

State University of Trade and Economics

Faculty of Technologies and Business

INFORMATION PACKAGE

European Credit Transfer System (ECTS)

Field of study	G Engineering, Manufacturing and Construction
Specialty	G18 Geodesy and Land Management
Educational program	Land Management and Cadastre
Qualification	Bachelor's degree

Kyiv 2025

1. EDUCATIONAL PROGRAM PROFILE

1 – GENERAL INFORMATION	
Full name of IHE and structural unit	State University of Trade and Economics Faculty of Technologies and Business Department of Engineering and Land Management
Level of higher education and qualification name in the original language	Bachelor's degree Specialty «Geodesy and Land Management»
Field of study	G Engineering, Manufacturing and Construction
Specialty	G18 Geodesy and Land Management
Name of the educational program	Land Management and Cadastre
Restrictions regarding study forms	Restrictions are absent
Compliance with the standard of higher education of MES of Ukraine	Compliance with Standard of Higher Education of MES in Ukraine (decree 517, issued on 11.05.2021)
Diploma type and volume of the educational program	Bachelor's diploma. 240 credits ECTS. Training period 3 years 10 months.
Accreditation	-
Cycle / Level	NFQ of Ukraine – level 6, FQ-EHEA –first cycle, EQF-LLL – level 6
Preconditions	Having a complete general secondary education / junior specialist degree
Language(s) of instruction	Ukrainian
Duration	3 years 10 months
Educational Program Link	https://knute.edu.ua
2 – EDUCATIONAL PROGRAM AIM	
Training of highly qualified bachelors in geodesy and land management, able to perform professional activity in a sphere of land management, cadastre, geodesy and geoinformation systems, to develop land and cadastre documentation, to perform land monitoring and assessment, to work with geospatial data and make efficient managerial solutions amid up-to-date challenges of sustainable territorial development.	
3 – CHARACTERISTICS of the EDUCATIONAL PROGRAM	
<i>Subject area</i>	
<i>Objects of study and activity:</i> objects of land management, topographic-geodetic and cartographic activities, state cadastres and other geoinformation systems; methods, technologies and equipment for the collection and analysis of geospatial data, their display on maps and plans; observation of changes in the state of objects in space and time.	
<i>Learning goals:</i> formation of students' ability to solve complex specialized problems of geodesy and land management.	

Theoretical content of the subject area: notions, concepts, principles, forms, methods of topographic-geodetic and cartographic activities, land management, monitoring, land protection, land and real estate evaluation; engineering and geodetic surveys and creation of geospatial data.

Methods, techniques and technologies: methods of collection, processing, analysis, storage, display, interpretation of geospatial data; methods of field, camera, remote research; technologies of geodetic measurements and searches, land management design, geoinformation technologies.

Tools and equipment: tools, devices, equipment and software that are necessary for solving problems of geodesy and land management.

Educational program orientation

Educational program has an applied orientation and is focused on training of bachelors in a sphere of geodesy, land management, cadastre and geoinformation systems, able to perform professional problems in state and private sectors, especially in a sphere of land resources management, cadastre activity and spatial planning.

The main focus of the educational program

Formation of general and professional competencies in a sphere of geodesy, land management and cadastre, necessary to perform professional activity in planning, rational use, development and protection of land resources of different categories and designated use, carrying out land cadastre, record of restrictions in land use, as well as making grounded solutions considering up-to-date scientific studies in the relevant field.

Key words: geodesy, cartography, land management, photogrammetry, remote sensing, geoinformation systems, land use economics, land cadastre, land law, land assessment, urban cadastre, land surveys.

Program features

A characteristic feature of this program is its interdisciplinary nature and union of engineer-geodetic, land-managing, economic and legal training, that provides formation of complex occupational competencies. The program is focused on practical activity with efficient application of geoinformation technologies, laboratory and field works and training of specialists able to work amid up-to-date land market.

