

COURSE GUIDE – short form

Academic year 2017...2018

Course name ¹	Welding Metallurgy					Course code	3SM10DS			
Course type ²	DS	Category ³	DO	Year of study	3	Semester	5	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					70	28		14		28

Pre-requisites from the curriculum ⁵	Compulsory	
	Recommended	

General objective ⁶	To develop students' abilities of analyzing/selecting/putting together phenomena in welding field.
Specific objectives ⁷	<ul style="list-style-type: none"> • Understanding the changes that occur into material's properties secondary to welding. • Basic knowledge regarding discontinuities origin and the main possibilities of reducing their amount. • Some methods to emphasize weld quality.
Course description ⁸	Weld, heat affected zone, add material, high rate solidification problems, induced fragility (through structural changes, chemical composition changes), Schaeffler diagram, discontinuities (cracks, pores, etc.), destructive /nondestructive tests, steel welding, aluminum welding, Copper, nickel welding.

Assessment		Schedule ⁹	Percentage of the final grade (minimum grade) ¹⁰
Continuous assessment	Class tests along the semester	7 th week	10%
	Activity during tutorials/laboratory works/projects/practical work		20%
	Assignments		20%
Final assessment	Final assessment form ¹¹	colloquium	14
	Examination procedures and conditions: 1. Theoretical knowledge, working conditions ORAL, closed/open questions, percent of the final grade 50% 2. Problem solving or selecting a technical solution; tasks: argue about the solution; working conditions oral; percent of the final grade 50%		50%

Course organizer	Lecturer PhD Eng. Diana Antonia GHEORGHIU
Teaching assistants	Lecturer PhD Eng. Diana Antonia GHEORGHIU

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)

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