DESIGN AND TECHNICAL DOCUMENTATION OF CONSTRUCTION, ROAD, LIFTING AND TRANSPORT MACHINERY

(course title)

COURSE SYLLABUS ABSTRACT

6-05-0715-03 – «Cars, 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	4
Semester	7
Lectures, hours	16
Practical classes (seminars), hours	16
Exam, semester	7
Contact hours	32
Independent study, hours	76
Total course duration in hours / credit units	108/3

1. Course outline

The purpose of the discipline is to form students' knowledge, skills and abilities in the design of construction, road and lifting vehicles, as well as the creation of technical documentation.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know:

- stages of design of construction, road and lifting-transport machines;
- stages of development of construction, road and lifting-transport machines;
- purpose, scope, device and principles of operation of design of construction, road and lifting-transport machines;
- rules of drawing up technical specifications, technical proposals, development of technical documentation for design of construction, road and lifting-transport machines transport vehicles;
- basic methods of calculation and design of construction, road and lifting vehicles;
- principles of design of construction, road and lifting vehicles;
- GOST standards ESKD, ESTD, SDPS, STB, STP for the creation of technical documentation;

be able to:

- analyze the designs of construction, road and lifting machines as a whole and individual mechanisms;
- design machines and technological complexes;
- use automatic design systems and modern computing equipment;
- use regulatory and technical literature and standards for the design, operation and certification of construction, road and lifting machines;
- perform the necessary calculations of parts, mechanisms and assembly units and, in general, construction, road and lifting and transport vehicles;
- to know the sequence and actions necessary for the certification of construction, road and lifting machines, their places of work and personnel associated with their work in compliance with regulatory requirements, to draw up technical documentation for the product, a general drawing, an assembly drawing;

to possess a skill:

- design and certification of construction, road and lifting vehicles;
- methods of using specialized literature, reference books, standards and guiding thematic materials.

3. Competencies:

Be capable of self-development and improvement in professional activity

Apply methodological principles of designing machines for earthworks

4. Requirements and forms of midcourse evaluation and summative assessment

The form of the current attestation is oral – an interview during the defense of practical work.

The form of intermediate certification: oral and written examination.