

## MATERIAL PROCESSES

(name of the discipline)

### ANNOTATION

#### TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

Specialty 1-53 01 01 "Automation of technological processes and production"

	Form of higher education
	Full-time (daytime)
Well	3
Semester	6
Lectures, hours	84
Practical (seminar) classes, hours	16
Laboratory classes, hours	16
Exam, semester	6
Classroom hours per academic discipline	116
Independent work, hours	60
Total hours per academic discipline / credits	176/4

#### 1. Brief content of the discipline

The discipline "Processes of Materials Processing" contains general ideas about the content and tasks of mechanical engineering technology, about the foundations of theoretical positions, about the connections and patterns of technological processes, knowledge of which allows you to develop processes for machining parts and assembling machines and devices that ensure their quality at the highest level of labor productivity and the lowest production cost.

#### 2. Learning outcomes

A student who has studied the discipline should **know**:

- sources of machining errors, methods of their reduction;
- influence of various factors on the characteristics of the quality of surfaces of parts and their performance properties;
- principles of designing rational technological processes for various production conditions;

#### **be able to:**

- perform calculations of the main types of processing errors;
- design technological processes for processing parts and assembling machines for various production conditions;
- draw up technological documentation;
- evaluate the accuracy and stability of the current technological process;

#### **own:**

- methodology for choosing the route for processing individual surfaces and the part as a whole, taking into account the requirements of the part drawing, the accepted workpieces and the type of production;
- skills for assessing the quality of the technological process of machining and manufactured parts in production conditions;
- information necessary for the selection of statistical methods of regulation and quality control of products for given production conditions.

#### 8. Formed competencies:

SK-7 Know the sources of errors in machining, methods for calculating and reducing machining errors, designing technological processes for machining parts and assembling machines.

#### 4. Requirements and forms of current and intermediate certification

Current and intermediate certification is carried out in written and oral-written form through reports on laboratory and practical work with their oral defense, a written exam.