BIRUNI UNIVERSITY

"Future of Science"

SUSTAINABLE DEVELOPMENT GOALS

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Message From the Rector

In an era when the world faces mounting environmental, social, and economic challenges, the role of universities has become more vital than ever. Institutions of higher education are not only centers of learning but also agents of transformation — shaping knowledge, values, and actions that define the future of our planet and humanity.

At Biruni University, we embrace this global responsibility with determination and vision. Guided by the United Nations Sustainable Development Goals (SDGs), we are committed to advancing sustainability through excellence in education, innovative research, and community-centered impact.

Our mission extends beyond academic achievement; it is about producing knowledge that heals, transforms, and sustains life in all its forms.

As a pioneering health sciences university, we channel our scientific expertise toward creating solutions that enhance well-being and social equity. Our multidisciplinary approach allows us to integrate health, innovation, and sustainability — transforming research into real-world benefits for people and communities. The projects and studies we carry out, particularly in the fields of medicine, health, and technology, stand as concrete reflections of this commitment.

Our understanding of sustainability transcends academic boundaries. It is woven into the fabric of our campuses, hospitals, and community initiatives — from energy efficiency and environmentally friendly infrastructure to nurturing students with the awareness and capacity to become responsible global citizens.

Through the dedication of our academic and administrative teams, and the unwavering support of our partners, Biruni University continues to build a resilient, inclusive, and sustainable future. Together, we reaffirm our pledge to serve humanity through science and compassion — today and for generations to come.

Prof. Dr. Adnan Yüksel
Rector, Biruni University

Message From the Editor

The world is entering an age of profound transformation — one that demands wisdom as much as it demands action. Climate disruption, social fragmentation, and economic imbalance have made it clear that the systems which once defined progress can no longer sustain it. Humanity needs a new compass — one that points toward balance, compassion, and collective renewal.

Universities stand at the very heart of this change. They are not merely institutions of teaching and research; they are the laboratories of humanity's future — places where science, conscience, and purpose must meet.

At Biruni University, we see sustainability not as a goal to be reached, but as a way of being. It is the thread that weaves through our research, our classrooms, our hospitals, and our partnerships. It is how we measure success — by the difference we make in people's lives and the legacy we leave for the generations to come.

Guided by the **United Nations Sustainable Development Goals,** we are reimagining higher education as a force for healing — for reconnecting human progress with planetary well-being, for bridging innovation with empathy, and for transforming knowledge into impact.

Our mission is both scientific and moral: to cultivate minds that create, question, and care; to generate ideas that build a more equitable, peaceful, and sustainable world. Every discovery, every collaboration, every act of learning becomes part of a larger story — the story of humanity's renewal through knowledge.

This report is more than an evaluation of where we stand; it is a reflection of who we choose to be. Biruni University stands as a living commitment to the idea that education can heal, science can serve, and together we can build a future worthy of hope.

Aslıhan Güzin ALSAN, P.h.D. FHEA
Director of Institutional Impact,
Visibility and Corporate Reputation

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

BİRUNİ UNIVERSITY COMMITMENT TO INDUSTRY, INNOVATION AND INFRASTRUCTURE

Innovation is the heartbeat of human progress the courage to imagine what does not yet exist and the discipline to bring it to life. Infrastructure, in turn, is the silent architecture of civilization: the systems and structures that allow ideas to move, connect, and transform the world.

At Biruni University, we see Sustainable Development Goal 9: Industry, Innovation and Infrastructure as a call to bridge science with society to ensure that innovation serves people, and technology becomes a pathway to equity. We believe that the future must be built not only with intelligence, but with integrity.

Our mission is to cultivate a culture where curiosity meets purpose and creativity meets responsibility. Innovation, for us, is not the pursuit of novelty for its own sake, but the conscious act of solving real human problems. Every research project, prototype, and partnership we build is rooted in the question: How can this improve lives and strengthen communities?

As a health sciences university, we stand at the intersection of technology, medicine, and humanity. From medical devices to data-driven healthcare systems, from smart infrastructure to social innovation, we work to create scalable, ethical, and sustainable solutions that respond to the needs of both individuals and society.

This report represents our ongoing commitment to transform knowledge into impact to make universities living laboratories of innovation, where science is not confined to walls but shared as a common good.

Our Approach: Building the Future Through Purposeful Innovation

At Biruni University, innovation is understood as a collective act a convergence of disciplines, perspectives, and values. Our approach rests on three guiding dimensions: Integration, Impact, and Inclusivity.

- Integration: We break down the barriers between science, technology, and social consciousness. True innovation arises when medicine collaborates with engineering, data meets empathy, and design serves humanity.
- Impact: Every innovation must improve quality of life, strengthen resilience, and create tangible social and environmental value.
- Inclusivity: We ensure that our research and technology serve the many, not the few empowering local communities and addressing real-world inequalities.

Through this lens, Biruni University nurtures innovators who see technology not as dominance over nature, but as partnership with life.

Institutional Framework: The Ecosystem of Innovation

Biruni University has built an integrated ecosystem that transforms ideas into action and research into results.

- Technopark and Incubation Centers: Our innovation hubs provide infrastructure, mentorship, and funding pathways for researchers and entrepreneurs to develop socially relevant technologies.
- Research and Development: Faculty and students engage in interdisciplinary R&D projects in health technology, biotechnology, digital transformation, and sustainable materials.
- Industry Collaboration: Partnerships with the private sector and public institutions enable the translation of academic discoveries into real-world applications.
- Smart Infrastructure: Our campus and hospital systems are continuously upgraded with digital and sustainable technologies that enhance efficiency, accessibility, and environmental performance.
- Innovation Governance: A coordinated institutional framework ensures that intellectual property, ethics, and sustainability are embedded in every stage of research and development.

In this ecosystem, innovation is not a department it is a way of thinking, living, and leading.

OUR STORY

2014

Inspired by Abu Rayhan al-Biruni, the university began its academic activities in the 2014 academic year with 6 faculties and 1 vocational school.

2016

Biruni Hospital was establishe d in 2016 to serve healthcare guests both locally and from around the world.

2019

The Graduate Education Institute was founded to meet the need for scientists and to provide the potential to guide research and practice.

2021

Biruni Technopark was established with the aim of making a difference in technology and innovation on an international level and leading numerous projects.

2023

Within the scope of the 2023 Institutional Accreditatio n Program carried out by the Higher Education Quality Council, all our faculties and departments have been accredited.

2024

BAMER (Biruni Scientific Research Center) was founded to encourage scientific research within the university, support high-quality academic production, and contribute to the development of competitive projects at national and international levels.

2024

B-eAraC, the Laboratory Animals Application and Research Center, was established to provide a major service to researchers in Türkiye by implementing experimental animal models, particularly in rodents (mice and rats).

2024

A student dormitory for both female and male students was established to bring together all the social facilities students may need—faciliti es that cannot be provided in a home environment.

2025

Continuing its education with the principle of "The Future of Science," our university aims to be a center of happiness, tolerance, and success for its students and staff, striving for excellence in its services. With its innovative practices and achievements that add value to learning and society, it continues to be a pioneering university that leaves a mark, both in Türkiye and internationally—tru e to its name.

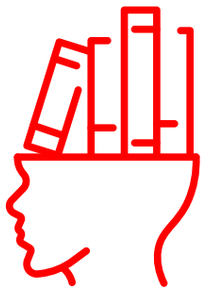
Our Vision

To be a pioneering university that, true to its name, leaves a lasting mark — leading change through knowledge, innovation, and impact.

Our Mission

To be an innovative and leading university that cultivates qualified individuals through transformative education, produces original knowledge at both national and international levels, and contributes to solving societal challenges with scientific and ethical responsibility.

CORE VALUES



Knowledge

Commitment to learning, discovery, and the pursuit of truth as the foundation of progress.

Wisdom

Using knowledge with depth, reflection, and ethical judgment to serve humanity.

Humanity

Placing human dignity, empathy, and compassion at the heart of education, research, and service.

Academic Freedom

Protecting the right to think, question, and create freely within an environment of respect and integrity.

