PROSPECTS FOR THE APPLICATION OF CNC MACHINES AND ROBOTS IN MACHINE PRODUCTION

(course title)

COURSE SYLLABUS ABSTRACT

for the specialty 7-06-0714-02-1 Innovative technologies in mechanical engineering

profiling Mechanical engineering and machine science

	Form of higher education	
	Full-time	Part-time
Well	**2**	**2**
Semester	**3**	**4**
Lectures, hours	**34**	**8**
Laboratory classes, hours	**102**	**22**
Exam, semester	**3**	**4**
Classroom hours per academic discipline	**136**	**30**
Independent work, hours	**264**	**370**
Total hours per academic discipline /	**400/12**	

1. Course outline

The purpose of the academic discipline is to teach students the skills of practical application of industrial robots, technological equipment equipped with numerical control devices in existing and designed technological processes.

2. Course learning outcomes

As a result of studying the discipline, students should: **know**:

- technological capabilities of various groups of CNC machines;
- scope of application of industrial robots in production processes;
- features of designing technological processing processes using CNC machines;

be able to: - develop control programs for processing parts on CNC machines;

- rational use of the capabilities of CNC equipment;
- carry out standardization of operations carried out on CNC equipment;

To press a skill:

- features of designing processing operations on machine tools and CNC machine complexes;
- features of designing technological operations using industrial robots;
- skills in developing text of control programs for CNC machines and industrial robots.

3. Competencies:

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

Know ways to improve CNC machines and robots, areas of their effective use

4. Requirements and forms of midcourse evaluation and summative assessment

Current and intermediate certification is carried out in written and oral form through reports on laboratory work with their oral defense, and a written exam.