



**ESOGU Faculty of Art and Design  
Industrial Design Department  
COURSE INFORMATION FORM**

<b>SEMESTER</b>	Fall
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<b>COURSE CODE</b>	1411xx	<b>COURSE NAME</b>	Experimental Materials
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	Type	Language
5	2	2	0	3	5	COMPULSORY ( ) ELECTIVE ( x )	Turkish

COURSE CATEGORY				
Basic Education	Design	Natural and Applied Science	Social Science	Art
	X	X		

ASSESSMENT CRITERIA			
MID-TERM	Evaluation Type	Quantity	%
	1st Mid-Term	1	40
	2nd Mid-Term		
	Quiz		
	Homework		
	Project		
	Report	1	10
	Others (.....)		
FINAL EXAM		1	50

<b>PREREQUIEITE(S)</b>	none
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<b>COURSE DESCRIPTION</b>	Beyond the typical materials taught primarily in industrial design education, for example wood, metal and plastics, in the Experimental Materials course, students will learn about less used or currently not broad available, experimental materials and production techniques. Plant fibers, wool/felt, used paper and waste plastic materials, growing mycelium and bacterial cellulose are materials introduced in the course and used to design small objects in an experimental way. In the theoretical part of the course students will learn how these materials are produced, how they are used and what can be done from them. In the applied part of the course students will internalize the materials by using traditional artisanal, manual and recycling techniques.
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<b>COURSE OBJECTIVES</b>	The Experimental Materials course aims to expand the student's theoretical and practical material knowledge, to internalize the material by using different material creating techniques, and with the design of objects to apply in a creative way the new learnings.
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<b>ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUCATION</b>	The occupation with materials and techniques that are not yet unsuitable for serial production can give the students different inspirations, broaden the students' perspective and thus help them in their future professional life to develop materials for production and to trigger innovation.
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<b>COURSE OUTCOMES</b>	<ol style="list-style-type: none"> <li>1. To be able to recognize natural, biological and recycled materials and techniques that are not used that much in serial production.</li> <li>2. To be able to create materials from natural, biological and recyclable basic materials.</li> <li>3. To be able to use experimental material as a starting point, to develop a</li> </ol>
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	design concept appropriate to the properties of the material and to realize the designs prototype.
<b>TEXTBOOK</b>	Reintroducing Materials for Sustainable Design: Design Process and Educational Practice, Mette Bak-Andersen, Routledge, 2021
<b>OTHER REFERENCES</b>	<p>Material Atlas – The Growing Pavilion, <i>Editors: Jasper van den Berg and Bente Konings</i>, Company New Heroes, Amsterdam, 2019</p> <p>The Chemarts Cookbook, <i>Editors: Pirjo Kaariainen, Liisa Tervinen, Tapani Vuorinen, Nina Riutta</i>, Aalto University publication seriesC, 2020</p> <p>Papermaking with Garden Plants &amp; common Weeds, <i>Helen Hiebert</i>, Storey Publishing, 2006</p> <p>Papier Mache (New Crafts), <i>Marion Elliot</i>, Lorenz Books, 2015</p> <p>Wet Felting: Creating texture, pattern and structure, <i>Natasha Smart</i>, The Crowood Press Ltd, 2022</p> <p>Bioplastic Cook Book – A catalogue of bioplastic recipes, <i>Margaret Dunne</i>, FabTextiles, Fab Lab Barcelona, 2018</p>
<b>TOOLS AND EQUIPMENTS REQUIRED</b>	Necessary tools and equipment can be found in stationery and hobby shops, in markets and in the kitchen.

## WEEKLY COURSE SYLLABUS

WEEK	TOPICS
1	Explanation of course content and the way it is taught.
2	Introduction to GIY materials, mycelium, fermentation of kombucha-scoby.
3	Creating container objects with natural materials, weaving techniques.
4	Rope and roll making from used paper, weaving and basket making techniques.
5	Felt fabric and tree-dimensional felt objects made from wool and fabric scraps.
6	Handmade paper made from plants and used paper.
7	Making of three-dimensional objects from paper pulp, trying out composite materials with pulp foam and natural fibers.
8	<b>Midterm Exam</b>
9	Making recycled plastic materials from waste plastic bags, sewing techniques.
10	Bioplastic trials from starch and agar.
11	Individual student project.
12	Individual student project.
13	Individual student project.
14	Individual student project.
15	Individual student project.
16	<b>Final Exam</b>

NO	PROGRAM OUTCOMES	Contribution Level		
		3	2	1
1	Within cultural, historical and artistic context the ability to integrate theoretical knowledge about production and consumption mechanisms into the design practice;		x	
2	The ability to plan the design process, to choose and use appropriate methods and techniques;	x		
3	The ability to identify design problems and related sub-problems and to produce creative solutions with a critical and dialectical approach;		x	
4	The ability to design in terms of spatial thinking using design principles and elements;	x		
5	The ability to make applications in the interaction of aesthetics and function using design elements and means and to evaluate these applications;	x		
6	The ability to visualize and present using two and three dimensional design tools;		x	
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;	x		
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;		x	
9	The ability to carry out the design process effectively individually or in a team;		x	
10	The ability to take an active role in discipline-specific or interdisciplinary studies at the national and international levels.			x

**1: None. 2: Partial contribution. 3: Complete contribution.**

**Instructor(s):** Öğr. Gör. Stefanie Aydın

**Signature:**

**Date:**