

GENERAL ENGINEERING PRACTICE

ANNOTATION TO THE INTERNSHIP PROGRAM OF A HIGHER EDUCATION INSTITUTION

Specialty _6-05-0722-05 "Production of products based on three-dimensional technologies"

	STUDY MODE	
	full-time	part-time
Year	2	2
Semester	4	4
Total course duration in hours / credit units	216/6	

1. Internship course outline (aims and objectives)

The purpose of the practice is to familiarize with the methods of three-dimensional design of products and their manufacture by methods of additive manufacturing; to consolidate and deepen the theoretical knowledge gained at the university in the study of general professional and special disciplines; to prepare students for the assimilation of academic disciplines in senior courses.

The objectives of the practice are:

- familiarization with the main types of polymer materials used in additive manufacturing;
- acquisition of skills in choosing a method of manufacturing a product based on three-dimensional technologies;
- study of software (applications of SolidWorks, SolidWorks PDM, Ansys Space Claim) for three-dimensional object design;
- development of 3D models of the product or its components;
- creating drawings of parts;
- creating an assembly drawing of a node or part;
- development of a specification for an assembly drawing of a node or part;
- justification of the chosen method of production of the product.

2. Course learning outcomes

to know: - principles of operation of technological equipment for 3D printing;
- types of raw materials for additive technologies;
- properties of polymer materials intended for 3D printing;
- the structure of the technological process of manufacturing products by methods of additive technologies.

be able to: - analyze 3D models of the product or its components;

- represent an object in space and perform drawings of parts;

- to justify the choice of the method of production of the product.

possess: - the basic principles of designing three-dimensional objects;

3. 3. Competencies

BOD-7: Have the skills to build and calculate dynamic models of mechanisms and machines

BOD-11: Have a systematic knowledge of materials used in additive technologies, their components, production technology, structure and properties

4. Form of midcourse evaluation

The defense of the report on the implementation of the internship program is conducted orally.

