

The AGH University successfully participates in the ministerial programme of industrial doctorates, whose aim is to provide funding for research conducted by doctoral students in collaboration with socioeconomic circles.



research education path



extensive use of e-learning platforms



intensive foreign languages courses



double degree programmes



individual course of studies



practical trainings and internships in Poland and abroad



classes in modern laboratories

DEGREE PROGRAMMES IN ENGLISH

FIRST-CYCLE DEGREE PROGRAMMES

- **Computer Physics**
Faculty of Physics and Applied Computer Science
- **Computer Science**
Faculty of Electrical Engineering, Automatics, Computer Science, and Biomedical Engineering
- **Electronics and Telecommunications**
Faculty of Computer Science, Electronics and Telecommunications
- **Mechanical Engineering**
Faculty of Mechanical Engineering and Robotics
- **Mechatronic Engineering**
Faculty of Mechanical Engineering and Robotics

SECOND-CYCLE DEGREE PROGRAMMES

- **Applied Geology:**
Economic Geology
Faculty of Geology, Geophysics, and Environmental Protection
- **Automatic Control and Robotics:**
Cyber-Physical Systems
Faculty of Electrical Engineering, Automatics, Computer Science, and Biomedical Engineering
- **Chemical Technology:**
Chemical Technologies in Energy Sector
Faculty of Energy and Fuels
- **Computer Science and Intelligent Systems:**
Artificial Intelligence and Data Analysis
Faculty of Electrical Engineering, Automatics, Computer Science, and Biomedical Engineering
- **Electrical Engineering:**
Smart Grids Technology Platform
Faculty of Electrical Engineering, Automatics, Computer Science, and Biomedical Engineering
- **Energy and Environmental Engineering**
Faculty of Energy and Fuels
- **Energy Engineering:**
Energy Transition
Faculty of Energy and Fuels
- **Geophysics:**
Applied Geophysics
Faculty of Geology, Geophysics, and Environmental Protection
- **Geospatial Computer Science:**
Remote Sensing and GIS
Faculty of Geo-Data Science, Geodesy, and Environmental Engineering
- **Management:**
International Management
Faculty of Management
- **Materials Science:**
Functional Materials
Faculty of Materials Science and Ceramics
- **Mechatronic Engineering:**
Mechatronic Design
Faculty of Mechanical Engineering and Robotics
- **Metalcasting Engineering**
Faculty of Metals Engineering and Industrial Computer Science
- **Mining Engineering:**
Mining Engineering
Faculty of Civil Engineering and Resource Management
- **Modern Materials, Design, and Application**
Faculty of Non-Ferrous Metals
- **Oil and Gas Engineering:** Petroleum Engineering
Faculty of Drilling, Oil and Gas
- **Raw Materials Value Chain**
Faculty of Civil Engineering and Resource Management
- **Remote Sensing and Geo Informatics**
Faculty of Energy and Fuels
- **Renewable Energy and Energy Management:**
Sustainable Energy Systems
Faculty of Geo-Data Science, Geodesy, and Environmental Engineering

AGH UNIVERSITY FACULTIES

FACULTY OF:

- Civil Engineering and Resource Management
- Metals Engineering and Industrial Computer Science
- Electrical Engineering, Automatics, Computer Science, and Biomedical Engineering
- Computer Science, Electronics, and Communications
- Mechanical Engineering and Robotics
- Geology, Geophysics, and Environmental Protection
- Geo-Data Science, Geodesy, and Environmental Engineering
- Materials Science and Ceramics
- Foundry Engineering
- Non-Ferrous Metals
- Drilling, Oil, and Gas
- Management
- Energy and Fuels
- Physics and Applied Computer Science
- Applied Mathematics
- Humanities
- Computer Science

FACULTIES UNIQUE IN POLAND:

- ▶ Materials Science and Ceramics
- ▶ Non-Ferrous Metals
- ▶ Drilling, Oil, and Gas
- ▶ Foundry Engineering



COOPERATION and FLOW OF KNOWLEDGE



Continuous collaboration with entrepreneurs, business-related institutions, central and local government administration, other universities, and research and development institutions, as well as participation in Polish and international scientific and industrial consortia, allows us to carry out plenty of interesting projects.