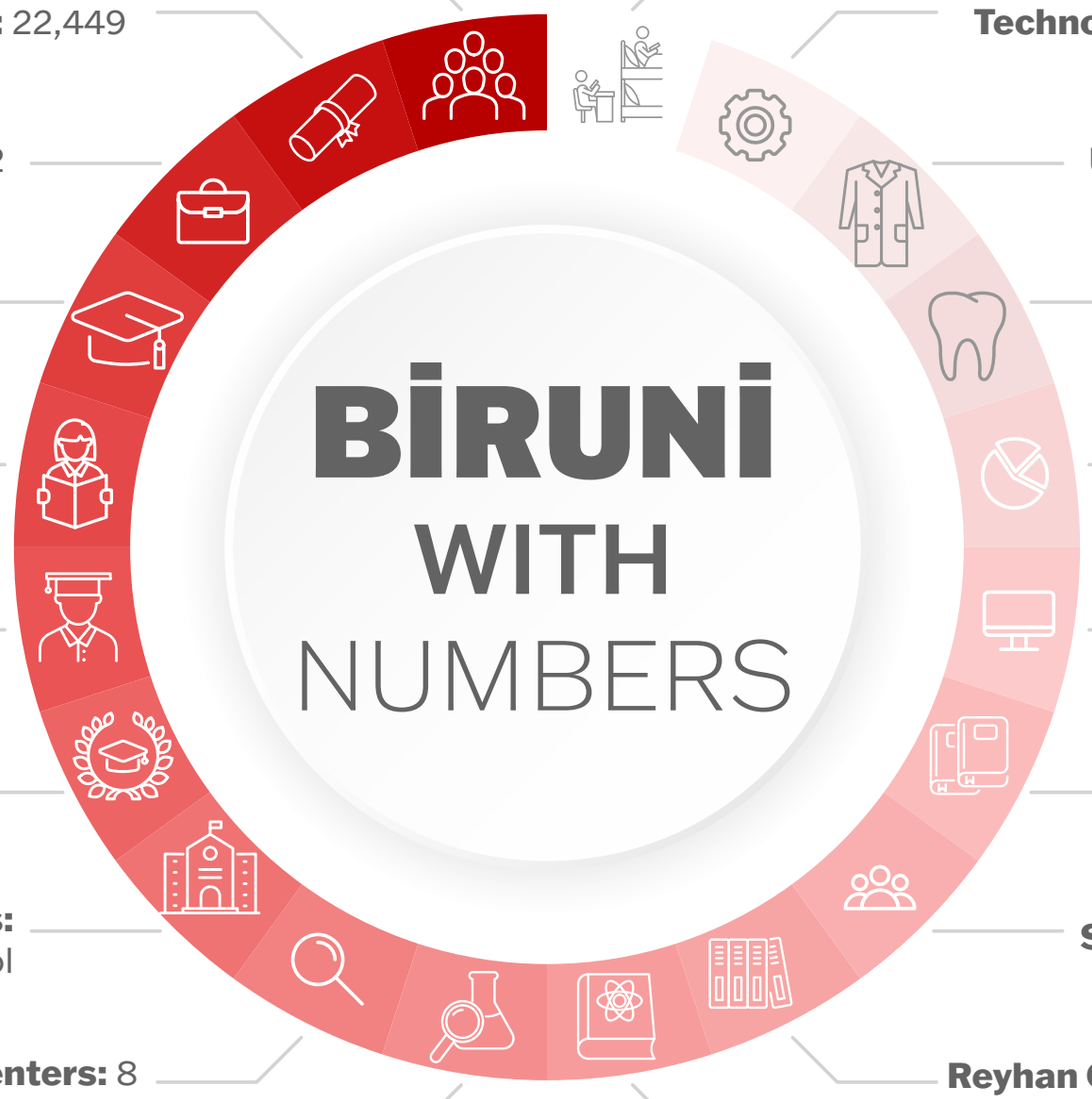
Pioneering Spirit

Challenging conventions with creativity and vision; leading transformative change in education and science.

Courage

Acting with integrity and resilience in the face of uncertainty — daring to stand for what is right and meaningful.

BİRUNİ WITH NUMBERS



Active Students: 14,679

Graduate Students: 22,449

Academic Staff: 402

Undergraduate Programs: 30

Associate Degree Programs: 31

Master Programs: 20

PhD Programs: 12

Faculties / Institutes / Vocational Schools:
7 Faculties, 1 Institute, 1 Vocational School

Research Centers: 8

Research Laboratories: 15

Female and Male **Student Dormitory**

Technopark

University Hospital

Oral and Dental Health Hospital

Total Resources: 228,000

Electronic Journals: 65,199

Books: 126,127

Student Clubs: 95

Reyhan Open Library: 24/7

Education Laboratories: 51

11

Number of University Spin-Offs

105.000

Research income from industry and commerce by subject area: STEM

4.750.943

Research income from industry and commerce by subject area: Medicine

4.855.943

Research income From Industry and Commerce: Total

674
Number of Employees

482
Number of Academic Staff

253
Number of Academic Staff by Subject Area: STEM

158
Number of Academic Staff by Subject Area: Medicine

62
Number of Academic Staff by Subject Area: Arts & Humanites / Social Sciences

Production of Visual Perception Materials with 3D Printing and Their Effects on Children's Visual Perception Skills - An Intervention Study

Aim:

To explore the potential of 3D printing technology in producing educational materials that improve children's visual perception skills through an evidence-based intervention study.

Description:

This interdisciplinary project combines digital manufacturing, design, and educational psychology to develop tangible learning materials using 3D printing. The research evaluates how these materials influence children's visual and cognitive development, emphasizing customization, accessibility, and sustainability. The approach demonstrates how additive manufacturing can be utilized to create high-quality, affordable educational tools tailored to diverse learning needs.

Impact:

The project contributes to the modernization of educational infrastructure by merging technological innovation with pedagogical advancement. It enables schools and educational institutions to adopt sustainable production models that reduce waste and promote creativity. Furthermore, the use of digital fabrication technologies encourages student engagement, inclusivity, and hands-on learning, fostering long-term innovation in educational environments.

SDG 9 Contribution:

This research aligns with SDG 9: Industry, Innovation, and Infrastructure by showcasing the use of advanced manufacturing technologies to strengthen educational systems. It highlights how 3D printing can support sustainable industrialization, foster research and innovation, and enhance the integration of technology into social development, particularly in education and child development.

AI-Based Defense Mechanism Against Insider Threats and Social Engineering Attacks Using Federated Learning

Aim:

To develop an artificial intelligence–driven, privacy-preserving cybersecurity framework capable of detecting and preventing insider threats and social engineering attacks across organizational networks.

Description:

This project introduces an innovative federated learning–based defense mechanism designed to strengthen digital infrastructure security without compromising data privacy. By enabling decentralized model training, the system allows multiple organizations to collaboratively improve cybersecurity performance while maintaining the confidentiality of local data. The research integrates machine learning, behavioral analytics, and network forensics to detect anomalies in user behavior and prevent manipulation attempts in real time.

Impact:

The project enhances the resilience and trustworthiness of industrial and digital ecosystems by promoting secure, ethical, and data-efficient AI use. Its outcomes can be applied across various sectors, including finance, education, and public institutions, to mitigate human-centered cyber risks. It also fosters collaboration between academia, industry, and the public sector, supporting innovation-driven security infrastructures essential for the digital economy.

SDG 9 Contribution:

This project advances Industry, Innovation, and Infrastructure (SDG 9) by promoting the development of sustainable, intelligent, and secure digital systems. It supports innovation in AI and cybersecurity, contributes to resilient industrial networks, and strengthens the technological foundations of modern industries, thereby ensuring inclusive and sustainable industrialization.

Global Health Technologies Transfer and Innovation Bridge: Leadership Focused on SDG 9

The participation of our General Director, Sezgin Erzan, as a speaker at the event “Health Technologies from Turkey to Germany” held on February 26, 2025, reflects Biruni University’s strong commitment to promoting international collaboration and innovation transfer in the field of health technologies, in alignment with Sustainable Development Goal 9: Industry, Innovation and Infrastructure. This leadership engagement reinforces integration with global technological networks and contributes to creating a sustainability-oriented social impact.

The event also provided students with an indirect yet valuable exposure to global perspectives on technology development in international markets, while raising public awareness about advancing accessible healthcare infrastructures for individuals with special needs.

Technological Innovation and Infrastructure Integration in Public Procurement

The DMO-TEYDEB Introduction Meeting held on April 18, 2025, where the State Supply Office (DMO) introduced its Techno Catalog initiative, supports Biruni University's vision within the framework of Sustainable Development Goal 9: Industry, Innovation and Infrastructure by promoting the integration of innovative products into public procurement systems. This knowledge-sharing initiative accelerates the commercialization of technological products, generating a sustainability-oriented social impact on the national innovation ecosystem. The event also enhanced student engagement by providing entrepreneurs and students with valuable market insights while raising public awareness about developing inclusive technological infrastructures accessible to individuals with special needs.

Global Dissemination of Innovation Capacity through International Scientific Networks

The participation of Biruni University General Director Sezgin Erzan in the international conference hosted by Cyprus International Final University on April 16, 2025, reinforced the university's vision of integrating research and innovation infrastructure into global scientific networks in line with Sustainable Development Goal 9: Industry, Innovation and Infrastructure. This international engagement fosters cross-border technology and knowledge transfer, creating a strong social impact focused on sustainability. The conference also provided both students and academics with opportunities to follow global scientific trends, offering indirect student interaction and raising public awareness about the importance of inclusive and globally connected innovation infrastructures that benefit all individuals, including those with special needs.

Innovation Hub in Information Technologies: Biruni Informatics Summit

Held on April 16, 2024, by the Technology and Information Engineering Club at Biruni University's Conference Hall, the Biruni Informatics Summit embodied the university's mission to promote innovation and technological infrastructure development within the framework of Sustainable Development Goal 9: Industry, Innovation and Infrastructure.

The summit fostered strong interaction between industry leaders and students, ensuring the sustainability of a culture of technological innovation. Through such events, Biruni University raises public awareness of digital infrastructure and demonstrates its commitment to building an inclusive innovation ecosystem that involves individuals with special needs.

R&D and International Innovation in the Pharmaceutical Industry: Symposium

Organized by the Young İVEK Society on May 9, 2025, the 2nd International Pharmaceutical Symposium addressed research and development (R&D) and innovation infrastructure in the pharmaceutical sector on a global scale, in alignment with Sustainable Development Goal 9: Industry, Innovation and Infrastructure. This scientific gathering promotes sustainability-oriented technological progress in the pharmaceutical industry, generating a significant social impact. The event provided students with advanced engagement opportunities to learn about global R&D trends and raised awareness about innovation in drug and treatment methods for individuals with special needs.

Artificial Intelligence Trends and the Entrepreneurship Infrastructure: Beykent University Presentation

During the presentation titled “Artificial Intelligence Studies in the Entrepreneurship Ecosystem: Concepts and Trends”, delivered by Teknopark representatives on May 9, 2025, at Beykent University, Biruni University emphasized the critical role of artificial intelligence in innovation infrastructure and entrepreneurship culture within the scope of Sustainable Development Goal 9: Industry, Innovation and Infrastructure.
This knowledge exchange promoted the sustainable dissemination of technological innovation, generating substantial social impact. The event encouraged active student participation and fostered social awareness around technology-driven entrepreneurship. Biruni University continues to work toward developing an inclusive technological landscape that accommodates individuals with special needs.

Venture Capital and Innovation Financing Infrastructure: WePlay GSYF Collaboration

The cooperation protocol signed between Biruni Technopark and WePlay Venture Capital Investment Fund (GSYF) on October 22, 2024, embodied Biruni University's mission to ensure the financial sustainability of entrepreneurship and innovation infrastructure in alignment with Sustainable Development Goal 9: Industry, Innovation and Infrastructure. This strategic partnership accelerates the growth of technology-based enterprises, creating a sustainability-oriented social impact on the national industry.
The protocol also provided students with indirect exposure to modern financing models, fostering awareness of the importance of accessible financial infrastructure for all entrepreneurs, including individuals with special needs.

Academic Capacity Development and Technology Transfer: BitStartUp Training

Held between June 30 and July 3, 2025, the “BitStartUp Discover Academic Module” training reinforced Biruni University’s vision of strengthening academic entrepreneurship and innovation management infrastructure in alignment with Sustainable Development Goal 9: Industry, Innovation and Infrastructure. This specialization program accelerates technology transfer and industry collaborations among faculty members, generating a strong social impact rooted in sustainability. By enhancing the quality of education offered to students, the program indirectly increases student engagement. Biruni University also promotes research that raises social awareness about inclusive technological solutions for individuals with special needs.

