COURSE SYLLABUS						
Course Title	**Course Code**	**Semester**	**Course Hour/Week**		**Credit**	**ECTS**
Studio 5	INDD301	1	**Theory** 2	**Practice** 8	6	9
Course Type	**Compulsory Courses**	**Department Elective**	**Faculty Elective**	**University Elective**	**CoHE (YÖK) Compulsory**	**Other**
	x					
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. Burçin SALTIK	E-mail: burcin.saltik@arucad.edu.tr Office: FM-OFF02
Course Objectives	Aims to teach the evaluation ability of industrial product changes and evolution caused by different factors. It enables the students to develop design projects through a progressive process and arrive final version or prototype of the designed product.	
Course Learning Outcomes	**Students To Do:** **Teaching Methods** **Evaluation Methods** Remembering: Identify and describe basic visual elements and principles of graphic representation. Emphasis on process oriented exercises and continuous feedback. Workshop, Class discussions, sketching. Identify a significant market or societal need and kick-start their project by developing a design brief. Understanding: Explain the relationship between sketching, isometric and perspective composition, and communication in design. Demonstrations and Visual Lectures: Introduction to freehand, technical, and compositional techniques Class discussions, weekly classwork's and homeworks's assignments. To be able to independently produce a design concept following the requirements of the given brief, and develop it into a product. Applying: Apply freehand drawing techniques to represent design ideas accurately and expressively. Weekly Practice, Assignment documentation and observation drawing. In class composition drawing and classwork's and	

	homeworks's assignments. To produce preliminary sketches as well as detailed explanatory ones. Analyzing: Evaluate and improve drawings through consideration of scale, proportion, and visual balance. Encourage reflective learning and collaborative improvement Peer critiques, instructor feedback sessions. To develop technical skills for building a virtual 3D computer model of the design product and its concept assembly. Evaluating: Critically assess presentation methods and justify visual communication choices. One on One Consultations; Individual progress guidance and targeted feedback. Midterm portfolio submission/ Final portfolio submission. Present a complete final proposal based on proper research and concrete data. Creating: Produce cohesive poster design presentations integrating multiple drawing and representation techniques. Workshop, focusing on proportion, perspective, and visual hierarchy. Midterm submission / Final design and portfolio submission. To produce hand-made actual scale model of the design product using the 3D computer model concept assembly.
Course Content	**Multifunctional Design** This fifth-semester studio students exhibit their proficiency in independently developing articulated product design concepts for a given design brief and technical skills in building a virtual 3D computer model of their concept assembly and a hand-made actual scale model.

COURSE OUTLINE/SCHEDULE			
Week	**Topic**	**Implementation (theory/practice)**	**Required Reading, Preliminary preparation**
1	<u>Introduction to the course and the studio's topic.</u> Project Brief: **Multifuctional Furniture Unit.** Students design a furniture unit which has multiple purposes (function) such as seating, storing, hanging, playing games and etc. for a family house. This unit can be designed in parts which can be easily assembled	T-P	Start and evaluated the topic.

	and carried. It also can be designed as one piece. Classwork: Individual work. Students work on a plan of the design process by preparing three alternatives models and then one model will be chosen. After one models will be decided then students will have to follow below steps for to prepare and finish their project.		
2	Student's research: Usage of the wood, tables, examining the existing products for family homes. The aim of the project is to serve consumers a joyful experience of usıng as a different aim. The design should be a set of objects all of them has different purposes. Research Board: Multifuctional use.	T-P	Search the related topics and start to prepare research boards and power points.
3	Classwork: Working on the design on shape and form, considering different purposes.	T-P	Bring a design proposal presentation board.
4	Classwork: Working on the design on shape and form, considering different purposes.	T-P	Be ready to do sketches and drawings related to the product's design process.

5	Classwork: Working on the design on shape and form, considering different purposes.	T-P	Bring materials and tools to make mood boards and be ready to take critiques.
6	Classwork: Working on the design on shape and form, considering different purposes.	T-P	Assign a design proposal board. Be ready to develop the design of your product. Be ready to make models and work on the computer. See required books: Psychology of everyday things.
7	Classwork: Working on the design on shape and form, considering different purposes.	P	Complete all your works, presentations. Prepare for finishing the project within all necessary components of the design process.
8	Class Work: Working on the design on shape and form, considering different purposes and Midterm.	P	Complete all your works, presentations. Prepare for finishing the project within all necessary components of the design process.
9	Classwork: Working on feedbacks and design on shape and form, considering different purposes.	T-P	Work on the jury critics. Analyses the criticism.

