C O U R S E G U I D E – s h o r t f o r m

Academic year 2014 - 2015

Course name[1]	**Mechanisms**					Course code		203.DI.DID	
Course type[2]	DID	Category[3]	DI	Year of study	II	Semester	3	Number of credit points	7

Faculty	Mechanical Engineering	Number of teaching and learning hours[4]					
Field	Automotive Engineering Mechanical Engineering Mechatronics and Robotics	Total	L	T	LB	P	IS
Specialization	SET, AR, MAIA, MCT, ROB, IM	98	56		28	14	

Pre-requisites from the curriculum[5]	Compulsory	
	Recommended	Applied Mechanics, Mathematics

General objective [6]	Understanding of the fundamental concepts of kinematics and dynamics of mechanisms.
Specific objectives[7]	Skills for dimensional synthesis of linkages, cams and gear mechanisms to perform desired motion specifications. Ability to use modern engineering tools necessary for solving engineering problems.
Course description[8]	*Introduction to Mechanisms* : basic concepts, link and joint types, kinematic chains, mechanisms mobility, linkage transformations, structure analysis. *Linkage Mechanisms*: kinematic analysis of planar and spatial mechanisms, kinetostatic analysis, synthesis of planar mechanisms. *Cam Mechanisms:* terminology and classifications, displacement diagrams, kinematic analysis, kinetostatic analysis, cam design. *Gear Trains:* terminology and gear types, the fundamental law of gearing, gear ratio, spur and helical gears, bevel gear, worm gears, epicyclic gear trains, design of compound gear trains. *Dynamics of mechanisms and machines*: dynamic models, phases of machine motion, flywheels, balancing of mechanisms and machines.

Assessment			Schedule[9]	Percentage of the final grade (minimum grade)[10]
Continuous assessment	Class tests along the semester			%
	Activity during tutorials/laboratory works/projects/practical work		Weeks 1 – 14	50 %
	Assignments			%
Final assessment	Final assessment form[11]	Exam	Exam period	50 %
	Examination procedures and conditions: 1. Written test; percent of the final grade 50 % 2. Presentation specific problems; percent of the final grade 50 %			

Course organizer	Professor Cezar Oprişan, Ph.D.	
Teaching assistants	Sn. lecturer Vasile Merticaru, Ph.D. Sn lecturer Florentin Buium, Ph.D.	

[1]Course 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