

SCIENTIFIC FOUNDATIONS FOR THE APPLICATION OF SOURCES OF CONCENTRATED ENERGY FLOWS

(name of the discipline)

ANNOTATION

TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

Specialty 1-36 80 02 "Innovative technologies in mechanical engineering"

	Form of higher education	
	Full-time (daytime)	Correspondence
Well	1	2
Semester	2	3
Lectures, hours	32	8
Practical lessons, hours	16	4
Test, semester	2	3
Classroom hours per academic discipline	48	12
Independent work, hours	60	96
Total hours per academic discipline / credit units	108/3	108/3

1. Brief content of the discipline

Discipline "Scientific foundations of the application of sources of concentrated energy flows" contains general ideas about introducing students to the future specialty, familiarizing them with the laws of development, preparing undergraduates for the effective operation of sources of concentrated energy flows in industry and science.

2. Learning outcomes

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

- promising methods of hardening of machine parts and areas of their application;
- laws and regularities on which the methods of hardening of machine parts are based;

be able to:

- classify modern means of implementing concentrated energy flows;
- choose the main and auxiliary materials and methods for implementing the main technological processes for hardening machine parts.

own:

- scientific and technical information, domestic and foreign experience in hardening machine parts;
- basic theoretical knowledge and apply them to solve scientific and practical problems.

3. Formed competencies:

SK-2 To know advanced methods of hardening machine parts and their areas of application

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 practical work with their oral defense, written test.