Azerbaijan TECHNICAL University

UI GreenMetric World University Rankings

AZERBAIJAN TECHNICAL UNIVERSITY

UI GREENMETRIC REPORT

REPORT ON SETTING AND INFRASTRUCTURE

2024

Introduction

Azerbaijan Technical University (AzTU) serves as a premier institution for engineering and technology education in the vibrant capital city of Baku, Azerbaijan. Established in 1950 under the name Azerbaijan Polytechnic Institute, AzTU transitioned to its current designation in 1993, reflecting its commitment to advancing technical education and research. The university's infrastructure spans six buildings across a total area of 68,404 square meters, providing a dynamic environment equipped with cutting-edge facilities designed to foster innovation and learning.

The strategic design of AzTU's campus promotes a blend of academic rigor and student well-being, marked by dedicated spaces for research, recreation, and social interaction. The main academic building houses administrative offices and academic departments; it is complemented by specialized computer laboratories and research facilities, particularly in fields such as 3D modeling and robotics. An extensive library serves as a hub for scholarly activity, stocked with an array of books, journals, and digital resources that support both students and faculty in their academic pursuits.

A pivotal component of the university's infrastructure is its commitment to health, wellness, and sustainability. The AzTU Sport Hall provides top-notch sports facilities, while the campus prioritizes pedestrian access, reinforcing a safer and more inclusive community. The establishment of dedicated pedestrian lanes fosters a sustainable campus environment that encourages walking as the preferred mode of mobility.

In alignment with Azerbaijan's broader goals for educational and economic collaboration, projects such as UniClad and LMQSante are indicative of AzTU's dedication to integrating university-industry cooperation. These initiatives aim to leverage the university's resources and expertise to enhance the agro-industrial sector and health protection systems in the region.

Furthermore, AzTU's approach to sustainability is evident in its campus greening initiatives, which include regular tree planting events and the maintenance of open green spaces. Such efforts underscore the university's commitment to environmental stewardship and the promotion of a healthy campus ecosystem.

As a leader in advancing equality, diversity, and inclusion, AzTU has implemented policies ensuring equitable access to education for all students, including those with disabilities. The university's infrastructure includes accessible facilities and accommodations reflective of its commitment to creating an inclusive academic environment.

Ultimately, Azerbaijan Technical University stands as a model of modern educational infrastructure, combining state-of-the-art facilities, a commitment to sustainability, and initiatives designed to prepare students for the challenges of the future while fostering a strong sense of community.

References

UI GreenMetric

National Information Portal on Sustainable Development

AzTU Sustainability

Objectives

- **Enhance Environmental Sustainability:** Integrate sustainable practices in the management and operation of university buildings and facilities, aiming for energy-efficient systems, sustainable materials, and reduced carbon footprints.
- **Expand Green Spaces:** Increase the total area of green spaces on campus, dedicating at least 30% of the total campus area to biodiversity-enhancing features such as gardens, parks, and tree planting areas that promote ecologically sustainable environments.
- **Promote Sustainable Mobility:** Develop and maintain pedestrian-friendly pathways and cycling infrastructure across the campus to encourage sustainable transportation options among students and staff, further fostering a culture of walking and cycling.
- **Implement Waste Reduction Strategies:** Establish comprehensive recycling and waste reduction programs across campus, aiming to recycle at least 50% of all waste generated by the university community by 2025.
- **Enhance Water Management:** Design and implement a sustainable water management system that includes rainwater harvesting, water-efficient landscaping, and educational programs on water conservation practices, with the goal of reducing overall water usage by 20%.
- **Integrate Renewable Energy Sources:** Aim to integrate renewable energy sources, such as solar panels or wind turbines, into campus infrastructure with a target of sourcing at least 25% of energy needs from renewable sources by 2030.
- **Foster Research in Sustainability:** Encourage faculty and students to engage in research and innovation projects focused on sustainability challenges, providing support and funding for initiatives that align with national and global sustainability goals.
- **Establish Educational Programs on Sustainability:** Develop and incorporate educational programs and workshops targeted at students and staff

to raise awareness about sustainable practices, environmental stewardship, and the impact of climate change.

- **Enhance Campus Infrastructure for Accessibility:** Ensure that all campus facilities and green spaces are fully accessible to individuals with disabilities, improving inclusivity and participation in sustainability initiatives across the university.
- **Strengthen Community Partnerships:** Collaborate with local organizations, government bodies, and environmental groups to promote sustainability initiatives and green projects that extend beyond the university, fostering community involvement and awareness.
- **Monitor and Evaluate Sustainability Initiatives:** Establish metrics and standards for assessing the effectiveness and impact of sustainability initiatives, using this data to guide future improvements and align with green metrics benchmarks.
- **Increase Student Engagement in Sustainability Activities:** Create incentives for student participation in sustainability programs, such as volunteer opportunities, internships, and service-learning projects, aiming to involve at least 50% of the student body in sustainability initiatives by 2025.

