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]	Methods and analyzing techniques in computer aided design					Course code		MTC.DI.DS. 101	
Course type[2]	DID	Category[3]	DI	Year of study	I	Semester	1	Number of credit points	7

Faculty	Mechanical Engineering	Number of teaching and learning hours[4]					
Field	Mechanical Engineering	Total	L	T	LB	P	IS
Specialization	DET, TNIA, MTFC, SR, STA, STFC	56	28	-	28	-	-

Pre-requisites from the curriculum[5]	Compulsory	Technical Drawing , Descriptive Geometry and infographics , Programming and computers, Mathematics, Physics , Mechanics
	Recommended	Computer Aided Design , Machines Parts , Strength of Materials , Analysis and Numerical Calculation .

General objective [6]	Familiarizing students with a new design environment that can perform computer aided design in any field of technical mechanics . Approach and assimilation of techniques for functional simulation and analysis of mechanical parts and subassemblies .
Specific objectives[7]	Computer Aided Design of parts and assemblies in CATIA or SolidWorks. Dimensional analysis . Analysis of the behavior and functioning for parts / mechanisms / assemblies from mechanical constructions . Simulation analysis of mechanical systems during operation. Analysis of kinematics , mechanical stresses , thermal stresses . Technical documentation.
Course description[8]	Computer Aided Design environments; CATIA / SolidWorks overview . Principles and methods of CAD . Principles of working in 2D , defininig and constraining profiles . Creating 3D models through appropriate sketch based features . Principles of solids generation based on defined surfaces . Volumes- generation and editing. Methods in assembly design. Kinematic simulation of assemblies and mechanisms , dimensional analysis . Parts/assemblies stresses analysis (finite element analysis) . Kinematic analysis of the mechanical assemblies . Parts and product documentation .

Assessment			Schedule[9]	Percentage of the final grade (minimum grade)[10]
Continuous assessment	Class tests along the semester		Week 7	10 %
	Activity during tutorials/laboratory works/projects/practical work			40 %
	Assignments			- %
Final assessment	Final assessment form[11]	Colloquium	Week 14	50 %
	Examination procedures and conditions: 1. Project presentation ; percent of the final grade 60 % 2. Practical skills (3D model design and analysis); percent of the final grade 40 %			

Course organizer	Assistant Professor Mihail Catalin TIRON, ME Ph.D.	
Teaching assistants	Assistant Professor Mihail Catalin TIRON, ME 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