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

Code/Name	MEC 103 / Thechnical Drawing				
Туре	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	<b>Primary</b> KL Narayana, P Kannaiah, KV Reddy, Machine Drawing, New Age International Publishers, 3 <sup>rd</sup> Ed., 1994 <b>Supplementary</b> K. Rathnam, A First Course in Engineering Drawing, Springer, 2018				
Objectives	<ul> <li>To learn essentials of technical drawings</li> <li>To representation and read of machine parts with 2D drawings</li> <li>To prepare perspectives of machine parts</li> <li>To draw machine elements and their assemblies</li> </ul>				
Course Outcomes	In this course you will be able to: CO1 Draw basic geometrical shapes by hand CO2 Draw 2D views of solid parts CO3 Visualize machine parts in mind CO4 Prepare isometric drawings of machine parts CO5 Prepare technical drawings of standard machine elements CO6 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 <sup>st</sup> and 3 <sup>rd</sup> 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

## **Contribution to Program Outcomes**\*

		0									
	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010	P011
C01	0	2	1	1	2	3	3	2	0	0	2
CO2	0	4	1	1	2	4	4	3	0	0	3
CO3	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

<b>Special Conditions</b>	Students work in groups for assignment.						
	• The consequence of violation of the attendance rule is to receive a grade of <b>NA</b> .						
Requirements	Basic knowledge of a dynamic analysis software						
Evaluation	Midterm Exam 30%						
	Assignment 30%						
	Final Exam 40%						
	Total 100%						
Rubric	A rubric will be announced prior to assignments. A total of 5 assignments will be given during the semester and each assignment will affect your total grade by 5%.						
<b>Course Policy</b>	1. You must attend at least 70% of the sessions including add-drop period.						
	2. Be in the class on time.						
	3. English should always be used to communicate with one another.						
	4. Mobile phone should be switched off and put away during the class.						
	5. You cannot talk to your friends during class no matter what the subject is.						
Cheating &	• Copying or letting someone to copy your work on exams, assignments, or reports is						
Plagiarism	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 <b>F</b> for the course.						

Instructor							
Name/Surname	Fatih Darıcık	Email	fatih.daricik@alanya.edu.tr				
Room	413	Office Hours	ТВА				

Prepared by Fatih Darıcık on July 27, 2021