

USE OF COMPUTER-AIDED DESIGN SYSTEMS

(course title)

COURSE SYLLABUS ABSTRACT

1-36 11 01 – Innovative equipment for the construction complex (by directions)
(speciality code and name)

Technical operation of vehicles
(concentration)

Advanced higher education

	STUDY MODE	
	full-time	part-time
Year	2	2
Semester	3	3
Lectures, hours	34	8
Laboratory classes, hours	50	10
Exam, semester	3	3
Contact hours	84	18
Independent study, hours	132	198
Total course duration in hours / credit units	216/6	

1. Course outline

The purpose of the discipline is to form specialists who possess the basics of theory and skills in using computer-aided design (CAD) systems to develop sound solutions in engineering activities.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know:

- general information about the stages and methods of designing technical facilities using CAD tools;
- general approaches to the selection and use of technical and linguistic CAD software;
- methods of structural analysis and parametric optimization;
- the main features, relationships and quantitative patterns of the automated design tool used.

be able to:

- create design algorithms for construction, road and lifting equipment;
- use integrated design tools to solve design and technological problems;
- use basic calculation methods using modern computer technology;
- solve optimization problems by means of integrated design tools.

to possess a skill:

- design of technical facilities using CAD tools.

3. Competencies

- To solve research and innovation tasks based on the use of information and communication technologies
- To provide communication, demonstrate leadership skills, be capable of team building and the development of strategic goals and objectives
- To develop innovative sensitivity and ability to innovate
- To apply modern computer technologies in scientific research and design of transport facilities and systems
- To apply computer-aided design systems in the creation of transport facilities

4. Requirements and forms of midcourse evaluation and summative assessment

The form of the current certification: technical – electronic tests and oral – an interview for the protection of practical work.

The form of intermediate certification: technical – exam.