



International Summer School – 2025



ENGINEERING TECHNOLOGIES FOR SUSTAINABLE AGRICULTURAL DEVELOPMENT

● **June 2–15, 2025 | Almaty, Kazakh National Agrarian Research University**

Head of the school: Keshuov Seytkazy Asylseitovich, Doctor of Technical Sciences, Professor, Academician of the National Academy of Sciences of the Republic of Kazakhstan

Moderator: Moldybaeva Nurgul Iskakovna, PhD, Senior Lecturer, Department of Power Engineering and Electrical Engineering

Facilitator: Zinchenko Dmitry Andreevich, assistant of the Department of Power Engineering and Electrical Engineering, master's degree

Technical support: Sarsenbekuly Dat, assistant of the Department of Power Engineering and Electrical Engineering, master's degree



Event Description

The International Summer School 2025, organized on the basis of KazNARU, became a significant educational event that brought together students, master's students, doctoral students, teachers and scientists from **Kazakhstan, China, Uzbekistan, Kyrgyzstan, Belarus and Bulgaria.**

The International Summer School 2025 in the field of "ENGINEERING TECHNOLOGIES FOR SUSTAINABLE DEVELOPMENT OF AGRICULTURE" was organized at the Faculty of Engineering Technologies.

The school program was aimed at developing the competencies of future engineers in the field of **digitalization, automation, energy efficiency and sustainable development** of the agro-industrial complex. Participants underwent intensive two-week training in a hybrid format - with lectures, practical sessions, off-site events and international scientific exchange.



Goals and objectives

- Improving knowledge and practical skills in the field of **engineering and digital technologies** for agriculture;
- Introduction to advanced solutions in the field of **energy supply, automation and renewable energy sources** ;
- Formation of an **international professional community** of young researchers and specialists;
- Development of skills in **interdisciplinary analysis and engineering modeling** ;
- Promoting academic mobility and scientific cooperation.



Thematic areas

- **Sustainable energy supply for agricultural enterprises** (autonomous systems, energy storage devices, renewable energy sources);
- **Automation and digital sorting** using machine vision and AI;
- **Mechanization and robotization of the agro-industrial complex** (tillage, haylage, transport);
- **Purification and rational use of water resources** ;
- **Software platforms for engineers** : MATLAB, Simulink, LabVIEW;
- **Engineering pedagogy and digitalization of education.**



Practical components

- 🌱 **Study tour to Bayserke Agro LLC** : advanced engineering solutions in crop and livestock production;
- ⚡ **Technical visit to the Moinak hydroelectric power station** : issues of autonomous energy supply for rural areas;

-  Master classes using modern software for modeling and data analysis.

Geography and composition of participants

- **More than 40 participants**, including in-person listeners from Kazakhstan, China and Uzbekistan;
- Representatives of the master's, doctoral and teaching staff ;
- Participants from **agricultural, energy and technical universities and colleges** ;
- **Online connection of listeners and experts** from the CIS countries and Europe.

Speakers and partners

The program was implemented by **leading scientists, professors, developers and engineers** from Kazakhstan, Bulgaria, Belarus, Uzbekistan, Kyrgyzstan and China. The school became a unique platform for discussing the challenges of agricultural engineering, demonstrating best practices and exchanging experience between generations of specialists.

Kazakhstan speakers and teachers:

Keshuov Seitkazy Asylseitovich - Doctor of Technical Sciences, Professor, Academician of the National Academy of Sciences of the Republic of Kazakhstan, KazNARU . Head of the school, author of lectures on modeling, autonomous power supply systems.

Alikhanov Dzhakhfer Muzaferovich - PhD, professor of KazNARU . Class on digital sorting and quality assessment of products.

Umbetkulov Ertugan Kozhagulovich – PhD, professor at AUES. Lecture on energy storage devices for agricultural facilities.

Tergemes Kazybek Tileugaliuly – PhD, professor at AUES. Lecture on frequency control of motors.

Khazimov Marat Zhalelovich – PhD, professor of KazNARU . Experience in beekeeping engineering.

Musabekov Nazarbek Rasulbekovich – Master of Engineering. Sciences, KazATIU . Lesson on AI in the agricultural sector.

Foreign speakers and experts:

Sheryazov Saken Koishibaevich (Russia) – Doctor of Technical Sciences, Professor of South Ural State Agrarian University. Lectures on energy in the agro-industrial complex, renewable energy sources.

Penchev Stanislav (Bulgaria) – Dr., Associate Professor, University of Ruse. Spectral analysis, MATLAB.

Berdyshev Abdurakhim Suleimanovich (Uzbekistan) – Doctor of Technical Sciences, TIAME. Lectures on drinking water purification.

Orda Alexander Nikolaevich (Belarus) – Doctor of Technical Sciences, BSATU. Technologies for reducing soil compaction.

Kasymbaev Bekbosyn Myrkasymovich – PhD, University named after. Sakharov. Forage procurement and mechanization.

Undirbaev Makulbek Seydazymuly – Ph.D., University. Sakharov. AI in agricultural engineering.

Daskalov Plamen (Bulgaria) – Dr., Professor, University of Ruse. MATLAB / Simulink.

Atadzhanov Adilzhan Usenovich – associate professor, TIAME. Water saving technologies.

Khudaev Ibromkhim and Usmanov Nail (Uzbekistan) – associate professors of TIAME. Lectures on drainage systems.

Cherikbaev Rakhat Kanashevich – Ph.D., Associate Professor. Tracked vehicles in the agro-industrial complex.

Asanov Arstanbek Avlezovich (Kyrgyzstan) – Doctor of Technical Sciences, Professor, National Research Center "KONOS". Transport in the highlands.

Mamyrova Meerim Ishenbekovna (Kyrgyzstan) – candidate of pedagogical sciences, associate professor, KSTU. Psychological and pedagogical support students.

Certification

Upon completion of the training, participants received **a personalized international certificate** confirming participation in the educational program, practical modules and lectures of the school.

Gallery and details





