

# COURSE GUIDE – short form

Academic year 2017 - 2018

Course name <sup>1</sup>	<b>MECHANICS AND MECHANICAL VIBRATIONS</b>					Codul disciplinei		<b>3 EPI 08</b>	
Course type <sup>2</sup>	<b>DID</b>	Category <sup>3</sup>	<b>DI</b>	Year of study	3	Semester	<b>6</b>	Number of credit points	<b>4</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>56</b>	<b>42</b>	<b>-</b>	<b>14</b>	<b>-</b>	

Pre-requisites from the curriculum <sup>5</sup>	Compulsory	
	Recommended	

General objective <sup>6</sup>	The discipline completes and develop knowledge obtained from fundamental disciplines: mechanical theoretical, mechanisms.
Specific objectives <sup>7</sup>	Acquiring knowledge and skills necessary for the calculation, design, implementation and operation and diagnosis of mechanical elastic actuated or disturbed vibrational
Course description <sup>8</sup>	<p>Introduction - Generals on rigid solid.</p> <p>I. Statics of rigid body. Rigid body bounds. Rigid body equilibrium</p> <p>II. Rigid body dynamics. Calculation of dynamic parameters. The case of translational movement.</p> <p>III. Mechanical vibration - general considerations. Classification of mechanical vibrations. Characteristic elements of elastic systems.</p> <p>IV. Response at vibrations of mechanical systems. Off vibrations in linear systems with one degree of freedom.</p> <p>V. Methods and techniques for measuring and analyzing signal vibroacustical.</p> <p>VI. Vibroacustical control of mechanical systems. Vibration control. Control by noise. Control by acoustic intensity.</p> <p>VII. Active control of vibration and noise - general considerations.</p> <p>VIII. Vibroacustical diagnosis and monitoring of mechanical systems.</p> <p>IX. Isolation vibroacustical of mechanical systems. Acoustic inzolation.</p>

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	25 %
Final assessment	Final assessment form <sup>11</sup>	colloquium	week 14	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>Assist.Ph.D.Eng. Bălțatu Mădălina Simona</b>

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

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<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

<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