PRE-GRADUATION INTERNSHIP
(course title)

INTERNSHIP 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, Computer engineering in automotive industry
(concentration)

	STUDY MODE
	full-time
Year	4
Semester	8
Total course duration in hours / credit units	216/6

1. Internship course outline (aims and objectives)

The objectives of the practice are to master in practical conditions the principles of organization and management of a division in the organization and performance of engineering support tasks, analysis of economic performance of machinery, measures to improve the reliability and efficiency of engineering equipment. Mastering industrial computing programs for calculating, analyzing, and optimizing the design of facilities, taking into account specialization. Studying the requirements for the development of design solutions, familiarization with specific projects of various facilities, taking into account specialization, mastering the principles of design when creating new technical facilities. Formation and analysis of materials for the completion of the graduation project.

2. Course learning outcomes

Learning outcomes:

– to consolidate theoretical knowledge in the field of features of various production and technological processes; designs and principles of operation of basic machines; methods for selecting the main parameters of machines; requirements of production organizations for machines; design methodology used at the enterprise; regulatory and scientific and technical documentation used at the enterprise when designing machines;

- to master practical skills in the field of analyzing scientific, technical and design documentation; to determine the basic parameters of machines; to develop design solutions for machines and technological processes; to compile and execute technical documentation in accordance with the requirements of standards;

– to develop practical expertise in the field of preparation of assignments for the development of design solutions; determination of the values of the main parameters of machines; technical calculations and analysis of the effectiveness of design solutions; creation of design documentation in accordance with the requirements of standards.

3. Competencies

To work in a team, to accept social, ethnic, religious, cultural and other differences in a tolerant manner

Take initiative and adapt to changes in professional activities

Solve standard tasks of professional activity based on the use of information and communication technologies

To use methods of graphic representation of objects on a plane and in space, to create drawings of parts and assemblies, to draw up and develop design documentation according to the requirements of the Unified System of Design Documentation

To use the basic concepts of methods of obtaining structural materials, methods of surface treatment, to apply them in the manufacture of parts of cars, tractors and electric vehicles

To apply in practice physico-mathematical methods for calculating mechanisms, machines and structures, to analyze and develop their kinematic and dynamic schemes

Perform calculations for strength, rigidity, and stability of structures

Select and determine the composition and basic properties of materials by brand for the production of cars, tractors and electric vehicles

Use methods of research, construction, analysis of kinematics and dynamics of mechanisms and machines, calculate mechanical systems of cars, tractors, mobile and technological complexes

Use the basic concepts of technical regulatory legal acts that ensure the accuracy of manufacturing and product quality, technical and information compatibility, interchangeability in accordance with the level of development of science, technology and technology, use appropriate measuring instruments and devices

Apply the basic laws of pneumatics and hydraulics in the design of automobiles, tractors, mobile and technological complexes

Use calculation methods that confirm the operability of the designed structures, develop and issue design documentation for the designed products

Use basic computer-aided design technologies, computer-aided drawing techniques, three-dimensional models, and other graphic works.

Calculate economic indicators of transport and technological machines based on standard methods, carry out a feasibility study of consumer qualities

4. Form of midcourse evaluation

The form of intermediate certification. The intermediate certification in practice is a differentiated credit. The final grade is defined as the sum of the rating control of the internship (up to 60 points), intermediate certification (up to 40 points).