Global Technology Hubs and Innovation Infrastructure: London Tech Week

Participation in London Tech Week 2025 reflected Biruni University's commitment to tracking global trends in technology and innovation infrastructure and actively engaging in international technology networks in line with Sustainable Development Goal 9: Industry, Innovation and Infrastructure. This global involvement contributes to the sustainable technological development of national industries while creating significant social impact. Biruni University provides students with a global vision of academic interaction and fosters social awareness of inclusive technology solutions that empower individuals with special needs.

Regional Technology Collaboration and Strengthening Technopark Infrastructure

The meeting hosted by Biruni Technopark on July 30, 2025, with the participation of Istanbul's Technology Development Zone General Directors, embodied the mission of reinforcing regional innovation infrastructure coordination and joint technology development strategies under Sustainable Development Goal 9: Industry, Innovation and Infrastructure. This key gathering fostered sustainability-based collaborations among technoparks, generating strong social impact for national industry. Through its leadership role, Biruni University offered students a high-level engagement opportunity within the technopark ecosystem and promoted social awareness of inclusive technological development involving individuals with special needs.

Access to Global Markets and Commercialization of Innovation: GITEX Information Webinar

The GITEX EUROPA Berlin National Participation Organization Information Webinar held on April 14, 2025, supported Biruni University's mission to strengthen the commercialization infrastructure of innovation and promote the global expansion of national technology enterprises, in alignment with Sustainable Development Goal 9: Industry, Innovation and Infrastructure. By guiding entrepreneurs, the event fostered sustainability-driven social impact in international competitiveness. The webinar also provided students with valuable engagement opportunities related to global trade and technology transfer processes while raising public awareness of the importance of inclusive commercialization infrastructures that embrace individuals with special needs.

Youth, Innovation, and Sustainable Technological Development: Halkbank Youth Summit

Participation in the Halkbank Youth Summit held on December 4 at Volkswagen Arena, which brought together 1,000 young participants from across Türkiye, reinforced Biruni University's vision of encouraging youth engagement in technology and innovation infrastructure within the framework of Sustainable Development Goal 9: Industry, Innovation and Infrastructure.This interaction with young leaders aimed to foster a sustainability-oriented social impact in the future of technology and industry. The event provided a dynamic platform for extensive student engagement, enhancing young people's participation in innovative thinking. Biruni University continues to promote social awareness of inclusive technological development that embraces individuals with special needs.

Artificial Intelligence and Innovation Capacity: Entrepreneurship Talks

The national event titled “Entrepreneurship Talks: Artificial Intelligence and Entrepreneurship,” organized by the Entrepreneurship Club on February 6, 2025, focused on the transformative power of artificial intelligence in innovation and technological infrastructure, in line with Sustainable Development Goal 9: Industry, Innovation and Infrastructure.

By equipping students with the ability to merge innovative business ideas with AI technologies, the event fostered a sustainability-oriented social impact. Providing a high level of student engagement, it also promoted public awareness of technology-driven entrepreneurship. Biruni University continues to work toward an inclusive innovation ecosystem that embraces individuals with special needs.

International Knowledge Transfer and Innovation in the Pharmaceutical Industry

The national participation in the “International Webinar Series-2” organized by the İVEK Club on February 13, 2025, supported Biruni University’s vision of advancing international scientific collaboration and innovation infrastructure in the pharmaceutical sector, in accordance with Sustainable Development Goal 9: Industry, Innovation and Infrastructure. This international participation encouraged global knowledge exchange, generating a sustainability-based social impact in the field. The webinar offered an international student engagement experience and raised public awareness of technological solutions designed to address the needs of individuals with special requirements.

Applied Innovation Infrastructure in the Pharmaceutical Industry: Company Visit

The field trip organized by the İVEK Club to Tab Pharmaceuticals on February 19, 2025, provided students with the opportunity to observe modern technological infrastructure and innovation processes in pharmaceutical production, aligning with Sustainable Development Goal 9: Industry, Innovation and Infrastructure. This direct student engagement contributed to developing qualified human resources in the industry while generating a sustainability-driven social impact. Biruni University also promotes social awareness of the importance of industrial infrastructures that enhance access to medicine and health technologies for individuals with special needs.

Medical Device Technologies and Biomedical Innovation

The event titled “Basic Medical Device Training,” organized by the Biomedical Engineering Biomedtech Club on February 21, 2025, aimed to enhance specialization and innovation capacity in medical device technologies, which form the foundation of healthcare infrastructure. This initiative aligns with Sustainable Development Goal 9: Industry, Innovation and Infrastructure, emphasizing technological advancement in the medical sector.Through this technical training, students gained critical engineering skills, generating a sustainability-oriented social impact in the industry. The program offered meaningful student engagement while raising social awareness about developing technological infrastructures that improve the quality of life for individuals with special needs.

Digital Finance Innovation and Media Engagement: Ekotürk TV Broadcast

The participation of General Manager Sezgin Erzan in the live program “Digital Finance” on Ekotürk TV on October 7, 2024, reflected Biruni University’s vision of fostering innovation and supporting digital infrastructure in financial technologies (FinTech), in line with Sustainable Development Goal 9: Industry, Innovation and Infrastructure.

This media engagement created significant social impact by promoting public awareness of advancing digital transformation within sustainability principles. The open dissemination of knowledge also provided indirect student engagement with sector leaders, highlighting the importance of accessible financial infrastructures for individuals with special needs.

Technological Advancement and Media Discourse: TVNET Broadcast and SDG 9 Awareness

The participation of Biruni Technopark General Manager Sezgin Erzan in the TVNET prime news program on October 15, 2024, reflected Biruni University's commitment to enhancing the visibility of technological innovation infrastructure in national media and raising public awareness in alignment with Sustainable Development Goal 9: Industry, Innovation and Infrastructure.

This public engagement created a strong social impact by emphasizing the role of technoparks in sustainability-based innovation processes. Through such media appearances, Biruni University provides students with indirect engagement opportunities with industry leaders while promoting the inclusion of individuals with special needs in technology development processes.

Global Technology Market and Innovation Networks: GITEX EUROPE 2025 Participation

Participation in the GITEX EUROPE 2025 Exhibition supported Biruni University's strategy to integrate its technology and innovation infrastructure with global markets and strengthen international collaborations, in line with Sustainable Development Goal 9: Industry, Innovation and Infrastructure.

This international involvement created a significant social impact by enabling close monitoring of global technology trends and contributing to the sustainable progress of local innovation. Through such platforms, Biruni University offers students and entrepreneurs an international engagement vision while fostering social awareness of inclusive technological infrastructure solutions for individuals with special needs.

Global Innovation in Financial Technologies: Money20/20 Europe Participation

Participation in Money20/20 Europe 2025 demonstrated Biruni University's dedication to closely following global innovation and digital infrastructure developments within the Financial Technologies (FinTech) sector, aligned with Sustainable Development Goal 9: Industry, Innovation and Infrastructure.

This international event promoted sustainability-driven social impact by supporting the digital transformation of financial infrastructure. It also provided students with indirect engagement opportunities with global FinTech experts while raising social awareness about the importance of accessible financial infrastructures for individuals with special needs.

Regional Technology Integration and Innovation Infrastructure: Eurasia Technology Week

Participation in Eurasia Technology Week 2025 supported Biruni University's strategy to strengthen technological collaborations and innovation infrastructure within the Eurasian region, in alignment with Sustainable Development Goal 9: Industry, Innovation and Infrastructure.

This engagement fostered regional technology transfer and created a strong, sustainability-oriented social impact. The event provided students with a broad vision of regional technology trends while promoting social awareness of building an inclusive technological infrastructure that encompasses individuals with special needs.

Visibility of Innovation and Entrepreneurial Culture: SAHNE XL Participation

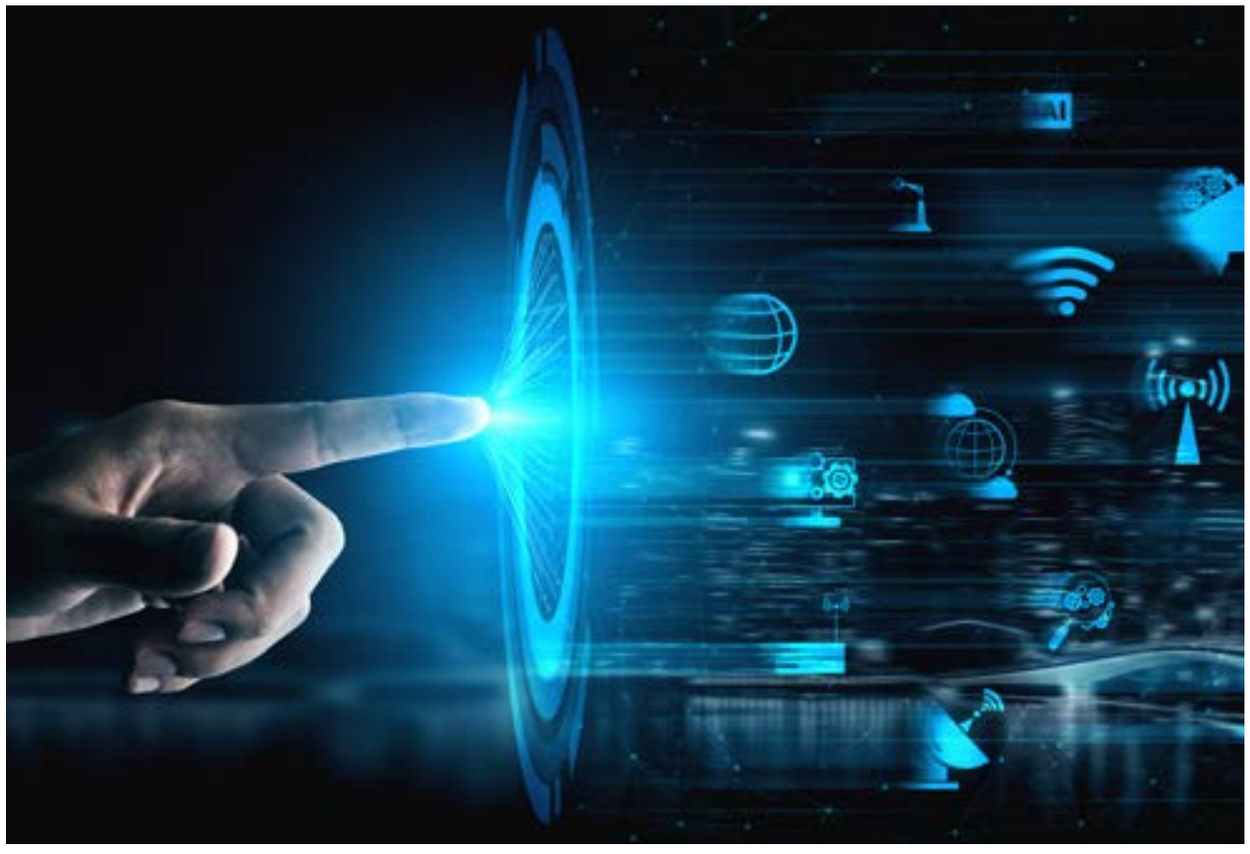
Biruni University's participation in the SAHNE XL event reflected its mission to enhance the visibility of technological innovations and entrepreneurial achievements to a wider audience, supporting Sustainable Development Goal 9: Industry, Innovation and Infrastructure.

