

Profile of the Education program

General information	
The official name of the education program	Industrial and Civil Engineering
Specialty	192 Construction and civil engineering
Field of knowledge	19 Construction and architecture
Higher education degree and title of qualification in the original language	Master of Science Master of Civil Engineering
Type of diploma and scope of education program	Master's degree diploma, unitary, 90 ECTS credits, the term of apprenticeship is 1 year 4 months
Accreditation	Ministry of Education and Science of Ukraine, Accreditation Certificate ND 2190239 validity period - until July 01, 2023
Cycle/level	Second (Master) level NQF of Ukraine - Level 8 FQ-EHEA - Second Cycle EQF-LLL - Level 7
Entry level education requirements	Holder of a Bachelor's degree, Specialist's degree
Language(s) of instruction	Ukrainian, English
Duration of the education program	5 years
Education program objective	
	Professional training in the field of design, construction, operation, monitoring and reconstruction of buildings and structures, engineering support and equipment of construction sites, scientific research and educational activities.
Education program objective	
Subject area	<p>Objects of study: scientific foundations, technologies, sites, structures and equipment in construction and civil engineering.</p> <p>Learning objectives: training of specialists capable of developing and using modern technologies in construction and civil engineering.</p> <p>The theoretical content of the subject area: the theory of the processes of design, construction, operation, maintenance, reconstruction of construction sites and civil engineering.</p> <p>Methods, techniques and technologies: experimental methods for studying materials and processes, modeling methods, special methods, technologies in construction and civil engineering.</p> <p>Tools and equipment: experimental measuring instruments, construction process equipment, specialized software.</p>
Education program orientation	Educational and professional program
The main focus of the education program and specialization	Special education in industrial and civil engineering Keywords: reconstruction, behavior management, reconstruction technology, reliability, high-rise buildings, engineering structures, dynamics, geotechnical

	support, underground construction, complex engineering and geological conditions
Program features	
Graduate employability and further academic studies	
Employability	A holder of the Master's degree in industrial and civil engineering is able to perform the following professional work (according to the Common Classifier 003: 2010): 2142 Civil Engineering Professionals 2142.1 Researchers (civil engineering) 2142.2 Civil Engineers 2310.2 Teachers of universities and higher educational institutions Professional certification opportunity
Further academic studies	Education at the third (educational-scientific) level of higher education
Teaching and Assessment	
Teaching and learning	Student-centered training, lectures, practical exercises, independent work using textbooks, teaching aids, practical training, consultations, project work, preparation of the Master's qualification work.
Assessment	ECTS system that provides students with grades for all types of classroom and extracurricular educational activities aimed at mastering the workload of the educational program. Written exams, practice report, presentation of individual tasks. Intermediate modular control, final control in the form of exams and tests in the relevant disciplines, settlement and graphic work, term papers and projects. Public defense of the qualification work of the Master.
Program Learning Outcomes	
Standard Program Learning Outcomes	The ability to demonstrate ownership of traditional and modern innovative research methods; The ability and knowledge to perceive and understand scientific and technical foreign literature by profession, to compile scientific and technical documentation and communicate on professional topics; The ability to demonstrate the ability to evaluate and adjust the level of safety of workers in enterprises and to provide social guarantees for workers in the field of protection; The ability to demonstrate possession of geoinformation technologies, basic theoretical principles, hardware and software for their implementation, means of creating electronic maps, thematic layers, generalization of spatial objects of the real world, GIS analysis; The ability to develop measures for the protection of labor and the environment during research and in production activities; The ability to conduct the formulation and conduct of experiments, metrological support, collection, processing and analysis of results, identification of theory and experiment; The ability to carry out calculations of the effectiveness of investment projects, calculations of profitability and temporary measurement of investment, determine ways to optimize the investment process; The knowledge of management features at different levels of the life cycle of enterprises, the specifics of managing varieties of enterprises and their associations, the conditions of the external and internal environment, the creation and registration of enterprises of various legal forms; The ability to correctly simulate structural elements in software and

