

Educational Program Profile

General information	
Official title of educational program	Geodesy 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	Master of geodesy and land management
Type of a diploma and extent of educational program	Master's diploma, single, 90 credits of ECTS, duration of study - 1 year and 4 months
Educational accreditation	Accreditation certificate of the Ministry of Education and Science of Ukraine №21006914, duration: till 01 July, 2024
Cycle/level	The second (Master's) level NQF of Ukraine – the 8th level FQ-EHEA - the second cycle EQF-LLL - the 7th level
Requirements for the applicant's level of education	Bachelor's or Specialist's degree
Language(s) of teaching	Ukrainian
Duration of educational program	5 years
Purpose of educational program	
	Development of graduates' ability to fulfil complex specialized tasks and solve practical problems in the process of professional activity or training, which involves the application of theoretical knowledge of Geodesy and Land Management and technologies and equipment in the field of geographic and geodetic production in order to obtain and analyze geospatial data.
Characteristics of educational program	
Subject area	<p>Objects of study: theoretical foundations, techniques, technologies and equipment for collecting and analyzing geospatial data on the shape and size of the Earth, displaying it on maps and plans, ensuring the erection of engineering structures (including underground) and studying geospatial relationships between objects and structures.</p> <p>Theoretical content of the subject area: knowledge of the shape and size of the Earth, concepts and principles of conducting topographic-geodetic activity and land cadastre, as well as their information support. Basic knowledge of natural sciences and advanced knowledge of mathematics and information technology.</p> <p>Methods, techniques and technologies: field, camera and remote methods of research, methods of collecting and processing geospatial data, geoinformation technologies, technologies of field and cameral works in the field of Geodesy and Land Management.</p> <p>Tools and Equipment: surveying, navigation, aerial surveying, photogrammetric and mapping complexes and systems, specialized geoinformation, surveying and photogrammetric software for solving applied problems in Geodesy and Land Management.</p>

Purpose of educational program	Education and professional training
Basic focus of educational program and specialization	Special education in geodesy and land management. <i>Keywords:</i> geodesy, GIS, land lot, cadastre, estimation of real estate
Program features	
Aptitude of graduating students for employment and further study	
Aptitude for employment	<p>A graduating student with a Master's degree in geodesy, mapping and land management is able to perform the following professional work (<i>according to the current version of the National Classifier of Ukraine: Classifier of occupations (DK 003:2015)</i>):</p> <p>2131.2 (Geo)Database Administrator; 2131.2 (Geo)system Administrator; 2148.2 Aerial Photographer; 2320 Vocational School Teacher; 2148.2 Surveyor; 2431.2 Keeper of Funds (geo funds); 2148.2 Land Engineer; 2213.2 Natural Ecosystem Reproduction Engineer; 2149.2 Real Estate Inventory Engineer; 2213.2 Environmental Engineer; 2148.2 Mapmaker; 2148.2 Mapmaker-compiler; 2148.2 Map Editor; 2148.2 Technical Map Editor; 2148.2 Specialist in Environmental Geosystem Monitoring 2148.2 Specialist in Remote Earth Sensing and Aerospace Monitoring 2148.2 Photogrammeter</p> <p>Possibility of professional certification</p>
Further study	Study at the third (educational and scientific) level of higher education
Teaching and assessment	
Teaching and learning	Student-centred teaching, lectures, practical classes, self-training with the help of textbooks, teaching aids, consultations, project work, completing a Master's degree qualifying project.
Assessment	<p>Credit-transfer system which involves assessing all types of students' in-class and out-of-class study activities aimed at mastering the study load of the educational program.</p> <p>Written examinations, reports on practice, presentations of individual tasks. Intermediate module control, final control in the form of examinations and credits in corresponding subjects, calculation and graphical work, course projects. An open defense of Master's degree qualifying project (thesis).</p>
Program results of study	
Program results of study, specified by the higher education standard for a specialty	<ul style="list-style-type: none"> - to use oral and written technical Ukrainian language and be able to communicate in a foreign language (English) in the circle of specialists in geodesy and land management; - to know theoretical bases of Geodesy, Engineering Geodesy, topographic and thematic mapping, compilation and updating of maps, remote sensing of the Earth and photogrammetry, land management, real estate and land cadastre estimation;

	<ul style="list-style-type: none"> - to know the legal basis for ensuring the issues of rational use, protection, accounting and estimation of land at national, regional, local and household levels, procedures for state registration of land plots, other real estate objects and restrictions on their use; - to apply methods and technologies of creation of state geodetic networks and special engineering geodetic networks, topographic surveys of terrain, topographic geodetic measurements for exploration, design, construction and operation of engineering structures, public, industrial and agricultural complexes with use of modern land and aerospace techniques; - to use methods of collecting information in the field of geodesy and land management, its systematization and classification according to the assigned design or production task; - to use geodetic and photogrammetric equipment and technologies, methods of mathematical processing of geodetic and photogrammetric measurements; - to use methods and technologies of land planning, territorial and economic land management, planning of land use and protection, cadastral surveys and keeping of the state land cadastre; - to develop land management, land and cadastre and land estimation documents, make maps and prepare cadastral data using computer technologies, geoinformation systems and digital photogrammetry; - to process the results of geodetic measurements, topographic and cadastral surveys, using geoinformation technologies and computer software and database management system; - to be able to apply the technology and techniques of planning and executing surveying, topographic and cadastral surveys and computer processing of survey results in geoinformation systems; - to be able to apply methods of land planning, territorial and economic land management, planning of land use and protection taking into account the influence of a number of conditions of social and economic, ecological, landscape, nature protection and other factors; - to be able to apply methods of organization of topographic and geodetic and land management production, ranging from field measurements to management and sale of topographic and land management production on the basis of using knowledge of the basics of legislation and production management.
<p>Program results of study, defined by higher education institution</p>	<ul style="list-style-type: none"> - to be able to apply modern methods, instruments and software for design, organization and fulfillment of geodetic work; - to be able to apply geoinformation technologies for modeling and analysis of spatial objects and phenomena; - perform estimation of land and real estate; - to be able to apply modern technologies of land planning and land accounting for rational use of land resources, increase of land use efficiency
Resource support for program implementation	
<p>Staffing</p>	<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</p>

	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.
Material and technical support	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. Classrooms with multimedia equipment are used for lectures and practical classes. For practical classes there are used a special classroom of geodesy and mapping (room 410arch) with geodesic equipment, 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 teaching support	All educational components of the educational program «Geodesy, Mapping and Land management» are provided with the following teaching materials: textbooks; teaching aids; notes of lectures; teaching recommendations; individual tasks; compilations of individual tasks; examples of solving typical problems or fulfilling typical tasks; computer presentations; illustrative materials; catalogues of resources, etc. 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 Training Centre http://cdo.kname.edu.ua/
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	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: 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	According to the Admission Rules of O. M. Beketov National University of Urban Economy in Kharkiv