

COURSE GUIDE – short form

Academic year 2021-2022

Course name ¹	Equipments for Technologies of Unconventional Materials Processing (2)					Course code	SITM IA 107		
Course type ²	DS	Category ³	DI	Year of study	I	Semester	2	Number of credit points	4

Faculty	Materials Science and Engineering	Number of teaching and learning hours ⁴						
Field	Mechanical Engineering	Total	L	T	LB	P	IS	
Specialization	Modern technologies for industrial systems	96	28	-	28	-	40	

Pre-requisites from the curriculum ⁵	Compulsory	-
	Recommended	-

General objective ⁶	Assimilation of knowledge regarding the use of modern equipment in the field of materials processing.
Specific objectives ⁷	Knowledge of equipment for the production of metallic materials using special casting processes and the benefits they create. Understanding the mechanisms of influencing the structure of metallic materials when using vibrations.
Course description ⁸	1. Vibration theory bases; -Vibrators used in casting metals; Transducers and vibration measurement captors; Physical processes that occur in vibrating cast alloys; Technologies and equipment that uses vibrations to casting alloys. 2. Centrifugal casting; Hydraulics of centrifugal casting processes; Solidification of centrifugally cast parts; The technological factors of centrifugal casting and their influence on the quality of castings made of non-ferrous alloys

Assessment		Schedule ⁹	Percentage of the final grade (minimum grade) ¹⁰
Continuous assessment	Class tests along the semester		%
	Activity during tutorials/laboratory works/projects/practical work	continuous	50%
	Assignments		%
Final assessment	Final assessment form ¹¹	session	50%
	Examination procedures and conditions: Oral examination: two closed questions 100%		

Course organizer	Conf.univ.dr.ing. Iulian IONIȚĂ
Teaching assistants	Conf.univ.dr.ing. Iulian IONIȚĂ

¹Course name from the curriculum

²DF – fundamental, DID – in the field, DS – specialty, DC – complementary (from the curriculum)

³DI – imposed, DO – optional, DL – facultative (from the curriculum)

⁴Points 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)

⁵According to 4.1 – Pre-requisites - from the Course guide – extended form

⁶According 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