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]	**Strength of materials**					Course code		2EPI05DID	
Course type[2]	DID	Category[3]	DI	Year of study	2	Semester	3	Number of credit points	4

Faculty	Materials Science and Engineering	Number of teaching and learning hours[4]					
Field	Mechanical engineering	Total	L	T	LB	P	IS
Specialization	Equipment for Industrial Processes	100	28	14	14	-	44

Pre-requisites from the curriculum[5]		
	Compulsory	Not stipulated.
	Recommended	Mathematical analysis, Algebra, Mechanics, Physics.

General objective [6]	Conveying knowledge concerning the general principles of the strength, stiffness and stability computations, respectively, for the main types of elements used in machine building.
Specific objectives[7]	• Experimental determination of the behavior of materials under mechanical testing; • Present simple load and problem-solving design and checking • Solving problems on calculation of deflections to simple requests; • Solving problems of design and checking buckling • Solving the problems of combined loads.
Course description[8]	Basic theories, loads, stresses, strains, conventional stress-strain diagram, Hooke's law, axial load, transverse shear, torsion, bending, buckling, combined loadings.

Assesment			Sche-dule[9]	Percentage in the final grade (minimum grade)[10]
A. Final assessment form [11]: Exam	Class tests along the semester	25%	week 8	80% (minimum 5)
	Home works	25%	week 1-14	
	Examination procedures and conditions: Probe1: Problem of axial load; tasks: solving; working conditions: writing; percent of the final grade: 25% Probe 2: Problem of transverse shear or torsion; tasks: solving; working conditions: writing; percent of the final grade: 25% Probe 3: Problem of bending; tasks: solving; working conditions: writing; percent of the final grade: 25% Probe 4: Theoretical subject; tasks: assumptions, judgments; working conditions: writing; percent of the final grade: 25%	50% (mini-mum 5)	exam period	
B. Seminar	Activity during seminar			10% (minimum 5)
C. Laboratory	Acttvity during laboratory			10% (minimum 5)
D. Project	Activity during project			% (minimum 5)

Course organizer	PhD Lecturer Liviu ANDRUȘCĂ	
Teaching assistants	PhD Lecturer Liviu ANDRUȘCĂ	

[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