

Profile of the educational program

General information	
The official name of the educational program	Oil and gas engineering and technology
Specialty	185 Oil and gas engineering and technology
Branch of knowledge	18 Production and technology
Higher education degree and title of qualification in the original language	Bachelor
Type of diploma and scope of educational program	Bachelor's degree, single, 240 ECTS credits, term of study 3 years 10 months
Availability of accreditation	National Agency for Quality Assurance in Higher Education Certificate of accreditation of the educational program № 418 dated 16.06.2020 validity period - until June 16, 2025
Cycle / level	The first (bachelor's) level, NQF of Ukraine – 6 level, FQ-EHEA – the first cycle, EQF-LLL – 6 level
Requirements for the level of education of the entrant	Availability of complete general secondary education
Language (s) of instruction	Ukrainian
Term of the educational program	5 years
Internet address of the permanent placement of the description of the educational program	https://egts.kname.edu.ua/
The purpose of the educational program	
Formation of general and professional competencies necessary for solving tasks in the field of development of oil and gas fields and transportation of hydrocarbons, development and implementation of technologies for drilling wells, production, industrial collection and preparation of hydrocarbons, transportation and storage of oil and gas.	
Characteristics of the educational program	
Subject area	<p>Object of study: technologies and equipment for drilling wells, extraction, transportation and storage of oil and gas.</p> <p>Learning objectives: formation of higher education students' competencies necessary for solving complex specialized tasks of design and application of equipment and technologies for drilling wells, extraction, transportation and storage of oil and gas.</p> <p>Theoretical content of the subject area: theoretical bases of oil and gas technologies related to drilling, extraction, transportation and storage of oil and gas.</p> <p>Methods, techniques and technologies: methods of physical and mathematical modeling; technologies of drilling wells, extraction, transportation and storage of oil and gas.</p>

	Tools and equipment: oil and gas equipment, equipment, machinery, control and measuring devices required for technological processes of drilling, extraction, transportation and storage of oil and gas.
Orientation of the educational program	Educational and professional
The main focus of the educational program and specialization	<i>Special education</i> in the field of production and technology, <i>specialties</i> oil and gas engineering and technology <i>Key words:</i> oil, natural gas, fluid, field, deposit, well, production technology, collection and preparation of products, main gas transport, gas pipelines, oil pipelines, gas storage facilities, oil and oil products warehouses.
Features of the program	The educational program provides the acquisition of theoretical knowledge and practical skills in oil and gas engineering and technology
Suitability of graduates for employment and further study	
Suitability for employment	According to the Classifier of professions DK 003: 2010, the specialist must be prepared for the following professions: 3117 Technical specialists in the field of mining and metallurgy <ul style="list-style-type: none"> – master of oil, gas and condensate extraction; – master of gas preparation; – master of oil preparation and stabilization; – master of well repair (capital, underground); – master of complex works in drilling (overhaul) of wells; – master of well research; – master of development and repair of injection wells; – master of well testing; – oil and gas production technician; – pipeline operation technicians; – technician for operation of gas facilities equipment; – technicians for preparation and transportation of oil and gas.
Further training	Opportunity to continue education in the educational program of the second (master's) level of higher education and to acquire additional qualifications in the system of adult education.
Teaching and assessment	
Teaching and learning	Student-centered learning, lectures, practical classes, independent work with the use of textbooks, manuals, learning through practice, consultations, project work, preparation of bachelor's thesis
Evaluation	Credit-transfer system, which provides for the assessment of students for all types of classroom and extracurricular educational activities aimed at mastering the workload of the educational program. Written exams, practice report, presentations of individual tasks. Intermediate modular control, final control in the form of exams and tests in relevant disciplines, calculation and graphic works, term papers and projects. Public defense of bachelor's thesis.
Program competencies	
Integral competence	Ability to solve complex specialized problems in professional activities related to the oil and gas industry.
General competencies (GK)	GK1. Ability to abstract thinking, analysis and synthesis. GK2. Ability to communicate in the state language both orally and in writing. GK3. Ability to communicate in a foreign language. GK4. Ability to use information and communication technologies. GK5. Ability to learn and master modern knowledge. GK6. Ability to search, process and analyze information from various sources.