TRANSFER OF KNOWLEDGE AND TECHNOLOGY

Technology transfer and the commercialisation of innovative solutions are strongly supported and promoted by our university. Our experience allows us to regularly adjust and adapt our offer, as well as respond effectively to the needs and expectations of industry.

Every year, the AGH University signs over 100 contracts, letters of intent, and cooperation agreements with industry, administration, and business-related institutions. In addition, year after year, the university executes approximately 1,000 research and development contracts, more than half of which are projects commissioned by the economic sector.

The innovative potential of the AGH University is based on its intellectual property, the accumulated know-how, and the sheer experience of our scientists and students. Each year, the university obtains several dozen patents and grants several dozen licences. The AGH University is leading the way for Polish institutions with regard to the number of patent applications submitted to the European Patent Office.

All these actions are executed in the innovative ecosystem of our university, which comprises units that cooperate closely with one another and mutually complement their competences:

THE ADMINISTRATION AND BUSINESS CO-OPERATION DEPARTMENT initiates and coordinates cooperation between the AGH University, entrepreneurs, economic circles, and the central and local government administration. It inspires and fosters collaboration with the business environment by organising recurrent events related to the economy in the fields crucial to the growth of the region and country.

THE TECHNOLOGY TRANSFER CENTRE is responsible for protecting the intellectual property developed at the university as well as creating effective mechanisms facilitating the transfer of knowledge and innovative solutions to industry. It establishes and maintains contact with socioeconomic circles, identifying technological needs, and creating space to satisfy them.

THE KRAKOW CENTRE OF INNOVATIVE TECHNOLOGIES INNOAGH SP. Z O.O. is a quasi-investment fund of the university, with 100% share capital owned by the AGH University. INNOAGH is tasked with indirect commercialisation of the results of research and development work carried out at the AGH University by means of establishing spin-off companies and buying shares therein.

INTERNATIONAL COOPERATION

International cooperation is coordinated by the **CENTRE FOR INTERNATIONAL AFFAIRS**. The unit supports the academic community, among others, by implementing scholarship and educational programmes for students and employees.

The university has concluded nearly 320 general agreements on cooperation with universities from more than 70 countries

(the majority with universities in Ukraine, France, the People's Republic of China, and the United States of America), over 600 Erasmus+ bilateral agreements, and 25 double diploma agreements (including two concluded within the prestigious T.I.M.E. programme).

Every year, about 700 students (leaving and arriving) and 120 employees (leaving) participate in the Erasmus+ programme of academic exchange. The programme covers the area of the EU but also some countries outside of it, increasing the attractiveness of the international studies offered.

The AGH University is also a beneficiary of the Polish National Agency for Academic Exchange NAWA (KATAMARAN, SPINAKER programme – 2 editions, Welcome to Poland).

Furthermore, each year, our university hosts more than a dozen visiting professors – prominent researchers and popularisers of science from all over the world.

The Centre for International Affairs is also an organiser of numerous international conferences with guests from all over the world, including the International Conference POL-VIET (7th edition in 2023) and “The Impact of Internationalization on the Openness and Tolerance of the University Environment”, as well as a host of Staff Week as part of Erasmus+ programme.



HAVEN for PEOPLE with PASSION



The AGH University is home to nearly 140 student research clubs and almost 30 other organisations. Members of the clubs gain practical knowledge, fulfil their passions and goals, and their projects gain recognition that goes far beyond the university campus.

AGH UNIVERSITY STUDENT RESEARCH CLUBS

„Student Research Clubs are an excellent place for students who wish to foster their passions, practical skills, and social bonds, while simultaneously exploring theoretical knowledge. They are a school of talents and a forge of elite research and engineering staff in our country,” says Professor Rafał Dańko, AGH University Vice-Rector for Student Affairs.

The AGH University has supported the clubs, among others, by means of the “Rector’s Grant” competition and its IDUB edition. Students themselves have obtained funds for the activity of Clubs, which resulted in, for example, the funding of projects as part of programmes organised by the Ministry of Education and Science, “Best of the Best” and “Student Research Clubs create innovations.”

