

# COURSE GUIDE – short form

Academic year 2017-2018

Course name <sup>1</sup>	<b>Vacuum deposition techniques II</b>					<b>Course code</b>		5 MATAE DI 04	
Course type <sup>2</sup>	<b>DS</b>	<b>Category<sup>3</sup></b>	DI	Year of study	V	Semester	2	Number of credit points	6

Faculty	Materials Science and Engineering	Number of teaching and learning hours <sup>4</sup>					
Field	Materials engineering	Total	L	T	LB	P	IS
Specialization	Advanced materials and experimental analysis techniques	42	28		14		

Pre-requisites from the curriculum <sup>5</sup>	Compulsory	-
	Recommended	Vacuum deposition techniques I

General objective <sup>6</sup>	Acquiring and appropriate use of concepts and methods of making thin films deposited in vacuum
Specific objectives <sup>7</sup>	Work Skills Training facility vacuum deposition, magnetron booked and evaporation; Gaining theoretical and practical methods, procedures and devices usual deposition of thin films; Gaining theoretical and practical methods and means of characterization of thin films deposited in vacuum; Identify applications of thin layers deposited by physical methods;
Course description <sup>8</sup>	Methods, procedures and devices in vacuum thermal evaporation deposition; Methods, procedures and devices Sputter deposition; Ion plating deposition methods; Methods for chemical vapor deposition at low pressure; Monitoring and control of thin film vacuum deposition; Methods and means of surface analysis to determine the composition deposited layers; Methods and means for determining the structure of thin films deposited in vacuum; Methods and means for determining the thickness of thin films deposited in vacuum; Methods and means for determining adherence deposited layers; Methods and means for determining the corrosion resistance of the deposited layers; Applications of thin films deposited in vacuum by means of physical, chemical and physico-chemical;

Assessment		Schedule <sup>9</sup>	Percentage of the final grade (minimum grade) <sup>10</sup>
Continuous assessment	Class tests along the semester	S8-S10	20%
	Activity during tutorials/laboratory works/projects/practical work	S1-S14	30%
	Assignments	-	%
Final assessment	Final assessment form <sup>11</sup>	E	50%
	Examination procedures and conditions: Three subjects with open questions. Working time 100 minutes		

Course organizer	<b>Ioan Gabriel SANDU</b>	
Teaching assistants	<b>Ioan Gabriel SANDU</b>	

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

<sup>2</sup> DF – fundamental, DI – 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

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<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