

Course Description Form	
Course Code and Name	ME 103 COMPUTER AIDED TECHNICAL DRAWING I
Course Semester	1
Catalog Content	Introduction to technical drawing, AutoCAD basic commands and applications, Principles of dimensioning, three dimensional drawing techniques, Principles of sectioning, Introduction to 3D solid modeling, AutoCAD applications
Textbook	Giesecke, Frederick E., et. al., Technical Drawing with Engineering Graphics (14th Edition), Prentice-Hall, 2010.
Supplementary Textbooks	
Credit	5
Prerequisites of the Course (Attendance Requirements)	-
Type of the Course	Compulsory
Instruction Language	English
Course Objectives	To learn the fundamental technical drawing and make drawings by using CAD software.
Course Learning Outcomes	<ol style="list-style-type: none"> 1. Makes the basic geometric drawings. 2. Identify the objects from the pictorial drawings and draws the principal views. 3. Comprehends the conventional drawings for the features such as holes, counterbores, fillets-rounds / their intersections, etc. and applies them. 4. Identify the parts from the given principal view(s) and draws the other view(s). 5. Makes dimensioning of the views of the objects. 6. Makes the isometric and oblique drawings of the objects. 7. Knows the sectioning methods and applies them. 8. Knows CAD software and makes drawings by using it.
Instruction Methods	Lecture, Question & Answer, Drill - Practice
Weekly Schedule	<ol style="list-style-type: none"> 1. Week : Introduction to technical drawing: Basic concepts. 2. Week : Geometric constructions. AutoCAD basic commands and applications. 3. Week : Principles of orthographic projection: Basic projections of parts, selection of views. Freehand drawing practices. 4. Week : Drawing of six principal views of objects whose pictorial drawings are given. AutoCAD basic commands and applications. 5. Week : Drawing of six principal views of objects whose pictorial drawings are given. AutoCAD applications. 6. Week : Conventional drawings of the features such as holes, counterbores, fillets-rounds / their intersections, etc. AutoCAD applications. 7. Week : Drawing the missing view(s) of the parts by making use of the given principal view(s). AutoCAD applications. 8. Week : 1. Midterm Principles of dimensioning. AutoCAD applications. 9. Week : Three dimensional drawing techniques: Isometric drawing. AutoCAD applications. 10. Week : Three dimensional drawing techniques: Oblique drawing. AutoCAD applications. 11. Week : Principles of sectioning: Full, offset and half sections. AutoCAD applications.

	<p>12. Week : Principles of sectioning: Aligned sections, revolved/ removed sections, broken-out sections and related conventions. AutoCAD applications.</p> <p>13. Week :2. Midterm Principles of sectioning: Aligned sections, revolved/ removed sections, broken-out sections and related conventions. AutoCAD applications.</p> <p>14. Week : Introduction to 3D solid modeling.</p> <p>15. Week: Final Exam</p>																																																												
<p>Teaching and Learning Methods</p> <p><i>(These are examples. Please fill which activities you use in the course)</i></p>	<p>Weekly theoretical course hours: 2 Weekly applied course hours: 1 Reading Activities: 2 Internet browsing, library work: 0 Designing and implementing materials:4 Report preparing: 0 Preparing a Presentation: 0 Presentations: 0 Preparation of Midterm and Midterm Exam: 5 Final Exam and Preparation for Final Exam: 5</p>																																																												
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Contribution Level Between Course Learning Outcomes and Program Outcomes	NO	PROGRAM LEARNING OUTCOMES	1	2	3	4	5
	1	Engineering graduates with sufficient theoretical and practical background for a successful profession and with application skills of fundamental scientific knowledge in the engineering practice.				X	
	2	Engineering graduates with skills and professional background in describing, formulating, modeling and analyzing the engineering problem, with a consideration for appropriate analytical solutions in all necessary situations			X		
	3	Engineering graduates with the necessary technical, academic and practical knowledge and application confidence in the design and assessment of machines or mechanical systems or industrial processes with considerations of productivity, feasibility and environmental and social aspects.			X		
	4	Engineering graduates with the practice of selecting and using appropriate technical and engineering tools in engineering problems, and ability of effective usage of information science technologies				X	
	5	Ability of designing and conducting experiments, conduction data acquisition and analysis and making conclusions					
	6	Ability of identifying the potential resources for information or knowledge regarding a given engineering issue				X	
	7	The abilities and performance to participate multi-disciplinary groups together with the effective oral and official communication skills and personal confidence					
	8	Ability for effective oral and official communication skills in Turkish Language and, at minimum, one foreign language		X			
	9	Engineering graduates with motivation to life-long learning and having known significance of continuous education beyond undergraduate studies for science and technology				X	

	10	Engineering graduates with well-structured responsibilities in profession and ethics					
	11	Engineering graduates who are aware of the importance of safety and healthiness in the project management, workshop environment as well as related legal issues					
	12	Consciousness for the results and effects of engineering solutions on the society and universe, awareness for the developmental considerations with contemporary problems of humanity					
The Course's Lecturer(s) and Contact Informations		<ol style="list-style-type: none"> 1. nihatgem@gazi.edu.tr , Assist. Prof. Dr. Nihat GEMALMAYAN 2. yzumrut@gazi.edu.tr, Instr. Dr. Yavuz ZÜMRÜT 3. maakdogan@gazi.edu.tr , Arş.Gör. Dr. MEHMET AKİF AKDOĞAN 					