The activity of Research Clubs is summarised during yearly science conferences and festivals, such as SFI IT Academic Festival or Space Resources Conference.

The Clubs receive awards and distinctions at international competitions and challenges, including SmartMoto Challenge, Formula Student, Monaco Solar & Energy Boat Challenge, Hackathon, MATE ROV Competition, University Rover Challenge, KRAKsat, CanSat Competition, SmartMoto Challenge, Spaceport America Cup, Topical issues or Rational use of Natural Resources.



Student Construction Centre

The Research Clubs are divided into three sectors in the colours of the University:

- **GREEN SECTOR** comprises clubs undertaking activities in sciences related to Earth (“geoscience”) and the management of its resources (including circular economy), environment and climate, effectiveness, management, economy, social sciences and humanities, as well as engineering structures connected with the above fields, including construction.
- **RED SECTOR** are the clubs conducting research and implementation work in the scope of engineering and experimental sciences, materials design and analysis, as well as the construction and technological processes themselves. Their objects of interest are, among others, automotive, robotics, automatic control, mechatronics, modern space technologies, recycling, AI technologies, nanomaterials, modern engineering materials, broadly understood renewable energy, bioinformatics, bioengineering, biomechanics, climate and energy matters, heavy industry and related production processes, but also artistic foundry and 3D printing.
- **BLACK SECTOR** are the clubs focused on natural sciences and their applications in technology, medicine, and many other fields. Their main areas of interest are computer science and applied computer science, chemistry and fuel technology, mathematics and applied mathematics, physics with medical physics, biomaterials and bioengineering, electronics and measurement systems, mechanics, acoustics, environmental engineering, polymers and ceramics, biophysics, and space.

STUDENT ORGANISATIONS

Student organisations attract enthusiasts of physical activity, artistic expression, and journalism, as well as academic community activists and science quality and popularisation aficionados. The AGH University is a seat of the local branches of the following international organisations: BEST (Board of European Students of Technology), EESTEC (Electrical Engineering Students’ European Association), ESTIEM (European Students of Industrial Engineering and Management), and IAESTE (International Association for the Exchange of Students for Technical Experience).



The AGH University is also a place where cultural and artistic life flourishes.

AGH UNIVERSITY MEDIA CENTRE

The AGH University is home to a unique media and art project, gathering under one roof the largest student Internet radio in Krakow, Radio1.7, the award-winning AGH University Krakow Student Photo Agency, the professional film and television production studio, AGH University MINE, and the AGH University Student Newsletter, whose publications are distributed throughout the campus. The centre combines the features of a production media

house and a cultural centre, where more than 150 people, including students from different Krakow universities, can freely develop their creative passions.

FESTIVALS, CONCERTS, AND COMPETITIONS

For many years, the university has supported and endorsed a large number of cultural events organised in student clubs at the AGH University Student Campus and beyond. The most original ones include the interdisciplinary Synaesthesia Festival. Music. Art. Word., which presents unconventional and ambitious music. This is a time of happenings, art exhibitions, VJ shows (live visualisations to the music), and discussion panels. During the festival, one can observe artists creating spontaneously to the music. The AGH University also provides patronage to, among others, meetings with travellers, writers, and journalists, numerous rock, blues, jazz, and folk concerts, as well as highly popular comedy shows. Since 2019, on the initiative of the AGH University Student Government, the university has featured a show called AGH University Talent Mine, which is an opportunity for artistically gifted students to present their passions and skills.

MUSICAL PRIDE AND JOY

- **AGH UNIVERSITY CHOIR AND STRING ORCHESTRA “CON FUOCO”**

There are many pieces in the band’s repertoire, from mediaeval psalms and classical compositions of the Renaissance and the Baroque, to contemporary music arrangements. Every year, “Con Fuoco” goes on international tours and takes the top spots in Polish and international competitions.

- **AGH UNIVERSITY REPRESENTATIVE ORCHESTRA**

The artists mainly perform popular and film music, as well as popular marches. The make-up of the orchestra changes frequently, new members join in, and many university graduates, despite completing their studies, continue their musical adventure with the Orchestra. Its greatest musical success was the first place in the category of concert competition at the WAMSB World Championships in Calgary, Canada, in 2019.

