



Oles Honchar Dnipro National University: Prospects for development under wartime and postwar period



2023 – Everything to Win

Thank you for your support!



DNU – 2023: Educational and research capacity



Oles Honchar Dnipro National University traces its history as a classical university back to 1918. It was during the time of the independent Ukrainian state, which was formed after the fall of the Russian Empire and before the advent of the Soviet power, that in 1918 the Ukrainian government of Hetman Pavlo Skoropadsky founded Katerynoslav University in Katerynoslav. The university opened with **4 faculties: History and Philology, Law, Medicine, and Physics and Mathematics.**

Having overcome a way of more than a hundred years, Katerynoslav University has become a center of education and science in the Dnipro region.



DNU – 2023: Educational and research capacity



Thanks to the efforts of leading scientists, the university has formed widely known schools of thought in **Mathematics, Mechanics, Radiophysics, Electronics, Rocketry and Space Technology, Neurocybernetics, Biotechnology, Inorganic Chemistry, Historiography and Source Studies, History of Ukraine, Archeology, Germanic Studies, Literature and Linguistics, etc.**

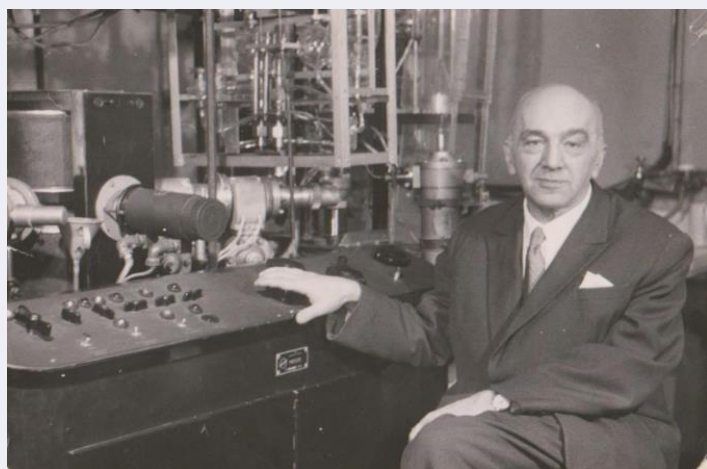




DNU – 2023: Educational and research capacity



Academician **Oleksandr Brodsky** in 1920-1930 headed the Department of Physical Chemistry at the DSU (Dnipropetrovsk State University), and later for 30 years he directed the L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine.



In particular, under the leadership of the great chemist Brodsky, for the first time in the USSR, the installation for the production of heavy water (1934), heavy oxygen (1937), and concentrates of heavy nitrogen (1949) were created. Samples of heavy deuterium and later heavy oxygen water played an important role in solving the nuclear problem.

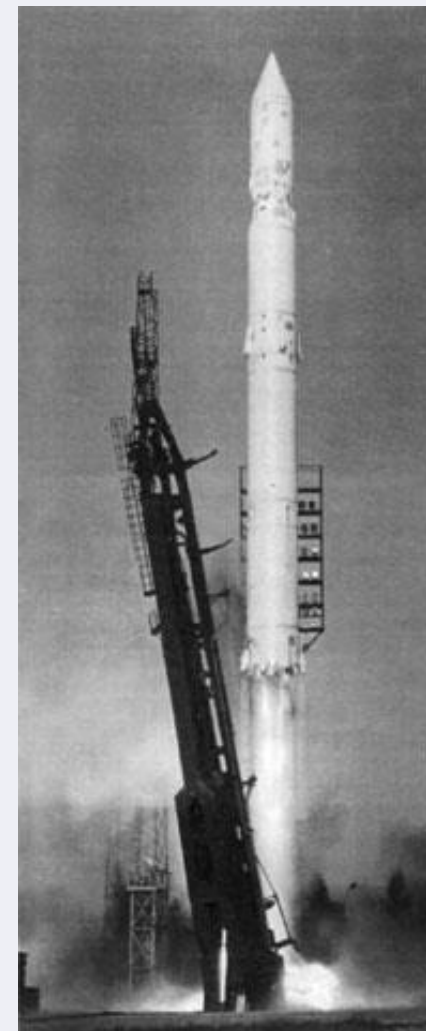
Many prominent scientists considered this discovery of heavy water to be one of the most important achievements of the twentieth century, in particular isotope chemistry.



