

# REPORT OF SDG 4 QUALITY EDUCATION



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#### Introduction

Azerbaijan Technical University (AzTU) is one of the oldest and biggest engineering universities in Azerbaijan and promotes quality education in a wide range of fields. AzTU has 605 academic staff delivering 36 Bachelor's degrees, 35 Master's degrees and 34 PhD degrees with specialities in engineering and economics. With 7 dedicated institutions, AzTU strengthens innovation by providing cutting-edge research to the industry and integrating it into curriculum development. AzTU has more than 90 international relations with reputable universities around the world as well as international cooperations.

AzTU is an accredited government university for a five-year period by the decision of the Accreditation Council of the Ministry of Science and Education of the Republic of Azerbaijan in 2022 and the corresponding order of the Chairperson of the Management Board of the Education Quality Assurance Agency (TKTA). AzTU has experience in international accreditation of education programs. Several education programs, Electrical Power Engineering, Automation Technology, and Process Automation, in bachelor's and master's degrees were accredited by International Higher Education Quality Assurance ASIIN, between 20215 and 2020. (AzTU - Beta)

AzTU has a Center for Quality Assurance and Learning-Teaching to enhance the quality of education and maintain monitoring of the education process. The Center supports academic and administrative staff to deliver qualitative education to the students based on internal and external quality assurance indicators within the concept of legal legislation and the European Higher Education Area's guidelines and standards.

AzTU is a member of The CDIO™ INITIATIVE, an innovative educational framework for producing the next generation of engineers. From 2022, AzTU adopted the CDIO framework, which focuses on real-world systems and products within fundamental context sets: Conceiving — Designing — Implementing.

Overall, AzTU developed the "Development Strategy 2021-2030" and have integrated it as the main roadmap for further operation of the university, main objectives:

 To provide quality teaching with modern standards at all levels of education for the acquisition of global competencies.

- To teach how to solve the real problems created by the world industrial revolution.
- To promote research supporting high-tech industry as the basis of quality teaching, innovation and initiative.
- To contribute to the economy and society by continuously supporting innovation and entrepreneurship.
- To build a Sustainable and Inclusive university that meets the global demands of the 21st century.

## **Progress and Achievements**

The university provides free access to educational resources, such as lectures, presentations, laboratory work, an online library, and computers, even for those who do not study at the university. AzTU also holds useful meetings, seminars, and events which are open to the public in order to contribute to the community. Additionally, the university is aware of the importance of educational outreach activities held beyond campus, and university-school cooperation is one of them. AzTU has a policy called "Equality, Diversity and Inclusion", "Code of Behaviour" and "Discipline Rules of Students" in order to prevent discrimination and promote equality and accessibility to everyone without any within the university. Aztu has a "Student Research Community" (TEC), which is another platform for students established to enhance student engagement with research and innovation. The main goal of TEC as a scientific organisation is to improve the quality of education of highly educated specialists by maintaining research potential, involving students in new scientific research activities, and helping them adapt to socio-economic conditions.

In 20222, Centre of Quality Assurance and Learning-Teaching is established by the decision of the Scientific Council, operates at the university. The main activities of the Center are organisation of trainings for academic staff, improvement of teaching, syllabus and curriculum and quality assurance. The Center has its own Charter.

Charter: https://drive.google.com/file/d/1jqtwU4IZpJAOvmdaawVPMRqmHensevbu/view?pli=1

The university also has a "Quality" policy confirmed by the decision of the Scientific Council of AzTU (protocol №11) in July 2022. The "Quality" policy of AzTU is based on the education policy of the Republic of Azerbaijan and modern quality management. It

explains the main elements accepted by all staff during structuring and managing the system of quality management in the whole departments of the University.

Policy: <a href="https://drive.google.com/file/d/1Qyk3GLWf3PQmDxoLp95pmF4sJSy8QPRi/view">https://drive.google.com/file/d/1Qyk3GLWf3PQmDxoLp95pmF4sJSy8QPRi/view</a>

Azerbaijan Technical University (AzTU) was institutionally accredited for a five-year period by the decision of the Accreditation Council of the Ministry of Science and Education of the Republic of Azerbaijan in 2022 and the corresponding order of the Chairperson of the Management Board of the Education Quality Assurance Agency (TKTA). According to the Accreditation result, accreditation of major engineering programs was advised. The next step was taken, and AzTU has decided to cooperate with AQAS (The Agency for Quality Assurance through Accreditation of Study Programs). It plans to make accreditation of 5 bachelor's and 5 master's degree programs of various engineering specialities in 2024.

