

ELASTOMERIC MATERIALS AND INDUSTRIAL APPLICATIONS

1	Course Title:	ELASTOMERIC MATERIALS AND INDUSTRIAL APPLICATIONS	
2	Course Code:	POL6051	
3	Type of Course:	Optional	
4	Level of Course:	Third Cycle	
5	Year of Study:	1	
6	Semester:	1	
7	ECTS Credits Allocated:	6.00	
8	Theoretical (hour/week):	3.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. MURAT YAZICI	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Prof. Dr. Murat Yazıcı myazici@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	Understanding of elastomer technology and industrial applications.	
19	Contribution of the Course to Professional Development:	The production technology of elastomer materials is known. In addition, information about the industrial applications of elastomers is obtained.	
20	Learning Outcomes:		
		1	General information about rubber is learned.
		2	To have information about the production of rubber products.
		3	To have information about rubber tests.
		4	The information about the components in the rubber formula is learned.
		5	Learn about vulcanization technology.
		6	Know about commercial elastomer products.
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		10	
21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	Solid-State Properties of Polymers.		
2	Description of Elastomer and General Usage Properties.		
3	Commercial Elastomer Types.		
4	Preparation of Elastomers Mixtures.		
5	Vulcanization of Elastomers.		

6	Rheology of Elastomers 1	
7	Midterm	
8	Rheology of Elastomers 2	
9	Processing Technologies of Elastomers 1	
10	Processing Technologies of Elastomers 2	
11	Viscoelasticity	
12	Viscoelasticity Properties of Elastomers	
13	Tests Methods of Elastomer Materials 1	
14	Tests Methods of Elastomer Materials 2	

22	Textbooks, References and/or Other Materials:	<p>1. Rubber Technologist's Handbook, J. R. White, Rapra Technology, 2001.</p> <p>2. Polymer Engineering Science and Viscoelasticity, H. F. Brinson; L. Cate Brinson, Springer Science+Business Media, 2015</p> <p>3. Rubber Technology, Maurice Morton, Van Nostrand Reinhold Company, 1987</p>
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23	Assesment	
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TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
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Midterm Exam	1	40.00
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Activites	Number	Duration (hour)	Total Work Load (hour)
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Final Exam	1	60.00	42.00
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Practicals/Labs	0	0.00	0.00
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Self-study and Preparation Learning Activities to Success Grade	40.00	6.00	84.00
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Homeworks	1	14.00	14.00
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Contribution of Final Exam to Success Grade	60.00	0.00	0.00
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Field Studies	0	0.00	0.00
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Measurements and Evaluation Techniques Used in the It is done with written exams (Midterm, Homework and	20.00	20.00	20.00
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Others	0	0.00	0.00
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Final Exams	1	20.00	20.00
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Total Work Load			180.00
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Total work load/ 30 hr			6.00
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ECTS Credit of the Course			6.00
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25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
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	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	2	3	2	5	3	3	4	4	3	2	3	3	4	4	4	4
ÖK2	3	3	4	4	5	3	4	4	3	3	3	4	3	4	4	4
ÖK3	2	3	3	4	3	3	4	4	5	5	5	4	4	3	4	4
ÖK4	5	4	5	5	3	3	2	4	3	3	3	3	3	2	4	3

ÖK5	2	2	4	4	4	4	5	5	4	4	4	4	4	2	3	3
ÖK6	2	3	1	1	3	3	4	4	3	3	1	3	3	3	3	3
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low		2 low			3 Medium			4 High			5 Very High				