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

Academic year 2017-2018

Course name[1]	TECHNOLOGICAL PROCESSES SIMULATION					Course code		3IPM13 DS	
Course type[2]	DS	Category[3]	DI	Year of study	IV	Semester	VIII	Number of credit points	5

Faculty	Of Materials Science and Engineering	Number of teaching and learning hours[4]					
Field	Materials Engineering	Total	L	T	LB	P	IS
Specialization	Materials Processing Engineering	120	14	-	14	-	92

Pre-requisites from the curriculum[5]	Compulsory	
	Recommended	Computer programming and programming languages.

General objective [6]	Combining the knowledge, principles and methods of the technical sciences of the field with the principles and methods used in the analysis, modeling and simulation of metallurgical processes
Specific objectives[7]	Knowledge of statistical and mathematical methods for obtaining mathematical models describing the functional links between the input and output variables of the technological processes. Simulation of technological processes specific to the processing of metallic materials (thermal and thermo-chemical treatments, plastic deformation).
Course description[8]	Simulation of the plastic deformation regime of a metallic material Modeling and simulation of the plastic deformation process. Determining the optimal function of the plastic deformation process. Simulation of the thermal treatment of a metallic material. Modeling and simulation of some stages specific to the heat treatment process. Determining the optimal function of the heat treatment process. Simulation of controlled lamination regimes of low alloyed steels.

Assessment			Schedule[9]	Percentage of the final grade (minimum grade)[10]
Continuous assessment	Activity during laboratory		Weeks 1-14	20% (minimum 5)
	Assignments (It will be deliver a report in week 7 from topics of the course)		Weeks 1-14	30%
Final assessment	Final assessment form[11]	Oral examination	Week 14	50% (minimum 5)
	Examination procedures and conditions: 1. One subject in the course topics; oral presentation and answers to specialty questions, 100%. percent			

Course organizer	Assoc. Prof. dr. eng. Nicanor CIMPOEȘU	
Teaching assistants	Assoc. Prof. dr. eng. Nicanor CIMPOEȘU	

[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
[11] Exam or colloquium