

BASICS OF SURFACE TREATMENT BY METHODS OF SPD

(course title)

COURSE SYLLABUS ABSTRACT

Speciality: 1-36 01 04 «Equipment and technologies for highly efficient material processing processes».

	STUDY MODE
	full-time
Year	3
Semester	6
Lectures, hours	34
Laboratory classes, hours	16
Pass/fail, semester	6
Contact hours	50
Independent study, hours	58
Total course duration in hours / credit units	108/3

1. Course outline.

The purpose of the discipline is to acquire by students a complex of special knowledge and skills in the field of various methods of surface plastic deformation (SPD), the technological equipment and equipment used.

2. Course learning outcomes.

As a result of mastering the academic discipline, the student should know:

- technical capabilities of various SPD methods;
- physical essence of SPD methods;
- tools, tooling and equipment used for SPD;
- operational properties of the surfaces of parts treated with SPD;

be able to:

- to choose methods of SPD for processing individual surfaces of the part, providing the necessary quality and efficiency of the processing process;
- to determine the optimal processing parameters by the SPD method;

possess:

- a methodology for choosing the method SPD of pressure molding for processing individual surfaces of a part, taking into account the requirements of the drawing and type of production;
- information about modern SPD methods and prospects for their development;
- skills in the choice of equipment, tooling, automation and mechanization in the design of processing technology using the methods of SPD.

3. Competencies.

Mastering this academic discipline should ensure the formation of the following competencies:

CK-3: Know the basic processes of material processing and assembly of machines, methods of calculation and selection of a processing tool.

4. Requirements and forms of midcourse evaluation and summative assessment.

To assess the level of knowledge of students, the following diagnostic tools are used: oral survey during laboratory work; reports on completed laboratory work with their oral defense; submission of an account.