DNU – 2023: Educational and research capacity

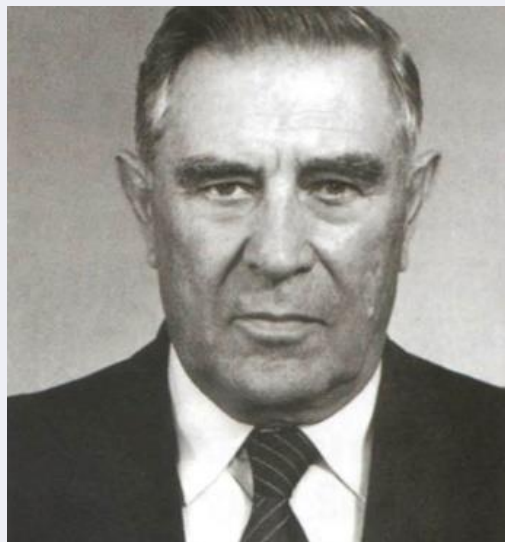


In the early 1950s, a **school of thought in rocketry** was established. It developed along with rocket and space technology around the world. The graduates of our university provided solutions to personnel issues at enterprises throughout the Soviet Union. Today, these are the most popular areas of rocket and space technology: design, construction, production of space launch vehicles, creation of space systems that include, in addition to the launch vehicle, a launch pad and a flight control center.





DNU – 2023: Educational and research capacity



The origins of our scientific school were founded by famous creators of rocket and space technology, such as academicians **Mikhail Yangel and Vasily Budnik**. Their ideas have become fundamentals of the world rocketry: the use of platform approaches to the creation of spacecraft, deserted autonomous launch of space launch vehicles, and in military rocketry. The creation of the Satan rocket is unsurpassed up today.



DNU – 2023: Educational and research capacity



14 faculties, 3 educational centres

- 89 Bachelor programmes
- 64 Master programmes
- 35 PhD programmes

3 research institutes, 65 departments

- 167 Doctors of Science, Professors
- 466 PhDs, Associate Professors

Scientific schools

- Humanities
- Natural science
- Social and behavioural science
- Engineering



DNU – 2023:

Regional leader in world and Ukrainian rankings

- For the 3rd year in a row, in 2023 DNU holds the 4th position in the national chart of the **Times Higher Education World University Rankings** and it is the only representative of regional universities on the list.
- In 2023, DNU for the first time was included in the **Times Higher Education University Impact Rankings 2023** and took the 4th place among Ukrainian HEIs (range 1001+ of the total world ranking).
- In 2021, for the first time, it entered the **QS Emerging Europe & Central Asia** ranking and took the 11th position among HEIs in Ukraine. In 2022, DNU retained its position.
- For the second year in a row, DNU ranks first among universities in the region and the 16th in Ukraine in the **Transparent Ranking: Top Universities by Citations in Top Google Scholar Profiles**.
- According to the rating of Ukrainian HEIs **Top-200 Ukraine 2022**, DNU entered the top-20 best universities of Ukraine and became the leader of regional institutions.





DNU – 2023:

Educational and research capacity

Humanities Sciences

- Faculty of Ukrainian and Foreign Philology and Study of Art
- Faculty of Social Sciences and International Relations
- Faculty of History
- Faculty of Systems and Means of Mass Communication

Social and Behavioral Sciences

- Faculty of Psychology and Special Education
- Law Faculty
- Faculty of Economics

IT and Engineering Sciences

- Faculty of Applied Mathematics
- Faculty of Physics, Electronics and Computer Systems
- Faculty of Mechanics and Mathematics
- Physical and Technical Faculty

Natural Sciences

- Faculty of Biology and Ecology
- Faculty of Medical Technologies of Diagnostics and Rehabilitation
- Faculty of Chemistry



DNU – 2023:

Education for defense and development of Ukraine

New education programmes – 2023:

- computer engineering of unmanned aerial vehicles and complexes
- chemistry of medicinal compounds
- digital media

Priority development – 2023:

- aviation, and rocket and space technology
- avionics
- cybersecurity
- computer science
- computer engineering
- biology and nature rehabilitation

DNU initiatives – 2023:

- military department for training officers for missile forces
- training system for the rocket and space industry under a co-financing program with the State Space Agency of Ukraine





DNU – 2023: Science for defense and rebuilding of Ukraine

I. Research – Development – Design – Implementation

NATO's ARTEMIS mission to the lunar orbit/surface

- technologies for solid rocket fuel production from domestic components
- rocket and space vehicles, engine building, and space information technologies
- structure dynamics and strength, hydroaerodynamics, heat and mass transfer, and ballistics computation
- energy-efficient technologies ensuring a modern level for post-war industrialization





DNU – 2023:

Science for defense and rebuilding of Ukraine II

II. Research – Development – Design – Implementation

- composite materials of specified properties
- teaching telecommunications and radio electronics
- artificial crystals growth with selected properties (the products are currently used in high-precision weapon)
- mobile applications for alerting about enemy aircraft
- biodiversity research and conservation
- assessment of damage to the nature of Ukraine caused by the war
- soil and water resources rehabilitation





DNU – 2023:

EdTech as a transformation driver in all industries

Transforming the future of education through advanced technology

Personality-oriented education aimed at solving interdisciplinary problems using smart technologies, AI, and machine learning is provided. Forecasting future labor market needs is performed.

