AUTOMATION OF TECHNOLOGICAL PROCESSES AND EQUIPMENT IN THE INDUSTRY

(course title)

COURSE SYLLABUS ABSTRACT

Speciality: 6-05-0713-04 Automation of technological processes and production,
Concentration «Automation of technological processes and production in mechanical engineering»

	STUDY MODE
	full-time
Year	4
Semester	7, 8
Lectures, hours	56
Practical classes (seminars), hours	56
Course paper, semester	8
Exam, semester	7, 8
Contact hours	112
Independent study, hours	128
Total course duration in hours / credit units	240/7

1. Course outline.

The aim of the academic discipline is to provide students with a set of specialized knowledge and skills for organizing and ensuring comprehensive automation of technological processes in the industry.

2. Course learning outcomes.

As a result of mastering the academic discipline, the student should

know:

- general patterns and directions of modern automated production;
- fundamentals of construction and methods for calculating technological processes of automated machine-building production;
- methods of managing production processes using modern technical means of automation and control computer technology;
- modern automated equipment necessary for organizing and managing a highly efficient production process;

be able to:

- calculate technological processes of automated machine-building production and devices for automatic loading of equipment;
- design functional and block diagrams of control systems for automated machine and robotic technological complexes, flexible production systems, etc.;
- draw up diagrams of algorithms for the functioning of automated machine systems, robotic technological complexes, flexible production systems, etc.;
- effectively use modern automated equipment necessary for organizing and managing the production process;

to possess a skill:

- the basics of construction and methods for calculating technological processes of automated machine-building production;
- the principles of constructing automated machine tools, robotic technological complexes, flexible production systems, etc.;
- methods of managing production processes using modern technical means of automation and control computer technology.

3. Competencies.

Mastering this academic discipline should ensure the formation of the following competencies:
- Master the fundamentals of research, search, analyze, and synthesize information. - Be capable of developing and improving in professional activities. - Show initiative and adapt to changes in professional activities. - Evaluate the parameters of an automatic control system, ensure comprehensive automation of technological processes in the industry.

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

The following diagnostic tools are used to assess the level of students' knowledge: written reports on practical work with their oral defense; passing an exam - a combination of oral response and written preparation.