COURSE GUIDE METALLURGICAL PROCESS MODELING AND OPTIMIZATION – short form

Academic year 2017-2018

Course name[1]	**METALLURGICAL PROCESS MODELING AND OPTIMIZATION**					Course code		4SM07DID	
Course type[2]	DID	Category[3]	DI	Year of study	IV	Semester	VII	Number of credit points	3

Faculty	Faculty of Materials Science and Engineering	Number of teaching and learning hours[4]					
Field	Materials Engineering	Total	L	T	LB	P	IS
Specialization	Materials Science	72	14	-	14	-	44

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

General objective [6]	Evaluation and technical problem-solving related materials processed by applying concepts, theories and experimental methods.
Specific objectives[7]	• Understand what a model is and the main modeling methods. • Processes modeling by materials and energy balance. • Knowledge of statistical and mathematical methods to obtain mathematical models that describe the functional links between input and output variables of processes.
Course description[8]	Technological processes. The concept of model and model types. Applications of mathematical statistics to the processing and interpretation of experimental data

Assessment			Schedule[9]	Percentage of the final grade (minimum grade)[10]
Continuous assessment	Class test along the semester		Week 1-14	10 %
	Activity during laboratory.		Week 1-14	30 % (minimum 5)
	Assignments		Week 1-14	10 %
Final assessment	Final assessment form[11]	Oral examination	Week 14	50 % (minimum 5)
	One subject in the course topics; oral presentation and answers to questions specialty, with a share of 100%.			

Course organizer	Lecturer PhD. Eng. Vasile MANOLE	
Teaching assistants	Assoc. Prof. phd. eng. Nicanor CIMPOEȘU Assist. phd. eng. Oana RUSU	

[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