



## COURSE INFORMATION FORM

Course Name	Course Code
DESIGN THINKING	141115006

Semester	Number of Course Hours per Week		Credit	ECTS
	Theory	Practice		
5	2	2	3	5

Course Category (Credit)				
Basic Sciences	Engineering Sciences	Design	General Education	Social
		4		1

Course Language	Course Level	Course Type
Turkish	Undergraduate	Elective

<b>Prerequisite(s) if any</b>	None
<b>Objectives of the Course</b>	The aim of this course; * Presenting and applying the mindset, process, and tools of design thinking approach, * Gaining experience of teamwork, * Exploring various fields of application of design thinking approach.
<b>Short Course Content</b>	* Definition of design thinking. * Applied learning of five-stage design process and tools that can be used in each stage through a project-based approach.

Learning Outcomes of the Course	Contributed PO(s)	Teaching Methods *	Measuring Methods **
1 Gain knowledge and experience about design thinking.	2, 3, 4, 5, 6, 7, 8, 9	1, 2, 6, 12	D, J
2 Experience human-centered design approach.	2, 4, 5, 7, 8	1, 2, 6	D, J
3 Gain experience in design research.	3, 7	1, 2, 6	D, J
4 Generate numerous ideas on a single problem statement.	3, 4, 5	6, 11	D, J
5 Get quick feedback about their ideas by prototype and test cycles.	3, 6	6, 11, 12	D, J
6 Being open to teamwork and collaboration.	9	12	D, J

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

\*\***Measuring 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

<b>Main Textbook</b>	Lewrick, Link, & Leifer. (2020). The Design Thinking Toolbox: A Guide to Mastering the Most Popular and Valuable Innovation Methods.
<b>Supporting References</b>	<ul style="list-style-type: none"> <li>* Brown, T. (2009). Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation. Harper Collins.</li> <li>* Dunne, D. (2018). Design Thinking at Work: How Innovative Organizations are Embracing Design. Rotman-UTP Publishing.</li> <li>* Kelley, T., &amp; Kelley, D. (2013). Creative confidence. Crown Publishing.</li> <li>* Kelley, T., &amp; Littman. (2001). The art of innovation. Doubleday.</li> <li>* Kelley, T., &amp; Littman. (2005). The ten faces of innovation. Random House.</li> <li>* Liedtka, J., King, A., &amp; Bennett, K. B. (2013). Solving problems with design thinking: 10 stories of what works. Columbia University Press.</li> <li>* Liedtka, J., &amp; Ogilvie, T. (2011). Designing for growth: A design thinking tool kit for managers. Columbia University Press.</li> <li>* Martin, B., &amp; Hanington, B. (2012). Universal Methods of Design.</li> <li>* Stanford d.school. (2010). An Introduction to Design Thinking PROCESS GUIDE. <a href="https://web.stanford.edu/~mshanks/MichaelShanks/files/509554.pdf">https://web.stanford.edu/~mshanks/MichaelShanks/files/509554.pdf</a></li> <li>* van Boeijen, &amp; Daalhuizen. (2010). Delft design guide.</li> <li>* <a href="https://www.designkit.org/">https://www.designkit.org/</a></li> </ul>
<b>Necessary Course Material</b>	Working papers, sticky notes, basic office supplies, personal computers for design work

<b>Course Schedule</b>	
<b>1</b>	Introduction
<b>2</b>	What is design thinking?
<b>3</b>	Announcement of project title and exploration of users (Empathize stage)
<b>4</b>	User interviews (Empathize stage)
<b>5</b>	User interviews (Empathize stage)
<b>6</b>	Definition of the problem (Define stage)
<b>7</b>	Idea generation (Ideate stage)
<b>8</b>	Mid-Term Exam
<b>9</b>	Idea generation (Ideate stage)
<b>10</b>	Prototype production and test cycles (Prototype and test stages)
<b>11</b>	Prototype production and test cycles (Prototype and test stages)
<b>12</b>	Prototype production and test cycles (Prototype and test stages)
<b>13</b>	Detailing and production of high-fidelity prototypes (Prototype and test stages)
<b>14</b>	Detailing and production of high-fidelity prototypes (Prototype and test stages)
<b>15</b>	Detailing and production of high-fidelity prototypes (Prototype and test stages)
<b>16,17</b>	Final Exam

<b>Calculation of Course Workload</b>			
<b>Activities</b>	<b>Number</b>	<b>Time (Hour)</b>	<b>Total Workload (Hour)</b>
Course Time (number of course hours per week)	14	4	56
Homework	1	8	8
Participation (Preparation)	14	1	14
Mid-Term Exam (homework submission)	1	1	1
Studying for Mid-Term Exam (homework)	1	32	32
Final Exam (project)	1	7	7
Studying for Final Exam (project)	1	40	40
<b>Total workload</b>			<b>158</b>
<b>Total workload / 30</b>			<b>5,26</b>
<b>Course ECTS Credit</b>			<b>5</b>

Evaluation	
<b>Activity Type</b>	<b>%</b>
Mid-term (Project)	20
Homework	10
Participation	30
<b>Final Exam (Project)</b>	<b>40</b>
<b>Total</b>	<b>100</b>

RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO) (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low)		
NO	PROGRAM OUTCOME	Contribution
1	Within cultural, historical and artistic contexts the ability to integrate theoretical knowledge about production and consumption mechanisms into the design practice	
2	The ability to plan the design process, to choose and use appropriate methods and techniques	5
3	The ability to identify design problems and related sub-problems and to produce creative solutions with a critical and dialectical approach	5
4	The ability to design in terms of spatial thinking using design principles and elements	3
5	The ability to make applications in the interaction of aesthetics and function using design elements and means and to evaluate these applications	3
6	The ability to visualize and present using two and three dimensional design tools	3
7	The ability to follow and apply technological developments, current design approaches, sustainable production methods, materials and innovations in the field of informatics in design projects	3
8	The ability to use field knowledge in industrial design projects by considering the needs and interests of the society and target users within the scope of environmental awareness, professional ethics and the laws	4
9	The ability to carry out the design process effectively individually or in a team	5
10	The ability to take an active role in discipline-specific or interdisciplinary studies at the national and international levels;	

LECTUTER(S)				
<b>Prepared by</b>	Lect. Nimet Başar Kesdi			
<b>Signature(s)</b>				

**Date:**08.08.2024