

COURSE GUIDE – short form

Academic year 2017 - 2018

Course name ¹	MODELLING OF PLASTIC DEFORMATION PROCESSES					Codul disciplinei		6 TAIPM 10	
Course type ²	DS	Category ³	DI	Year of study	2M	Semester	1	Number of credit points	6

Faculty	Material Science and Engineering	Number of teaching and learning hours ⁴					
Field	Materials Engineering	Total	L	T	LB	P	IS
Specialization	TAIPM	56	28	-	28	-	

Pre-requisites from the curriculum ⁵	Compulsory	
	Recommended	

General objective ⁶	Grounding the theoretical basis of modelling of the plastic deformation processes
Specific objectives ⁷	Acquire the fundamentals of modelling by finite element method (FEM); Knowledge of the main areas of applying FEM in material processing
Course description ⁸	Theoretical bases, state of stress and strain, relationship between stress and strain, mechanical principle of virtual work, field of study setting and meshing, types of finite elements and their choice, size and number of finite elements, properties definition of the finite element, interpolation functions, stiffness matrix, finite element analysis run, examination results, checking the accuracy of modelling, fields of application

Assessment		Schedule ⁹	Percentage of the final grade (minimum grade) ¹⁰
Continuous assessment	Class tests along the semester -	week -	- %
	Activity during tutorials/laboratory works/projects/practical work		50 %
	Assignments -	week	%
Final assessment	Final assessment form ¹¹	exam	50 % (minimum 5)
	Examination procedures and conditions: 1. Subject with closed questions ; tasks answer to closed questions ; working conditions oral; percent 50 %; 2. Subject with closed questions ; tasks answer to closed questions ; working conditions oral; percent 50 %; 3. - ; tasks - ; working conditions -; percent %;		

Course organizer	Professor, Ph.D., Eng. Dorin LUCA
Teaching assistants	Assistant Professor, Ph.D., Eng. Cătălin-Andrei ȚUGUI

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

⁷According to 7.2 from the Course guide – extended form

⁸Short description of the course, according to point 8 from the Course guide – extended form

⁹For continuous assessment: weeks 1 – 14, for final assessment – colloquium: week 14, for final assessment-exam: exam period

¹⁰A minimum grade might be imposed for some assessment stages

¹¹ Exam or colloquium