- **AGH UNIVERSITY SONG AND DANCE ENSEMBLE "KRAKUS"**

The oldest student folk group in Poland shows the original Polish folklore. Songs, dances, and traditions connected with particular regions reflect their beauty in a picturesque way.



The AGH University cares about the development of physical activity in its community. The availability of numerous sports facilities, several dozen various sports units, and professional coaching staff provide everyone who is passionate about sport with an opportunity to hone their skills.

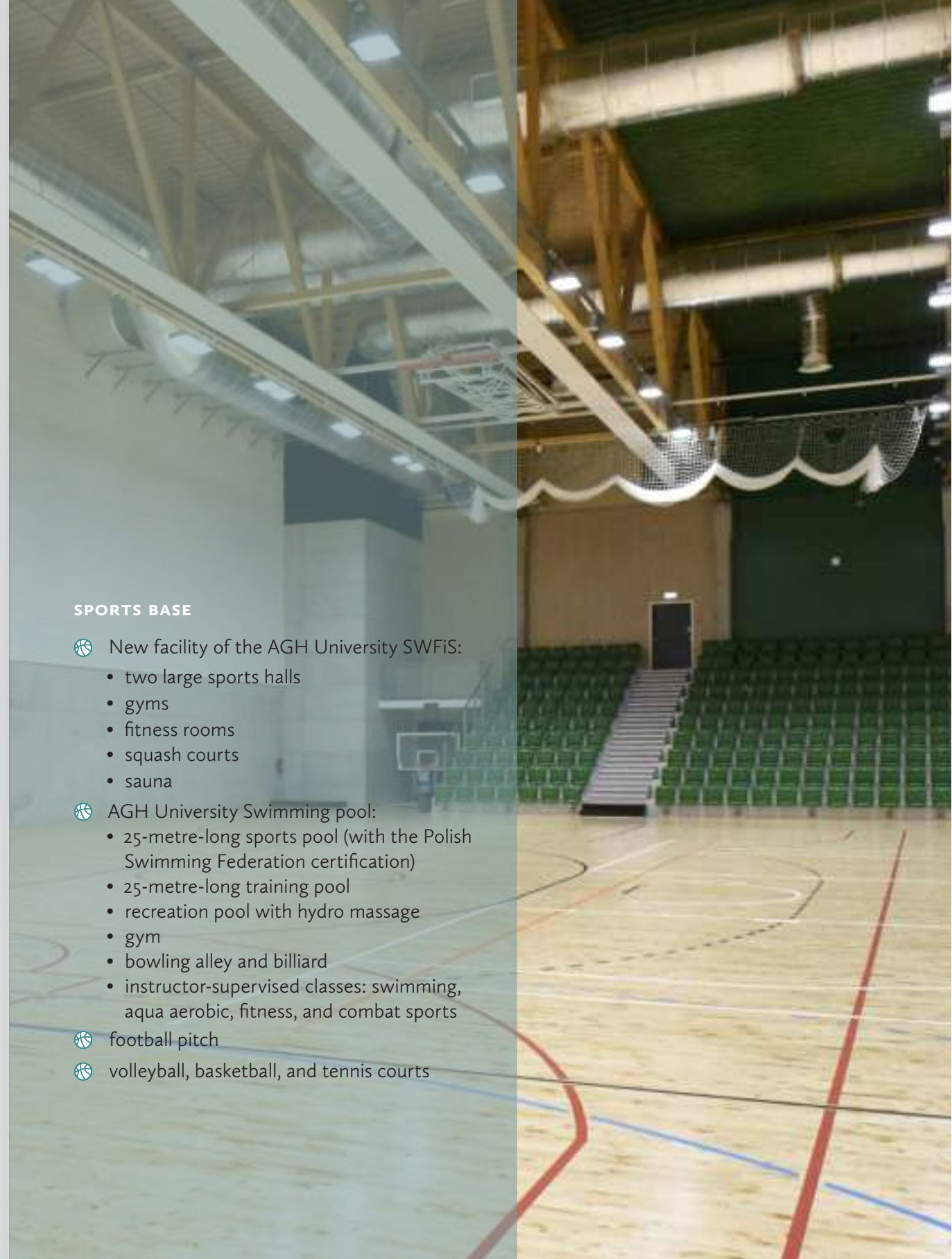
AGH University students represent the university at championships in Poland and abroad, and professional athletes can enjoy personalised studies as well as scholarships for sports achievements.