This involvement generated meaningful social impact by contributing to the dissemination of entrepreneurial culture and sustainability principles. The event offered students direct engagement with inspiring entrepreneurs and promoted social awareness toward creating an inclusive innovation stage that integrates individuals with special needs.

Artificial Intelligence and Technological Transfer in the Entrepreneurship Ecosystem

The training titled “Artificial Intelligence in the Entrepreneurship Ecosystem,” delivered by Biruni University General Manager Sezgin Erzan at Beykent University on May 9, 2025, supported the vision of integrating artificial intelligence into innovative business ideas and strengthening technological infrastructure in line with Sustainable Development Goal 9: Industry, Innovation and Infrastructure.

This knowledge exchange fostered sustainability-oriented social impact within the entrepreneurial ecosystem while contributing to the advancement of technological capacity. The event created high-level student interaction among participants from different universities and aimed to raise social awareness toward building an inclusive technological development framework involving individuals with special needs.



Artificial Intelligence Innovation and Technological Advancement in Clinical Fields

The presentation titled “The Butterfly Effect in Artificial Intelligence: Clinical Research,” delivered by General Manager Sezgin Erzan at Atlas University on December 6, 2024, reflected Biruni University’s commitment to integrating artificial intelligence technologies into clinical and healthcare innovation infrastructure, aligned with Sustainable Development Goal 9: Industry, Innovation and Infrastructure.

This expert knowledge sharing promoted a sustainability-based transformation in healthcare technologies, creating a meaningful social impact. The event provided students with an advanced level of engagement in the field of health technology while fostering social awareness about developing accessible and personalized healthcare infrastructures for individuals with special needs.

Innovation Methodologies and Entrepreneurial Infrastructure: BitStartUp Training

The “BitStartUp Entrepreneurship Training” held at Biruni University between July 5–7, 2025, focused on creative thinking and innovation methodologies that form the foundation of the entrepreneurial ecosystem, in alignment with Sustainable Development Goal 9: Industry, Innovation and Infrastructure. This comprehensive program introduced techniques such as Six Thinking Hats and SCAMPER, equipping students with the ability to transform innovative business ideas into strong technological infrastructures and thereby creating a sustainability-driven social impact. The training fostered high-level student engagement and raised social awareness in the field of technology. Biruni University continues to work toward building an inclusive innovation infrastructure that embraces individuals with special needs.

Dissemination of Scientific Ideas and Innovation Culture: TEDx Seminar

Participation in the “Ideas Worth Spreading” seminar at TEDx Atatürk University on June 24, 2025, reinforced Biruni University’s vision of promoting technological infrastructure and a culture of development through the dissemination of scientific knowledge and innovative ideas, in line with Sustainable Development Goal 9: Industry, Innovation and Infrastructure. This intellectual engagement contributed to the adoption of sustainability principles within innovation, generating a significant social impact. The seminar offered indirect student interaction with global thought leaders, fostering social awareness. Biruni University highlights the importance of an inclusive knowledge and innovation infrastructure that involves all stakeholders, including individuals with special needs.

Global Scientific Network and Research Infrastructure: EACR Membership

Membership in the European Association for Cancer Research (EACR) demonstrates Biruni University's commitment to strengthening international collaboration and the global infrastructure of scientific innovation in cancer research, in alignment with Sustainable Development Goal 9: Industry, Innovation and Infrastructure.

This international engagement fosters sustainability-driven research that guides advancements in biotechnology and the pharmaceutical industry, generating a significant social impact. Active participation within the EACR network provides students and young academics with opportunities for high-level interaction through involvement in global research projects. Biruni University promotes social awareness for an inclusive and innovative scientific ecosystem that embraces all stakeholders, including individuals with special needs.

Innovation-Based Health Technologies: MOKAD Membership

Membership in the Molecular Cancer Research Association (MOKAD) embodies Biruni University's vision to support groundbreaking scientific research and technological innovation in healthcare, in line with Sustainable Development Goal 9: Industry, Innovation and Infrastructure. This strategic collaboration promotes the development of sustainability-oriented methods and diagnostic technologies in cancer research, creating a strong social impact. Through this membership, students gain exposure to cutting-edge studies in molecular biology and oncology, enhancing their academic engagement and career growth. Biruni University aims to raise awareness about building innovative healthcare infrastructures that improve the quality of life for individuals with special needs.

Global Respiratory Technologies and Innovation: ERS Membership

Since 2022, Biruni University's Faculty of Health Sciences (SABİF) has been a member of the European Respiratory Society (ERS), reinforcing its vision to strengthen international scientific cooperation and technological infrastructure in the field of respiratory health, aligned with Sustainable Development Goal 9: Industry, Innovation and Infrastructure.

This global partnership fosters innovation in medical devices and treatment methods, producing a meaningful social impact. Active engagement in the ERS network enables students and young researchers to participate in global projects in respiratory sciences and health technologies, offering sustainability-focused, high-level academic interaction. Biruni University continues to promote social awareness about developing accessible and innovative health technologies for individuals with special needs.

ERS EUROPEAN RESPIRATORY SOCIETY
every breath counts

National Health Standards and Technological Infrastructure: TÜSEB–TÜSKA Collaboration

The collaboration maintained between TÜSEB and TÜSKA through the Faculty of Health Sciences (SABİF) for the 2023–2025 period demonstrates Biruni University's commitment to enhancing quality infrastructure and technological standards in national healthcare services, in alignment with Sustainable Development Goal 9: Industry, Innovation and Infrastructure. This institutional partnership supports the development of innovative solutions that improve the efficiency of health systems, creating a strong social impact. Participation in this collaboration provides students with opportunities to gain insights into national health technology policies, offering indirect student engagement and strengthening sustainability awareness. Biruni University continues to foster social awareness toward developing accessible healthcare infrastructures for all citizens, including individuals with special needs.

European Scientific Network and Inclusive Innovation: COST Participation

Biruni University's participation in the European Cooperation in Science and Technology (COST) program through the Faculty of Health Sciences (SABIF) reflects its vision of fostering technological and scientific innovation through integration into interdisciplinary European research networks, in line with Sustainable Development Goal 9: Industry, Innovation and Infrastructure. This international collaboration focuses on strengthening research infrastructure and facilitating knowledge transfer, generating a meaningful social impact. Participation offers students and academic staff opportunities to engage in global scientific projects, promoting high-level student interaction and a sustainability-oriented innovation mindset. Biruni University promotes social awareness for an inclusive scientific ecosystem that ensures full participation of individuals with special needs in science and technology initiatives.

cost
EUROPEAN COOPERATION
IN SCIENCE AND TECHNOLOGY

Strengthening Innovation Financing through Enertek Support

Participation in the University–Industry Collaboration (ÜSİ) Support Programs Information Day, held at Enertek Technopark on August 12, 2025, reflects Biruni University's mission to strengthen the financial infrastructure of technology-based initiatives in alignment with Sustainable Development Goal 9: Industry, Innovation and Infrastructure. This engagement accelerates the commercialization of technology-driven projects, generating a sustainability-oriented social impact on national industry. The event provided entrepreneurs and students with valuable insights into critical innovation financing mechanisms, offering indirect student interaction opportunities. Biruni University continues to promote social awareness for an inclusive innovation ecosystem that embraces all individuals, including those with special needs.

Venture Capital and Technology Commercialization: The Hood Tekmer GRILL

Participation in The Hood Tekmer GRILL The Deal Startups event held on May 29, 2025, reinforces Biruni University's strategywithin the framework of Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure)to support the commercialization infrastructure of innovation by bringing together technology-based startups and investors.

This gathering fosters sustainability-oriented social impact by accelerating the market launch of new technological products and strengthening the national industry. The event provided students with a hands-on learning opportunity regarding venture capital processes and raised social awareness about innovations that address the needs of individuals with special requirements.

School-Industry Collaboration and Skill Development in Technological Infrastructure

Within the scope of the School-Industry Collaboration Project, the SANLAB Simulation Products Training held on March 11, 2025, for vocational high school students strengthens Biruni University's mission under Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure) to cultivate a qualified workforce by introducing young people to modern technological infrastructure tools.

This hands-on training supports the development of technical skills in line with sustainability principles, generating a significant social impact. The program provided a direct student interaction experience for vocational high school participants and promoted social awareness by encouraging the inclusion of individuals with special needs in vocational and technical education.

Technology Transfer and Collaboration Between Incubation Centers

Participation in the İTÜ ARI Teknokent ARI Projects Information Exchange Event held on July 29, 2025, as part of the ITU Çekirdek Partner Incubation Program Knowledge & Experience Sharing Day, supports Biruni University's vision within the framework of Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure) to promote inter-technopark collaboration and the expansion of innovation infrastructure.

This knowledge exchange accelerates the development of technology-based projects, creating a strong social impact grounded in sustainability. The event offered entrepreneurs new collaboration opportunities, providing an indirect student interaction experience while raising social awareness for an inclusive innovation ecosystem that embraces individuals with special needs.