4 – CAREER OPPORTUNITIES AND FURTHER LEARNING

Career opportunities

The graduates are able to perform professional work according to the National Classifier of Ukraine «Profession Classifier» DK 003:2010:

2148.2 Surveyor;

2148.2 Land engineer;

2213.2 Engineer for reproduction of natural ecosystems;

2213.2 Environmental engineer;

3439 Inventory inspector;

2148.2 Cartographer;

2148.2 Compiler cartographer;

3417 Appraiser;

3417 Appraiser (expert appraisal of property);

3417 Appraiser-expert;

2148.2 Specialist in geosystem monitoring of the environment;

2148.2 Specialist in remote sensing of the earth and aerospace monitoring;

2148.2 Photogrammetrist; 3439 Public inspector for land use and protection
<i>The graduate is able to perform professional types of work and hold positions in state, regional, and local authorities in matters of land accounting, use and protection of lands; in design and research institutes with land management; in specialized, licensed land management organizations; at enterprises and organizations engaged in economic and legal activities in the field of land relations; in land evaluation organizations and enterprises related to the purchase and sale of land plots; at urban planning organizations.</i>
<i>Further learning</i>
The possibility of studying under the program of the second cycle of FQ-EHEA, 6th level of EQF-LLL and 7th level of HPK of Ukraine
5 – TRAINING AND ASSESSMENT
<i>Teaching and learning</i>
Student-centered learning, self-learning, problem-oriented learning. Lectures, practical classes in specialized laboratories, independent work based on textbooks, study guides and lecture notes, learning through practical training and professional internship, consultations with teachers, preparation for the defense of the qualification work.
<i>Assessment</i>
Written exams, practice; scientific presentations, current control, course projects, qualification work, etc. According to the Regulation on the organization of the educational process of students, the Regulation on the evaluation of students and postgraduates' studying results at DTEU.

6 – PROGRAM COMPETENCES	
<i>Integral Competence (IC)</i>	
The ability to solve complex specialized tasks of geodesy and land management	
<i>General Competence (GC)</i>	
GC01.	Ability to learn and master up-to-date knowledge.
GC02.	Ability to apply knowledge in practical situations.
GC03.	Ability to plan and manage time.
GC04.	Ability to communicate in the official language both orally and in writing.
GC05.	Ability to communicate in a foreign language.
GC06.	Ability to use information and communication technologies.
GC07.	Ability to work autonomously.
GC08.	Ability to work in a team.
GC09.	Ability to interpersonal interaction.
GC10.	Ability to perform safe activities.
GC11.	Awareness of equal opportunities and gender issues.
GC12.	The ability to realize rights and responsibilities as a member of society; value awareness of a civil (free democratic) society and the need for its sustainable

	development, the rule of law, the rights and freedoms of a person and a citizen in Ukraine.
GC13.	The ability to preserve and multiply the moral, cultural, scientific values and achievements of society on the basis of an understanding of history, the patterns of development of the subject area, its place in the general system of knowledge about nature and society, as well as in the development of society, technique and technology, use various types and forms of motor activity for recreation and having a healthy lifestyle.
GC14.	Ability to make decisions and act, following the principle of inadmissibility of corruption and any other displays of dishonesty.
<i>Professional Competence (PC)</i>	
PC01.	The ability to apply fundamental knowledge to analyze phenomena of natural and man-made origin when performing professional tasks in the field of geodesy and land management.
PC02.	Ability to apply theories, principles, methods of physical and mathematical, natural, socio-economic, and engineering sciences when performing tasks of geodesy and land management.
PC03.	Ability to apply regulatory and legal acts, regulatory and technical documents, reference materials in professional activities.
PC04.	The ability to choose and use effective methods, technologies and equipment for carrying out professional activities in the field of geodesy and land management.
PC05.	Ability to use modern information, technical and technological support to solve complex issues of geodesy and land management.
PC06.	Ability to perform remote, ground, field and laboratory surveys, engineering calculations from the processing of research results, form research results, prepare reports when solving geodesy and land management tasks.
PC07.	Ability to collect, update, process, critically evaluate, interpret, store, publish and use geospatial data and metadata about objects of natural and man-made origin.
PC08.	The ability to carry out professional activities in the field of geodesy and land management, taking into account the requirements of professional and civil safety, labor protection, social, ecological, ethical, economic aspects.
PC09.	Ability to use tools, devices, equipment when performing tasks of geodesy and land management.
PC10.	Ability to monitor and evaluate land.
PC11.	Ability to carry out geodetic monitoring of the earth's surface, natural objects, engineering structures.
PC12.	Ability to carry out technical control and evaluate the quality of topographical, geodetic and cartographic products.
PC13.	The ability to develop land management and land valuation documentation, cadastral documentation, to fill in state land, urban planning and other cadastres with data.
7 – PROGRAM LEARNING OUTCOMES (PLO)	
PLO1	Communicate orally and in writing freely in national and foreign languages on professional activity matters.

