

# **RATIONING THE ACCURACY OF PRODUCTS**

## **ADDITIVE SYNTHESIS**

(course title)

### **COURSE SYLLABUS ABSTRACT**

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

(specialty code and name)

|   | STUDY MODE |           |
|---|------------|-----------|
|   | full-time  | part-time |
| Year  | 3          | 3         |
| Semester                                      | 6          | 6         |
| Lectures, hours                               | 16         | 6         |
| Laboratory classes, hours                     | 16         | 4         |
| Practical classes (seminars), hours           | 16         | 4         |
| Pass/fail, semester                           | 6          | 6         |
| Contact hours                                 | 48         | 14        |
| Independent study, hours                      | 60         | 94        |
| Total course duration in hours / credit units | 108/3      | 108/3     |

#### **1. Course outline**

The discipline "Standardization of the accuracy of additive synthesis products" contains general ideas about the methods of ensuring the interchangeability of a product at the stages of its life cycle, the basics of choosing requirements for the standardization of the accuracy of parameters, their control and the essence of standardization of these requirements.

#### **2. Course learning outcomes**

Upon completion of the course, students will be expected to

##### **know:**

- methods of ensuring interchangeability at the stages of the product life cycle;
- methods of normalizing the accuracy of parameters;
- basic principles of building systems of tolerances and landings, basic standards - basic standards of interchangeability, covering systems of tolerances and landings for typical types of connections of machine parts and devices;
- theoretical foundations of measurement control of parameters;

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

- use the standards of the basic norms of interchangeability;
- to indicate the requirements for the accuracy of the parameters in the drawings, read and decipher the symbols;
- to carry out measuring control of parameters by calibrations and basic universal measuring instruments;
- to present measurement results indicating errors and uncertainties.

##### **possess:**

- methodology for ensuring the interchangeability of nodes of technical systems;
- methods of using precision rationing in the manufacture of parts and assemblies.
- methods of control of geometrical parameters of details.

#### **3. Competencies**

Mastering this discipline should ensure the formation of the following competence: SK-6. To know the basic standards of interchangeability, the unified system of tolerances and landings, the methodology for calculating and assigning tolerances for products made of polymer and composite materials, as well as parts of forming equipment.

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

The current and intermediate certification is carried out in written and oral-written form by means of tests, reports on laboratory work with their oral defense, control works, written tests.