COURSE SYLLABUS						
Course Title	**Course Code**	**Semester**	**Course Hour/Week**		**Credit**	**ECTS**
Design Communication 2	INAD104 (Industrial Design)	2	**Theory** 2	**Practice** 2	3	**5**
Course Type	Compulsory Courses	Department Elective	Faculty Elective	University Elective	CoHE (YÖK) Compulsory	Other
	✓					
Level of Course	Associate Degree (Short Cycle)		Undergraduate (First Cycle)		Graduate/ Doctoral (Second /Third Cycle)	
			X			

Language of Instruction	English

Course Instructor(s)	**Asst. Prof. Dr. Nazgol Hafizi** E-mail: nazgol.hafizi@arucad.edu.tr Office: TI OFF06
Course Objectives	This course aims to develop Industrial Design students' proficiency in product technical drawing and 2D visual communication. Students will master orthographic projection and isometric drawing techniques to accurately represent three-dimensional products on a two-dimensional plane. They will learn to produce precise multi-view drawings, construct isometric pictorials, and develop section views, exploded-view drawings, and point detail illustrations that communicate product assembly, material joints, and structural logic. By the end of the course, students will be equipped with the fundamental technical drawing skills essential for professional product design practice and studio work.
Course Learning Outcomes	

Students will be able to:	**Teaching Methods**	**Evaluation Methods**
Identify drawing standards, orthographic conventions, line types, and dimensioning rules used in industrial product technical drawing, and differentiate between drawing types including multi-view, isometric, section, and exploded views.	Direct instruction, Demonstration	Class works, Midterm Exam
Apply orthographic projection principles to produce accurate multi-view technical drawings of three-dimensional products, correctly representing top, front, side, and auxiliary views with appropriate line types and dimensioning.	Direct instruction, Demonstration, Studio practice	Midterm Exam, Final Exam

	Construct isometric and pictorial drawings of industrial products that accurately convey three-dimensional form, proportion, and spatial relationships from two-dimensional orthographic views.	Guided practice, Studio sessions, Critique rounds	Midterm Exam, Final Exam
	Develop section views, exploded-view drawings, and point detail illustrations that reveal internal structure, assembly logic, and material joints of industrial products.	Demonstration, Studio sessions, Class exercises	Final Exam
	Compose a complete and coherent technical drawing set for an industrial product — integrating multi-view, isometric, section, exploded, and detail drawings — presented to professional graphic standards.	Studio practice, Critique rounds, Presentation exercises	Final Exam
	Evaluate the technical accuracy, completeness, and graphic quality of a product drawing set through structured self-review and peer critique, identifying areas for improvement in drawing precision and professional presentation.	Critique rounds, Peer review	Portfolio, Final Exam
Course Content	This course covers the fundamentals of technical drawing for industrial product design. Students begin with architectural drawing standards and conventions before progressing to orthographic projection — the core skill of multi-view product representation including top, front, side, and auxiliary views with correct line types, dimensions, and annotations. The second half introduces isometric and pictorial drawing, enabling students to visualise three-dimensional form from flat views. Post-midterm, the course advances to section views (full, half, and detail), exploded-view drawings that reveal assembly sequences, and point detail illustrations communicating material joints and construction logic. The course concludes with graphic layout and poster composition, integrating all drawing types into a professionally presented technical drawing set.		

COURSE OUTLINE / SCHEDULE			
Week	**Topic**	**Implementation (theory/practice)**	**Required Reading, Preliminary Preparation**
1	Course Introduction	T	No preparation required.
2	Drawing Standards & Drawing Conventions Line types, line weights, scales, drawing tools and materials.	T/P	Read: Ching, Architectural Graphics, Ch.1 (Drawing Tools and Materials).
3	Introduction to Orthographic Projection setting up multi-view layouts. Multi-View Orthographic Drawing I	T/P	Read: Ching, Architectural Graphics, Ch.4: Multiview Drawings. Sketch a

			simple geometric solid in three views.
4	Multi-View Orthographic Drawing II Top, front, and side views	T/P	Practice orthographic projection
5	Multi-View Orthographic Drawing II Top, front, and side views	T/P	Refine drawings from Week 4; study hidden-line and centre-line conventions.
6	Dimensioning & Annotation Standards Dimensioning rules for products: chain, parallel, and datum dimensioning. Isometric Drawing Introduction	T/P	Apply dimensioning to your Week 5 drawings; compare with provided reference examples.
7	Review & Pre-Midterm Practice Refining multi-view drawings and addressing key learning points.	T/P	Review all previous assignments; identify areas requiring further practice.
8	MIDTERM EXAM and Isometric Practice		
9	Isometric Drawing Practice — Curves & Complex Forms	T/P	Read: Ching, Architectural Graphics, Ch.5: Paraline Drawings. Sketch a box-form product in isometric.
10	Section Views Full sections, removed sections; hatching conventions for product materials.	T/P	Study section-view examples from product datasheets; sketch a sectioned product component.
11	Section Views Full sections, removed sections; hatching conventions for product materials.	T/P	Study section-view examples from product datasheets; sketch a sectioned product component.
12	Exploded-View Drawings Principles of exploded isometric views; representing assembly sequence and fastening logic.	T/P	Disassemble a simple product (e.g. pen, stapler); sketch an exploded view showing components.
13	Point Details Detail drawings of joints, material connections, and assembly interfaces at enlarged scales.	T/P	Develop two point-detail drawings based on the product from Week 12.
14	Full Drawing Set Development I Integrating multi-view, isometric, section, and exploded views into a single product drawing set.	P	Gather all previous drawings; begin composing the complete drawing set for your chosen product.
15	Full Drawing Set Development II Refining and completing the drawing set; graphic layout and poster composition.	P	Continue drawing set; apply graphic layout principles; ensure consistency across all views.