PLO2	Organize and manage the professional development of individuals and groups.
PLO3	Convey information, ideas, problems, solutions, own experience and arguments to specialists and non-specialists.
PLO4	Know and apply regulatory and legal acts, regulatory and technical documents, reference materials in the field of geodesy and land management and related fields.
PLO5	Apply conceptual knowledge of natural and socio-economic sciences when performing tasks of geodesy and land management.
PLO6	Know the history and peculiarities of the development of geodesy and land management, their place in the general system of knowledge about nature and society.
PLO7	To carry out surveys and search, topographic-geodetic, cartographic, project and project-search works when performing professional tasks in geodesy and land management.
PLO8	Participate in the creation of state geodetic networks and special engineering and geodetic networks, organize and perform topographic and cadastral surveys, geodetic measurements, engineering and geodetic searches for the design, construction and operation of construction objects.
PLO9	Collect, evaluate, interpret and use geospatial data, metadata about objects of natural and man-made origin, apply statistical methods of their analysis to solve specialized problems in the field of geodesy and land management.
PLO10	Select and apply the tools, equipment and software required for remote, terrestrial, field and camera surveys in the field of geodesy and land management.
PLO11	Organize and perform remote, ground, field and laboratory works in the field of geodesy and land management, prepare the results of the work, prepare relevant reports.
PLO12	Develop land management documentation, cadastral documentation and land valuation documentation using computer technologies, geo-information systems and digital photogrammetry, fill in state land, urban planning and other cadastres with data.
PLO13	Plan and perform geodetic, topographic and cadastral surveys, process the obtained results in geoinformation systems.
PLO14	Plan complex professional activities, develop and implement projects in the field of geodesy and land management under conditions of resource and other limitations.
PLO15	Develop and make effective decisions regarding professional activity in the field of geodesy and land management, including conditions of uncertainty.

8 – RESOURCE SUPPORT FOR PROGRAM IMPLEMENTATION

Academic staff

Fully meets Licensing requirements of conducting educational activities. Realization of the educational program «Land Management and Cadastre» is carried out by the teaching staff with scientific degrees and/or academic titles, which complies with requirements of current Ukraine's legislation, has a sufficient level of scientific and professional

<p>qualification. Practicing experts, as well as professional unions representatives and foreign partners are also involved into educational process. All teaching staff retake internship / advanced training every five years.</p>
<p><i>Facilities</i></p>
<p>Fully meet Licensing requirements of conducting educational activities. The basis of material and technical support is: Laboratory of geodesy and land management and Laboratory of GIS-technologies, equipped with up-to-date devices, tools (electronic reflectorless tachometers Sokkia iM55 SOUTH N6+ 2"; optical and digital theodolites Nivel system DT5; theodolites 3T5KII optical dumpy levels SOKKIA C330-31; drone Hubsan Zino Mini SE Refined Portable Combo with a 4K camera; receiver GPS Holybro H-RTK F9P Rover Lite, receiver GPS Holybro H- RTK F9P Rover Lite, etc). Specialized licensed software is available: ESRI ArcGis, Surfer 8.0, MapInfo, TopoCad, Microsoft Office 365, AutoCAD 2025, CloudCompare, QGIS, SNAP, etc., that provides qualitative bachelor's training under the program «Land Management and Cadastre» during the whole training cycle.</p>
<p><i>Informational, Teaching and Learning Materials</i></p>
<p>Each university educational program implies development of ECTS. Every student, via https://mia1.knute.edu.ua/ personal cabinet, may view and form individual plan, view educational plan, grades in courses, study schedule and communicate with educational process participants. Course summaries, course outlines, syllabuses and estimation criteria are placed on the corporative remote education system. In the university electronic repository, there's a full-text access to scientific and educational SUTE sources, manuscripts of qualification works and theses (PhD and doctoral). For education applicants' convenience, students have a right to choose selective educational components.</p>
<p>9 – ACADEMIC MOBILITY</p>
<p><i>National Credit Mobility</i></p>
<p>National credit mobility is realized within signed memorandums on collaboration between SUTE and other Ukraine's higher education institutions (scientific institutions) in accordance with the legislation.</p>
<p><i>International Credit Mobility</i></p>
<p>It is within the framework of the EU Erasmus + program, based on bilateral agreements between SUTE and higher education institutions of partner countries.</p>
<p><i>Training of Foreign Students</i></p>
<p>Training of foreign citizens is realized in accordance with current legislation.</p>

