

1. Educational Program Profile of Specialty

193 Geodesy and Land Management

General information	
Official title of educational program	Geodesy, mapping and land management
Specialty	193 Geodesy and land management
Field of knowledge	19 Architecture and civil engineering
Degree of higher education and name of qualification in original language	Bachelor of geodesy and land management
Type of a diploma and extent of educational program	Bachelor's diploma, single, 240 credits of ECTS, duration of study - 3 years and 10 months
Educational accreditation	Accreditation certificate of the Ministry of Education and Science of Ukraine №21001025: - organization: Ministry of Education and Science of Ukraine; - country: Ukraine; - duration: from 13 December, 2017 till 01 July, 2022
Cycle/level	The first (Bachelor's) level NQF of Ukraine – the 7th level FQ-EHEA - the first cycle EQF-LLL - the 6th level
Requirements for the applicant's level of education	Complete general secondary education
Language(s) of teaching	Ukrainian
Duration of educational program	5 years
Purpose of educational program	
	Training of bachelors capable to perform all types of geodesic work, form and apply approaches and fields of the land planning, carry out monitoring of lands, implement modern processes in keeping register of real estate.
Characteristics of educational program	
Subject area	Geodesic measurements and their calculation process. Geodesic provision of construction and land use work. Application of geographical information systems. Planning of inter-land lots, denationalization, and privatization of land.
Purpose of educational program	Education and professional training.
Basic focus of educational program and specialization	General education in geodesy and land management. <i>Keywords:</i> geodesy, digital terrain model, GIS, land lot, cadastre, estimation of real estate.
Program features	Elective courses expand the students' opportunities for mastering professional competencies to effectively perform all types of geodesic work.
Graduate employability and further academic studies	
Employability	A graduating student with a Bachelor's degree in geodesy, mapping and land management is able to perform the following professional work

	<p><i>(according to the current version of the National Classifier of Ukraine: Classifier of occupations (DK 003:2015):</i></p> <p>3131 Aerophotography and geodesy worker 3111 Astronomer assistant 3111 Geologist assistant 3152 Engineer of technical supervision (construction) 3439 Inventory inspector 3119 Laboratory assistant (technical fields) 3491 Laboratory assistant of scientific department (other fields (industries) of scientific research) 3417 Appraiser 3417 Appraiser (expert estimation of property) 3417 Expert Appraiser 3212 Technician (environmental studies) 3112 Technician of architectural planning 3131 Technician, Aerophotogrammetry specialist 3112 Builder Technician 3112 Technician and builder (road construction) 3119 Geodesist Technician 3212 Soil Scientist Technician 3212 Technician of land management 3118 Cartographer Technician 3117 Surveyor Technician 3121 Programmer Technician (geodesic tasks) 3118 Topographer Technician 3118 Technician, Topographer of Cadastre 3123 Technician, Photogrammetry specialist</p> <p>Possibilities of professional certification</p>
Access to further academic studies	Possibility of study according to the second (Master's) level of higher education. Acquirement of additional qualifications in the postgraduate education system.
Teaching and assessment	
Teaching and learning	Student-centred training, self-training, field study, field experience. Teaching and learning include lectures, practical and laboratory classes, self-study, individual consultations with teachers and completing a Bachelor's degree qualifying project.
Assessment	Oral and written questioning, tests, graphical tasks, course projects, reports on practice, oral and written examinations, differential credits, a Bachelor's degree qualifying project (thesis) defense.
Program results of study	
Program results of study, defined by the higher education standard for a specialty	<p>PRS 1. To use technical Ukrainian language orally and in writing, to be able to communicate in a foreign language (English) in the professional sphere with specialists on geodesy and organization of the land use;</p> <p>PRS 2. To know theoretical basic principles of geodesy, higher and engineering geodesy, topographical and thematic mapping, compilation and updating of maps, earth remote sensing and photogrammetry, land management, estimation of real estate and land cadaster;</p> <p>PRS 3. To know legal and regulatory principles of implementing rational use, protection, accounting and land estimation at the national, regional, local and household levels, procedures of state registration of land lots, other objects of real estate and limitations in their use;</p>

	<p>PRS 4. To apply methods and technologies of creating state geodesic networks and special engineering and geodesic networks, topographical survey of locality, topographical and geodesic measuring for exploration, design, construction and exploitation of engineering structures, public, industrial and agricultural complexes with the help of modern surface and aerospace methods;</p> <p>PRS 5. To use methods of information collection in the field of geodesy and land management, its systematization and classification in accordance with a set project or production task;</p> <p>PRS 6. To use a geodesic and photogrammetric equipment and technologies, methods of mathematical processing of geodesic and photogrammetric measurements;</p> <p>PRS 7. To use methods and technologies of land surveying planning, territory and household land management, planning of the use and land protection, cadastre survey and keeping the state land cadaster;</p> <p>PRS 8. To develop projects on land management, land management and cadaster documentation and documents on land estimation, to make maps and prepare cadastre data with application of computer technologies, geographic information systems and digital photogrammetry;</p> <p>PRS 9. To process results of geodesic measurements, topographical and cadastre survey, with the help of geoinformational technologies and computer software, as well as a data base management system;</p> <p>PRS 10. To know technologies and methods of planning and implementation of geodesic, topographical and cadastre survey and computer processing of survey results with the help of geoinformation systems;</p> <p>PRS 11. To know the methods of land planning, territorial and economic land management, planning of land use and protection, taking into account influence of social, economic, ecological, terrain, environment protection and other factors;</p> <p>PRS 12. To know the methods of organization of topographic and geodesic and land planning work ranging from field measurements to management and realization of topographical and land surveying outputs on the basis of the use of legislation and production management principles.</p>
<p>Program results of study, defined by the higher education institution</p>	<p>PRS 13. To use English for effective communication in the professional environment;</p> <p>PRS 14. To understand principles of economics and peculiarities of economic system functioning;</p> <p>PRS 15. To analyse the role and importance of a modern town in the context of global and local challenges;</p> <p>PRS 16. To analyse the process of legal and market regulation of social and economic labour relations;</p> <p>PRS 17. To use knowledge of the main religious systems in the society and professional activity;</p> <p>PRS 18. To apply language, speech, linguistic, social, cultural and communication skills for effective use of the English language;</p> <p>PRS 19. To apply the main principles and methods of social and cultural science when fulfilling professional tasks;</p> <p>PRS 20. To apply the main principles of political science when fulfilling professional tasks;</p> <p>PRS 21. To apply a set of psychological categories in the system of professional study and practical activity;</p>

