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

Academic year 2024-2025

Course name[1]	**THEORETICAL BASICS OF CASTING**					Course code		3.SM.04.DD	
Course type[2]	DD	Category[3]	DI	Year of study	III	Semester	5	Number of credit points	5

Faculty	Materials Science and Engineering	Number of teaching and learning hours[4]					
Field	Materials Engineering	Total	L	T	LB	P	IS
Specialization	Materials Science	125	28	-	28		69

Pre-requisites from the curriculum[5]		
	Compulsory	-
	Recommended	Cristalography and Mineralogy, Properties and Materials Choice 1

General objective [6]	The formation of the ability of applying of principles and basic methods for solving well defined problems/ situations, tipical for the phenomena and physico-chemical, crystalographical, thermodinamical and technological processes occuring at the casting and solidification of liquid metals and alloys in moulds in qualified assistance conditions promoting logical reasoning and applying the values of ethics of engineer profesion in resposible task execution
Specific objectives[7]	The establishing of of knowledge relations between theoretical subjects studied and professional areas as physics, chemistry, mechanics and the technologies of obtaining and processing by casting of the alloys, focussing on the phenomenology specific to solidification in the mould.
Course description[8]	The parameters of melting process, alloy flowing, cristallisation, solidification front, solidification directing, cristalline structure of castings, segregation phenomena, solid and gas inclusions, casting defects, alloy-mould heat exchange, contraction in cast alloys, retasure formation.

Assessment			Schedule[9]	Percentage of the final grade (minimum grade)[10]
Continuous assessment	Class tests along the semester			-
	Activity during aboratory (open question)		continuous	50%
	Assignments			-
Final assessment	Final assessment form[11]	exam	Exam period	50%
	Examination procedures and conditions: 1. Subject with closed questions; tasks: answer to closed questions; percent 50% 2. Subject with closed questions; tasks: answer to closed questions; percent 50%			

Course organizer	**Lect.Ph.D.Eng. Daniela CHICET**	
Teaching assistants	**Lect.Ph.D.Eng. Raluca Maria BLANARIU**	

[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