2. LIST OF EDUCATIONAL PROGRAM COMPONENTS AND THEIR LOGICAL ORDER

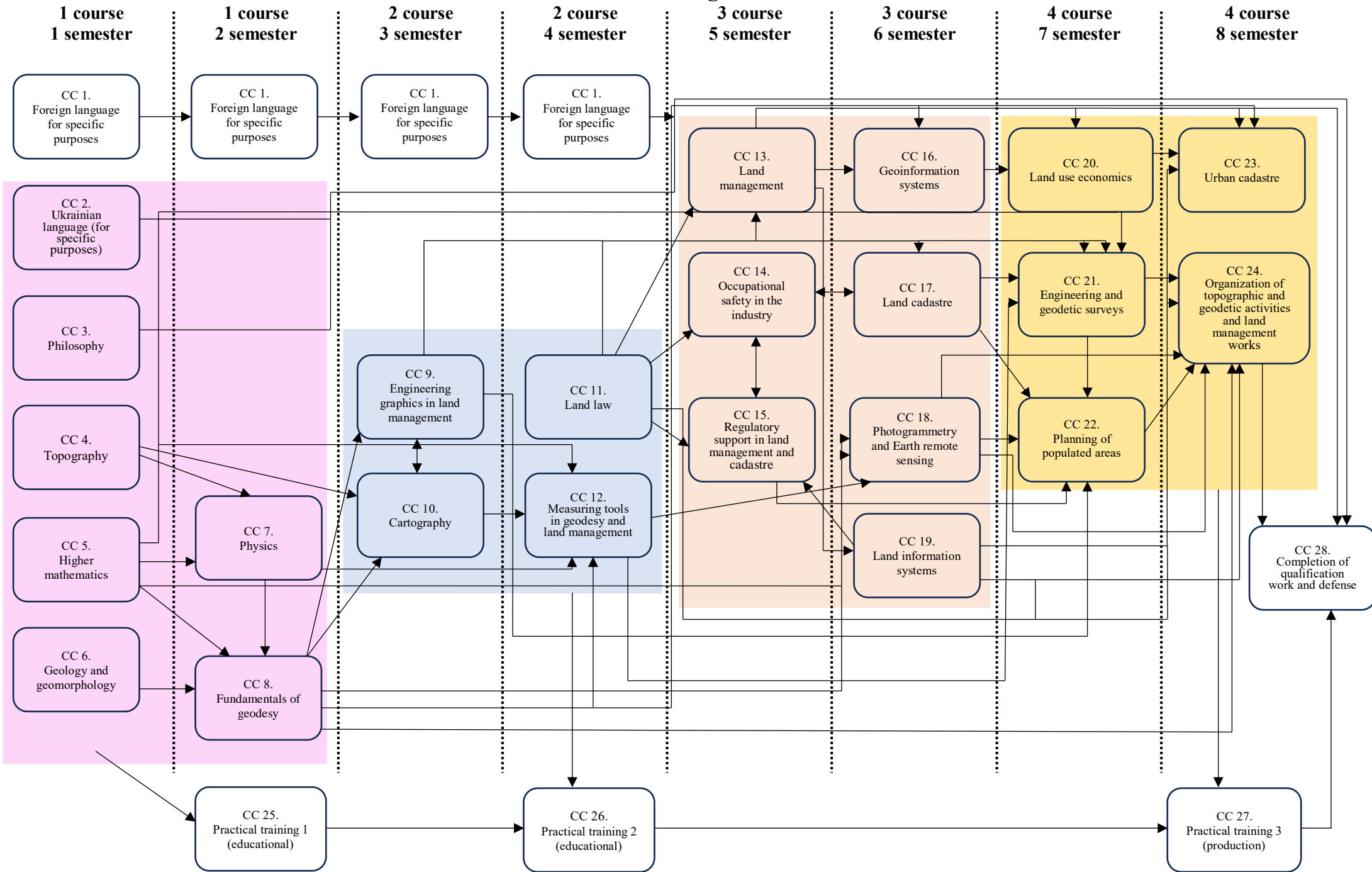
2.1. Educational Program components

№	Educational Program components	ECTS credits	Form of control
<i>Compulsory components of EP</i>			
CC 1.	Foreign language for specific purposes	18	Examination
CC 2.	Ukrainian language (for specific purposes)	3	Examination
CC 3.	Philosophy	6	Examination
CC 4.	Topography	6	Examination
CC 5.	Higher mathematics	6	Examination
CC 6.	Geology and geomorphology	6	Examination
CC 7.	Physics	6	Examination
CC 8.	Fundamentals of geodesy	9	Examination
CC 9.	Engineering graphics in land management	6	Examination
CC 10.	Cartography	6	Examination
CC 11.	Land law	6	Examination
CC 12.	Measuring tools in geodesy and land management	6	Examination
CC 13.	Land management	6	Examination
CC 14.	Occupational safety in the industry	6	Examination
CC 15.	Regulatory support in land management and cadastre	6	Examination
CC 16.	Geoinformation systems	6	Examination
CC 17.	Land cadastre	6	Examination
CC 18.	Photogrammetry and Earth remote sensing	6	Examination
CC 19.	Land information systems	6	Examination
CC 20.	Land use economics	6	Examination
CC 21.	Engineering and geodetic surveys	6	Examination
CC 22.	Planning of populated areas	6	Examination
CC 23.	Urban cadastre	6	Examination
CC 24.	Organization of topographic and geodetic activities and land management works	6	Examination
CC 25.	Educational practice 1	6	Pass
CC 26.	Educational practice 2	6	Pass