Keywords

KEYWORDS FOR SETTING AND INFRASTRUCTURE				
Agro-Industrial Clusters	**Eco-Friendly**	**Green Metrics**	**Pedestrian Access**	**Sustainable Practices**
Biodiversity	**Ecological Footprint**	**Green Spaces**	**Pollution Reduction**	**Sustainable Transportation**
Campus Greening	**Educational Initiatives**	**Health and Wellness**	**Recycling Programs**	**Tree Planting**
Carbon Footprint	**Energy Efficiency**	**Inclusion and Accessibility**	**Renewable Energy**	**Urban Forestry**
Climate Resilience	**Environmental Awareness**	**Infrastructure Development**	**Smart Technology**	**Waste Management**
Collaboration	**Environmental Impact Assessment**	**Innovation Centers**	**Sustainability**	**Water Conservation**
Community Engagement	**Green Infrastructure**	**LEED Certification**	**Sustainability Committee**	**Zero Waste**

Current Situation

Azerbaijan Technical University (AzTU) is committed to sustainability and has made significant strides toward integrating green metrics into its infrastructure and operations. The university encompasses a total area of 68,404 square meters across six buildings, including specialized facilities for academic and research purposes. The campus housing features dedicated environmental initiatives that promote ecological responsibility and enhance the overall learning experience.

Campus Infrastructure

- **Building Specifications:** The six main buildings range in size, with the main academic building housing administrative offices and academic departments while supporting facilities include specialized laboratories for computer, robotics, and advanced modeling techniques.

Building name	Total Area
Building 1 (main)	14000 m^2
Building 2	8700 m^2
Building 3	10800 m^2
Building 4	7300 m^2
Building 5	9000 m^2
Building 6	12448,15 m^2
Other	6155,85 m^2
Total	68404 m^2

- **Open Spaces:** Around 20,000 m^2 of the main campus is dedicated to open areas, accounting for 32% of the total campus area.

Environmental Initiatives

- **Sustainable Mobility:** The campus prioritizes pedestrian access with dedicated lanes to ensure safe movement for students and staff. This initiative supports a shift toward walking as a primary mode of transportation, thereby reducing reliance on motor vehicles and contributing to lower carbon emissions.
- **Campus Greening Projects:** AzTU has actively implemented greening initiatives, including designated areas for planting vegetation. Recent actions involve regular tree planting events that encourage community participation, emphasizing the importance of environmental conservation.
- **Total Planted Vegetation and Water Management:** The university has designated 5,000 m^2 for planted vegetation, of which 15,000 m^2 functions as water absorption areas, indicating a commitment to managing storm water effectively.

Sustainability Budget

- **Sustainability Budget:** The average sustainability budget over the last three years has accounted for 32% of the total university budget, reflecting a strong commitment to sustaining environmental initiatives.

	2021	2022	2023	Average
Budget Total	$ 16 449 673	$ 19 468 528	$ 24 792 470	$ 20 236 890
Sustainability Budget	$ 5 352 019	$ 6 207 233	$ 7 691 302	$ 6 416 851
			Percentage	32 %

Health and Wellness Facilities

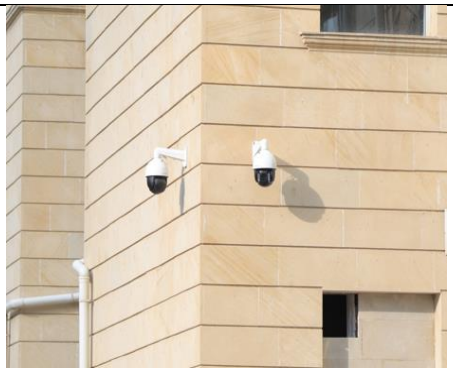
- AzTU houses a student Polyclinic that plays a crucial role in supporting the health and wellness of students and staff. The facility provides comprehensive medical services, including preventive health measures, contributing to a supportive campus environment. Azerbaijan Technical University (Biomedical technology engineering) is a local partner of the LMQSante project. The purpose of the LMQSante project is to support the development of the health protection system in the Azerbaijan and to increase the mobility of specialist training in the organization and management of quality assurance of medical care, important for medical structures is the application of the academic program and professional training program that can provide the competencies.