16	Presentation Techniques & Final Review Professional graphic layout, title blocks, and preparing technical drawing sheets for submission.	T/P	Finalise drawings; prepare submission-ready presentation sheet.
17	FINAL EXAM		

Required Course Material(s) / Reading(s) / Text Book(s)	Ching, Francis D.K. (2002). Architectural Graphics. Van Nostrand Reinhold, New York. Call number: NA2700.C45.A734 1996 Bertoline, G. R., & Wiebe, E. N. (2007). Fundamentals of Graphics Communication. McGraw-Hill. Call number: T353 .B465 2007 Eissen, K., & Steur, R. (2008). Sketching: Drawing Techniques for Product Designers. BIS Publishers. Call number: NK1520 .E37 2008
Recommended Course Material(s) / Reading(s) / Other	Additional references will be suggested based on the product category chosen by each student.

ASSESSMENT		
Learning Activities	**NUMBER**	**WEIGHT (%)**
Mid-Term	1	30
Quiz		
Assignment		
Portfolio		20
Field Study		
Presentation / Seminar		
Studio Practice		
Other		
Contribution of Final Examination / Final Project / Dissertation to the Final Grade	1	50
TOTAL		100

CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME LEARNING OUTCOMES							
No	**PROGRAMME LEARNING OUTCOMES**	**Level of Contribution (1-lowest / 5-highest)**				
		1	2	3	4	5
1	Understand knowledge of industrial design principles, design methodologies, history, aesthetics, form & function and product development processes.		x			

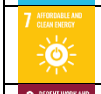
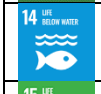
2	Explain the properties of materials, manufacturing technologies, and production methods used in industrial product design.			x		
3	Understand ergonomics, and user-centered design concepts in product development.	x				
4	Understand sustainability principles, environmental impacts, and life-cycle considerations in industrial design.	x				
5	Analyze design problems, user needs, and market requirements to develop appropriate product design solutions.		x			
6	Generate creative product concepts using sketching, ideation techniques, and visual exploration methods.			x		
7	Develop product designs using digital tools, 3D modeling, and rendering software.	x				
8	Develop prototypes or models to evaluate product functionality, usability, and aesthetics.		x			
9	Communicate design ideas effectively through sketches, technical drawings, models, and professional presentations.					x
10	Work effectively in multidisciplinary teams during product design and development processes.	x				
11	Manage design projects considering production constraints, market needs, and economic feasibility.		x			
12	Demonstrate professional responsibility, ethical awareness, and commitment to sustainable design practices.		x			

ECTS / STUDENT WORKLOAD				
ACTIVITIES	**NUMBER**	**UNIT**	**HOUR**	**TOTAL (WORKLOAD)**
Course Teaching / Practice Hour (weeks × total course hours)	16		4	64
Preliminary Preparation and Self-study	15		3	45
Midterm Exam	1		8	8
Quiz				
Portfolio	1		5	5
Field Study / Project				
Final Exam	1		10	10
TOTAL WORKLOAD				132
TOTAL WORKLOAD / 25				5.28
ECTS				**5**

ETHICAL RULES WITH REGARD TO THE COURSE
Plagiarism Disclaimer

Detected and undetected plagiarism is a serious offence at any time and it could have devastating effects on your degree result and future professional lives.

Plagiarism is easy to avoid if you make sure to identify and acknowledge your sources thoroughly and do not copy directly from visual examples, designs, or notes that have in turn been taken word for word from your sources.

	SDG 1: No Poverty	
	SDG 2: Zero Hunger	
	SDG 3: Good Health and Well-Being	
	SDG 4: Quality Education	X
	SDG 5: Gender Equality	
	SDG 6: Clean Water and Sanitation	
	SDG 7: Affordable and Clean Energy	
	SDG 8: Decent Work and Economic Growth	
	SDG 9: Industry, Innovation and Infrastructure	
	SDG 10: Reduced Inequalities	
	SDG 11: Sustainable Cities and Communities	
	SDG 12: Responsible Consumption and Production	
	SDG 13: Climate Action	
	SDG 14: Life Below Water	
	SDG 15: Life on Land	
	SDG 16:Peace, Justice and Strong Institutions	
	SDG 17:Partnership for the Goals	

ASSESSMENT DETAILS AND EVALUATION CRITERIA:
Final Grades will be determined according to the Course Learning Activities and Final Examination / Project / Dissertation Assessment Details as below, and comply with the Education and Examination Regulation set forth by the University.

ARUCAD
Arkın University
of Creative Arts and Design

FACULTY OF DESIGN
COURSE SYLLABUS DSGN104

PREPARED BY	Asst. Prof. Dr. Nazgol Hafizi
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APPROVED	