"SCIENTIFIC FUNDAMENTALS OF MECHANICAL ENGINEERING TECHNOLOGY"
(name of the discipline)

ANNOTATION
TO THE WORK PROGRAM OF THE DISCIPLINE

Field of study: 1-36 80 02 – "Innovative technologies in mechanical engineering"
Profile: Mechanical engineering and Machine science
Welding technologies
Transport, mining and construction engineering
Qualification: Master's degree

	Form of higher education	
	Full-time (full-time)	Correspondence
Course	1	1
Semester	2	2
Lectures, hours	32	8
Exam, semester	2	2
Classroom hours in the academic discipline	32	8
Independent work, hours	58	82
Total hours of academic discipline / credits	90 / 3,0	

1. The purpose of the discipline

The purpose of the discipline is to present to students a range of issues related to the scientific foundations of mechanical engineering technology, as well as the basics of scientific research used in modern mechanical engineering.

2. Planned results of studying the discipline

As a result of mastering the discipline , the student must

Know:
- the influence of various factors on the operational properties of machine parts;
- mechanisms of formation of parameters of accuracy and quality of surfaces of machine parts with various methods of their manufacture;
- modern methods of scientific research in mechanical engineering technology;
- methods of improving the technological processes of manufacturing machine parts, improving the quality of these parts;

be able to:
- evaluate the accuracy of machining machine parts that is necessary and achievable under these conditions;
- choose the requirements for the quality characteristics of the surfaces of machine parts, taking into account their operating conditions and technical conditions, as well as technological methods to ensure these requirements in production;
- to carry out theoretical and experimental research in the field of mechanical engineering, to process and analyze the results;
- to choose optimal methods for improving product quality and production efficiency, taking into account current trends in these areas and specific production and operating conditions

own:
- computer tools for processing and analyzing research results.

3. Requirements for mastering the academic discipline

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

UK-2: possess in-depth fundamental and applied knowledge and skills in the field of innovative engineering technologies;

UPK-4: Be able to use knowledge about the theoretical foundations of mechanical engineering technology to improve the efficiency of mechanical assembly production in the design of technological processes for the manufacture of machine parts

4. Educational technologies

When conducting classes, the following forms and methods of educational technologies are used: traditional; multimedia.