

COURSE GUIDE – short form

Academic year 2024-2025

Course name ¹	Technological processes in materials engineering (3)					Course code	3.SM.07.DD		
Course type ²	DD	Category ³	DI	Year of study	III	Semester	6	Number of credit points	6

Faculty	Materials Science and Engineering	Number of teaching and learning hours ⁴					
Field	Materials Engineering	Total	L	T	LB	P	IS
Specialization	Materials Science	150	28		28	28	66

Pre-requisites from the curriculum ⁵	Compulsory	-
	Recommended	-

General objective ⁶	Completing the knowledge assimilated to other disciplines with specific elements regarding the design and use of casting technologies.
Specific objectives ⁷	Obtaining appropriate knowledge and skills in the field of designing technologies for casting molding. Knowing the advantages of obtaining molded parts and the possibilities of using them in the industry.
Course description ⁸	Casting of metals and metal alloys; Designing castings; The technological process of obtaining parts by casting; Technology execution cores in mixed forms and moulding - Permanent and semi-permanent moulds; Special moulding methods; Special casting methods; Laboratory; Work protection; Collect, prepare and weigh the material to be analyzed; Determination of sand humidity; Determining the leachable component; Granulometric analysis; Executing test specimens; Determination of the permeability; Determination of the mechanical properties of moulding materials; Determination of mechanical strengths of moulding; Hand moulding; Manual skeleton modeling; Performing forms using volatile models; Casting into metallic shapes.

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	Wk 1-14	25%+25%
	Assignments		%
Final assessment	Final assessment form ¹¹	session	50%
	Examination procedures and conditions: 1. Oral examination; two closed questions – equal share		

Course organizer	Lect. Ph.D. Eng., Oana RUSU
Teaching assistants	Lect. Ph.D. Eng., Oana RUSU

¹Course 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