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]	**MACHINE COMPONENTS I**					Course code		MTC.208. DI.DID	
Course type[2]	DID	Category[3]	DI	Year of study	II	Semester	IV	Number of credit points	7

Faculty	Mechanical Engineering	Number of teaching and learning hours[4]					
Field	All the profiles	Total	L	T	LB	P	IS
Specialization	All the specializations	168	42	-	28	28	70

Pre-requisites from the curriculum[5]		
	Compulsory	Mathematics. Technical Drawing.Strength of Materials. Mechanisms. Materials science. Theoretical Mechanics. Measurements and tolerances. Using the Computer and Software (CUP). CAD.
	Recommended	Materials technology. Computing (CUP and detailed CAT). Execution and precision measurements. Statistics and analyzes statistical techniques.

General objective [6]	The discipline intends to present fundamental principles, assisted by adequate applications, concerning the design and exploitation of the machine components.
Specific objectives[7]	- Run at a high level of technical knowledge as general student will attend other specialized subjects provided in the curriculum. - To acquire the necessary technical knowledge related professional decay optimizations in terms of calculation, design, sizing, exploitation and maintenance of machine parts and subassemblies and assemblies that goes into the different machines, installations and existing devices.
Course description[8]	-General design elements in machine building. General design criteria. Design criteria for particular cases. Characteristics of materials according to design criteria. Criteria aided design. Safety mechanical tension static and variable. Elements of Tribology -Threaded fasteners. Overview. Classifications and Standards. Forces and moments fittings. Yield. The design of the thread. Initial tightening screws. Screws and threads special classes. Bolts of motion. -Belt drives. Flat belt drives. V-belt drives. Toothed belt drives. Variable belt drive. -Chain drives. Roller chain drives. Toothed chain drives. Friction chain drives. Transmission by metal strips. -Gear transmissions. Outline of the geometry and kinematics of gear involute profile. Damage gear. Materials. Forte rated in gear. Forte cylindrical and bevel gears real. Gears of cylindrical spur wheels. Bending teeth. Gears of cylindrical spur wheels. Contact fatigue. Gears of cylindrical spur wheels. Seizing. Gear wheel cylinder inclined teeth. Features. Gears bevel wheel. Features. Worm gears. Special gears. -Transmission by friction wheels.

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	40 %
	Assignments			%
Final assessment	Final assessment form[11]	Exam		Minimum note 5 to each of the three modes of examination
	Examination procedures and conditions: 1.Cunostinte taught; oral examination; individual ticket; 60% share; 2. The project: weekly grading; degree of participation in activities; quantity and quality of responses; computer; 20% weighting; 3.Laborator: weekly grading; degree of participation in activities;			

	quantity and quality of responses; computer; 20% weighting;	

Course organizer	Prof.univ.dr.ing. Stefan GRIGORAS	
Teaching assistants	Conf.dr.ing. R.Balan; Conf.dr.ing.V.Paleu; S.l.dr.ing.Fl.Tudose; Asist.dr.ing.A.Tufescu; Asist.dr.ing.M.Benchea	

[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