Integration of Artificial Intelligence into Clinical Innovation Infrastructure: The Butterfly Effect in AI Small Steps, Big Transformations

The participation of General Manager Sezgin Erzan as a speaker at the conference titled “The Butterfly Effect in Artificial Intelligence: Clinical Applications” held at Atlas University on December 6, 2024, reflects Biruni University’s commitmentwithin the framework of Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure)to integrating artificial intelligence technologies into the innovation infrastructure of the clinical and healthcare industries.

This expertise exchange promotes sustainability-oriented transformation in the healthcare sector, creating a significant social impact. The event provided participants with an advanced level of student interaction and raised social awareness about developing more accessible and personalized healthcare infrastructures for individuals with special needs.

Venture Capital and Technology Commercialization: The Hood Tekmer GRILL The Deal Startups

Participation in The Hood Tekmer GRILL The Deal Startups event held on May 29, 2025, aligns with Biruni University's mission under Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure) to strengthen the commercialization infrastructure of innovation by connecting technology-based startups with investors. This gathering fosters the market launch of new technological products, creating a strong social impact grounded in sustainability. The event provided students with a practical understanding of venture capital processes through direct interaction and raised public awareness of innovation that addresses the needs of individuals with special needs.

National Development and Scientific Innovation Strategies: “From Victory to the Future - Preparation, Evaluation, and Project Management Processes for Artificial Intelligence and Horizon Europe Projects in Kütahya”

Participation in the event “From Victory to the Future: Kütahya”, which brought together Türkiye’s leading academics and experts, supports Biruni University’s vision within the framework of Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure) to integrate national science and technology strategies into the innovation infrastructure.

This academic gathering contributes to the sustainable technological advancement of national development, generating a significant social impact. The event provided a high-level environment for student engagement in science and technology fields and raised public awareness about the inclusion of individuals with special needs in technology development processes.

Global Talent Pool and the Development of Technological Infrastructure: Tech Visa Launch

Global Talent Pool and Technological Infrastructure Development: Tech Visa Launch

The Türkiye Tech Visa Program Launch, held on September 16, 2024 at İGA Istanbul Airport with the participation of the Minister of Industry and Technology, Mehmet Fatih Kacır, supports Biruni University's strategy within the framework of Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure) to strengthen the technology and innovation infrastructure by attracting global talent.

This national policy initiative creates a strong social impact by facilitating the inclusion of qualified professionals in Türkiye's workforce in line with sustainability principles. The launch provided students with indirect engagement opportunities regarding global career prospects and raised public awareness about the participation of individuals with special needs in the international technology workforce.

International Technology Transfer and Scientific Diplomacy: Visit of the Libyan Delegation

Within the scope of the university's international activities, the visit of the Libyan delegation to Biruni Technopark on October 22, 2024, reinforces Biruni University's vision under Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure) to contribute to the development of international innovation infrastructure through technology transfer and scientific cooperation.

This international engagement fosters a sustainability-driven social impact on regional development. The visit also offered students and academics indirect engagement opportunities in global collaboration processes and raised public awareness of the importance of building an inclusive technological infrastructure that involves individuals with special needs.

Institutional Innovation Collaboration in Health Technologies: Siemens Healthineers Launch

Participation in the Siemens Healthineers Launch Event, which covered areas such as startup screening, product development, mentorship, and intellectual property (IP) processes, reflects Biruni University's commitment under Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure) to foster institutional collaboration between the health industry and innovation infrastructure.

This partnership promotes sustainability-based rapid product development in health technologies, creating a strong social impact. The event provided students with indirect engagement opportunities to learn about innovation processes in the healthcare technology sector and raised public awareness of accessible technological solutions for individuals with special needs.

Innovative Mobility Technology and Industrial Collaboration: Visit to Martı

The visit to Martı, one of the technopark companies, supports Biruni University's mission under Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure) to enhance knowledge transfer and collaboration potential in innovative mobility technologies and industrial applications.

This company visit promotes the dissemination of technology-based solutions aligned with sustainability principles, creating a significant social impact. The visit provided students with indirect engagement opportunities to learn about innovative business models and raised public awareness of the importance of accessible urban infrastructure solutions for individuals with special needs.

Information and E-Commerce Policies and Digital Infrastructure: Specialized Committee Meeting

The hosting or participation of Biruni Technopark in the 21st Term Information and E-Commerce Specialized Committee's 7th Meeting on June 24, 2025, reflects Biruni University's commitment under Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure) to actively contribute to national policymaking processes aimed at strengthening information technologies and e-commerce infrastructure. This institutional participation creates a strong social impact by promoting the sustainable development of digital infrastructure. The meeting provided students with indirect engagement opportunities related to digital economy policies and raised public awareness of the importance of inclusive e-commerce and ICT infrastructures that also address the needs of individuals with special requirements.

Cybersecurity, Artificial Intelligence, and Digital Infrastructure: MÜSİAD Cyber Power Summit

Participation in the MÜSİAD Cyber Power: Türkiye ’24 Summit held on November 6, 2024, reinforces Biruni University’s vision under Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure) to support the security and advancement of national infrastructure in key innovation areas such as artificial intelligence and cybersecurity technologies.

This summit participation creates a strong social impact by promoting the sustainable and secure growth of digital infrastructure. The event offered students indirect engagement opportunities to explore cybersecurity challenges and career prospects, while also raising public awareness about the importance of secure digital infrastructure solutions accessible to individuals with special needs.

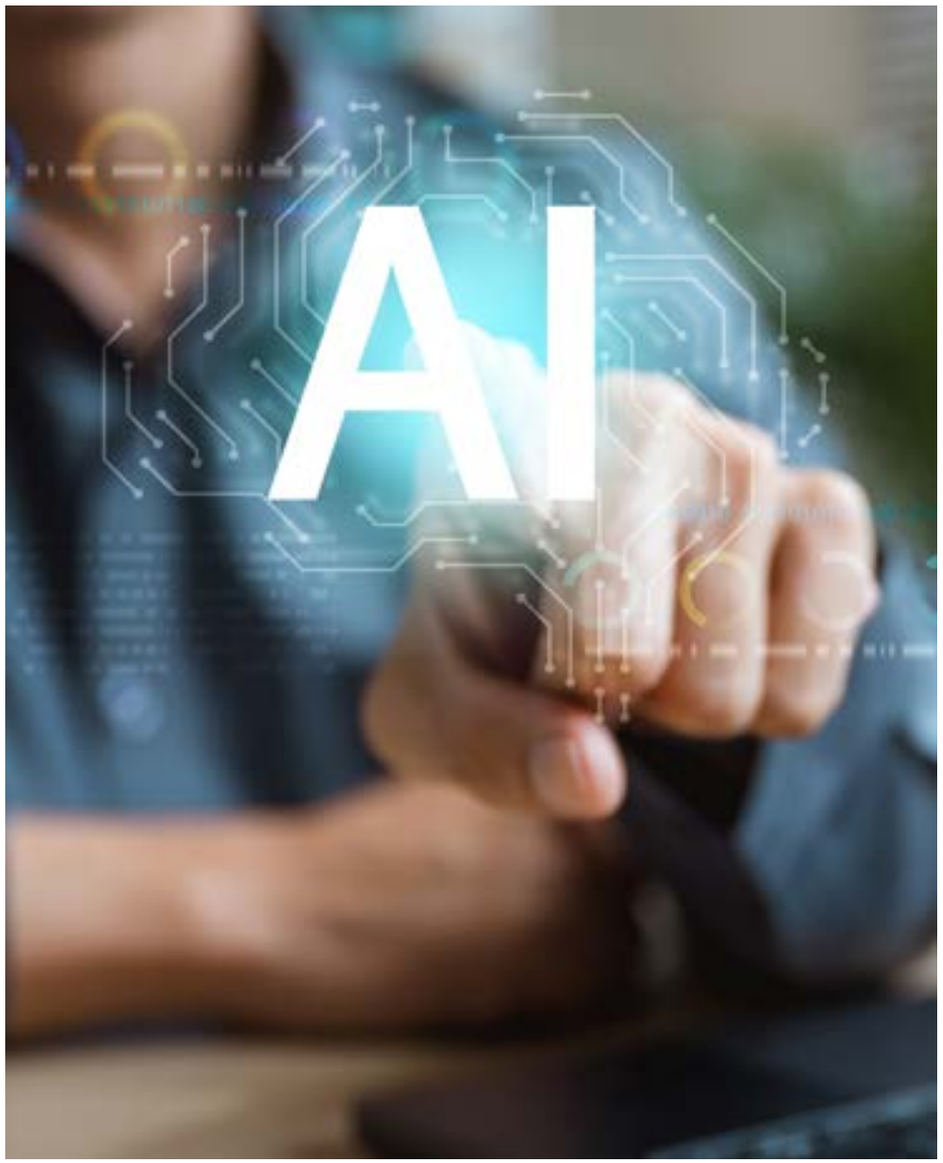
SDG RELATED COURSES

Health Informatics and Computer Applications

The Health Informatics and Computer Applications course lies at the core of Biruni University's higher education strategy focused on sustainable development and digital transformation, directly aligning with Sustainable Development Goal 9: Industry, Innovation, and Infrastructure. The course aims to enable students to gain in-depth knowledge of the principles underlying health data management, electronic health record systems, artificial intelligence applications, and telemedicine technologies, while scientifically analyzing health challenges stemming from inefficient service delivery, unequal access to information, and outdated IT infrastructures.
Students are encouraged to design innovative and inclusive informatics solutions that promote accessible and sustainable healthcare infrastructures. Through experience-based and applied learning, they develop practical skills in health informatics software, data analysis, and mobile health application prototyping, gaining awareness of how digital health technologies can overcome geographic and socioeconomic barriers.

By participating in digital health projects and research activities, students generate tangible social impact and strengthen their analytical, ethical, and social responsibility competencies. This interdisciplinary approach not only contributes to their personal and professional growth but also supports the modernization of the national healthcare infrastructure.
Thus, Biruni University reinforces its identity as an innovative higher education institution that nurtures qualified human resources to advance sustainable development through digital transformation in health informatics.

Artificial Intelligence



The Artificial Intelligence course lies at the heart of Biruni University's higher education vision focused on sustainable development and technological advancement, and is directly aligned with Sustainable Development Goal 9: Industry, Innovation, and Infrastructure.