AGH UNIVERSITY DEPARTMENT OF SPORT AND PHYSICAL EDUCATION (SWFiS) conducts mandatory PE classes, and moreover, organises recreational and training camps, classes for students with health issues, as well as co-organises sports events.

AGH UNIVERSITY ACADEMIC SPORTS ASSOCIATION (AZS) is one of the largest AZS clubs in Poland; it brings together several hundred athletes who train in more than 30 sections, from sports aerobic to sailing. Their professionalism and physical fitness have been confirmed by the successes achieved in the last few years, both in the AGH University colours, as well as individually, from Polish Academic Championships to Olympic Games.

SPORTS BASE

- New facility of the AGH University SWFiS:
 - two large sports halls
 - gyms
 - fitness rooms
 - squash courts
 - sauna
- AGH University Swimming pool:
 - 25-metre-long sports pool (with the Polish Swimming Federation certification)
 - 25-metre-long training pool
 - recreation pool with hydro massage
 - gym
 - bowling alley and billiard
 - instructor-supervised classes: swimming, aqua aerobic, fitness, and combat sports
- football pitch
- volleyball, basketball, and tennis courts



UNIQUE CAMPUS



All teaching and research facilities, the main offices of faculties, administration, and student organisations, as well as the AGH University Student Campus with its four student clubs, sports and recreation facilities make up a condensed 40-hectare hub nestled in the heart of Krakow. It is only a 15-minute walk between the Main Building and the Krakow Main Square.

The entire area is conveniently connected with other parts of the city thanks to an extensive network of trams and buses. The campus also features student canteens, a medical centre, a nursery school, a crèche, and a number of various shops and service outlets.

MODERNITY AND SAFETY

In the last decade, due to a number of construction and modernisation projects, the AGH University Campus has gained a very modern look. The latest developments include building c-7, a new building for the Faculty of Humanities and the Faculty of Applied Mathematics, as well as a modern sports hall and the AGH University Student Construction Centre, and building D-3, which will be home to the Faculty of Mechanical Engineering and Robotics and the AGH University Space Technology Centre.

Most buildings are equipped with special lifts and ramps for wheelchair users, as well as other facilities, such as induction loops, room labelling in Braille, and height-adjustable desks. The Campus is secured by a 24/7 video surveillance system.

THE LARGEST STUDENT ACCOMMODATION IN POLAND

The AGH University Student Campus covers an area of 13 ha. Its residents can reach the university buildings in 10 minutes. 20 halls of residence with 8,000 beds provide students with comfortable conditions: access to a fast Internet connection, designated places for learning, TV rooms, and club rooms. The room

standard is regularly improved. Each first-year first-cycle student has a guaranteed place in the hall of residence.

Between the halls of residence, there are sports fields and tennis courts. An unquestionable asset of the campus is a modern swimming pool with a gym. The close proximity to Krakow Błonia Park and Park Jordana allows runners, joggers, cyclists, and roller skaters to spend their time actively in the picturesque and green areas of the city.

EYE-PLEASING SPACE

The University buildings are submerged in greenery. Their architecture – monolithic, classical forms of simple, repeating lines – enforces the way of arranging plants, which fit into the picture and create a well-thought-out whole. Every year, green arrangements surprise with new set-ups. Blooming seasonal plants, perennials, shrubs, and trees attract insects, including bees, for which several hives have been located, among others, in the neighbourhood of Klub STUDIO. In trees and a few hundred nesting boxes, many species of birds find shelter.

