DESIGN OF TECHNOLOGICAL EQUIPMENT FOR THREE-DIMENSIONAL TECHNOLOGIES

(name of the discipline)

ANNOTATION

TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

Specialty 1-36 07 02 "Manufacture of products based on three-dimensional technologies"

Form of higher education		
	Full-time (daytime)	Correspondence
Well	3, 4	4
Semester	6, 7	7, 8
Lectures, hours	68	12
Laboratory classes, hours	16	12
Practical lessons, hours	50	-
Test, semester	6	7
Exam, semester	7	8
Classroom hours in academic disciplines	134	26
Classroom examination (semester, hours)	-	7, 2
Independent work, hours	118	226
Total hours per academic discipline / credit units	252/7	

1. Brief content of the discipline

The purpose of the discipline "Design of technological equipment for three-dimensional technologies" is to form a natural-science outlook and develop the technical horizons of future specialists in the field of design, operation, repair and assessment of the functional suitability of equipment for three-dimensional technologies on the market; technologies; as well as to give future engineers basic scientific and theoretical knowledge, which is the basis for understanding and assimilation of general educational, general technical and special disciplines, allowing them to master an interdisciplinary approach in solving theoretical and practical problems in their activities using various technological complexes of the 3rd, 4th and 5-coordinate processing in the field of synthesis of three-dimensional products.

2. Planned results of studying the discipline:

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

– types and arrangement of equipment for three-dimensional technologies;

– features of technological processes implemented on a certain type of equipment;

– the main elements of equipment for three-dimensional technologies and their functional indicators;

– features of the interaction of drives of technical systems of equipment with executive bodies, as well as the principles for choosing a specific design of units and parts of equipment for three-dimensional technologies;

– areas of effective application of materials for the manufacture of parts and components of equipment for three-dimensional technologies;

be able to: - to formulate the concept of using equipment according to market indicators;

– to predict manufacturability and reliability indicators when choosing certain technological schemes inherent in a certain type of equipment for three-dimensional technologies;

– evaluate the influence of accompanying technological factors on the effectiveness of three-dimensional synthesis of parts and products;

– determine the cause of failure of individual units of equipment for three-dimensional technologies and formulate requirements for the implementation of maintenance and overhaul.

own:

– practical skills in the selection and operation of technological equipment for three-dimensional technologies;

– ways to change the settings and parameters of technological equipment;

– skills in calculating the main characteristics that determine the functional parameters of units, mechanisms and working elements of technological equipment for three-dimensional technologies.

3. Formed competencies:

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

BPK-14 Know the basics of calculation and design of equipment and special means of technological equipment for three-dimensional technologies

4. Requirements and forms of current and intermediate certification

Educational technologies: multimedia.