The main purpose of the course is to provide students with a comprehensive understanding of the theoretical foundations, algorithms, and principles of machine learning and deep learning, while emphasizing the ethical and responsible use of AI technologies. Students are trained to scientifically analyze individual and societal economic challenges arising from digital infrastructure deficiencies, industrial inefficiencies, and the pace of technological innovation, and to develop solutions that enhance productivity, support new production processes, and promote sustainable growth in industry and infrastructure sectors.
Through experience-based and applied learning, students gain hands-on experience in developing original AI projects, big data analysis, and intelligent system prototyping, while raising awareness of how artificial intelligence can be harnessed for social benefit and inclusive access in line with the principles of equitable education.

By participating in research and development projects, students create measurable social impact and strengthen their research-oriented thinking, social responsibility, and professional ethics. This interdisciplinary learning process contributes both to their individual development and to the modernization of national and global industrial infrastructures.

In doing so, Biruni University reinforces its identity as an innovative higher education institution dedicated to cultivating a qualified workforce that advances responsible and transformative applications of artificial intelligence, thereby contributing to the realization of sustainable development goals.

Artificial Intelligence and Dentistry

The Artificial Intelligence and Dentistry course lies at the core of Biruni University's higher education strategy centered on sustainable development and the digital transformation of health technologies, directly aligning with Sustainable Development Goal 9: Industry, Innovation, and Infrastructure.

The course aims to equip students with a comprehensive understanding of the integration of artificial intelligence into dental diagnosis, treatment planning, and imaging processes, as well as the principles of data security and bioethics. Students are encouraged to scientifically analyze both individual and societal health challengessuch as diagnostic errors, inefficiencies in treatment processes, and the lack of accessible healthcare infrastructureand to develop innovative, reliable, and sustainable technological solutions that enhance the quality of dental care and promote entrepreneurship within the field.

Through experiential and applied learning, students gain hands-on experience in AI-supported image analysis, treatment simulations, and healthcare technology prototyping, fostering awareness of how artificial intelligence can help deliver more accurate and accessible dental services for all patients in line with inclusive education principles.

By participating in research and digital health projects, students create tangible social impact while strengthening their research-based thinking, social responsibility, and professional ethics. This interdisciplinary process supports both their personal development and the technological transformation of national healthcare infrastructure.

Thus, Biruni University reinforces its identity as an innovative higher education institution cultivating qualified professionals who advance industrial innovation and responsible AI integration in health technologies, contributing directly to the realization of sustainable development goals.

Quality Management System in Medical Devices Quality

The Quality Management System in Medical Devices course stands at the center of Biruni University's mission to promote sustainable development and raise industrial quality standards, and is directly aligned with Sustainable Development Goal 9: Industry, Innovation, and Infrastructure.

The course's primary goal is to provide students with an in-depth understanding of international quality management principles (ISO 13485, FDA, etc.) applied throughout all stages of the medical device lifecyclefrom design and production to risk management and post-market surveillance. Students are trained to analyze economic and industrial challenges such as product reliability gaps, inefficiencies in manufacturing, and weaknesses in technological infrastructure, while developing sustainable, safe, and globally compliant solutions that foster innovation and entrepreneurship in the healthcare technology sector.

Through experience-based and applied learning, students gain practical skills in process mapping, risk analysis reporting, and designing quality systems for medical device innovation projects. They also develop awareness of producing accessible and safe medical devices that serve all user groups in accordance with inclusive education principles.

By engaging in quality- and safety-oriented research and development projects, students create measurable social impact, strengthening their research-based thinking, social responsibility, and professional ethics. This interdisciplinary learning process enhances both their individual growth and the resilience of national and global industrial infrastructures.

In this way, Biruni University consolidates its position as an innovative higher education institution that cultivates competent professionals dedicated to advancing quality, reliability, and sustainability in the high-tech medical device sector, thereby contributing to the achievement of sustainable development goals.

Science and Mathematics Education in Early Childhood

The Science and Mathematics Education in Early Childhood course lies at the heart of Biruni University's higher education strategy focused on sustainable development and scientific literacy, directly aligning with Sustainable Development Goal 9: Industry, Innovation, and Infrastructure.

The course aims to equip students with a deep understanding of the scientific principles behind evidence-based methods that support young children's scientific process skills, mathematical reasoning, and problem-solving abilities. Students are encouraged to analyze both individual and societal economic challengessuch as the shortage of qualified professionals in future technology and engineering fields and the limited potential for scientific innovationthrough a research-based perspective. They also develop creative and sustainable learning solutions that promote scientific curiosity and entrepreneurial thinking from an early age, forming the foundation of industrial and technological infrastructure.

Through experience-based and applied learning, students gain hands-on experience in designing original STEM (Science, Technology, Engineering, Mathematics) activities, assessing children's scientific skills, and developing inclusive educational materials. This approach fosters awareness of equal access to science and technology education for all children, guided by a sense of social responsibility.

By engaging in early science projects and research participation, students create tangible social impact and strengthen their critical thinking, professional ethics, and social consciousness. This interdisciplinary process contributes both to their individual development and to the strengthening of national and global science and technology infrastructure.

Thus, Biruni University reinforces its identity as an innovative higher education institution cultivating qualified professionals who promote industrial innovation and scientific foundations in early childhood education, contributing to the realization of sustainable development goals.

Science Education in Early Childhood

The Science Education in Early Childhood course is a key component of Biruni University's approach to sustainable development and scientific thinking in higher education, and it is directly aligned with Sustainable Development Goal 9: Industry, Innovation, and Infrastructure.

The course aims to help students gain a deep understanding of evidence-based methods that foster young children's scientific process skills, environmental awareness, critical thinking, and problem-solving abilities. Students learn to analyze individual and societal economic challengessuch as the shortage of qualified professionals in future technology and engineering sectors and the limited potential for scientific innovationthrough a research-based lens. They also develop creative and sustainable learning solutions that encourage scientific curiosity and entrepreneurial spirit from an early age, laying the foundation for industrial and technological infrastructure.

Through experience-based and applied learning, students engage in designing original science experiments, environmental awareness projects, and science activities, while creating inclusive teaching materials that promote equal access to science and technology for all children. This process builds students' awareness of social responsibility and fosters early interest in STEM disciplines.

By participating in early science projects and research initiatives, students create measurable social impact while enhancing their ethical awareness, critical thinking, and professional responsibility. This interdisciplinary learning approach contributes both to their personal growth and to the strengthening of national and global science and technology infrastructure.

Thus, Biruni University solidifies its role as an innovative higher education institution that cultivates qualified professionals who advance industry, innovation, and infrastructure, particularly through building strong scientific foundations in early childhood education, thereby contributing to the achievement of sustainable development goals.

Entrepreneurship and Brand Management

The Entrepreneurship and Brand Management course lies at the center of Biruni University's higher education vision focused on sustainable development and economic transformation, and it is strongly connected to Sustainable Development Goal 9: Industry, Innovation, and Infrastructure.

The course's primary goal is to provide students with a comprehensive understanding of the scientific principles of business commercialization, brand value creation, intellectual property rights, and innovation process management. Students analyze individual and societal economic challengessuch as limited technological advancement, restricted R&D investment, and the need for modernization in industrial infrastructurethrough an analytical and sustainability-based framework. They are encouraged to develop ethical and responsible entrepreneurship strategies that enhance competitiveness in both local and global markets and drive sustainable economic growth.

Through experiential and project-based learning, students gain practical experience in business planning, prototyping, and brand positioning simulations, while developing awareness of how to create an inclusive entrepreneurial ecosystem that ensures equitable access to ideas and resources for all learners.

By engaging in original technology and branding projects, students generate tangible social impact, strengthening their research engagement, innovation capability, and sense of social responsibility. This interdisciplinary learning process contributes both to individual professional growth and to the modernization of national and global industrial infrastructure.

In this way, Biruni University reinforces its identity as an innovative higher education institution that cultivates highly qualified individuals dedicated to advancing industry, innovation, and infrastructure, particularly through entrepreneurship and innovation-driven economic development, thereby contributing to the realization of sustainable development goals.

Artificial Intelligence in Entrepreneurship

The Artificial Intelligence in Entrepreneurship course is positioned at the core of Biruni University's higher education approach that integrates sustainable development and technological innovation, directly aligning with Sustainable Development Goal 9: Industry, Innovation, and Infrastructure.

The course aims to provide students with an in-depth understanding of the scientific principles behind integrating artificial intelligence (AI) into business model development, market analysis, product innovation, and operational efficiency. Students learn to analyze both individual and societal economic challenges such as the lack of technological advancement, inefficiencies, and the need for digital infrastructure modernization through a scientific lens, while developing ethical and responsible AI-based entrepreneurial solutions that strengthen industrial competitiveness and promote sustainable success.

Through experience-based and applied learning, students gain hands-on experience in AI-supported business planning, model prototyping, and market validation simulations. The course also fosters awareness of designing fair and accessible AI-driven services across all sectors in line with the principles of inclusive education.

By engaging in social impact-focused technological entrepreneurship projects and research participation, students demonstrate tangible social responsibility and contribute to a culture of ethical innovation. This interdisciplinary process strengthens their critical thinking, professional ethics, and innovation-oriented mindset, contributing to both their personal growth and the modernization of national and global industrial infrastructures.

Thus, Biruni University reinforces its identity as an innovative higher education institution cultivating skilled professionals who advance industry and innovation through the responsible integration of AI into entrepreneurial activities, thereby contributing to the achievement of sustainable development goals.

Career Planning and Development

The Career Planning and Development course stands at the center of Biruni University's higher education strategy focused on sustainable development and the strengthening of human capital, and it is closely aligned with Sustainable Development Goal 9: Industry, Innovation, and Infrastructure.

