

FUNDAMENTALS OF ENGINEERING

(course title)

CARS, TRACTORS, MOBILE AND TECHNOLOGICAL**Computer engineering**

(concentration)

OPERATION OF GROUND TRANSPORT AND TECHNOLOGICAL MACHINES AND COMPLEXES**Technical operation of cars and car service**

(concentration)

	STUDY MODE		
	full-time	part-time	part-time (shortened program)
Year	1,2	2	2
Semester	2,3	3,4	3
Lectures, hours	32	8	4
Laboratory classes, hours	68	12	6
Test, semester	2,3	3,4	3
Contact hours	100	20	10
Independent study, hours	116	196	206
Total course duration in hours / credit units	216/6	216/6	216/6

1. Course outline

The purpose of teaching the discipline "Fundamentals of Engineering" is to form students' skills and abilities when working with software (software) implemented in the form of three-dimensional design systems for machine parts, subassemblies and machines in general, allowing them to make specific decisions in practical work with solving problems in the field of machine design.

2. Course learning outcomes

Upon completion of the course, students will be expected to know:

- principles, methods and rules for creating three-dimensional models of parts using Compass and Solid Works software.
- principles, methods and rules for creating three-dimensional subassemblies using Compass and Solid Works software.

- basics of creating, checking, editing nodes, overlaying relationships between assembly elements

- principles, methods and rules for creating drawings using Compass and Solid Works software.

- principles, methods and rules for creating specifications..

be able to:

- use the Compass software to create three-dimensional models of parts and Solid Works.

- use the Compass software to create, check, edit nodes, overlay relationships between assembly elements.

- use the Compass software to create and edit drawings, apply dimensions, perform sections, cuts, local views,

configure drawing tools and "Solid Works". possess:

- computer skills;

- in creating three-dimensional models of parts.

- of creating, checking, editing nodes, superimposing relationships between assembly elements.

- creating and editing drawings, drawing dimensions, performing sections, sections, local views, to customize drawing tools..

3. Competencies

for the specialty

Operation of ground transport and technological machines and complexes for the specialty 6-05-0715-03 Cars, tractors, mobile and technological complexes

- Use methods of graphic representation of objects on the plane and in space, create drawings of parts and assemblies, design and develop design documentation according to the requirements of the Unified System of Design Documentation

- Use basic computer-aided design technologies, methods of computer-aided execution of drawings, three-dimensional models and other graphic works.

for the specialty

6-05-0715-07 Operation of ground transport and technological machines and complexes

- Apply various methods of graphical constructions on the plane and in the space of car parts and technical equipment for technical repair and maintenance of cars

- Use basic computer-aided design technologies, methods of computer-aided execution of drawings, three-dimensional models and other graphic works.

The form of the current certification is a individual task. Test