	<p>PRS 22. To apply skills of conflict management in professional activity, means and strategies of their settling and solving;</p> <p>PRS 23. To create or apply scale and planning solutions for further layout, in particular, with the help of information technologies;</p> <p>PRS 24. To work with geodesic devices and use topographic materials for design and creation of construction objects and engineering networks;</p> <p>PRS 25. To understand principles of designing urban territories and infrastructure objects and urban economy;</p> <p>PRS 26. To apply basic professional and scientific knowledge in the field of social, humanitarian and economic sciences in cognitive and professional activity;</p> <p>PRS 27. To carry out economic calculations and draw economically grounded conclusions when making a business plan according to professional projects and programs;</p> <p>PRS 28. To analyse the main indices of development of small and medium-sized business, conduct monitoring of the market conjuncture and foreign economic environment; to analyse the state policy measures in the field of entrepreneurship, taking into account their being up-to-date, complex, coordinated and efficient;</p> <p>PRS 29. To perform collecting, keeping, integrating, storing, processing, analyzing and visualizing geospatial data; to perform designing, creating and implementing multi-purpose geographical informational systems; to create integrated information content for making management decisions on the basis of geographical informational analysis; to perform web-mapping;</p> <p>PRS 30. To arrange, plan and carry out work on land management with the purpose of making land planning documents; to perform registration and accounting work, to carry out state control of use and protection of lands, state inspection of decisions connected with land management;</p> <p>PRS 31. To carry out normative monetary estimation of lands, monetary expertise of land and real estate, develop technical documents on estimation of lands and real estate, to settle issues of geographical informational support of normative monetary estimation and monetary expertise of land and real estate.</p>
Resource support for program implementation	
Staffing	<p>A high-quality level of professional training is provided by qualified scientific and teaching staff of the department, which includes Doctors of Sciences and Doctors of Philosophy, professors, associate professors, members of the public organization «All-Ukrainian Union of Land Appraisers», Association of Real Estate Experts of Ukraine (AREEU), public organization «All-Ukrainian Association «Ukrainian Partnership of Appraisers». Three teachers have an English language skills certificate for B2 level; six teachers had an international internship, one of them - twice. All the teachers at the department have a substantial practical experience in the professional field.</p>
Material and technical support	<p>The academic process is completely provided with classrooms, administrative and supporting premisses. Specialized computer laboratories have up-to-date equipment and software (ArcGIS 10.5, Get to know Arc View 3.2, ArcGIS VBA, Autodesk Delta Digitals 2012), as well as the Internet access.</p> <p>Classrooms with multimedia equipment are used for lectures and practical classes. Practical classes are held in a specialized classroom of geodesy and mapping (room 410arch) with geodesic equipment,</p>

	laboratories of land and real estate estimation (room 407arch) geographical information systems, land management (room 412bmk) and geographical information systems and remote earth reconnaissance (room 412aVTs), all of them are equipped with computers and appropriate software.
Informational and methodological support	<p>All educational components of the educational program «Geodesy, Mapping and Land Management» are provided with the following educational and methodological materials: textbooks; teaching aids; notes of lectures; methodical recommendations; individual tasks; compilations of individual tasks; examples of solving typical problems or fulfilling typical tasks; computer presentations; illustrative materials; catalogues of resources, etc.</p> <p>All teaching materials are available for students in the reading halls of the Scientific Library http://library.kname.edu.ua/index.php/uk/, including the hall of information service, which is equipped with computers having the Internet access and University local network access, in the digital repository http://eprints.kname.edu.ua, on the portal of Distant Learning Centre http://cdo.kname.edu.ua/</p>
Academic mobility	
National credit mobility	According to the Provisions about Academic Mobility of students, postgraduate students, doctoral students, scientific teaching and scientific staff of O. M. Beketov National University of Urban Economy in Kharkiv
International credit mobility	<p>O. M. Beketov National University of Urban Economy in Kharkiv has 5 valid agreements within the framework of Erasmus + International Credit Mobility with the following foreign universities:</p> <ol style="list-style-type: none"> 1) Middle East Technical University, Ankara, Turkey (METU) 2) Aristotle University, Saloniki, Greece 3) Nova Horytsia University, Nova Horytsia, Slovenia 4) Estonia University of Natural Sciences, Tartu, Estonia 5) Lodz Technical University (Lodz, Poland)
Training of foreign higher education applicants	In accordance with the Regulations for admission to study at O. M. Beketov National University of Urban Economy in Kharkiv