CC 27.	Production practice	6	Pass
CC 28.	Completion of qualification work and defense	6	Defense
Total credits for compulsory components		180	
<i>Optional components of EP</i>			
OC 1.	Optional component	6	Examination
OC 2.	Optional component	6	Examination
OC 3.	Optional component	6	Examination
OC 4.	Optional component	6	Examination
OC 5.	Optional component	6	Examination
OC 6.	Optional component	6	Examination
OC 7.	Optional component	6	Examination

OC 8.	Optional component	6	Examination
OC 9.	Optional component	6	Examination
OC 10.	Optional component	6	Examination
Total credits for optional components		60	
TOTAL AMOUNT OF EDUCATIONAL PROGRAM		240,0	

Higher education applicants choose optional disciplines via <https://mia1.knute.edu.ua/> personal cabinet. Description of disciplines and their prerequisites are present in the SUTE Disciplines Catalogue

2.2. Structural and logical EP scheme



3. Final Assessment

Certification is carried out in the form of public defense of the final qualifying work.

The final qualifying work should involve solving a complex applied problem in the field of geodesy and land management using modern theories, methods, technologies and equipment.

The final qualifying work should not contain academic plagiarism, fabrication, falsification and other types of academic dishonesty.

The final qualifying work must be published on the official website of the higher education institution or its subdivision, or in the repository of the higher education institution.

