C O U R S E G U I D E – s h o r t f o r m

Academic year 2024-2025

Course name[1]	**Machine elements and mechanisms 1**					Course code		2.IMAT.01.DD	
Course type[2]	DID	Category[3]	DI	Year of study	2	Semester	3	Number of credit points	4

Faculty	Material Science and Engineering	Number of teaching and learning hours[4]					
Field	Materials Engineering	Total	L	T	LB	P	IS
Specialization	Materials Science Materials Processing Engineering	100	28	-	14	-	58

Pre-requisites from the curriculum[5]		
	Compulsory	-
	Recommended	Mechanics, physics, mathematical analysis, technical drawing

General objective[6]	Identifying, defining and describing principles and methods from general technical sciences, using graphic representations for solving specific tasks, as well as developing critical attitudes towards problems related to the design of machines and their constituent elements, mechanisms.
Specific objectives[7]	• Knowledge of the structure, kinematics, kinetostatics of the mechanisms and some basic characteristics of the machine parts in their composition, as well as how to use them practically; • The development of a specialized technical language through the use of terminology specific to the mechanism discipline; • Understanding the methods of movement and load transmission within a mechanism; • Acquiring fundamental notions about mechanisms and their constituent elements.
Course description[8]	Structural analysis of mechanisms, kinematic elements, kinematic joints, kinematic chains, structural designing of mechanisms, mechanisms kinematic analysis - mathematical methods, kinetostatic analysis, inertia forces and momentum, determination of normal reaction forces in revolute and prismatic joints, gears and gear classification, geometric parameters for cylindrical gears, gear ratio, cam mechanisms, classification, operation cycle.

Assesment			Sche-dule[9]	Percentage of the final grade(minimum grade)[10]
A. Final assessment form[11]: Exam	Class tests along the semester	-	-	70% (minimum 5)
	Home works	-	-	
	Other activities	-	-	
	Examination procedures and conditions: Written examination	100% (mini-mum grade 5)	Exam period	
B. Seminar	Activity during seminar			-
C. Laboratory	Acttvity during laboratory			30% (minimum 5)
D. Project	Activity during project			-

Course organizer	Ș.l.dr.ing. Cristina-Magda CAZACU	
Teaching assistants	Dr.ing. Marius RECEANU	

[1]Course name from the curriculum
[2] DF – fundamental, DID – in the field, DS – specialty, DC – complementary (from the curriculum)
[3] DI – imposed, DO –optional, DL – facultative (from the curriculum)
[4]Points 3.8, 3.5, 3.6a,b,c, 3.7 from the Course guide – extended form (L-lecture, T-tutorial, LB-laboratory works, P-project, IS-individual study)
[5]According to 4.1 –Pre-requisites - from the Course guide – extended form
[6]According to 7.1 from the Course guide – extended form
[7]According to 7.2 from the Course guide – extended form
[8] Short description of the course, according to point 8 from the Course guide – extended form
[9]For continuous assessment: weeks 1 – 14, for final assessment – colloquium: week 14, for final assessment-exam: exam period
[10]A minimum grade might be imposed for some assessment stages
[11]Exam or colloquium