

# COURSE GUIDE – short form

Academic year 2014-2015

Course name <sup>1</sup>	<b>PARALLEL ROBOTS</b>					Course code	RBT.415.D O.DS-2		
Course type <sup>2</sup>	DS	Category <sup>3</sup>	DO	Year of study	4	Semester	8	Number of credit points	5

Faculty	MECHANICS	Number of teaching and learning hours <sup>4</sup>						
Field	MECHATRONICS AND ROBOTICS	Total	L	T	LB	P	IS	
Specialization	BACHELOR - ROBOTICS	42	28	-	-	28		

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

General objective <sup>6</sup>	General knowing about constructive, functional and designing fundamental principles of the parallel robots components and also the ways of their construction.
Specific objectives <sup>7</sup>	Course: Introduction to parallel robots, Structural synthesis and mechanical architectures, IKP, DKP, Velocities, accelerations an accuracy analysis, Singularities, Workspace, Statics, Dynamics, Callibrating methods, Designing of parallel robots. Applications: IKP, workspace and singularities for a parallel robot.
Course description <sup>8</sup>	Introduction to parallel robots, Structural synthesis and mechanical architectures, IKP, DKP, Velocities, accelerations an accuracy analysis, Singularities, Workspace, Statics, Dynamics, Callibrating methods, Designing of parallel robots

Assessment			Schedule <sup>9</sup>	Percentage of the final grade (minimum grade) <sup>10</sup>
Continuous assessment	Class tests along the semester			-
	Activity during tutorials/laboratory works/projects/practical work		Week 1-14	50%
	Assignments			-
Final assessment	Final assessment form <sup>11</sup>	Exam	Exam period	50%
	Examination procedures and conditions: 1. Exam with three subjects from the curriculum, time 2h, percent of the final grade 50% 2. Applications evaluation, percent of the final grade 50%			

Course organizer	S.I.dr.ing. Buium Florentin	
Teaching assistants	S.I.dr.ing. Buium Florentin	

<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

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<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