	<p>analyze the calculation results;</p> <p>The ability to constructively implement passive and active control systems;</p> <p>The ability to assess the technical condition of building structures, their degree of wear and bearing capacity;</p> <p>The ability to independently solve issues of calculation and design of reinforcement of metal, reinforced concrete and wooden structures;</p> <p>The ability to evaluate the bearing capacity of soils for use as the foundations of buildings and structures in difficult engineering and geological conditions, to design foundations and footing on subsidence and technogenic soils;</p> <p>The ability to use advanced methods of technology and organization when performing repair and construction work, to know how to reduce their labor and energy intensity.</p> <p>The ability to choose the basic machines and mechanisms for performing these works.</p>
Higher education Program Learning Outcomes	<p>For non-formal specialization “Industrial and civil engineering”</p> <p>The ability to use various laws of distribution of random variables and connecting standard software systems to solving reliability problems;</p> <p>The ability to use regulatory and reference materials for calculations of building structures of buildings;</p> <p>The ability to analyze the design features of various building schemes and reflect them in the calculation and analytical programs;</p> <p>The ability to draw up design schemes for varieties of engineering structures and to design elements of engineering structures and nodes of their connection;</p> <p>The ability to perform calculations of buildings and structures under construction in seismic zones;</p> <p>The ability to reproduce the design schemes of various structures and analyze the calculation in analytical programs, taking into account various conditions;</p> <p>The ability to design a new object from the old one, conduct a feasibility study of the options for decisions being made and strengthen the foundations;</p> <p>For non-formal specialization “Geotechnics of underground urbanistics”</p> <p>The ability to use the technique of engineering and geological work.</p> <p>The ability to predict and determine the danger of various natural and natural-technological processes and phenomena on the stability of various structures;</p> <p>The ability to evaluate the architecture of underground structures, design tunnels and operate underground urban facilities;</p> <p>The ability to use mechanical, structural, thermal and hydraulic means of artificial foundations and design them using calculation programs.</p>
Resource support for program implementation	
Staff assistance	The educational program is provided by scientific and pedagogical staff of 15 people, including 4 Doctors of Sciences, Professors, 11 Candidates of Sciences, Associate Professors
Logistics	<p>The state of the material and technical base complies with the requirements and provides the opportunity for the effective implementation of the educational process and the organization of research work.</p> <p>For training of applicants, 6 specialized laboratories are made available,</p>

	as well as a specialized educational computer audience with the necessary equipment and software. The existing facilities (educational, educational, domestic, sports and others) of the university comply with sanitary standards and regulations, state building standards of Ukraine.
Information and educational - methodological support	The content and quality of information and educational-methodological support meets the requirements and is sufficient to ensure high-quality training of specialists in modern conditions. Information about education programs, educational, scientific and pedagogic activities, university structure, admission rules, event announcements, news, etc. distributed on the official website of the University (https://www.kname.edu.ua/) KNUUE named after O. M. Beketov has a library, which provides scientific and fiction literature subscription as well as reading rooms for 540 seats. The university has an electronic repository (http://eprints.kname.edu.ua/), which provides access to higher education applicants to methodological and educational materials (educational and methodical complexes of disciplines, materials for independent and individual work of students, practice programs, etc.), as well as the electronic version of the scientific and technical collection “Communal Services of Cities” and materials of scientific conferences. Students and teachers are provided with access to the Moodle distance learning system (http://cdo.kname.edu.ua). All library computers are connected to the Internet. Access to Internet resources using Wi-Fi technology is organized in the reading room. There is access to scientometric databases Web of Science and Scopus.
Academic mobility	
National Credit Mobility	
International Credit Mobility	Cooperation Agreement No. 89 between Kharkiv National University of Urban Economy named after O. M. Beketov and Lodz University of Technology (Poland). Cooperation Agreement No. 88 dated October 10, 2017 between Kharkiv National University named after O. M. Beketov of Urban Economy and the University of Nova Gorica (Slovenia). Cooperation Agreement No. 69 as of 2016 between Kharkiv National University of Urban Economy named after O. M. Beketov and the Middle East Technical University (Turkey). Cooperation Agreement No. 75 between Kharkiv National University of Urban Economy named after O. M. Beketov and Aristotle University, Thessaloniki (Greece). Cooperation Agreement No. 90 between Kharkiv National University of Urban Economy named after O. M. Beketov and the Estonian University of Life Sciences (Estonia).
Training of foreign higher education applicants	Training of foreign citizens in the state and foreign languages is provided.