

Alanya Alaaddin Keykubat University | Rafet Kayış Faculty of Engineering
Mechanical Engineering Department
2021-2022 Fall Semester
SYLLABUS

Code/Name	MCE 103 / Thechnical Drawing
Type	Required
Credit/ECTS	7/7
Hour per Week	4 (2+2+0)
Level/Year	Undergraduate/1
Semester	Fall
Classroom	TBA
Content	Technical drawing in engineering. Descriptive geometry. Line types and lettering. Fundamentals of dimensioning. Principles of projection. Orthographic views. Section views. Isometric perspectives. Symbols for surface finishing and welding. Mechanical assembly drawing. Fasteners, limits, and fits. Geometric tolerances.
Prerequisites	-
Textbooks	Primary KL Narayana, P Kannaiah, KV Reddy, Machine Drawing, New Age International Publishers, 3rd Ed., 1994 Supplementary K. Rathnam, A First Course in Engineering Drawing, Springer, 2018
Objectives	• To learn essentials of technical drawings • To representation and read of machine parts with 2D drawings • To prepare perspectives of machine parts • To draw machine elements and their assemblies
Course Outcomes	In this course you will be able to: C01 Draw basic geometrical shapes by hand C02 Draw 2D views of solid parts C03 Visualize machine parts in mind C04 Prepare isometric drawings of machine parts C05 Prepare technical drawings of standard machine elements C06 Prepare assembly drawings

Weekly Schedule of Topics

W	Topic
1	Introduction to Technical Drawing; drawing tools, lettering, lines, scales
2	Geometrical constructions; drawing basic geometrical shapes
3	Engineering curves; Ellipse, parabola, hyperbola, spirals, roulettes
4	Theories of projections; 1 st and 3 rd angle projections, orthographic projections
5	Projections of points, simple solids, inclined lines, surfaces and auxiliary projection technique
6	Auxiliary views; expressing machine arts with auxiliary views
7	Creating isometric drawings using auxiliary views
8	Section Views; full sections, half sections, and stepped sections
9	Dimensioning, surface finishing and symbols, tolerances
10	Technical representation of bolts, nuts, and screws
11	Technical representation of pins, keys, and cotters
12	Technical representation of bearings and pulleys

13	Technical representation of gears and chains
14	Assembly drawing

Professional Contribution	Ability to visualize 2D &3D objects in the mind and to express them on paper
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Contribution to Program Outcomes*

	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010	P011
C01	0	2	1	1	2	3	3	2	0	0	2
C02	0	4	1	1	2	4	4	3	0	0	3
C03	2	4	2	2	3	5	3	5	1	1	1
C04	4	4	3	3	5	4	5	5	1	1	4
C05	2	5	2	3	5	5	5	5	1	2	4
C06	3	5	3	3	5	5	5	4	1	2	4

* Contribution Level | 0: None | 1: Very Low | 2: Low | 3: Medium | 4: High | 5: Very High

Special Conditions	- Students work in groups for assignment. - The consequence of violation of the attendance rule is to receive a grade of NA.						
Requirements	Basic knowledge of a dynamic analysis software						
Evaluation	<table> <tr> <td>Midterm Exam</td><td>50%</td></tr> <tr> <td>Final Exam</td><td>50%</td></tr> <tr> <td>Total</td><td>100%</td></tr> </table>	Midterm Exam	50%	Final Exam	50%	Total	100%
Midterm Exam	50%						
Final Exam	50%						
Total	100%						
Rubric	A rubric will be announced after the exams based on the details of the answer keys						
Course Policy	- You must attend at least 80% of the sessions including add-drop period. - Be in the class on time. - English should always be used to communicate with one another. - Mobile phone should be switched off and put away during the class. - You cannot talk to your friends during class no matter what the subject is.						
Cheating & Plagiarism	- Copying or letting someone to copy your work on exams, assignments, or reports is cheating. - Cutting and pasting text, figures and tables from the web sources or any other electronic source is plagiarism. - The consequence of academic dishonesty is to receive a grade of F for the course.						

Instructor

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Room	220	Office Hours	TBA

Prepared by Fatih DARICIK on August 20, 2025