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

Academic year 2021 - 2022

Course name[1]	**INDUSTRIAL SYSTEMS FOR HEAT TREATMENTS AND UNCONVENTIONAL THERMOCHEMICAL TREATMENTS**					Discipline code		SITM IA 203	
Course type[2]	**DA**	Category[3]	**DI**	Year of study	2M	Semester	**3**	Number of credit points	**6**

Faculty	Material Science and Engineering	Number of teaching and learning hours[4]					
Field	Mechanical Engineering	Total	L	T	LB	P	IS
Specialization	SITM	**42**	**28**	**-**	**14**	**-**	**78**

Pre-requisites from the curriculum[5]	Compulsory	
	Recommended	

General objective [6]	Heat and thermochemical treatments using laser, plasma, electron beam or other advanced methods used in materials processing.
Specific objectives[7]	Knowledge, analysis, design and efficient used and effective and appropriate use of heat treatments and thermochemical technologies used in machinery industry.
Course description[8]	Introduction I. The opportunity of special heat treatment processes and unconventional used in machinery industry. II. Heat and thermochemical treatment in the ultrasound field. III. Heat treatment in magnetic field. IV. Heat and thermochemical treatment with plasma heat. V. Heat treatment with fast and ultrafast heating. VI. Heat and thermochemical treatment in fluidized bed.

Assessment		Schedule[9]		Percentage of the final grade (minimum grade)[10]
A. Final assessment form [11]	Class tests along the semester	%	week	75 % (minimum 5)
	Home works	25 %		
	Other activities	%	week	
	Examination procedures and conditions: 1. -, working conditions -, percent %; 2. -, working conditions -, percent %; 3. -, working conditions -, percent %	75 % (minimum 5)	exam perio	
B. Seminar	Activity during seminar			% (minimum 5)
C. Laboratory	Activity during laboratory			25 % (minimum 5)
D. Project	Activity during project			% (minimum 5)
Course organizer	**Lecturer Ph.D. Eng. Carmen NEJNERU**			
Teaching assistants	**Asist. Ph.D.Eng. Doru Dumitru Burduhos Nergis**			

[1]Course name from the curriculum

[2] DF – fundamental, DD – 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