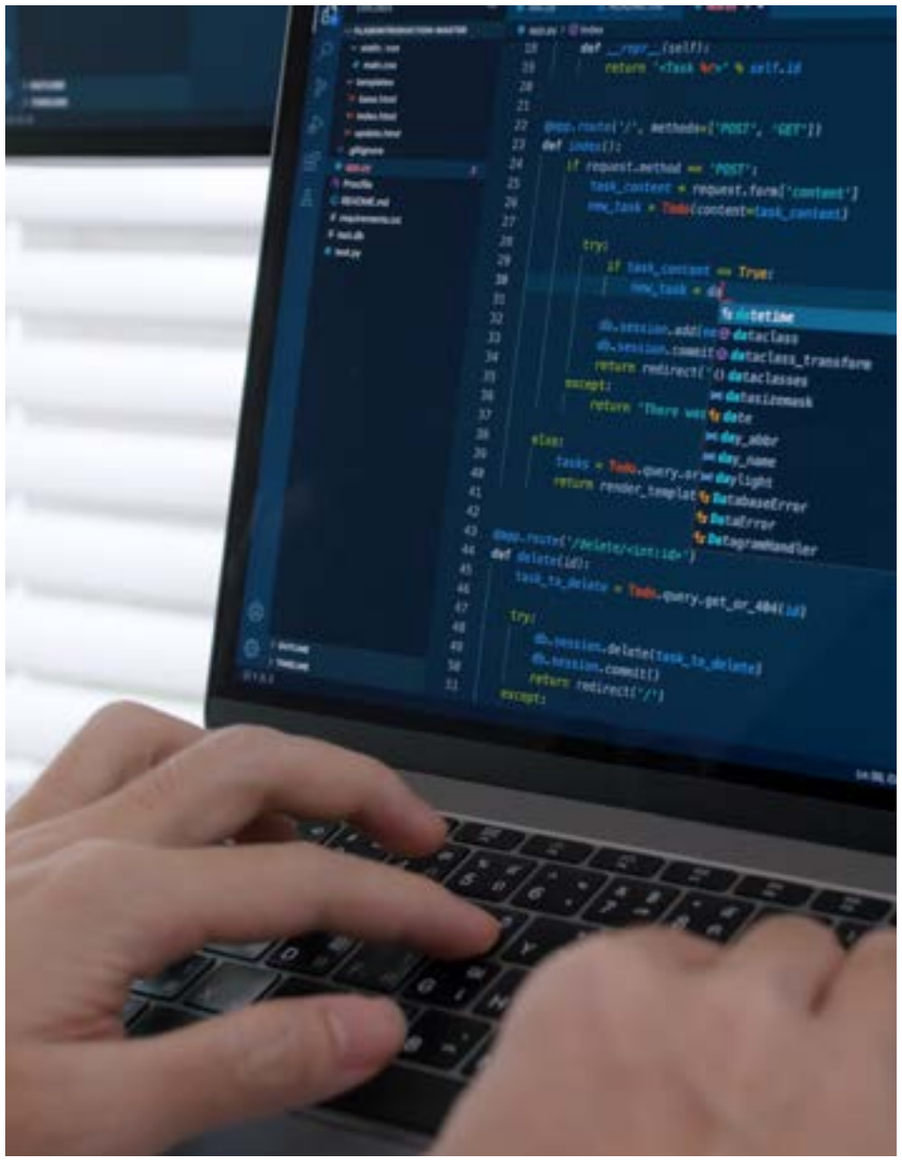
The main objective of the course is to enable students to analyze the competencies required by evolving industrial infrastructures, develop personal branding strategies, adapt to technological innovation processes, and master the principles of lifelong learning. Students are trained to scientifically examine individual and societal economic challenges such as youth unemployment, the shortage of skilled labor, and the need for digital transformation competencies, while designing strategies that foster high-value, sustainable employment and entrepreneurial potential.

Through experiential and practical learning, students engage in industry mentorship programs, career simulations, and technology-focused portfolio development, gaining hands-on experience while fostering awareness of equitable access to professional opportunities for all learners under inclusive education principles.

By participating in career analysis and research-based projects, students generate measurable social impact, strengthening their sense of social responsibility, professional ethics, and adaptability to future industries. This interdisciplinary learning process contributes both to their personal development and to the modernization of national and global industrial infrastructures.

In this way, Biruni University consolidates its role as an innovative higher education institution that cultivates future industrial leaders and technology-driven entrepreneurs, fostering the advancement of industry, innovation, and infrastructure, and directly contributing to the achievement of sustainable development goals.

Machine Learning



The Machine Learning course is positioned at the core of Biruni University's higher education strategy focused on sustainable development and technology-driven industrial transformation, and it is directly aligned with Sustainable Development Goal 9: Industry, Innovation, and Infrastructure.

The main objective of the course is to provide students with a deep understanding of the scientific principles behind machine learning algorithms, data analysis methods, predictive modeling techniques, and the integration of these technologies into industrial processes. Students are encouraged to analyze both individual and societal economic challenges such as the lack of data-driven decision-making, industrial inefficiency, and the pace of technological innovation through a scientific and sustainability-oriented perspective. They also develop solutions that enhance industrial productivity, support new production models, and promote sustainable growth.

Through experiential and applied learning, students engage in original machine learning projects, work with large-scale data sets, and gain hands-on experience in intelligent system prototyping. The course also promotes awareness of using machine learning for social benefit and ensuring its fair integration across all sectors in accordance with the principles of inclusive education.

By participating in research and development projects, students generate tangible social impact while strengthening their research-oriented thinking, sense of social responsibility, and professional ethics. This interdisciplinary learning process contributes to both their personal development and the modernization of national and global industrial infrastructures.

Thus, Biruni University reinforces its identity as a pioneering higher education institution in innovation, cultivating skilled professionals who promote industry and innovation through the responsible and transformative use of machine learning technologies, thereby contributing to the achievement of the sustainable development goals.

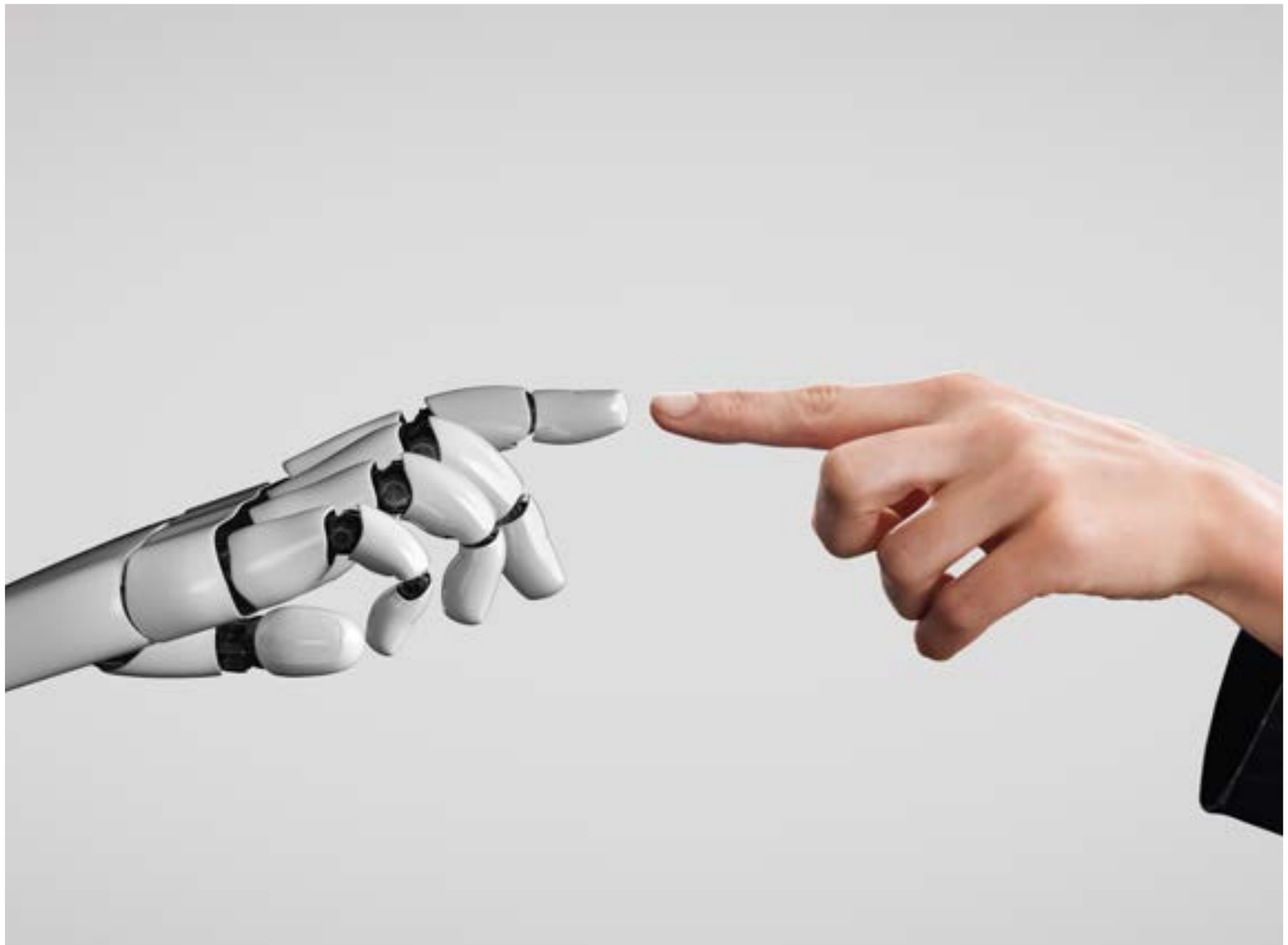
COMMUNITY LIFE LONG LEARNING

Institutional Knowledge Sharing and Human Resource Infrastructure for Future Technologies

As part of Biruni University's institutional outreach activities, an event was held on April 29, 2025, at Samiha Ayverdi Anatolian High School in alignment with Sustainable Development Goal 9: Industry, Innovation, and Infrastructure. The initiative aimed to strengthen the human resource infrastructure for the future by encouraging young people to pursue careers in technology and innovation-oriented fields.

With the participation of Dr. Neşe Cızıroğlu and Dr. Muammer Alhan Babat, this student engagement created long-term social impact by raising awareness about career pathways and the importance of science and technology in shaping future industries.

Biruni University supports the sustainable growth of an inclusive innovation ecosystem, promoting participation in science and technology for all students, including those with special needs, in line with the principles of sustainability.



Scientific Guidance and Innovative Careers: Institutional Promotion

The Biruni University Institutional Promotion Event, conducted by Asst. Prof. Dr. Tarık Mecit on April 30, 2025, at Samiha Ayverdi Anatolian High School, was organized within the framework of Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure). The event aimed to encourage students to pursue scientific and technological fields, thereby contributing to the sustainability of innovation infrastructure. This direct student engagement created a significant social impact by helping young individuals place science and technology at the center of their future career planning. Through its inclusive approach, Biruni University promotes social awareness that ensures the participation of individuals with special needs in technology and innovation fields, thereby supporting sustainability-oriented development.

