

 OSTİM TEKNİK ÜNİVERSİTESİ A N K A R A	FACULTY OF ENGINEERING COURSE SYLLABUS FORM	Doküman No	MF.FR.003
		Revizyon Tarihi	13.11.2024
		Revizyon No	01
		Sayfa No	1 / 4

MEC 104 – COMPUTER AIDED TECHNICAL DRAWING

Course Code	Course Name			Semester		
MEC 104	Computer Aided Technical Drawing			Fall ☐	Spring ☒	Summer ☐
Hours				Credit	ECTS	
Theory		Practice	Lab	2	4	
1		2	0			

Course Details	
Department	Aerospace Engineering
Course Language	English
Course Level	Undergraduate ☒ Graduate ☐
Mode of Delivery	Face to Face ☒ Online ☐ Hybrid ☐
Course Type	Compulsory ☒ Elective ☐
Course Objectives	Introducing the CAD/CAM systems. Giving the information about creating a CAD software. Teaching a CAD software and using it to design a product. Preparing presentation of designed product. Teaching a CAM software and obtaining codes required for CNC machines.
Course Content	Computer aided systems and interaction among them. Modelling methods used by a CAD software. Product design and development process. Getting the NC codes manually or by using a CAM software.
Course Method/ Techniques	Lecture ☒ Question & Answer ☒ Presentation ☐ Discussion ☐
Prerequisites/ Corequisites	
Work Placement(s)	

Textbook/References/Materials

Gediktaş, M., Özdaş, N., "Teknik Resim", Birsen Yayınevi, İstanbul
Karagöz, Y., 1998, "Uygulamalı Teknik Çizim", Barış Yayınları, Fakülteler Kitabevi, İzmir.
Bağcı, M., Bağcı, C., 1982, "Teknik Resim", Teknik Eğitim Fakültesi Matbaası, Ankara.
Helsel, J., 1992, "Engineering Drawing and Design", McGraw-Hill International Editions, Singapore.
Lamit, L.G., Kitto, K.L., 1997, "Engineering Graphics and Design", West Publishing company, Minneapolis.
Kalameja, A.J., 1992, "The Autocad Tutor For Engineering Graphics", Delmar Publishers Inc., Albany.

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Course Category			
Mathematics and Basic Sciences	☐	Education	☐
Engineering	☒	Science	☐
Engineering Design	☒	Health	☐
Social Sciences	☐	Profession	☐

Weekly Schedule		
No	Topics	Materials/Notes
1	Introduction to CAD and Graphic Tools	
2	2D Drawing Methods, Projections	
3	Orthographic Projection, Surfaces, Lines, and Holes, Isometric View	
4	Views, Introduction to Software (SolidWorks), 2D Drawing and Relations - 1	
5	2D Drawing and Relations - 2	
6	3D Solid Modeling - 1	
7	3D Solid Modeling - 2	
8	Midterm Exam	
9	3D Solid Modeling - 3	
10	Assembly and Relations	
11	Assembly and Machine Elements	
12	Layout, Drawing Creation, Annotations	
13	Layout, Auxiliary Views	
14	Sectional Views	
15	Exploded View and Animation	
16	Final Exam	

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Assessment Methods and Criteria		
In-term studies	Quantity	Percentage
Attendance	14	
Lab		
Practice		
Fieldwork		
Course-specific internship		
Quiz/Studio/Criticize		
Homework	2	20%
Presentation / Seminar		
Project		
Report		
Seminar		
Midterm Exam	1	30
Final Exam	1	50
Total		100%
Contribution of Midterm Studies to Success Grade		50
Contribution of End of Semester Studies to Success Grade		50
Total		100%

ECTS Allocated Based on Student Workload			
Activities	Quantity	Duration (Hrs)	Total Workload
Course Hours	16	3	48
Lab			
Practice			
Fieldwork			
Course-specific Work Placement			
Out-of-class study time			
Quiz/Studio/Criticize			
Homework	2	6	12
Presentation / Seminar			
Project			
Report			
Midterm Exam and Preparation for Midterm	1	20	20
Final Exam and Preparation for Final Exam	1	20	20
Total Workload			100
Total Workload / 25			4
ECTS Credit			4

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Course Learning Outcomes	
No	Outcome
L1	Understanding of different type drawings and principles used in technical drawings, Projection types
L2	Ability of Orthographic pictures of 3D modelling, get 2D sketching skills using CAD application, dimensioning
L3	Ability of 3D modelling for design or analysis purpose using CAD application
L4	Ability of combine parts as assembly design and analysis of systems, understanding of relations
L5	Ability of layout of model from the standard views, annotation, section view

Contribution of Course Learning Outcomes to Program Competencies/Outcomes																
<i>Contribution Level: 1: Very Slight, 2: Slight, 3: Moderate, 4: Significant, 5: Very Significant</i>																
	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11					Total
L1	3	5	5	5	3	2	3	4	2							58,2
L2	3	5	5	5	3	2	3	4	2							58,2
L3	3	5	5	5	3	2	3	4	2							58,2
L4	3	5	5	5	3	2	3	4	2							58,2
L5	3	5	5	5	3	2	3	4	2							58,2
Total																