

**«ҚАЗАҚ ҰЛТТЫҚ АГРАРЛЫҚ
ЗЕРТТЕУ УНИВЕРСИТЕТІ»
КОММЕРЦИЯЛЫҚ ЕМЕС
АКЦИОНЕРЛІК ҚОҒАМЫ**



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«КАЗАХСКИЙ НАЦИОНАЛЬНЫЙ
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**Subject: Integrating Sustainable Development Goals into Teaching and Curriculum at
KazNARU**

INFORMATION LETTER

As part of our ongoing commitment to global sustainability and academic excellence, Kazakh National Agrarian Research University (KazNARU) is proud to deepen its alignment with the United Nations Sustainable Development Goals (SDGs) across all faculties, embedding these principles into curriculum design, research initiatives, community engagement, and institutional partnerships to foster inclusive, innovative, and impact-driven education.

This strategic integration reflects our institutional mission to educate future leaders, researchers, and practitioners who are equipped to address complex challenges in agriculture, environment, health, and society. With 85–90% of our academic courses explicitly aligned with the United Nations Sustainable Development Goals (SDGs), we ensure that students engage with globally relevant frameworks that promote sustainability, equity, and interdisciplinary problem-solving across sectors.

The SDGs offer a universal framework for addressing pressing global issues—from poverty and hunger to climate action and responsible consumption. By embedding these goals into our courses and teaching materials, we ensure that our students not only gain technical expertise, but also develop the ethical, interdisciplinary, and systems-thinking skills necessary for sustainable development.

Below is an overview of how each faculty at KazNARU is incorporating relevant SDGs into its academic programs and pedagogical approaches:

Faculty of Agrotechnologies

Relevant SDGs: SDG 2 (Zero Hunger), SDG 9 (Industry, Innovation and Infrastructure), SDG 12 (Responsible Consumption and Production)

Courses in precision agriculture, smart farming systems, and agri-informatics are being redesigned to emphasize sustainable food production, resource efficiency, and technological innovation. Students explore how digital tools—such as sensors, drones, and AI—can optimize yields while minimizing environmental impact. Teaching materials now include case studies on sustainable agri-tech startups and circular farming models.

Faculty of Agro-Engineering

Relevant SDGs: SDG 7 (Affordable and Clean Energy), SDG 9 (Industry, Innovation and Infrastructure), SDG 13 (Climate Action)

Agro Engineering programs are integrating renewable energy systems, low-carbon infrastructure, and climate-resilient design into core modules. Students learn to engineer irrigation systems, machinery, and post-harvest technologies that reduce emissions and energy use. Faculty are also embedding life-cycle analysis and sustainability metrics into engineering design courses.

Faculty of Water Resource Management and IT

Relevant SDGs: SDG 6 (Clean Water and Sanitation), SDG 13 (Climate Action), SDG 15 (Life on Land)

Water resource management courses now emphasize integrated watershed management, climate adaptation, and equitable access to water. Teaching materials include simulations of transboundary water governance, analysis of water-energy-food nexus, and field-based learning on sustainable irrigation practices. Students are encouraged to develop solutions for water scarcity and pollution in Central Asia.

Faculty of Forest and Land Management

Relevant SDGs: SDG 15 (Life on Land), SDG 13 (Climate Action), SDG 11 (Sustainable Cities and Communities)

This faculty is embedding ecosystem restoration, biodiversity conservation, and sustainable land-use planning into its curriculum. Courses now include modules on carbon sequestration, forest certification, and land tenure systems. Students engage with GIS tools to map deforestation and design reforestation strategies aligned with national and global targets.

Veterinary Faculty

Relevant SDGs: SDG 3 (Good Health and Well-being), SDG 2 (Zero Hunger), SDG 12 (Responsible Consumption and Production)

Veterinary education at KazNARU is being enhanced to address zoonotic diseases, food safety, and animal welfare. Courses incorporate One Health principles, linking human, animal, and environmental health. Teaching materials include global case studies on antimicrobial resistance, sustainable livestock management, and ethical veterinary practices.

High School of Business and Law

Relevant SDGs: SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production), SDG 17 (Partnerships for the Goals)

The Business School is embedding sustainability into entrepreneurship, finance, and management courses. Students analyze business models that prioritize social impact, environmental stewardship, and inclusive growth. Modules on ESG (Environmental, Social, Governance) reporting, sustainable supply chains, and SDG-aligned investment strategies are now part of the core curriculum.

Cross-Faculty Initiatives and Pedagogical Enhancements

To ensure coherence and impact, KazNARU is also implementing cross-faculty initiatives that support SDG integration:

- **Curriculum Mapping:** Each faculty is conducting SDG mapping exercises to align course outcomes with specific goals and targets.
- **Capstone Projects:** Students are encouraged to undertake final-year projects that address real-world sustainability challenges in agriculture, water, energy, and health.
- **Faculty Development:** Workshops and seminars are being held to support instructors in incorporating SDG themes, interdisciplinary approaches, and participatory teaching methods.
- **Digital Resources:** A centralized repository of SDG-related teaching materials, case studies, and multimedia content is being developed to support faculty and students.
- **International Collaboration:** Through Nexus and other regional partnerships, KazNARU is co-developing SDG-focused modules with universities in Germany, the United States, and Central Asia.

Why This Matters

Integrating SDGs into our academic programs is not just a symbolic gesture—it is a strategic imperative. As educators, we have a responsibility to prepare students for a world where sustainability is central to innovation, policy, and practice. By embedding these goals into our teaching, we:

- Equip students with the tools to solve complex, interconnected problems.
- Enhance the global relevance and competitiveness of our programs.
- Contribute to Kazakhstan's national development priorities and international commitments.
- Foster a culture of responsibility, resilience, and ethical leadership.

All faculty members actively participate in this transformation. Whether by revising syllabi, sharing best practices, or mentoring student projects, your contributions are vital to making sustainability a lived reality at KazNARU.

Vice Rector for International Relations



Rafis Abazov