10	Classwork: Working on the design on shape and form, considering different purposes.	P Idea exchange and brainstorming.	Assign mood board. Be prepared for doing sketches.
11	Presentation of design proposal boards. Concern problems and solutions of the design proposal.	T-P	Bring design proposal boards and sketches. Be ready to work in the studio for the boards.
12	Classwork 1: Continue to develop the design with draft models, examining the design criteria and alternative solutions for using practices of the product. Evolving to design components and compartments. Classwork 2: Evolving design process through draft models and technical drawings with related ergonomic concerns. Do pre-models and be clear about the designed units, parts and components. Modelling and technical drawings on the computer.	T-P	Be ready for finishing.
13	Completing the design process with all necessary levels. Technical drawings with exact measures and solved details. Final critiques. Classwork: Making 1/1 Real model and 3D Models with living	P Design and presentation boards.	Be ready for finishing.

	spaces in the appropriate software.		
14	Completing the design process with all necessary levels. Technical drawings with exact measures and solved details. Final critiques. Classwork: Making 1/1 Real model and 3D Models with living spaces in the appropriate software.	P Design and presentation boards.	Be ready for finishing.
15	Completing the design process with all necessary levels. Technical drawings with exact measures and solved details. Final critiques. Classwork: Making 1/1 Real model and 3D models with living spaces in the appropriate software.	P Design and presentation boards.	Be ready for finishing.
16	**FINAL EXAM**		

Required Course Material(s) / Reading(s)/ Text Book(s)	• Lesko, C. (2008). *Industrial design : materials and manufacturing guide*. Call Number: TS171.4.L472008 • Kalb, P. R. (2013). *Art since 1980: charting the contemporary*. London, United Kingdom: Laurence King Publishing. Call Number: N6497.K362013 • Saville, L. (2008). *Design secrets : furniture : 50 real-life projects uncovered*. Call Number: NK2260.S267 2006

Recommended Course Material(s)/ Reading(s) /Other	• Bürdek, B. E. (2005). *Design: History, theory and practice of product design*. Birkhäuser. ISBN: 978-3764370299 • Cane, K. (2012). *Making and drawing*. A&C Black. ISBN: 978-1408134511. • Ching, F. D. K. (2014). *Interior design illustrated (3rd ed.).* Wiley. ISBN: 978-1118090718 • Hoadley, R. B. (2000). *Understanding wood: A craftsman's guide to wood technology*. Taunton Press. ISBN: 978-1561583584 • Manzini, E. (2015). *Design, when everybody designs: An introduction to design for social innovation*. MIT Press. ISBN: 978-0262028608 • Miller, R. (2012). *Design + environment: A global guide to designing greener goods*. Fairchild Books. ISBN: 978-1874719434 • Norman, D. A. (2013). *The design of everyday things: Revised and expanded edition.* Basic Books. ISBN: 978-0465050659 • Papanek, V., & Hennessey, J. (1973). *Nomadic furniture: D-I-Y projects that are lightweight & light on the environment.* Pantheon. ISBN: 978-0764330247 • Postell, J. (2012). *Furniture design (2nd ed.).* John Wiley & Sons. ISBN: 978-1118090787 • Rawsthorn, A. (2018). *Design as an attitude.* JRP|Ringier. ISBN: 978-3037645215 • Rittel, H. W. J., & Webber, M. M. (1973). *Dilemmas in a general theory of planning.* Policy Sciences, 4(2), 155–169 https://doi.org/10.1007/BF01405730 • Sauer, M. (2020). *Modular design: Flexible systems for a changing world.* Journal of Contemporary Design, 18(4), 56–67. DOI: 10.1007/978-3-642-35950-7_6460-4

ASSESSMENT		
Learning Activities	**NUMBER**	**WEIGHT in %**
Mid-Term	1	40
Quiz		
Assignment		
Project		
Field Study		

Presentation / Seminar		
Studio Practice		
Other		
Contribution of Final Examination/Final Project/ Dissertation to the Final Grade	1	60
TOTAL	2	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	

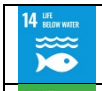
9	Communicate design ideas effectively through sketches, technical drawings, models, and professional presentations.			x		
10	Work effectively in multidisciplinary teams during product design and development processes.			x		
11	Manage design projects considering production constraints, market needs, 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 Hour (X weeks * total course hours)	15	1	10	150
Preliminary Preparation and self- study	5	1	8	40
Mid-Term	1	1	10	10
Quiz				
Assignment				
Project				
Field Study				
Presentation / Seminar				
Studio Practice				
Final Examination/ Final Project/ Dissertation	1	1	30	30
Other				
TOTAL WORKLOAD				230

TOTAL WORKLOAD / 25				9,2
ECTS				9

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 life. 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	x
	SDG 6: Clean Water and Sanitation	
	SDG 7: Affordable and Clean Energy	
	SDG 8: Decent Work and Economic Growth	x
	SDG 9: Industry, Innovation and Infrastructure	x
	SDG 10: Reduced Inequalities	
	SDG 11: Sustainable Cities and Communities	
	SDG 12: Responsible Consumption and Production	x
	SDG 13: Climate Action	x

	SDG 14: Life Below Water	
	SDG 15: Life on Land	
	SDG 16: Peace, Justice and Strong Institutions	
	SDG 17: Partnership for the Goals	x

ASSESSMENT DETAILS AND EVALUATION CRITERIA:	
Final grades will be determined based on the course learning activities and the assessment details for the final examination or project, as outlined below, in accordance with the University's Education and Examination Regulations. Students are required to attend at least 70% of the classes. The maximum allowable absenteeism is 30%. Midterm: 40% Final: 60%	
PREPARED BY	Asst. Prof. Dr. Burçin Saltik.
UPDATED	September 2023, September 2024, September 2025.
APPROVED	