At the same time, the lawns and squares of the campus create a unique open-air art gallery. Among the exhibits of the open-air collection, there are sculptures made by Bronisław Chromy, an outstanding Krakow artist, and works of art made by the students of the Academy of Fine Arts in Krakow, as well as erratic boulders, created by nature, and “industrial sculptures” – installations connected with the development of human technological thought and research activity of university faculties.

STUDENT CLUBS

There are four clubs on the Student Campus premises, organising around 360 events in a year. Klub STUDIO is one of the largest and most avant-garde music clubs in Poland. The stage features well-known Polish and international artists. An underground connection with the nearby professional Kotłownia Music Studio enables recording live concerts. Klub STUDIO also features a Mining and Metallurgical Brewery, established on the occasion of the 100th anniversary of the AGH University. Klub Zaścianek welcomes its guests with a stronger beat, but karaoke fans and organisers of collective singing events will also feel very at home here. Klub Gwarek often features blues and jazz performers, as well as young Krakow artists. On top of that, an ideal place to meet friends is Klub Filutek where you can enjoy delicious food and drinks.



AGH UNIVERSITY CAMPUS

- | | |
|---|--|
| 1 Rector's Office | 25 Centre of e-Learning and Innovative Education |
| 2 Faculty of Civil Engineering and Resource Management | 26 Academic Computer Centre Cyfronet |
| 3 Faculty of Metals Engineering and Industrial Computer Science | 27 IT Sector |
| 4 Faculty of Electrical Engineering, Automatics, Computer Science, and Biomedical Engineering | 28 Centre for Education Affairs |
| 5 Faculty of Computer Science, Electronics, and Telecommunications | 29 Student Affairs Centre |
| 6 Faculty of Mechanical Engineering and Robotics | 30 UNESCO AGH Chair |
| 7 Faculty of Geology, Geophysics, and Environmental Protection | 31 Admissions Centre |
| 8 Faculty of Geo-Data Science, Geodesy, and Environmental Engineering | 32 Department for International Students |
| 9 Faculty of Materials Science and Ceramics | 33 AGH University Doctoral School |
| 10 Faculty of Foundry Engineering | 34 AGH University Student Campus |
| 11 Faculty of Non-Ferrous Metals | 35 University Board of Student Government |
| 12 Faculty of Drilling, Oil, and Gas | 36 Student Construction Centre |
| 13 Faculty of Management | 37 Careers Centre |
| 14 Faculty of Energy and Fuels | 38 Technology Transfer Centre |
| 15 Faculty of Physics and Applied Computer Science | 39 Administration and Business Cooperation Department |
| 16 Faculty of Applied Mathematics | 40 Krakow Centre of Innovative Technologies INNOAGH |
| 17 Faculty of Humanities | 41 Centre for Project Management Support |
| 18 Faculty of Computer Science | 42 Science Support Centre |
| 19 Academic Centre for Materials and Nanotechnology | 43 Space Technology Centre |
| 20 Centre of Energy | 44 Centre for International Affairs |
| 21 Main Library | 45 Disability Support Office |
| 22 Department of Foreign Languages | 46 Geological Museum of the Faculty of Geology, Geophysics, and Environmental Protection |
| 23 Department of Sport and Physical Education | 47 AGH University Press |
| 24 AGH University Swimming Pool | 48 Academic Cultural Centre Klub STUDIO |
| | 49 Student Klub Gwarek |
| | 50 Student Klub Zaścianek |
| | 51 Student Klub Filutek |
| | 52 Recording Studio Kotłownia |



DOWNLOAD
THE MAP

- research and teaching facilities
- student houses
- service outlets
- facilities under construction
- information point
- main gate
- canteen
- AED
- bus stop
- name of bus stop



Green roofs and walls are both aesthetically pleasing and environmentally friendly. Biologically active surfaces contribute to the improvement of air quality, collect rainwater, and promote energy efficiency of buildings.

PLACE for EVERYONE



One of our principal values is care for accessibility and inclusiveness at each level of university functioning so that it could be a place of equal chances, free from prejudice and discrimination, which ensures safety for people working and studying, where respect for one another, for diversity, as well as for equal treatment constitute important values setting standards for interpersonal relationships.

