

# ENGINEERING GEODESY

## ANNOTATION TO THE CURRICULUM OF A HIGHER EDUCATION INSTITUTION

Specialty 1-70 02 01 Industrial and civil engineering

	Form of higher education	
	Full-time (day)	Correspondence
Course	1	1,2
Term	1,2	2,3
Lectures, hours	50	8
Laboratory classes, hours	34	8
Classroom control work (semester, hours)		2 (2 hours)
Credit, semester (*differentiated credit)	2*	3*
Exam, semester	1	2
Classroom hours for the academic discipline	84	18
Independent work, hours	96	162
Total hours of academic discipline / credits	180/4,5	

1. Engineering and geodetic works are an integral part of the technological process of construction at all stages of the construction of the structure.

The purpose of teaching and studying the discipline "Engineering Geodesy" is to acquire theoretical knowledge and practical skills for solving engineering and geodetic problems that accompany construction production at all its stages.

2. As a result of studying the academic discipline, the student must:

**To know:-** the main issues of theory and practice of geodetic support of a complex of works in industrial and civil construction;-methods of geodetic measurements and processing of their results;-modern achievements of scientific and technological progress in the field of engineering geodesy (electronic total stations, satellite technologies, laser and digital devices);

**be able to:** -independently perform measurements using various geodetic instruments (theodolites, levelers, measuring and laser tape measures, planimeters, eckers, etc.);-perform mathematical processing of the results of geodetic measurements in an automated way;-make topographic plans and profiles, be able to use them in design and construction;-correctly understand and use the results of the center work and executive surveys under construction and completed by the construction of highways;

**own:-**methods of measurement and compilation of topographic and executive plans, profiles;-methods of analysis of the topographic and geodetic support; -methods of organizing work on geodetic support of the construction process.

3. As a result of mastering the discipline, the student should have the following competencies:- AK-1 To be able to apply basic scientific and theoretical knowledge to solve theoretical and practical problems; -AK-2 To have a systematic and comparative analysis; - AK-3 Possess research skills; - AK-4 Be able to work independently; - AK-7 Have skills related to the use of technical devices, information management and computer work; - AK-8 Have oral and written communication skills; - SLK-2 Be capable of social interaction; - SLK-3 Have the ability to interpersonal communication; - SLK-4 Be able to work in a team; - SLK - 5 Be capable of criticism and self-criticism.

4. Requirements and forms of current and interim certification.

The following forms are used to diagnose competencies:

- oral;- written;- oral-written.

To assess the level of knowledge of students, the following diagnostic tools are used:

- reports on laboratory work with their oral defense; - execution and oral defense of calculation and graphic work;- passing the test;- passing the exam.