

COURSE GUIDE – short form
Academic year 2017-2018

Course name ¹	Linear Algebra, Analytic and Differential Geometry					Course code	1EPI07DF		
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	Mechanical Engineering	Total	L	T	LB	P	IS	
Specialization	Equipments for Industrial Processes	84	28	28	-	-	28	

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
Continuous assessment	Class tests along the semester		
	Activity during tutorials/laboratory works/projects/practical work	Weekly	25 %
	Assignments	-	
Final assessment	Final assessment form ¹¹	colloquium	75 %
	Examination procedures and conditions: Test paper to resolve 5 problems		

Course organizer	Lect. PhD. Daniela Roşu
Teaching assistants	Lect. PhD. Daniela Roşu

¹Course name from the curriculum

²DF – fundamental, DID – in the field, DS – specialty, DC – complementary (from the curriculum)

³DI – imposed, DO –optional, DL – facultative (from the curriculum)

⁴Points 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)

⁵According to 4.1 – Pre-requisites - from the Course guide – extended form

⁶According to 7.1 from the Course guide – extended form

⁷According to 7.2 from the Course guide – extended form

⁸Short description of the course, according to point 8 from the Course guide – extended form

⁹For continuous assessment: weeks 1 – 14, for final assessment – colloquium: week 14, for final assessment-exam: exam period

¹⁰A minimum grade might be imposed for some assessment stages

¹¹Exam or colloquium