In this spirit, we constantly try to identify and satisfy needs of various groups, e.g. we have engaged in the Accessibility Academy project to take actions for complex support of persons with disabilities in the AGH University structure. We have also implemented the Gender Equality Plan aimed at reaching institutional solutions to prevent any signs of unequal treatment based on gender.

Any discrimination in employment – direct or indirect, in particular with regard to gender, age, disability, race, religion, nationality, political beliefs, trade union membership, ethnic origin, religion, sexual orientation, as well as due to employment for a specified period or indefinite period or full or part-time work – is unacceptable.

From the AGH University
Work Regulations

ACCESSIBILITY

The AGH University Campus continues to develop the infrastructure for people with special needs. The facilities include special wheelchair ramps, lifts, and Braille signs marking lecture rooms.

Activities related to accommodating the needs of people with disabilities are coordinated by the **AGH UNIVERSITY DISABILITY SUPPORT OFFICE**. The Office provides help in adjusting the process of education, organises workshops and courses aimed at raising awareness on the functioning of people with disabilities, implements solutions reducing architectural and digital barriers, and also, in direct cooperation with the Association of Students with Disabilities, supports integration initiatives.

The AGH University offers the following:

- adjustment of the educational process,
- help of educational assistants,
- possibility of renting voice recorders, FM systems, text and image enlargers,
- access to the IT laboratory for the visually impaired and adaptation of educational materials,
- specialised foreign language teaching, e.g. for hard of hearing and visually impaired persons,
- sign language translators,
- possibility to use HELPI system for handling formal issues online,
- free psychological support,
- placement in a hall of residence suitable for people with disabilities,
- sports classes fit for the capabilities and needs of people with disabilities (e.g. swimming pool, gym, chess) with possible credit for PE courses,

- financial support from the university and other institutions,
- participation in projects that promote professional activity.



SUPPORT ON MANY LEVELS

ADAPTER PROGRAMME

The objective of the programme is to promote a healthy and active attitude in the academic environment and to provide psychological support to people experiencing difficulties adapting to conditions of student life. As part of the programme, there is a Consultation Point with a psychologist on duty, free of charge.

STUDENT OMBUDSPERSON

The Student Ombudsperson helps explain any doubts and ambiguities and intervenes in situations related to student rights and duties, the evaluation and verification system, scholarships, and any provisions of the Study Regulations.

EQUALITY OMBUDSPERSON

The Equality Ombudsperson is at the disposal of the entire university community. Any instances of violation of the equal opportunities rule and, particularly, behaviours and situations related to discrimination and mobbing can be reported to the Ombudsperson.





Our graduates are highly qualified professionals, and their knowledge and skills are appreciated by employers in Poland and abroad. In their professional careers, they put dynamic development first and hold prestigious positions in the economic sector and research institutions.

BROAD PROFESSIONAL PERSPECTIVES

The success of our alumni on the labour market stems from a system that has been developed and implemented by the AGH University, taking into account the scope and process of education, the aspirations of our students, and the employers' requirements verified regularly.

The AGH University alumni get employed relatively early; more than half of graduates in 2021 found a job even before completing their studies.

Frequently, the very first step is their practical training or internship, the participation in which is mandatory for most students until the end of third year of studies. According to the data provided by the [AGH UNIVERSITY CAREERS CENTRE](#) and the observations of the unit's employees, who, each year, help almost thousand people looking for jobs, practical trainings, or internships by means of individual consultations, increasingly more companies seek students on the competitive job market. Summer practical trainings and internship programmes are a chance for students to combine education with gaining professional experience.

The AGH University Careers Centre is responsible for initiating and maintaining cooperation with industry and preparing students for an effective job search. The unit organises, among others, one of the largest job fairs in Poland (two-day AGH Job Fair, which, since 2022, has been organised in spring in Klub Studio) and AGH Career Days. It also offers students and graduates help in preparing a resume, motivational letter, LinkedIn profile, and application documents (foreign trips, internship programmes, etc.), but also support in selecting their future employer and preparing for job interviews or consultations related to the choice of the field of study and specialisation based on job market research.

