

# COURSE GUIDE – short form

Academic year 2024-2025

Course name <sup>1</sup>	<b>MODERN SYSTEMS IN SURFACE ENGINEERING (2)</b>					Discipline code		<b>SITM IA 110</b>	
Course type <sup>2</sup>	<b>DA</b>	Category <sup>3</sup>	<b>DI</b>	Year of study	1	Semester	<b>2</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	SITM					<b>100</b>	<b>28</b>	<b>-</b>	<b>14</b>	<b>-</b>	<b>58</b>

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

General objective <sup>6</sup>	The establishment of functional goal and the imposed properties of metallic parts, using specialized equipments in surface engineering
Specific objectives <sup>7</sup>	Techniques and equipments for surface treatment based on thin layers deposition Techniques and equipments for surface treatment based on chemical conversion
Course description <sup>8</sup>	<ol style="list-style-type: none"> <li>1. Deposition layer concept</li> <li>2. Chemical and electrochemical deposition</li> <li>3. Thermal spraying deposition</li> <li>4. Plating deposition</li> <li>5. Deposition methods</li> <li>6. CVD deposition</li> <li>7. PVD deposition</li> <li>8. Thin layers characterization</li> </ol>

Assessment		Schedule <sup>9</sup>		Percentage of the final grade (minimum grade) <sup>10</sup>
A. Final assessment form <sup>11</sup> exam	Class tests along the semester	%	week	50 % (minimum 5)
	Home works	%		
	Other activities	%	week	
	Examination procedures and conditions: 1. Subject with open questions, working conditions oral, percent 100 %; 2. -, working conditions -, percent %; 3. -, working conditions -, percent %	100 % (minimum 5)		
B. Seminar	Activity during seminar			% (minimum 5)
C. Laboratory	Activity during laboratory			50 % (minimum 5)
D. Project	Activity during project			% (minimum 5)
Course organizer	<b>lecturer phd. eng. Achiței Dragoș</b>			
Teaching assistants	<b>lecturer phd. eng. Achiței Dragoș</b>			

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

<sup>2</sup> DF – fundamental, DD – 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