4. Program Competences and Compulsory Components Matrix of EP

Components Competences	CC 1	CC 2	CC 3	CC 4	CC 5	CC 6	CC 7	CC 8	CC 9	CC 10	CC 11	CC 12	CC 13	CC 14	CC 15	CC 16	CC 17	CC 18	CC 19	CC 20	CC 21	CC 22	CC 23	CC 24	CC 25	CC 26	CC 27	CC 28	
GC 01	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+					+	
GC 02	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+				+	+	+	+
GC 03														+							+		+	+			+	+	
GC 04		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC 05	+																			+								+	+
GC 06				+	+	+	+	+	+	+	+		+		+	+	+	+	+	+	+	+			+			+	+
GC 07	+		+						+			+		+									+		+		+		+
GC 08			+				+	+		+	+	+		+		+		+					+		+	+	+	+	+
GC 09	+		+					+				+										+			+				+
GC 10								+				+	+	+				+	+			+		+	+	+	+	+	+
GC 11																									+				+
GC 12			+								+		+		+		+				+			+	+	+			+
GC 13			+				+						+				+				+		+	+	+				+
GC 14														+								+			+				+
PC 01				+	+	+	+			+			+					+	+		+	+							+
PC 02				+	+	+	+			+	+		+	+	+			+		+	+	+		+			+	+	+
PC 03				+							+		+	+	+		+		+	+	+	+	+	+	+	+	+	+	+
PC 04								+		+		+	+	+	+		+	+	+	+		+	+	+	+			+	+
PC 05				+						+		+	+		+	+	+	+	+		+	+	+	+	+	+	+	+	+
PC 06				+				+	+	+		+	+			+	+	+			+	+	+	+		+	+	+	+
PC 07				+	+					+		+	+			+	+	+	+	+	+	+	+	+				+	+
PC 08					+			+	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+
PC 09				+				+	+			+	+					+			+					+	+	+	+
PC 10				+							+							+	+	+									+
PC 11																			+			+		+					+
PC 12				+					+			+						+			+				+	+			+
PC 13									+		+		+					+	+	+			+	+	+				+

5. Program learning outcomes (PLO) and Compulsory Components Matrix of EP

Components PLO	CC 1.	CC 2.	CC 3.	CC 4.	CC 5.	CC 6.	CC 7.	CC 8.	CC 9.	CC 10.	CC 11.	CC 12.	CC 13.	CC 14.	CC 15.	CC 16.	CC 17.	CC 18.	CC 19.	CC 20.	CC 21.	CC 22.	CC 23.	CC 24.	CC 25.	CC 26.	CC 27.	CC 28.
PLO 01	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 02																	+			+	+		+	+	+	+		+
PLO 03	+						+				+		+		+		+		+		+	+	+	+	+	+	+	+
PLO 04				+		+		+	+		+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+
PLO 05					+	+	+	+			+		+		+	+			+	+	+	+					+	+
PLO 06								+	+			+	+				+						+		+			+
PLO 07				+	+			+	+	+		+	+				+	+			+	+	+	+	+	+	+	+
PLO 08				+	+			+	+	+		+	+				+	+			+				+	+	+	+
PLO 09					+					+		+	+			+	+	+	+		+	+	+		+		+	+
PLO 10				+				+	+	+		+	+				+	+	+		+		+	+	+	+	+	+
PLO 11				+				+	+	+			+			+	+	+			+			+	+	+	+	+
PLO 12									+		+	+					+	+	+			+	+	+			+	+
PLO 13					+					+		+	+				+	+	+		+	+	+	+	+	+	+	+
PLO 14					+					+		+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+
PLO 15					+							+	+	+	+		+	+		+	+	+	+	+	+	+		+

LIST OF RECOMMENDED OPTIONAL COMPONENTS

№	Educational components	ECTS credits
OC 1.	Life safety	6
OC 2.	Geophysical monitoring of engineering constructions	6
OC 3.	Soil science	6
OC 4.	Environmental economics	6
OC 5.	Building engineering	6
OC 6.	Landscape science	6
OC 7.	Newest technologies in geodesy and land management	6
OC 8.	Assessment of real estate	6
OC 9.	Psychology of business communication	6
OC 10.	Target communicative English language course	6

