

# COURSE GUIDE – short form

Academic year 2017 - 2018

Course name <sup>1</sup>	<b>HEAT AND THERMOCHEMICAL TREATMENTS TECHNOLOGIES</b>					Codul disciplinei		<b>3 EPI 03</b>	
Course type <sup>2</sup>	<b>DS</b>	Category <sup>3</sup>	<b>DI</b>	Year of study	3	Semester	<b>5</b>	Number of credit points	<b>6</b>

Faculty	Material Science and Engineering					Number of teaching and learning hours <sup>4</sup>					
Field	Mechanical Engineering					Total	L	T	LB	P	IS
Specialization	EPI					<b>84</b>	<b>28</b>	-	<b>28</b>	<b>28</b>	

Pre-requisites from the curriculum <sup>5</sup>	Compulsory		
	Recommended	Chemistry, Physics, Study materials	

General objective <sup>6</sup>	Study of technologies used to heat treatments and thermochemical as a final operation in the material properties required for exploitation
Specific objectives <sup>7</sup>	Knowledge, analysis, design and efficient used and effective and appropriate use of heat treatments and thermochemical technologies used in machinery industry.
Course description <sup>8</sup>	I. Introduction. The purpose of heat treatments. II. The link between equilibrium diagrams and thermal treatments applied. III. Thermal parameters and specific temporal for heat treatments and thermochemical technologies. IV. Primary thermal treatment technology. V. Steels quenching technology; Quench implementing technology solution; Martensitic hardening technology; Shallow hardening. VI. Annealing technology. VII. Thermochemical treatments.

Assessment		Schedule <sup>9</sup>	Percentage of the final grade (minimum grade) <sup>10</sup>	
Continuous assessment	Class tests along the semester -		week	%
	Activity during tutorials/laboratory works/projects/practical work			25 %
	Assignments 1		week 14	25 %
Final assessment	Final assessment form <sup>11</sup>	exam	exam period	50 % (minimum 5)
	Examination procedures and conditions: 1. - ; tasks answer to closed questions ; working conditions oral; percent 50 %; 2. - ; tasks answer to closed questions ; working conditions oral; percent 50 %; 3. - ; tasks - ; working conditions - ; percent %;			

Course organizer	<b>Lecturer Ph.D. Eng. Carmen NEJNERU</b>	
Teaching assistants	<b>As.Ph.D.Stud.Eng. Dumitru-Doru BURDUHOS-NEGIS</b>	

<sup>1</sup>Course name from the curriculum

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

<sup>3</sup> DI – imposed, DO – optional, DL – facultative (from the curriculum)

<sup>4</sup> 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)

<sup>5</sup> According to 4.1 – Pre-requisites - from the Course guide – extended form

<sup>6</sup> According to 7.1 from the Course guide – extended form

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<sup>7</sup> According to 7.2 from the Course guide – extended form

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

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

<sup>10</sup> A minimum grade might be imposed for some assessment stages

<sup>11</sup> Exam or colloquium