

COURSE GUIDE – short form

Academic year 2014-2015

Course name ¹	Robotics Basis					Course code	RBT.309. DI.DS		
Course type ²	DS	Category ³	DI	Year of study	III	Semester	6	Number of credit points	5

Faculty	Mechanical Engineering	Number of teaching and learning hours ⁴						
Field	Mechatronics and Robotics	Total	L	T	LB	P	IS	
Specialization	Robotics; Mechatronics	70	42		28		4	

Pre-requisites from the curriculum ⁵	Compulsory	Mathematics, Applied Mechanics, Theory of Mechanisms
	Recommended	Electrotechnics and Electrical Machines, Hidraulical and Pneumatical Drives of Mechatronical Systems, Sensorial Systems

General objective ⁶	The goal of this discipline is to give general information about robotics, to the students on Mechatronics & Robotics. It should also give the basis knowledge that will be used for disciplines as Robot Dynamics and Motion Control of Robots.
Specific objectives ⁷	<ul style="list-style-type: none"> • Presentation of general issues and structural analysis of serial robot manipulator type • Study of direct and inverse kinematics, for positions and velocities, of serial manipulators • Presentation of information on the statics of serial manipulators and their trajectory planning
Course description ⁸	The discipline give some information as follow: robotized system architecture, robot classification and applications, social and economical aspects, mechanical structure of robots, direct and inverse kinematics (for position and velocity), some robot dynamics aspects.

Assessment			Schedule ⁹	Percentage of the final grade (minimum grade) ¹⁰
Continuous assessment	Class tests along the semester		25	%
	Activity during tutorials/laboratory works/projects/practical work		25	%
	Assignments			%
Final assessment	Final assessment form ¹¹	Exam	50	%
	Examination procedures and conditions: 1. Written knowledge test, with three topics, each one being evaluated from 1 to 10, 50 %			

Course organizer	Prof. Ioan DOROFTEI	
Teaching assistants	Prof. Ioan DOROFTEI	

¹Course name from the curriculum

² DF – fundamental, DID – in the field, DS – specialty, DC – complementary (from the curriculum)

³ DI – imposed, DO –optional, DL – facultative (from the curriculum)

⁴ 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)

⁵ According to 4.1 – Pre-requisites - from the Course guide – extended form

⁶ According to 7.1 from the Course guide – extended form

⁷ According to 7.2 from the Course guide – extended form

⁸ Short description of the course, according to point 8 from the Course guide – extended form

⁹ For continuous assessment: weeks 1 – 14, for final assessment – colloquium: week 14, for final assessment-exam: exam period

¹⁰ A minimum grade might be imposed for some assessment stages

¹¹ Exam or colloquium