DESCRIPTIVE GEOMETRY, ENGINEERING AND MACHINE GRAPHICS

ANNOTATION
TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

Speciality 1 – 70 02 01 «Industrial and civil construction»

	Form of higher education		
	Full-time (daytime)	Part-time	Part-time reduced
Well	1	1	1
Semester	1, 2	1, 2	1, 2
Lectures, hours	34	6	6
Practical (seminar) classes, hours	68	10	10
Classroom examination (semester, hours)	-	1,2 (8 hours)	1,2 (8 hours)
Report, semester	2	2	2
Exam, semester	1	1	1
Classroom hours per academic discipline	102	24	24
Independent work, hours	114	192	192
Total hours per academic discipline / credit units	216/6		

1. Brief content of the discipline
Introduction. Projections of a point, a straight line, a plane. The intersection of surfaces in case one occupies a projecting position. Cutting plane method. Method of concentric spheres. Projection plane replacement method. The method of rotation around straight lines. Projections with numerical marks. Design of earthworks on a topographic surface. Perspective. Architects method. Building shadows.
Kinds. Construction of three projections of the technical form. Algorithm for constructing pitched roofs. Axonometric projections. Cuts and sections. Thread. Threaded connections. Working drawings of details. Drawings of metal structures. Drawings of reinforced concrete structures.

2. Learning outcomes
- **know** the methods of projection in the system of projection planes of a point, a straight line, a plane and a surface; principles of construction of the intersection of geometric shapes; algorithm for constructing the boundaries of earthworks in projections with numerical marks; algorithm for constructing a linear perspective; GOST ESKD and SPDS.
- **be able** to solve positional, metric and complex problems, use standards and reference books, computer graphics tools when making drawings.
- **master** the methods of presenting details and the skills of reading construction drawings, the methods of using computer technology to construct drawings, the rules for drawing up construction documentation.

3. Formed competencies
To carry out graphic constructions on a plane and in space to solve professional problems.

4. Requirements and forms of current and intermediate certification.
A module-rating system for assessing knowledge is used. Intermediate control of progress is carried out on the basis of the performance and protection of a number of graphic individual tasks with scoring. The current attestation is carried out in the form of an exam (1st semester) and a test (2nd semester).