COURSE GUIDE – short form
Academic year 2024-2025

Course name[1]	**Linear Algebra, Analytic and Differential Geometry**					Course code		1ISI07DF	
Course type[2]	DF	Category[3]	DI	Year of study	1	Semester	2	Number of credit points	3

Faculty	Material Science and Engineering	Number of teaching and learning hours[4]					
Field	Industrial Engineering	Total	L	T	LB	P	IS
Specialization	Safety Engineering in Industry	75	28	28	-	-	19

Pre-requisites from the curriculum[5]	Compulsory	- Algebra, Geometry and Trigonometry, high-school level
	Recommended	-

General objective [6]	The main objective is that the student becomes familiar with mathematical thinking and is able to solve practical problems.
Specific objectives[7]	This course is intended to introduce the students of engineering to those areas of linear algebra and analytic and differential geometry, which will be used in technical specific fields of study.
Course description[8]	Matrices and determinants. Linear systems. Linear algebra: vectorial spaces, linear transformations, quadratic forms. Vectorial algebra (free vectors, products of vectors, vectorial equations). Planes and lines in space Second order algebraic curves in plane. Quadric surfaces.

Assessment		Schedule[9]	Percentage of the final grade (minimum grade)[10]
A. Final assessment form[11]	Class tests along the semester		
	Home works		
	Other activities		
	Examination procedures and conditions: colloquium Test paper, 4 problems, 100% (minim 5)	Week 14	70 % (minim 5)
B. Seminar	Activity during seminar	Weekly	30 % (minim 5)
C. Laboratory	Activity during laboratory		
D. Project	Activity during project		

Course organizer	Assoc. prof. PhD. Daniela Roșu	
Teaching assistants	Assoc. prof. PhD. Daniela Roșu	

[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