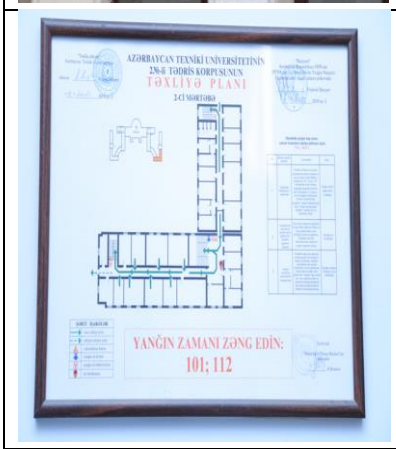
LMQS
Licence Master Qualité en Santé

- The AzTU Sports Hall offers state-of-the-art facilities to encourage sports and physical activity among students and staff, promoting health, wellness, and athletic achievement.

Safety and Emergency Preparedness

- The university has implemented robust safety measures, including surveillance cameras, fire safety equipment, and comprehensive emergency plans, ensuring a safe learning environment conducive to the health and welfare of all community members.





Commitment to Inclusion and Accessibility

- AzTU's policies concerning disability support show an ongoing commitment to inclusivity. The university provides necessary accommodations for students and staff with disabilities, ensuring equitable access to facilities and services.

Future goals

1. Enhancing Green Infrastructure:

- Increase the ratio of green space across the campus by at least 10% over the next five years. Design and implement a campus greening plan that includes planting trees, creating community gardens, and increasing biodiversity. Monitor and report on the growth of green areas and biodiversity annually.
- Upgrade existing infrastructure to meet LEED certification standards within the next ten years. Retrofit buildings with energy-efficient systems, including smart energy

management, improved insulation, and rainwater harvesting systems. Conduct energy audits and provide annual reports on energy consumption and savings.

2. Sustainable Transportation Initiatives:

- Establish a sustainable transportation plan that reduces the carbon footprint of campus travel by 25% in five years. Enhance pedestrian pathways and create dedicated cycling lanes to promote walking and biking. Conduct annual transportation surveys to track changes in commuting patterns among students and staff.
- Facilitate the implementation of an electric vehicle (EV) charging station system on campus by 2025. Partner with local businesses and government entities to install charging stations. Monitor usage rates of EV charging stations and report on the reduction in fossil fuel usage.

3. Waste Management and Recycling Programs:

- Reduce total waste generation by 30% over the next five years. Implement comprehensive recycling and composting programs, alongside educational campaigns to raise awareness. Regularly track waste disposal metrics and recycling rates through quarterly assessments.
- Achieve a 50% recycling rate of all waste produced on campus within three years. Introduce clearly labeled recycling bins across the campus and engage students in sustainability initiatives. Analyze recycling data from waste management services and report on progress annually.

4. Sustainable Energy Use:

- Transition to 50% renewable energy sources for campus energy needs by 2030. Invest in solar panels and explore partnerships for renewable energy sourcing. Evaluate energy consumption reports and calculate the percentage derived from renewable sources.
- Implement energy conservation programs that achieve a 20% reduction in energy consumption in the next five years. Utilize smart building technology for energy management in university facilities. Review energy bills and usage logs to assess the effectiveness of conservation strategies.

5. Community Engagement and Inclusivity:

- Foster partnerships with local environmental organizations and the community to integrate sustainability into educational programs. Create internships and volunteer opportunities for students within local green initiatives. Record student participation in community projects and feedback regarding the impact.

- Increase the accessibility of green spaces for students, particularly those with disabilities. Ensure all new landscaping projects prioritize wheelchair access and sensory-friendly features. Survey student satisfaction with accessibility and usability of green areas annually.

6. Continuous Improvement and Education:

- Establish a sustainability committee that meets quarterly to promote ongoing improvement and accountability in green initiatives across the university. Develop an actionable sustainability plan based on feedback and data analysis from the campus community. Report on the initiatives taken by the committee and improvements achieved at the end of each academic year.
- Implement a sustainability literacy program for staff and students by 2025. Offer workshops, seminars, and online resources to educate the campus community on sustainability practices and climate change. Track participation rates and feedback on the effectiveness of educational programs.

Conclusion

Azerbaijan Technical University is actively working to fulfill its commitment to sustainability through its infrastructure and setting. The emphasis on pedestrian-friendly design, greening initiatives, a robust health support system, and a significant sustainability budget align with global green metric standards. By fostering university-industry cooperation, particularly through projects like UniClad, AzTU is poised to enhance its role in agro-industrial clusters while prioritizing environmental stewardship and community welfare. By integrating sustainability into the fabric of university life, AzTU will not only enhance its operational efficiency but also contribute significantly to the socio-economic development of Azerbaijan.