

# COURSE GUIDE – short form

Academic year 2014-2015

Course name <sup>1</sup>	<b>Computer Aided Design</b>					Course code	MTC.209. DI.DID		
Course type <sup>2</sup>	DID	Category <sup>3</sup>	DI	Year of study	II	Semester	II	Number of credit points	3

Faculty	Mechanics	Number of teaching and learning hours <sup>4</sup>						
Field	All	Total	L	T	LB	P	IS	
Specialization	Licency	42	14	-	28	-	28	

Pre-requisites from the curriculum <sup>5</sup>	Compulsory	Mathematics, Physics, Mechanics, Machine Design, Mechanisms, Drafting, Infographics
	Recommended	Computer Using, Technical Drafting, Technologies

General objective <sup>6</sup>	Students habit creation to use a computer design medium. Prerequests creation to use any computer design programme.	
Specific objectives <sup>7</sup>	<ul style="list-style-type: none"> <li>• Sketcher in the plane. Constraints creation;</li> <li>• 3D modeling for mechanical parts;</li> <li>• Assembly creation, by existing part models;</li> <li>• Drafting representation of parts and assemblies;</li> <li>• Kinematic simulation and assemblies analysis.</li> </ul>	
Course description <sup>8</sup>	COURSE	METHODS
	1. Computer design criteria and programmes.....1 h	With video projector, interactive
	2. Planar Sketches. Construction and editing.....2 h	With video projector, interactive
	3. 3D parts modeling (homogenous geometry).....2 h	With video projector, interactive
	4. Primary editing of 3D parts.....2 h	With video projector, interactive
	5. Second 3D parts editing.....2 h	With video projector, interactive
	6. 3D parts assemblies.....1 h	With video projector, interactive
	7. Kinematic simulation of 3D assemblies.....1 h	With video projector, interactive
	8. Drafting files for parts and assemblies; dimensional precision; standard and personal representations.....3 h	With video projector, interactive
	LABORATORY	METHODS
	1. Planar sketches. Geometrical constraints	With video projector, by teams
	2. Planar sketches. Positional constraints	With video projector, by teams
	3. 3D direct features (Parts). Applications I	With video projector, in teams

	4. 3D indirect features (Parts). Applications II	With video projector, in teams
	5. 3D editing features (Parts). Applications I	With video projector, in teams
	6. 3D editing features (Parts). Application II	With video projector, in teams
	7. Solid parts assemblies	With video projector, in teams
	8. Drafting features: representations; sections; details: additional views.	With video projector, in teams
	9. Drafting features: Precision, tolerances, roughness	With video projector, in teams
	10. Kinematic simulation and dimensional analysis	With video projector, in teams
	11. Screwing mechanisms. Modeling. Drafting. Simulation	Individual
	12. Cam mechanisms. Modeling. Drafting. Simulation	Individual
	13. Gears. Modeling. Drafting. Simulation	Individual
	14. Colloquium	On the computer; imposed subject
	<b>References</b> <ol style="list-style-type: none"> <li>1. Stribu, Cr. Inginerie mecanica. Calculator. Autocad, Ed. TEHNOPRESS, IASI, 2005</li> <li>2. Stirbu, CR., Prietenul SOLIDWORKS al proiectantului, Ed. TEHNOPRESS, Iasi, 2007.</li> <li>3. Proiectare asistata. CATIA. Suprafete. Volume, Ed. TEHNOPRESS, Iasi, 2011</li> <li>4. Dimarogonas, A.D., Machine Design, A CAD Approach, Ed. J. Wiley &amp; Sons, New York, 2000.</li> <li>5. Ivan, N.V., Sisteme CAD/CAPP/ CAM, Ed. TEHNICA, Bucuresti, 2003.</li> </ol>	

Assessment			Schedule <sup>9</sup>	Percentage of the final grade (minimum grade) <sup>10</sup>
Continuous assessment	Class tests along the semester		8 th. week	20 %
	Activity during tutorials/laboratory works/projects/practical work		continuously	30 %
Final assessment	Final assessment form <sup>11</sup>	Colloquium		50 %
	Examination procedures and conditions: 1. tasks; working conditions: 3D modeling for parts and assemblies; drafting and simulation, according to the models difficulty; working conditions: individual, on the computer, with imposed subject, in the last week.			

Course organizer	Conf.dr.ing. Cristel STIRBU	
Teaching assistants	Conf.dr.ing. Stirbu Cr. Sef lucr.dr.ing. Tiron Mihail	

<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

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

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<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