Version Control Systems and Software Innovation: Git & GitHub Workshop

Organized by the Developer Students Club on October 30, 2024, the “Git & GitHub Workshop” reflects Biruni University’s mission under Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure) to strengthen students’ technological infrastructure competencies essential for software development and collaboration processes. This technical training promotes sustainability and efficiency in software projects, thereby generating an indirect social impact. Through high-level student engagement, participants adapt to modern industrial workflows while developing social awareness toward accessible technological solutions for individuals with special needs.

Advancing Artificial Intelligence Capacity: Python and Machine Learning Training

Held by the Technology and Information Engineering Club on December 2, 2024, the “Python and Machine Learning Training” supports Biruni University’s strategic focus on developing competence in artificial intelligence and data sciencekey components of technological infrastructure within the framework of SDG 9. This advanced training enhances students’ contributions to industrial innovation, creating a sustainability-based social impact. Through applied student engagement, graduates gain faster integration into the technology sector and develop awareness of innovations aimed at improving the quality of life for individuals with special needs

Innovation in Education and Qualified Human Capital: Innovative Ideas Seminar

The “Innovative Educators, Innovative Ideas” seminar, organized by the Innovative Educators Community on December 2, 2024, aligns with Biruni University’s commitment to SDG 9 (Industry, Innovation, and Infrastructure) by promoting innovation in teaching methods and supporting the adaptation of qualified human capital to technological advancement. This sustainability-oriented educational activity contributes to long-term technological progress and social impact. The seminar deepens student engagement in the education field while raising awareness about inclusive and technology-supported learning infrastructures for individuals with special needs.

Foundations of Artificial Intelligence and Innovation Infrastructure: Introduction to Machine Learning

Held by the Technology and Information Engineering Club on December 2, 2024, the “Python and Machine Learning Training” supports Biruni University’s strategic focus on developing competence in artificial intelligence and data sciencekey components of technological infrastructure within the framework of SDG 9. This advanced training enhances students’ contributions to industrial innovation, creating a sustainability-based social impact. Through applied student engagement, graduates gain faster integration into the technology sector and develop awareness of innovations aimed at improving the quality of life for individuals with special needs

Digital Imaging Technology and Industrial Applications: Image Processing Training

Organized by the IEEE Student Branch on April 7, 2025, the “Image Processing Training” supports Biruni University’s mission under Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure) by strengthening technological infrastructure skills essential for industrial innovation fields such as medical imaging and automation. This specialized training fosters efficiency and sustainability in industrial processes, creating a significant social impact. Through hands-on student engagement, participants are prepared for advanced technology applications while promoting social awareness about visual-support technologies designed to assist individuals with special needs.

Data Science in Healthcare and Innovation Infrastructure: Medical Data Seminar

Hosted by the Biruni Medical Students Association on April 12, 2025, the “Future of Medical Data Seminar” focuses on enhancing the health informatics and AI-based innovation infrastructure in alignment with Sustainable Development Goal 9. This scientific event promotes the technological transformation of the healthcare sector grounded in sustainability principles, generating a strong social impact. Through interdisciplinary student engagement, participants gain readiness for data-driven healthcare solutions, while fostering awareness of personalized technological infrastructures that improve accessibility for individuals with special needs.

Regional Development and Innovation Leadership in Informatics: Informatics Summit

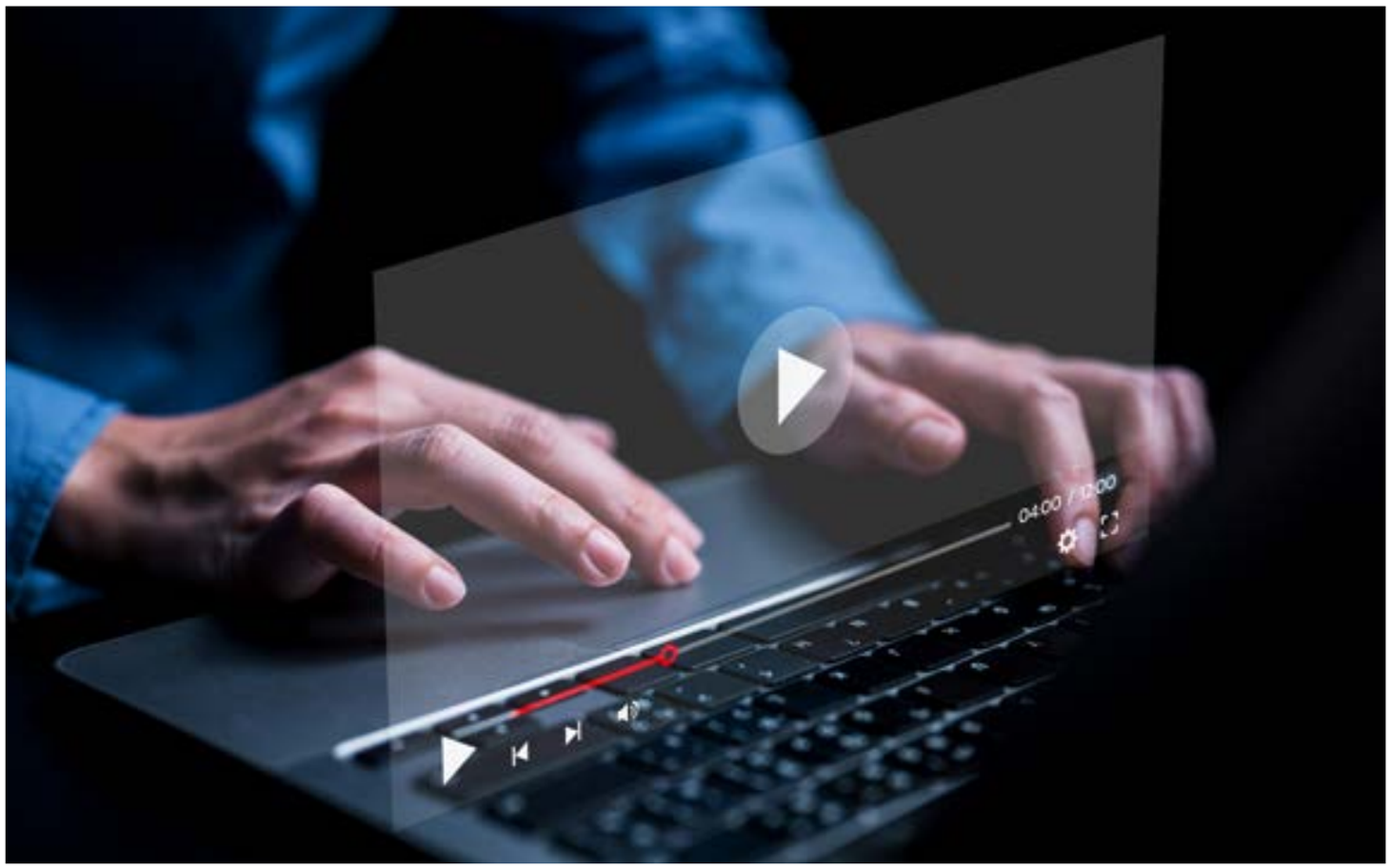
Participation in the Informatics Summit held on October 24, 2024, underscores Biruni University's strategic vision for advancing national informatics and innovation infrastructure within the framework of Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure). Engagement in this major event promotes the sustainable growth of regional technological innovation, creating a broad social impact. The summit provides students and academics with high-level engagement opportunities with industry leaders while reinforcing Biruni University's commitment to fostering inclusive innovation and raising awareness about digital accessibility for individuals with special needs.

Fundamentals of Data Science Training

Organized by the Technology and Information Engineering Club on October 10, 2024, the “Fundamentals of Data Science Training” supports Biruni University’s mission under Sustainable Development Goal 9 (Industry, Innovation, and Infrastructure) by strengthening students’ foundational knowledge of data analysis and technological innovation infrastructure. This core competency training contributes to the development of data-driven innovation aligned with sustainability principles, generating a significant social impact. Through hands-on student engagement, participants accelerate their integration into the technology sector while fostering social awareness toward inclusive data infrastructures that also benefit individuals with special needs.

National Innovation Financing and Strategic Roadmap: TÜBİTAK Webinar

Held on August 5, 2025, the “TÜBİTAK Supports, Application Processes, and Strategic Roadmap Webinar” provided essential insights into national mechanisms for financing technology and innovation infrastructure within the framework of Sustainable Development Goal 9. This informative session enhances the commercialization of R&D projects, creating a sustainability-oriented social impact. The webinar offered students and academics high-level engagement on national funding processes while promoting awareness of financial infrastructure solutions designed to support entrepreneurs, including individuals with special needs.



Prof. Dr. İsmail Tuncer DEĞİM's Statement

Prof. Dr. İsmail Tuncer DEĞİM

Industry, innovation, and infrastructuretogether with scientific research conducted at universitiesare the fundamental driving forces of sustainable development. Today, technology-based production models, green transformation, and digitalization are accelerating globally, transforming industries into more efficient, inclusive, and environmentally responsible systems. This transformation supports not only economic growth but also social welfare and environmental sustainability. Industrial policies are increasingly shaped by scientific and R&D activities, digital manufacturing technologies, green energy adoption, and the enhancement of domestic production capacity. In this process, university–industry collaborations, technological innovations, entrepreneurship ecosystems, and technopark structures play key roles.

Recognizing this global transformation, our university places the vision of sustainable industry and innovation at the center of all academic and research activities. Our scientific studies prioritize projects that translate technological innovations into social benefit. Through industry collaborations, patent research, incubation centers, and technology transfer offices, we actively support a culture of entrepreneurship. Moreover, our infrastructure investments are guided by the principles of energy efficiency, digital transformation, and environmental sustainability, while we equip our students with innovation-oriented thinking skills.

The vision of Biruni University is to bridge knowledge production with industry, contributing to national development while leading the global advancement of sustainable, innovative, and resilient infrastructure systems. In this regard, we regard the Sustainable Development Goals not merely as objectives, but as an integral part of our institutional culture.