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]	Modeling and simulation in materials processing (1)					Course code		4IPM12DS	
Course type[2]	DS	Category[3]	DI	Year of study	IV	Semester	VII	Number of credit points	4

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	100	28	-	28	-	44

Pre-requisites from the curriculum[5]	Compulsory	
	Recommended	Computer programming and programming languages. Using of computer in statistical analysis. Mathematical analysis. Numerical analysis

General objective [6]	The association of knowledge, principles and methods from technical sciences domain with the principles and methods used in the analysis, modeling and optimization of metallurgical processes
Specific objectives[7]	• The concept of a model and modeling methods. • Modeling the processes by material balance and energy balance. • Knowledge of statistical and mathematical methods for the obtaining of mathematical models that describe the functional links between input and output variables of metallurgical processes.
Course description[8]	Technological processes, general considerations regarding the modeling and optimization of technological processes, adaptive optimization, optimization of dynamic processes and optimization of technological processes by determining optimal conditions.

Assesment			Sche-dule[9]	Percentage in the final grade (minimum grade)[10]
A. Final assessment form [11]: Exam	Class tests along the semester	20%	Week 7	70 % (minimum 5)
	Home works	20%	Week 14	
	Other activities	%		
	Examination procedures and conditions: Oral exam with 3 subjects	60% (minimum 5)	Sesion	
B. Seminar	Activity during seminar			% (minimum 5)
C. Laboratory	Activity during laboratory			30 % (minimum 5)
D. Project	Activity during project			% (minimum 5)

Course organizer	Prof. phd. eng. Nicanor CIMPOEȘU	
Teaching assistants	Lecturer Chicet Lucia Daniela	

[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