

## CAD CAE OPTIMIZATION TOOLS

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

**Specialty** 7-06-0714-02 Innovative technologies in mechanical engineering

**Profiling** – Computer engineering of transport and technological machines

	Form of higher education	
	Full-time (daytime)	Correspondence
Course	1	2
Semester	2	3
Lectures, hours	50	10
Laboratory classes, hours	34	8
Credit, semester	2	3
Class hours for the academic discipline	84	18
Independent work, hours	132	198
Total hours per academic discipline / credits	216/6	

#### 1. Brief content of the discipline

The content of the discipline is aimed at the formation of specialists who can reasonably and effectively apply existing and master new software products and technologies in the optimization of ground TTM designs.

#### 2. Learning outcomes:

- **know:** mathematical foundations of optimization methods; features of the implementation of optimization methods in application software;
- **be able to:** optimize the parameters of the technical system, taking into account the limitations; use modern application software for parametric and topological optimization of technical systems;
- **have the skill** of using the DesignXplorer software module as part of ANSYS Workbench to optimize the parameters of a technical system.

#### 3. Formed competencies:

SC-1 – Be proficient in working with modern engineering analysis systems

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

The form of intermediate attestation is a test.