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## NATIONAL MINING UNIVERSITY — THE OLDEST MINING HIGHER EDUCATION INSTITUTION IN UKRAINE

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The city of Katerynoslav (nowadays Dnipropetrovsk) was the center of an important mining — metallurgical area. To the east of it, the Donetsk basin with developed coal and steel industry, to the West — the Kriwyj Rih iron mining area, to the Southwest — Nikopol — Marganetsk area, to the Northeast — Bahmutsk deposits of salt, dolomite and Nikitovsk mercury mine were situated, to the South — the Crimean peninsula, which is rich in mineral and salt deposits. Railways to the mining and metallurgical centers of modern Ukraine have connected the city.

On the territory of the Russian Empire at the end of the nineteenth century preparation of engineers for the mining industry was conducted in the Petersburg Mining Institute and a mining department of the Tomsk Institute of Technology. Later a mining department was created at the Donsk (Novocherkassk) Technical Institute as well. During this period, mining specialists were prepared also in technical mining (Steigersk) schools: Lisichansk mining technical school and Gorlowsk mining technical school named after S.S. Poliakov in Donbas, Uralsk (Katerynburg) and Niznietagilsk mining technical schools in Ural, Barnaul mining technical school in Altai, Irkutsk mining technical school in Siberia, Dombrowsk mining technical school in the Dombrowsk coal basin.

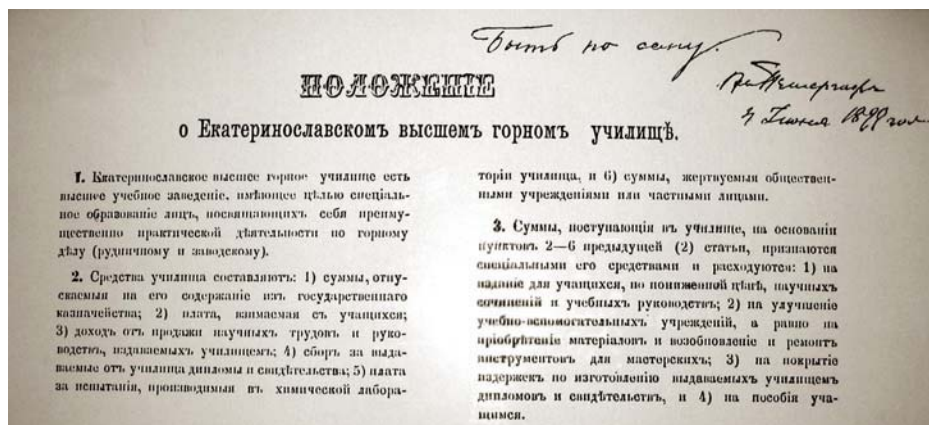
On September 30, 1899 in Katerynoslav the Higher Mining Technical School was opened following the petition from the local government and the 21st Congress of Mining Industrial Engineers. At the beginning it was placed in the former Potemkinskiy Palace, but was soon moved into the building specially constructed for the purpose under the project of architect Beketov. In it there were well-equipped auditoriums, drawing halls for students, classes of Mining Craft and Geology, and also laboratory of mineralogy, the common chemistry, physics and electrical engineering. A huge help for students in their study was a special machine hall and libraries (besides the general library, at each educational class were available special, meeting the requirements of each discipline).

The first director of the School was a well known mining engineer S.N. Suchkov. In 1908 he was changed by full professor N.I. Lebedev (1863–1931). It was possible to in-

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volve first class teachers, experts on mining and metallurgy, to lecture in the school. Mining Craft was lectured by professors O.M. Terpigorev (1873–1959) and M.M. Proto diakonov (1874–1930), Investigation and Mechanical Enrichment of Minerals — professor V.O. Guskov (1869–1949), Survey — professor P.M. Leontovsky (1871–1921).



The Charter about the organization of Katerynoslav Higher Mining Technical School

Preparation of students was conducted in two branches: Mining and Factory (Metallurgical). Initially training was carried out during three years. Students were in every possible way encouraged to study. For their use a volumetric library was opened, at first in the Class of Mining Craft, and then in the School. The future professor, and at that time a mining engineer, collegiate assessor Alexander Mitrofanovich Terpigorev managed the library as well as the class. The book fund was formed from donations of enterprises and individual citizens. Different grants were given to students: the Poltava Nobility, Tambov Provincial Manual, the Donsk Regional Board, Taurian Provincial Manual, Katerynoslav Provincial Manual, Katerynoslav City Manual and Valensk Imperial Medical Society. The amounts were significant, from 95 up to 420 roubles. Grants to outstanding students were also provided, from 9 up to 82 roubles. Distribution of Students was conducted according to estates and creeds. It is necessary to note that also persons already having higher education studied in the School.

