ADDITIVE TECHNOLOGIES
(name of the discipline)
ANNOTATION

TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

Specialty 1-36 01 04 "Equipment and technologies for highly efficient material processing processes"

Form of higher education	
	Full-time (daytime)
Course	4
Semester	8
Lectures, hours	12
Laboratory classes, hours	36
Pass, semester	8
Class hours for the academic discipline	48
Independent work, hours	60
Total hours per academic discipline / credit units	108/3

1. Brief content of the discipline

The discipline "Additive technologies" contains general ideas about the methods of controlling the structure and properties of materials in products under operational requirements.

2. Learning outcomes

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

– theoretical foundations of the processes of shaping products using three-dimensional technologies;

– the main technological operations in the formation and refinement of products;

– methods for calculating and modeling the processes of shaping products, the technical standards used in this case;

be able to::

– choose suitable technological processes for obtaining products;

– calculate the parameters of typical technological processes of product shaping using three-dimensional technologies and work them out in pilot industrial conditions;

– evaluate the manufacturability of the design of products according to economic criteria;

– develop technological documentation for standard manufacturing processes of products;

own:

– the skills of choosing a three-dimensional production process according to technical and economic indicators, taking into account energy and resource saving;

– skills in the development of technological and related documentation;

– methods of analytical evaluation, forecasting and experimental approbation of the parameters of the processing process and technological properties of materials;

– methods for ensuring the structure and performance properties of materials at the stage of product shaping.

3. Formed competencies:

SK-9 To know the equipment, types and technological processes of welding production, to be able to control the quality of welded joints, to select and develop the technological process of welding.

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 work with their oral defense, written test.