ACTIVITY OF THE AGH UNIVERSITY ALUMNI IN AN AVERAGE MONTH DURING THE FIRST YEAR AFTER GRADUATING

Graduation: 2021

data source: ela.nauka.gov.pl

80%
worked



16,1%
studied



13,5%
undertook
other activities



Graduates can undertake multiple activities simultaneously; that is why the percentage does not equal 100.

Graduates may simultaneously be involved in different types of work. For this reason, the total of the percentages presented exceeds 80%.



68,6%
worked full-time



11,7%
worked part-time



5,4%
were self-employed



8,5%
combined studies
with work



In addition to knowledge, bonds are the most precious value from the time spent at university. These relationships are shaped not only during classes but also as part of various projects, practical trainings, internships, cultural events, sports competitions, excursions, etc.

AGH UNIVERSITY FAMILY

Graduating does not mean severing the bonds. **E-REPOSITORY** is an electronic platform which gives each alumnus the opportunity to stay an active member of the “AGH University family” and to receive information about university life, invitations to current events, and dedicated training and mentoring materials. Former students can also reconnect through the **AGH UNIVERSITY ALUMNI CLUB**. Its members enjoy special discounts and can follow the current events at the university.

Established in 1945, the **AGH UNIVERSITY ALUMNI ASSOCIATION** is the oldest university organisation of this kind in Poland. It organises numerous events, including the re-matriculation ceremony of graduates 50 years after the beginning of their studies – a tradition that only our university cultivates.



AGH UNIVERSITY IN RANKINGS



An important indicator of the accuracy of the strategy adopted by the AGH University are rankings, those taking into account the potential, academic efficiency, and education conditions, but also those aimed at identifying the most valued disciplines and the best taught fields of study.

THE CENTER FOR WORLD UNIVERSITY RANKINGS (CWUR) | EDITION 2023

- ▶ 1st place among Polish technical universities
- ▶ 602nd place in general classification

ACADEMIC RANKING OF WORLD UNIVERSITIES (SHANGHAI RANKING) | EDITION 2023

- ▶ 1st place among Polish technical universities
- ▶ 801–900 rank range in general classification

CWTS LEIDEN RANKING | EDITION 2023

- ▶ 1st place among Polish technical universities
- ▶ 3rd place among Polish universities
- ▶ 154th place in Europe;
- ▶ 501st place in general classification

CWTS LEIDEN RANKING BY FIELD | EDITION 2023

- ▶ 1st place among Polish technical universities in the Physical Sciences and Engineering discipline

UNIVERSITY RANKING BY ACADEMIC PERFORMANCE (URAP) | EDITION 2022–2023

- ▶ 1st place among Polish technical universities
- ▶ 632nd place in general classification







URAP BY FIELD | EDITION 2022–2023

- ▶ Metallurgy Engineering – 81st place

RANKING WEB OF UNIVERSITIES (WEBOMETRICS) EDITION 2023.2.0

- ▶ 1st place among Polish technical universities
- ▶ 2nd place among Polish universities
- ▶ 574th place in general classification

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CONTENT

PUBLISHER

Centre for Communication and Marketing
AGH University of Krakow

TRANSLATION

Gabriela Lis, Cezary Polak

GRAPHIC DESIGN

Marianna Cielecka

PHOTOGRAPHS

AGH University Archive – p. 36² ♦ Marianna Cielecka – p. 9,
18, 32, 38, 42–43, 47, 55 ♦ AGH University KSAF Photo
Agency (Jakub Manecki – p. 34, Katarzyna Sadowy – p. 17,
Maciej Talar – p. 14) ♦ National Digital Archives – p. 6¹ ♦
Zbigniew Sulima – p. 35, 36¹ ♦ Jacek Taran – p. 10, 21, 26¹,
30¹, 39, 44, 48, 51, 52

Remaining illustrations (cover, p. 6², 12, 15, 18², 25, 26², 28, 29,
30², 33) come from or were created with the use of materials
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PRODUCTION

NBI Media

ISBN 978-83-67427-65-4
Krakow 2023

AGH.EDU.PL



Akademia Górniczo-Hutnicza
im. Stanisława Staszica w Krakowie