THEORETICAL MECHANICS
(course title)

COURSE SYLLABUS ABSTRACT

1-40 05 01 "Information systems and technologies" (according to directions)
(speciality code and name)

1-40 05 01 "Information systems and technologies" (in design and production)
(specialisation code and name)

	STUDY MODE		
	full-time	part-time	part-time (shortened program)
Year	**2**	**2**	**1**
Semester	3	3	2
Lectures, hours	50	12	10
Practical classes (seminars), hours	34	8	8
Pass/fail, semester	3	3	2
Contact hours	84	20	18
Independent study, hours	132	196	198
Total course duration in hours / credit units	216/6		

1. Course outline
Rigid body statics. Kinematics of a material point and a rigid body. Dynamics of a material point and a mechanical system. Analytical mechanics. Impact theory.
2. Course learning outcomes
Upon completion of the course, students will be expected to
- know: basic concepts and laws of mechanics; basic theoretical provisions of statics, kinematics and dynamics of a material point and a mechanical system; fundamentals of calculation methods for static and dynamic systems, units and mechanisms of machines
- be able to: develop independence and a creative approach to the problem of setting tasks and choosing the optimal engineering method for solving it; apply the basic laws and theorems of mechanics to solve applied engineering problems; basic concepts and laws of mechanics; basic concepts and laws of mechanics; basic theoretical provisions of statics, kinematics and dynamics of a material point and a mechanical system; use fundamental and special technical literature.
- possess: the ability to analyze specific problems to select rational methods for their solution; a method for determining the main parameters of movement (interaction, functioning) of mechanical objects; laws and methods of mechanics for building mathematical models of dynamic systems, analysis of complex dynamic systems, including optimization of their parameters.
3. Competencies: CK-4. Use the basic laws of natural science disciplines in professional activities
4. Requirements and forms of midcourse evaluation and summative assessment
To assess the current performance, a written form (tests), an oral form (protection of individual tasks), testing (testing theoretical knowledge), and for an intermediate - oral-written (test) are used.