

# ROAD SOIL SCIENCE AND ROADBED MECHANICS

(name of the practice)

## **annotation**

### **TO THE INTERNSHIP PROGRAM OF A HIGHER EDUCATION INSTITUTION**

**Specialty I 70 03 01 - "Highways"**

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	Form of higher education	
	Full-time (full-time)work	Part-time work
Course	2, 3	3
Semester	4, 5	5,6
Lectures, hours	68	14
Laboratory classes, hours	32	8
Course work, semester	5	6
Exam, semester	4, 5	5,6
Classroom hours for the academic discipline	100	22
Independent work, hours	116	194
Total discipline hours/credits	216/6	216/6

#### 1. Summary of the internship program (goals and objectives of the internship)

The purpose of teaching the discipline "Road soil science and roadbed mechanics" is to form students' knowledge about the elements of engineering geology; types of soils.

The objectives of the discipline are: study of engineering and geological conditions on the territory of the Republic of Belarus; study of soil properties used in the construction of the roadbed; study of types and characteristics of soils; study of the basics of soil mechanics; obtaining knowledge about the strength of soils, their stress state, compaction methods, rheology, slope stability.

#### 2. Learning outcomes. A student who has studied the discipline must::

**knowledgeof:** fundamentals of general and engineering geology and hydrogeology; general physical and physical-mechanical characteristics of soils and mathematical expressions for their determination; theory of soil strength, theoretical prerequisites for compaction of soils; theory of slope stability and methods for determining indicators that characterize their stability; theoretical prerequisites and classification of methods of soil strengthening;

**be ableto:** conduct engineering and geological surveys in the construction of highways; determine the general physical and physical-mechanical properties of soils; determine the deformation properties of soils; calculate indicators that characterize the stability of the slope and retaining wall.

**possess:** methods of conducting engineering and geological surveys; methods for determining the general physical and physico-mechanical properties of soils; methods for calculating indicators that characterize the stability of the slope and retaining wall; research skills in drawing up an experiment planning matrix and statistical processing of research results; skills in working with technical and regulatory literature.

#### 3. Emerging competencies

UK-1 – Under the foundations of research activities, search and synthesis of information;

BPK-4 – Apply geodesic-geological and hydro-geological research solutions when choosing constructions.

#### 4. Current certification form

Exam

Rating	10	9	8	7	6	5	4	3	2	1	0
Points	100-94	93-87	86-80	79-72	71-65	64-58	57-51	50-41	40-17	16-1	0