AUTOMATION CONTROL AND ROBOTICS

(course title)

COURSE SYLLABUS ABSTRACT

6-05-0715-03 Automobiles, tractors, mobile and technological complexes

(speciality code and name)

Computer engineering in lifting and transport engineering
Computer engineering in construction and road engineering

(concentration)

	STUDY MODE
	full-time
Year	**3**
Semester	6
Lectures, hours	16
Laboratory classes, hours	34
Exam, semester	6
Contact hours	50
Independent study, hours	58
Total course duration in hours / credit units	108/3

1. Course outline

The aim of the academic discipline is to train specialists who are able to reasonably and effectively apply existing and master new knowledge, skills and abilities that allow them to make competent technical decisions in practical work when creating and operating automation equipment.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know:

- fundamentals of automatic control theory;
- purpose of automation elements and telemetry systems;
- engineering methods of calculation and evaluation of automation system properties;
- principles of constructing control systems for lifting and transport, road construction machines, robots and manipulators;

be able to:

- draw up functional and structural diagrams of automation objects;
- conduct stability and control quality analysis;
- select sensors and regulators for a specific object;

to possess a skill:

- methods of evaluating the technical level of automation and automation equipment.

3. Competencies

Apply knowledge about the structure and operating principles of automatic systems and control systems of mobile technological machines

4. Requirements and forms of midcourse evaluation and summative assessment

The defense of laboratory work is carried out in oral and written form based on the questions given in the methodological recommendations. The test is carried out in technical form in the form of a test in the moodle system. The exam is carried out in technical form in the form of a test in the moodle system.