

DEPARTMENT OF MECHATRONIK ENGINEERING **COURSE SYLLABUS**

Course Details							
Code				Aca	lemic Y	ear	Semester
MEC107				1	1		Fall
Title				т	Α	L	ECTS
Design Techniques I Technical Dr	awing and Computer A	ided Desigr	ו	2	0	4	6
Language	German						
Level	Undergraduate	raduate 🗸 Graduate				Postgra	iduate
Department / Program	Mechatronic Enginee	Mechatronic Engineering					
Forms of Teaching and Learning	Formal						
Course Type	Compulsory	✓			ective		
Objectives	Knowledge in the field of technical drawing. Understanding of dimensions, standards, tolerances of components. Independent familiarization with modeling using 3D CAD systems						
Content	 Fundamentals of technical drawing as a means of information for construction and manufacturing Create lines, circles, hatching, dimensions and text. Information about drawing formats, scale lines and drawing head Representation and dimensioning of components Representation of parts using view sand sections Use of tolerance information and fits Information about surface marks and hardness information Standard series Introduction to standards Exercises: Creation of a construction drawing by hand from given standard parts taking into account boundary and connection conditions Modeling with a CAD system Laboratory: Elaboration of a simple construction with all necessary drawings 						
Prerequisites	-						
Coordinator	Assist. Prof. Dr. Mehmet İPEKOĞLU						
Lecturer(s)	Prof. Dr. Hulusi BOZKURT						
Assistant(s)	MSc. Ahmet Uğur BATUK, MSc. Arda ÇETİNER, MSc. Erdem Onur ÖZYURT						
Work Placement							
Recommended or Required R	eading						
Books / Lecture Notes	Frey, H. Herrmann, A.	Kuhn, V. (1	.996). Bautech	nnik Techr	isches Z	eichne	n, Deutschland.
Other Sources							
Additional Course Material							



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Documents	-	
Assignments	-	
Exams	-	
Course Composition		
Mathematics und Basic Sciences		%
Engineering		%
Engineering Design	50	%
Social Sciences		%
Educational Sciences		%
Natural Sciences		%
Health Sciences		%
Expert Knowledge	50	%
Assessment		
Activity	Count	Percentage (%)
Midterm Exam	1	40
Quiz		
Assignments		
Attendance		
Recitations		
Projects		
Final Exam	1	60
	Total	100
ECTS Points and Work Load		

Activity	Count	Work Load (Hours)		
Lectures	14	1	14	
Self-Study	14	42		
Assignments				
Presentation / Seminar Preparation				
Midterm Exam	1	1	12	
Recitations	14	2	28	
Laboratory	14	14		
Projects				
Final Exam	1	2	15	
Total Work Load			125	
	6			



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Learning Outcomes							
1	Fundamentals	Fundamentals of technical drawing as a means of information for construction and manufacturing					
2	Representation and dimensioning of components						
3	Introduction to three-dimensional computer-aided design						
4	Procedure and	Procedure and methodical procedure for creating simple components					
5	Application of	engineering app	roaches and ba	sic knowledge	of work techniqu	es to create sim	ple designs
6	Use of tolerand	ce information a	nd fits				
7	Technical Drav	Technical Drawing Basics as Information Source of Design and Manufacturing					
8	Ability to creat	e and interpret	technical drawir	ngs for simple o	designs.		
9	9 Independent creation of a construction drawing according to given boundary conditions						
Weekly Conter	it						
1	Fundamentals of technical drawing as a means of information for construction and manufacturing						
2	Fundamentals of technical drawing as a means of information for construction and manufacturing						
3	Representation and dimensioning of components						
4	Representation and dimensioning of components						
5	Introduction to Design Hierarchy and Design Methodology in Production Process (Construction Process and Production Modularization)						
6	Introduction to Design Hierarchy and Design Methodology in Production Process (Construction Process and Production Modularization)						
7	Introduction to Standard / Norm Information						
8	Introduction to Standard / Norm Information						
9	9 Midterm Exam						
10	Use of tolerance information and fits						
11	Use of tolerance information and fits						
12	12 Creating Manual Technical Drawings of the Given Elements Considering Boundary and Connection Conditions						
13	13Elaborating the Design with All Necessary Drawings						
14	14 Modeling with 3D Computer Aided Design						
15 Modeling with 3D Computer Aided Design							
Contribution of Learning Outcomes to Program Objectives (1-5)							
	P1	P2	P3	P4	P5	P6	P7
1	5	4	4				
2	5	4	4				
3	5	4	4				
4	5	4	4				
5	5	4	4				



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Contribution Level	1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High		
https://obs.tau.edu.tr/oibs/bologna/progLearnOutcomes.aspx?lang=en&curSunit=5946			
Compiled by:	Ali Korucu		
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