

COURSE GUIDE – short form

Academic year 2018-2019

Course name	Materials science and engineering (2)					Course code	1ISI11DD		
Course type	DD	Category	DI	Year of study	1	Semester	2	Number of credit points	5

Faculty	Materials Science and Engineering	Number of teaching and learning hours						
Field	Industrial Engineering	Total	L	T	LB	P	IS	
Specialization	Industrial safety engineering	42	28		14		28	

Pre-requisites from the curriculum	Compulsory	
	Recommended	

General objective	Making calculations, demonstrations and applications for solving industrial engineering specific tasks based on knowledge in the field of materials science and engineering and related to existing correlations between composition, structure, properties and uses of metallic materials.
Specific objectives	Recognition of materials using their properties and different methods of investigation. Materials selection depending on the application. Investigation of materials characteristics and properties. Developing skills for elaborating specific reports and scientific articles. Knowledge of materials processing technologies. Choosing processing technology according to the part/material requirements. Developing skills for elaborating specific reports and scientific articles.
Course description	Metallic materials. Ceramic materials. Composite materials. Semiconductors. Smart materials. Amorphous materials. Special destination metallic materials. Service behavior of the metallic materials.

Assessment		Schedule	Percentage in the final grade (minimum grade)	
A. Final assessment form:	Class tests along the semester	%	50% (minimum 5)	
	Home works	%		
	Other activities	%		
	Examination procedures and conditions:	100% (minimum 5)		Session
	1. Category: theoretical; subject with open questions; conditions: oral; weight in final grade: 20%; 2. Category: theoretical; subject with open questions; conditions: oral; weight in final grade: 20%; 3. Category: theoretical; solving problem; conditions: oral; weight in final grade: 30%; 4. Category: theoretical; solving problem; conditions: oral; weight in final grade: 30%.			
B. Seminar	Activity during seminar		% (minimum 5)	
C. Laboratory	Activity during laboratory		50% (minimum 5)	
D. Project	Activity during project		% (minimum 5)	

Course organizer	Associate professor dr.eng. Ioan RUSU
Teaching assistants	Assist. PH.D. eng. Elena MIHALACHE
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