	<p>GK7. Ability to work in a team.</p> <p>GK8. Ability to carry out safe activities.</p> <p>GK9. Ability to exercise one's rights and responsibilities as a member of society; awareness of the value of civil (free democratic) society and the need for its sustainable development, the rule of law, human and civil rights and freedoms in Ukraine.</p> <p>GK10. Ability to preserve and multiply moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technology, use different types and forms of physical activity active recreation and a healthy lifestyle.</p>
<p>Special (professional) competence (SC)</p>	<p>SK1. Ability to analyze public policy, historical stages and prospects for the development of the oil and gas industry.</p> <p>SK2. Ability to characterize geological processes, patterns and properties of rocks, including oil and gas deposits.</p> <p>SK3. Ability to use theories, principles, methods and concepts of basic and general engineering sciences for professional activities.</p> <p>SK4. Ability to analyze the processes of oil and gas movement in reservoirs, wells and pipelines.</p> <p>SK5. Ability to apply mathematical methods, models and modern digital technologies to solve complex problems of oil and gas engineering.</p> <p>SK6. Ability to perform operational calculations of technological parameters in oil and gas engineering.</p> <p>SK7. Ability to evaluate the performance of materials, structures and machines in operating conditions.</p> <p>SK8. Ability to design and operate components of systems and technologies of oil and gas companies.</p> <p>SK9. Ability to solve production and technological problems in drilling wells, extraction, transportation and storage of oil and gas.</p> <p>SK10. Ability to analyze the operating modes of the oil and gas facility, to make the optimal choice of process equipment, to optimize the operating mode according to certain criteria, including under conditions of uncertainty.</p> <p>SK11. Ability to carry out technological and technical and economic evaluation of the effectiveness of new oil and gas technologies and technical devices.</p> <p>SK12. Understanding of general principles of choice of means of control and automation of technological processes in oil and gas industry.</p> <p>SK13. Ability to plan and organize the work of the structural unit of the oil and gas company.</p>
<p>Program learning results</p>	
<p>Learning results (LR)</p>	<p>LR1. Know and understand the concepts, patterns and features of civil society, human and civil rights and freedoms in Ukraine, as well as ethical and legal principles of professional activity.</p> <p>LR2. Know the theories, principles, methods and concepts of oil and gas engineering, understand the current state and role of the oil and gas industry in ensuring energy security of Ukraine.</p> <p>LR3. Analyze and develop elements of technological schemes and technical devices of systems of drilling of wells, extraction, transportation and storage of oil and gas.</p> <p>LR4. Fluently communicate in state and foreign languages on professional issues orally and in writing, have the skills to work with foreign technical publications.</p>

	<p>LR5. Find the necessary information in scientific and reference literature, databases, the Internet and other sources, evaluate, interpret and apply this information.</p> <p>LR6. Analyze geological processes, basic patterns of formation and properties of rocks, including oil and gas deposits.</p> <p>LR7. Use modern digital technologies and specialized software to solve engineering and management problems related to the implementation of basic oil and gas technologies for drilling wells, production, transportation and storage of oil and gas.</p> <p>LR8. Make effective decisions on professional matters in difficult-to-predict hazardous conditions, taking into account goals, deadlines, resource and legal constraints, environmental and ethical aspects.</p> <p>LR9. Apply basic concepts and methods of basic and applied sciences to solve specialized problems in oil and gas engineering.</p> <p>LR10. Predict and analyze the physicochemical properties of oil and gas in the processes of their extraction, transportation and storage.</p> <p>LR11. Calculate the parameters of hydrogas-dynamic processes that accompany the movement of oil and gas and process fluids in the formation / wells / industrial and main pipelines using the laws of thermodynamics, hydraulics and gas dynamics and modern methods of calculation.</p> <p>LR12. Carry out calculations of technological parameters of oil and gas wells, oil and gas preparation systems, industrial and main gas and oil pipelines, gas and oil storages with the use of appropriate mathematical and engineering methods.</p> <p>LR13. Analyze the operating conditions of the components of oil and gas technical complexes, make the optimal choice of process equipment and optimize the operating mode according to certain criteria, including under conditions of uncertainty.</p> <p>LR14. Analyze and assess the technical condition of the elements of technological equipment of oil and gas facilities by means of technical diagnostics in industrial and laboratory conditions.</p> <p>LR15. Choose effective means of control and automation of technological processes in the oil and gas industry, taking into account the goals and existing constraints.</p> <p>LR16. Plan and organize the work of the structural unit of the oil and gas company in accordance with the requirements of life safety, labor protection and environmental protection.</p> <p>LR17. Communicate to specialists and non-specialists information, ideas, problems, solutions, own experience and arguments on oil and gas engineering and related issues.</p> <p>LR18. Organize and manage the professional development of individuals and groups in the field of oil and gas engineering.</p>
Resource support for program implementation	
Staffing	<p>The quality level of the program is provided by a qualified scientific and pedagogical staff, which includes doctors and candidates of science, professors, associate professors.</p> <p>All scientific and pedagogical workers have qualifications according to educational components, experience of practical and scientific and pedagogical activity, regularly improve their qualification through participation in scientific conferences, internships at leading enterprises and institutions of the industry.</p>
Logistics	<p>The condition of the material and technical base meets the requirements and provides the possibility of effective educational process and</p>

	organization of research work. About 30 laboratories and specialized offices are used to train applicants. Specialized computer laboratories of the departments and the University as a whole have modern equipment and software. The available premises (educational, training and production, household, sports and others) of the university correspond to sanitary norms and rules, state building norms of Ukraine.
Information and educational and methodical support	Educational components are provided with teaching materials posted in the relevant courses on the distance learning platform Moodle https://dl.kname.edu.ua/ . Applicants have free access to modern professional literature and periodicals, Scopus and Web of Science databases, Springer resources, ScienceDirect database from Elsevier publishing house, scientific library http://library.kname.edu.ua/index.php/uk/ , electronic repository http://eprints.kname.edu.ua .
Academic mobility	
National credit mobility	According to the Regulations on academic mobility of students, graduate students, doctoral students, scientific, pedagogical and research staff of O.M.Beketov National University of Urban Economy in Kharkiv.
International credit mobility	Opportunity to participate in international credit mobility programs under the agreements on international academic mobility of O.M.Beketov National University of Urban Economy in Kharkiv.
Training of foreign applicants for higher education	According to the Rules of admission to O.M.Beketov National University of Urban Economy in Kharkiv.