- DNU works proactively, creating various forms of cooperation with high-tech industrial and IT corporations, engaging businesses in education issues and students in understanding the mechanisms of the labor market and the importance of lifelong learning. The First Job Program was also put into practice
- digitalization of educational and administrative processes, implementation and development of the Digital University system
- increasing enrollment by opening new modern programs
- implementation of EU education practices acquired within academic exchange programs





DNU – 2023:

Human potential at the center of attention

- Personalized education: customized education services
- social responsibility and safety for the university, students, and the community of Dnipro City
- Giving refuge to universities relocated to DNU from occupied territories:
 - Volodymyr Dahl East Ukrainian National University (Sievierodonetsk)
 - Donbas State Pedagogical University (Bakhmut)
- Renovation of a dormitory for temporarily displaced persons from occupied Mariupol
- Developing a comfortable living environment for students and academic staff
- Education services of the Botanical Garden, Aquarium, Scientific Library, and Palace of Culture of Students to the citizens of Dnipro City
- “Point of unbreakability” with electricity, water, heat, food, and internet at DNU for people in need

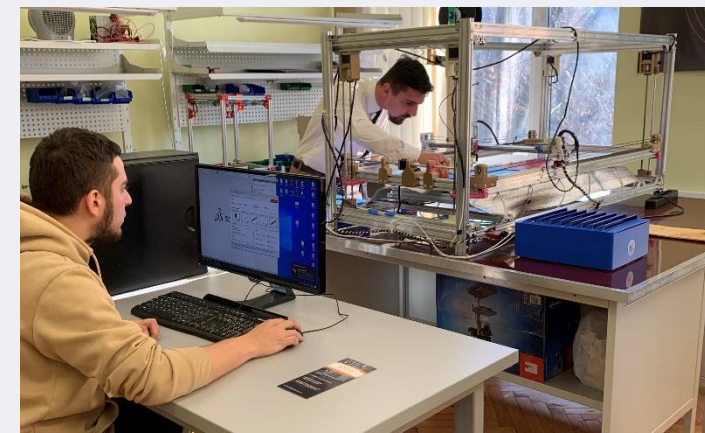




DNU – 2023: EU integration for sustainable development

In 2022, UAH 16,660,000 was raised under international programmes and individual grants

- Cooperation with the global academic community to modernize education and conduct research
- Implementation of the project “Development of Theoretical Foundations for the Creation of Ultralight Launch Vehicles from Polymeric Materials” (EU Horizon 2020)
- Implementation of the project “European Green Deal as a Prospect for Sustainable Economic Development” (EU Erasmus+ *Jean Monnet*)
- Implementation of international mobility for students and academics





DNU – 2023: European Universities collaboration

DNU is a co-founder of the Eastern Partnership University Cluster

- In 2022 Charles University in Prague, in cooperation with the Ministry of Foreign Affairs of the Czech Republic, took part in creating the Eastern Partnership University Cluster (EPUC) initiative <http://surl.li/esyzi>
- By invitation of Rector Milena Králíčková DNU joined the Cluster
- On October 19, the rectors of 12 universities signed a Memorandum of Understanding *in Prague*. The Cluster united Charles University and universities from Germany, Hungary, Poland, Italy, France, Ukraine, Moldova, and Georgia
- The idea is working together for R&D, education, introducing European values and fundraising by applying for EU funding





DNU – 2023:

Oles Honchar Dnipro University and Charles University in Prague

Universities were granted by the Ministry of Foreign Affairs of the Czech Republic under the program "Strengthening the capacities of public higher education institutions in Ukraine and Moldova in 2023".

Project title: Support for improving the quality of teaching, research and international activities at Oles Honchar Dnipro National University (DNU)

The project aims at supporting inter-university scientific, research and pedagogical cooperation, implementation of specialized studies, transfer of Czech know-how in the field of higher education management, cooperation in professional publications, scientific and academic cooperation, etc.

Implementation period: June – December 2023

Main outputs:

- Modernization of the educational process at DNU
- Improving scientific activities and research management at DNU
- Strengthening and expanding DNU's international activities



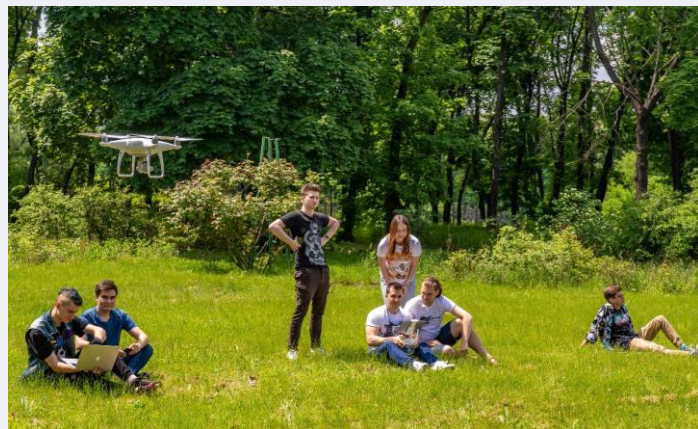


DNU – 2023: The infrastructure for sports and self-development

Student Palace of Culture of DNU



Botanical Garden of DNU



Scientific-educational Complex "Aquarium"



Palace of Sports of DNU