AzTU has initiated professional development programs to strengthen the pedagogical skills of academic staff. In 2022, a new training program, "Innovative learning-teaching approaches - 1", was run by experts from Turkey; 35 young academic staff participated in 4 training about various subjects of Teaching and Learning.

Link: AzTU - Azerbaijan Technical University (Beta)

AzTU provides students with various kinds of programs and as part of these programs, there are plenty of subjects taught at the university, such as "Environmental monitoring", "Complex use and protection of water resources", "Land reclamation, reclamation and ecological basics", "Urban ecology", "Global ecology", "Waste-free production processes and waste recycling", "Ecological engineering", "Integrated management of water resources", "Research of natural and wastewater with laboratory methods" which are related to different SDG goals.

Furthermore, several programs relevant to SDG goals are available within the university. One of them is called "Crisis and Risk Management for Transport Services", created within the framework of Erasmus+ Capacity building project "CRENG" in 2021.

More information about project: www.creng.eu

The academic content of the Master program CRENG includes various courses related to the Risk management of Transportation, which is directly related to the SDG 11(sustainable cities and communities). Established CRENG service office very closely

working with main public and private organisations which are responsible for the planning and maintaining of Transportation in Baku City.

More information about office: <u>AzTU - Beta</u>

There has been admission to the Master's level for the academic year 2021/2022 and 11 students have been accepted for the program.

Another program called "Quality and Risk Management in Healthcare" was created within the project of LMQS of Erasmus+ in 2022 and is related to SDG Good Health and Wellbeing. In the academic year 2022/2023, 20 students were admitted to the Master's level who are employed in various Clinics and Hospitals as doctors or managers.

The curriculum of most engineering programs includes several courses related to environmental science, which are related to the SDGs too. Urban ecology. General ecology, Wastewater treatment, Global ecology, Environmental monitoring, Complex use and protection of water resources, Waste-free production processes and waste recycling, Environmental engineering, Integrated management of water resources, Land reclamation, recultivation and ecological foundations, Treatment and reuse of wastewater, Research of natural and waste waters by laboratory methods, Green economy, Energy and environment are courses which are delivering in bachelor and master's programs.

In 2022, AzTU initiated a double degree with Ankara University and Gazi University of Turkey. The admission was made at the bachelor's level for the Computer Engineering program with Ankara University and the Electrical and Electronics Engineering program with Gazi University for the academic year 2023/2024. A total of 55 students from Turkey and Azerbaijan were admitted to those programs. The main goal of those programs is to transfer best practices from the mentioned universities and to deliver quality education to both Turkish and Azerbaijani students. In addition, AzTU signed an agreement on a double degree program in Metallurgy Engineering at the master's level with Brandenburg University of Technology of Germany. Admission is going to be conducted in 2024.

In 2021, a new centre was established to support Lifelong Learning, University-Industrial Cooperation & Lifelong Learning Center. The centre's main objectives are to support partnership development with industrial organisations and provide dedicated training programs to those who need to upgrade their engineering skills and knowledge. Also, to

coordinate flour of information based on the research subjects which are required by industry and possible to convert to the research topics of the university.

In 2022, AzTU initiated a new training program for enthusiastic young people interested in the Aerospace industry and robotics. University-Industrial Cooperation & Lifelong Learning Center, with cooperation TUSAŞ (Turkish Aviation and Space Industry Company) from Turkey, have implemented a new program called "AzTU-Turkish Aerospace, MGP 2023", which has had exceptional importance for the prospective development of engineering students. Students and young engineers from various universities can participate in this program, and announcement and admission is publicly available.

## **Future goals:**

- To update the curriculum of engineering programs based on the labour market demand.
- Enhance student centred Teaching and learning.
- Attract and increase the number of female students in engineering fields.
- Expand SDG inside and outside the university.
- Extend the integration of SDGS into the education programs.
- To increase public awareness of services provided by the university.
- Establish an environment for distance education.
- Strengthen relationships with alumni.

### References:

- 1. University web site
- 2. Internal reports of the university
- 3. Interdisciplinary policies:
  - Equality, Diversity and Inclusion
  - Code of Behaviour
  - Discipline Rules of Students
  - Education Quality policy
- 4. Legislative acts:
  - Accreditation Rules of Educational Institutions.
  - Institutional and Programme Accreditation Criteria for higher education institutions
- 5. AzTU "Development Strategy 2021-2030