EARTHMOVING MACHINERY
(course title)

COURSE SYLLABUS ABSTRACT

6-05-0715-03 Cars, tractors, mobile and technological complexes
(speciality code and name)

"Computer engineering in hoisting and transport engineering"
"Computer engineering in construction and road engineering"
(specialisation code and name)

	STUDY MODE
	full-time
Year	**3**
Semester	6
Lectures, hours	50
Practical classes (seminars), hours	16
Laboratory classes, hours	34
Course paper, semester	7
Pass/fail, semester	6
Contact hours	100
Independent study, hours	44
Total course duration in hours / credit units	144/4

1. Course outline

The purpose of the discipline is to form students' knowledge, skills and abilities in the field of structural design, selection of basic parameters, determination of the main characteristics of machines for earthworks.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know:

– construction of machines for earthworks, including their systems and working equipment;

– physical processes that occur when working equipment interacts with the environment being developed;

– methods of mathematical modeling of loads and work processes;

– methods for determining static and dynamic loads acting on the machine and its aggregates, performing strength calculations of machine elements;

be able to:

– perform traction kinematic, hydraulic and strength calculations of the machine, perform machine layouts, design assembly drawings, machine parts and systems;

– to select the main parameters of machines for earthworks;

determine the main characteristics of machines for earthworks.

possess:

– the methodology for performing traction kinematic, hydraulic and strength calculations of the machine, performing the layout of the machine, designing assembly drawings, parts and systems of machines;

– the methodology for selecting the main parameters of machines for earthworks;

the methodology for determining the main characteristics of machines for earthworks.

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 current certification oral and written.

The form of intermediate certification is an test.