Since 1905 the News of the Higher Mining Technical School began to be published. In it contained were general reports on the work done for the accounting period and scientific articles.

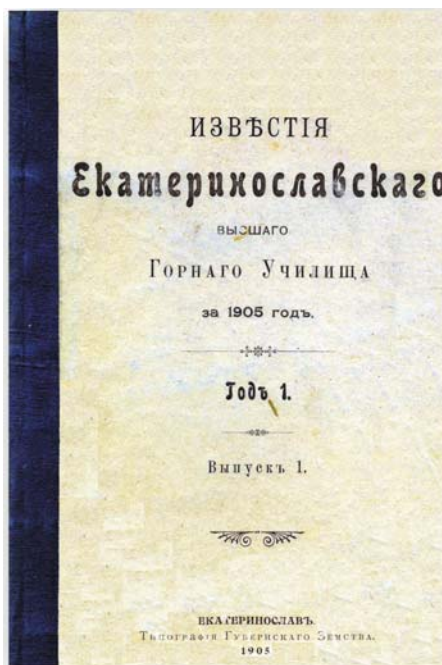
During the 100 years of activity at the University more than 56 000 highly qualified specialists were trained, more than 500 monographs and 250 textbooks and manuals, which are well known beyond the borders of Ukraine, were published. About 150 Doctors and 1750 Bachelors of Science were trained. Scientists of the University were responsible for about 2600 inventions 300 of which they patented in foreign countries. The scientists of the University carried out three recognized scientific discoveries during the recent years.

From the very beginning the University developed its programs of education as a combination of solid academic training and practical field experience. The growth conti-

nued due to the scientific qualification of the teaching staff and its interactions with pits, mines and metallurgical plants situated nearby (Kryvyi Rih, Donbas, Katerynoslav) in combination with modern scientific and technical level of the laboratories.



Construction of main building of Katerynoslav Higher Mining Technical School



First edition of News of Katerynoslav Higher Mining Technical School, 1905

The idea of scientific substantiation of contents and methods of modern teaching techniques forms the basis of the University. The University follows the best world standards, which are built on the positive experience of the national education system and is recognized as a leading scientific and methodological center. A system of continuous education is introduced at the University, which allows individualization and broadening of the students' minds. It gives them the independence to choose subjects and even simultaneously to obtain a second specialty at the University or at other leading Universities in Europe. The ability to obtain additional education with proper certification in the following fields: environment protection, ecological and computer technologies, utilization of Industrial waste products, economics, law, geoinformatics, power management, linguistic training — gives the University graduates a competitive edge. By cooperation with leading universities of Europe and America, collaboration with home and foreign business enterprises, banks, business centers, commercial structures for students trial placement period and practical work and also a high level of humanities in education, the University is able to contribute to the world standard of education, and to occupy a leading place among higher educational establishments, and respond to changes in the economy and labor market with proper speed.

At the beginning of the 20th century leading and world well-known scientific schools were created at the Mining University: cybernetics (Prof. Y.I. Hridina), mining (academician O.M. Terpigorev, Prof. M.M. Protodiakonov, Prof. L.D. Sheviakov), mineral dressing (Prof. V.O. Guskov), surveying (Prof. P.M. Leontovsky), geology (Prof. M.I. Lebedev), metallurgy (Prof. P.G. Rubin), electrical chemistry (Prof. L.V. Pisarzhevsky), electrical welding (Prof. V.P. Nikitin).

Scientific and pedagogic schools of the University promoted the development of the network of scientific and educational establishments not only in Prydniprovya, but also beyond the borders of Ukraine.

The Dnipropetrovsk Mining Institute was an instrumental organizer of other institutions, such as: the Dnipropetrovsk State Medical Academy (1920), the State Metallurgical Technical University of Ukraine and the Ukrainian State University of Chemistry and Technology (1930), the Moscow Welding Institute (1925), the North Caucasian Mining and Metallurgical Institute (1931), the Scientific Research Tube Institute (1929), the Scientific Research Mining Institute (1925), the Institute of Physical Chemistry of the National Academy of Sciences of Ukraine (1927), the Institute of Mining Mechanics of the National Academy of Sciences of Ukraine (1945), the Scientific Research Institute of Coal (1928), the Institute of Rock Mechanics of the National Academy of Sciences of Ukraine (1967), and the Institute “Dniprodiprosht” (1928).



