

# COURSE GUIDE – short form

Academic year 2014-2015

Course name <sup>1</sup>	<b>BIOMIMETICS OF LOCOMOTION SYSTEM</b>					Course code	RBT.404. DI.DIS		
Course type <sup>2</sup>	DI.D S	Category <sup>3</sup>	DI	Year of study	IV	Semester	7	Number of credit points	4

Faculty	Mechanical Engineering	Number of teaching and learning hours <sup>4</sup>						
Field	MECHATRONICS AND ROBOTICS	Total	L	T	LB	P	IS	
Specialization	ROBOTICS	42	28			14	19	

Pre-requisites from the curriculum <sup>5</sup>	Compulsory	Mechanisms and theory of machines, Robotics
	Recommended	

General objective <sup>6</sup>	The course aims to form a specialty training in the field of mechanical systems that imitate solutions proved by nature through evolution, to the students at the specialization "Robotics". Also, it aims to widen and develop creative and imaginative abilities.
Specific objectives <sup>7</sup>	It is a specialty discipline aiming to offer students knowledge necessary to develop and design mechanical systems based on solutions from living world, validated by nature through evolution. The discipline is a frontier one, between biology and mechanical engineering, and is using knowledge of biology, mechanics, mechanisms and machine parts.
Course description <sup>8</sup>	The discipline contains informations regarding: introductory notions, short history, general examples of biomimetics, locomotion system, examples of biomimetics of locomotion system, modeling of biomechanical systems, intelligent materials, biomaterials, artificial muscles.

Assessment			Schedule <sup>9</sup>	Percentage of the final grade (minimum grade) <sup>10</sup>
Continuous assessment	Class tests along the semester			%
	Activity during projects Discussions and specific design themes solving for each project class.		weeks 1 – 14	30%
	Assignments			%
Final assessment	Final assessment form <sup>11</sup>	colloquium	week 14	70%
	Examination procedures and conditions: Tasks: theme development and study case Written work - 2 hours			

Course organizer	S.I.dr.ing. Eugen MERTICARU	
Teaching assistants	S.I.dr.ing. Eugen MERTICARU	

<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

---

<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