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

Academic year 2018 - 2019

Course name[1]	**THEORETICAL BASES OF THERMAL TREATMENTS**					Discipline code		**4 SM 03**	
Course type[2]	**DS**	Category[3]	**DI**	Year of study	3	Semester	**5**	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	SM	**84**	**42**	**-**	**28**	**14**	

Pre-requisites from the curriculum[5]	Compulsory	
	Recommended	Chemistry, Physics, Study of materials

General objective [6]	Study of technologies used for thermal and thermochemical treatments for finalizing properties of the material to be exploited
Specific objectives[7]	Knowledge, analysis, efficient design and effective and appropriate use of thermal treatments and thermochemical technologies used in the industry of machinery
Course description[8]	I. Introduction. The purpose of heat treatments. II. The link between equilibrium diagrams and thermal treatments applied. III. Thermal parameters and specific temporal for heat treatments and thermochemical technologies. IV. Primary thermal treatment technology. V. Steels quenching technology; Quench implementing technology solution; Martensitic hardening technology; Shallow hardening. VI. Annealing technology. VII. Thermochemical treatments.

Assessment		Schedule[9]		Percentage of the final grade (minimum grade)[10]
A. Final assessment form [11] exam	Class tests along the semester	%	week	50 % (minimum 5)
	Home works	%		
	Other activities	%	week	
	Examination procedures and conditions: 1. Subject with open questions, working conditions oral, percent %; 2. -, working conditions -, percent %; 3. -, working conditions -, percent %	50 % (minimum 5)	exam perio	
B. Seminar	Activity during seminar			% (minimum 5)
C. Laboratory	Acttvity during laboratory			25 % (minimum 5)
D. Project	Activity during project			25 % (minimum 5)
Course organizer	**Lecturer Ph.D. Eng. Carmen NEJNERU**			
Teaching assistants	**As.Ph.D.Eng. Simona Mădălina BĂLȚATU**			

[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