The first teaching staff, 1901.

Stands: A. Sherin, M. Averkiev, V. Burdakov, O. Terpigorev, A. Chumanov, N. Lebedev.

Sits: P. Stepanov, P. Rubin, L. Jachevsky, S. Usaty, D. Sintsov, P. Sobolevsky

Traditionally the University has been involved in the development of high scientific-pedagogical potential in combination with the developed modern scientific laboratories, unique scientific equipment, close relationships with the industry and active participation

in the solution of actual problems of Ukraine's economy. This favored further development of the scientific schools and directions organized at the beginning of this century having enriched them with modern content.

Scientists of the University take active part and are the leaders in the implementation of national and inter-branch scientific programs. In particular, they are involved in the extraction and utilization of methane for increasing the safety of mining and economy of coal extraction, and in solving the problems of extraction and concentration of mineral resources, including ores of precious metals. These scientific directions have been actively developed in the field of mining and metallurgy, electric power engineering, ecologically clean utilization of coal in power generation, environment protection, and the complex mining at depths. Special attention is devoted to the development of economic research and scientific and technical basis for restructuring of mines, the coal industry in particular. The National Mining University of Ukraine is recognized worldwide as a multi-profile higher educational establishment. This is shown by its participation in international scientific and educational programs, academic exchanges, and participation of University specialists in work of prestigious international symposia, conferences, and congresses. The recognition is also shown by holding authoritative international forums at the University's facilities, and by the high level of language training of students and specialists. At present the University has connections with more than 60 higher educational establishments and institutions of 19 other countries, and is a member of such famous international companies and associations as: the European Society for Engineering Education, the International Association for Energy Economics and the International Society of Rock Mechanics. The number of publications abroad is increasing constantly.



The main building of the National Mining University

Students, post-graduate students and scientists of the Mining University are studying and working on a trial basis at the famous educational centers of Germany, America, and Great Britain. Specialists from Europe and America come to work at the National Mining University. Students and postgraduate students also come here from these countries to study. The University is a partner of joint international educational projects.

The highly qualified teaching staff and good relationships with mining and metallurgical business enterprises facilitated the development and reorganization of the school in 1912 to the Mining Institute. In 1993 the Institute was given the status of the State Mining University of Ukraine and in June 1997 it was given the status of the National Mining University of Ukraine, and in 2003 it was given the status of the National Mining University.

At present it is the leading educational institution of the country. It has been training highly qualified specialists and scientists in all modern professions for Geological Prospecting and Mining Industries, fuel and energy enterprises, mineral and raw material plants, mechanical engineering and automation systems, integration of information science into production. Graduates of the University are masters of computer technology, and are able to solve modern problems of industry development, economics and law. There are six faculties of full-time education and a Faculty of Extramural Education at the University.

Integral parts of the University include:

- external studies;
- post-graduate studies;
- doctoral studies;
- inter-branch institute of Continuous Education;
- a developed scientific-research department;
- the Ukrainian-American and Ukrainian-German linguistic centers and the Center of Ukrainian-Polish Cooperation;
- the Ukrainian-Bavarian center of the foundations of business enterprise;
- the Dnipropetrovsk business center;
- the Prydniprovsky center of power management;
- the Prydniprovsky center of technical security of information;
- the Prydniprovsky center of international computer network of the Ministry of Education and the National Academy of Sciences of Ukraine;
- the Ukrainian-American Lyceum;
- the Marganetsk mining college;
- the Pavlohrad mechanical engineering secondary technical school.

About 9000 undergraduate students, post-graduate students, and doctoral students are studying in 26 modern specialties at the University. The training staff is made up of nearly 100 Doctors of Science, professors and 350 Bachelors of Science, Assistant Professors. High quality of education is provided due to the developed infrastructure, computer engineering technology and computer network, a well-equipped library, strong material and technical laboratory basis, and modern teaching techniques.

The National Mining University of Ukraine is a new type of educational and scientific institution. It employs modern teaching and laboratory methods, provides good social infrastructure for the students and modern system of social protection of workers and boasts high scientific potential. These are being practically used in the structural reorganization of the fuel and energy, mineral and raw materials industry of the country, creation of new working places, strengthening of Ukraine's economy and increasing its international authority.

#### REFERENCES

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