ESOGU ELECTRICAL - ELECTRONICS ENGINEERING DEPARTMENT
COURSE INFORMATION FORM

Course Title	Course Code
Engineering Graphics	151222126

Semester in Program	Number of Course Hours per Week		ECTS
	Theory	Practice	
2	1	2	2

Course ECTS Credit Distribution				
Basic Sciences	Engineering Sciences	Design	General Education	Social
	2			

Language of Instruction	Course Level	Course Type
English	Undergraduate	Required

Prerequisite	-
Objectives of the Course	The aim of the course is to teach students basic structures about computer aided design and drawings, to draw two- and three-dimensional projects in computer environment with using AutoCAD program.
Brief Course Content	Technical drawing, computer aided drawing and design.

Learning Outcomes of the Course	Contributed POs	Teaching Methods *	Assessment Methods **
1 To understand basics of technical drawing.	2, 4	1, 4, 11	A, B, D
2 To know standards about technical drawing.	2, 4	1, 4, 11	A, B, D
3 To create technical drawings by using AutoCAD.	2, 4	1, 4, 11	A, B, D
4 Modeling.	2, 4	1, 4, 11	A, B, D
5 To develop technical drawing project.	2, 4	1, 4, 11	A, B, D
6			
7			
8			
9			
10			

***Teaching Methods** **1:**Lecture, **2:**Discussion, **3:**Experiment, **4:**Simulation, **5:**Question-Answer, **6:**Tutorial, **7:**Observation, **8:**Case Study, **9:**Technical Visit, **10:**Problem Solving, **11:**Induvidual Work, **12:**Team/Group Work, **13:**Brain Storm, **14:**Project Design / Management, **15:**Report Preparation and/or Presentation

****Assessment Methods** **A:**Exam, **B:**Quiz, **C:**Oral Exam, **D:**Homework, **E:**Report, **F:**Article Examination, **G:**Presentation, **I:**Experimental Skill, **J:**Project Observation, **K:**Class Attendance; **L:**Jury Exam

Main Textbook	Y. Shoukry and J. Pandey, Practical Autodesk AutoCAD 2021 and AutoCAD LT 2021: A no-nonsense, beginner's guide to drafting and 3D modeling with Autodesk AutoCAD. Birmingham, England: Packt Publishing, ISBN 978-1-78980-915-2, 2020.
Supplementary Resources	-
Necessary Course Material	-

Course Weekly Schedule	
1	Introduction to engineering graphics, standards and conventions, engineering drawing, purpose of an engineering drawing, and elements of engineering drawing
2	Alphabet of line, line types, line type precedence, multiview sketching, orthogonal, sectional, and auxiliary views
3	Introduction to AutoCAD, AutoCAD LT, and AutoCAD for Macintosh, understanding the user interface, navigating in AutoCAD, selecting and panning, zooming in and out, and, making selections
4	Basic drawing tools, understanding the coordinate system, using the line command, the status bar modes
5	Making circle, arc, rectangle, and polygon
6	The move command, copy command, the rotate command, the fillet command, the trim command, and the extend command
7	Learning about modify commands, using object snaps, the object snap override, and object snap tracking
8	Mid-Term Exams
9	Making an ellipse, working with spline, the mirror command, the offset command, the scale command, the chamfer command, the join command, the explode command, and the stretch command
10	Working with arrays and reusable objects using advanced status bar modes, making arrays,
11	Working with blocks and working with groups
12	Managing drawings with layers and properties, using match properties, and using enquiry commands
13	Drawing management using layers and using the quick access tools in the layers panel
14	Making isometric drawings and working with parametric drawings
15	Introduction to 3D modeling, technical requirements, 3D modeling workspaces, navigation and switching views, adjusting visual styles, configuring multiple viewports, user coordinate system
16,17	Final Exams

Calculation of Course Workload			
Activities	**Count**	**Time (Hour)**	**Total Workload (Hour)**
Weekly classroom time	14	3	42
Weekly study time (review, reinforcing, preparation)	14	1	14
Homework	5	1	5
Taking a quiz			
Studying for a quiz			
Oral exam			
Studying for an oral exam			
Report writing (Preparation and presentation time included)			
Project (Preparation and presentation time included)			
Presentation (Preparation time included)			
Mid-Term Exam			
Studying for Mid-Term Exam			
Final Exam	1	1	1
Studying for Final Exam	1	2	2
		Total workload	**64**
		Total workload / 30	**2.13**
		Course ECTS Credit	**2**

COURSE CONTRIBUTION TO THE PROGRAM OUTCOMES (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low)		
NO	**PROGRAM OUTCOMES**	**Contribution**
1	a. Sufficient knowledge of mathematics	
	b. Sufficient knowledge of basic sciences	
	c. Sufficient basic engineering and Electrical-Electronics engineering knowledge	
	d. Skill of applying all these knowledge and experience to complicated Electrical-Electronics engineering problems	
2	Skill of defining, identifying, formulating and solving the complicated problems in Electrical-Electronics engineering and related areas by applying appropriate analysis and modelling methods.	5
3	Skill of designing a complicated process, system, equipment or product by applying modern design methods under realistic constraints and conditions.	
4	To analyze and solve the complicated engineering problems: a. skill of developing, selecting and applying the required techniques and devices	5
	b. skill of using information technologies effectively	5
5	To study the complicated on the complicated Electrical-Electronics engineering problems and research subjects: a. skill of experimental design	
	b. skill of performing the experiments, collecting the data and analyzing and interpreting the results	
6	a. Skill of performing individual studies	
	b. Skill of performing intra and interdisciplinary and multidisciplinary teamwork and studies	
7	a. Skill of effective oral and writing communication in Turkish	
	b. Skill of improving and using foreign language knowledge	
	c. Skill of effective reporting, understanding the reports and preparing the design and production reports	
	d. Skill of effective presentation and giving and getting clear and understandable instructions.	
8	Awareness of the necessity of life-long learning and skill of accessing to information and following the improvements in contemporary science and technology	
9	a. Awareness of necessity of behaving in accordance with the ethical principles and awareness of the importance of having professional ethical responsibilities	
	b. Knowledge about legal regulations and standards of engineering	
10	a. Knowledge about project management, risk management and change management	
	b. Awareness of the significance of entrepreneurship and innovation	
	c. Knowledge about sustainable development	
11	Knowledge about the effects of engineering applications and practices on the global and social health, ecology and safety, knowledge about the current problems in relation to the working areas of Electrical-Electronics engineering; and awareness of the legal issues resulting from engineering solutions	
12	Knowledge about modern problems in local and universal scale	

Assessment	
Activity Type	**%**
Quiz	50
Final Exam	50
Total	100

LECTURER(S)				
Prepared by	Dr. İpek ÇETİNBAŞ			
Signature(s)				

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