NATURAL FIBERS

1	Course Title:	NATURAL FIBERS	
2	Course Code:	TEK1007	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	1	
6	Semester:	1	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	1.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:		
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. ESRA KARACA	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	U. Ü. Mühendislik Fakültesi Tekstil Mühendisliği Bölümü Görükle 16059 BURSA ekaraca@uludag.edu.tr 0 224 294 20 52	
17	Website:		
18	Objective of the Course:	1.To train students in understanding of general properties of textiles fibers. 2.To train the students in understanding the relation between polymers and fibers. 3.To provide knowledge on structure and properties of natural textile polymers. 4.To provide knowledge on history, growth and properties of important natural fibers.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	To understand the relation between polymers and fibers.
		2	To compare important natural fibers and their properties.
		3	To list the usage fields of natural fibers.
		4	To analyse the natural textile fibers.
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21	Course Content:		
	Course Content:		

Week	Theoretical	Practice
1	Definition and classification of textile fibers	To examine the examples of natural and chemical fibers
2	Physical and chemical properties of textile fibers	To examine the examples of natural and chemical fibers
3	General polymer knowledge	To calculate polymerization degree, molecular weight of polymers and count of fibers
4	Structure and properties of cellulose	To make microscopically analysis and burn tests of cotton, flax, wool and silk fibers
5	History, growth and classification of cotton fibers	To demonstrate cotton plant and different type cotton fibers
6	Physical/chemical properties and usage fields of cotton fibers	To demonstrate cotton plant and different type cotton fibers
7	History, growth and classification of flax fibers	To demonstrate different type flax fibers
8	Physical/chemical properties and usage fields of flax fibers	To demonstrate different type flax fibers
9	Midterm exam + Repeating of courses	
10	Structure and properties of protein	To make chemical analysis of cotton, flax, wool and silk fibers
11	History, growth and classification of wool fibers	To demonstrate different type wool fibers
12	Physical/chemical properties and usage fields of wool fibers	To demonstrate different type wool fibers
13	History, growth and classification of silk fibers	To demonstrate different type cocoon and silk fibers
14	Physical/chemical properties and usage fields	To demonstrate different type cocoon and silk fibers

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	14	1.00	14.00
Self study and preperation	10	3.00	30.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	8.00	8.00
Others	0	0.00	0.00
Final Exams	1	10.00	10.00
Total Work Load			90.00
Total work load/ 30 hr			3.00
ECTS Credit of the Course			3.00

2.W.E. Morton & J.W.S. Hearle, “Physical Properties of Textile Fibres”, The Textile Institute, London, 1962.

3.J.G. Cook, “Handbook of Textile Fibers”, Merrow Publishing Co. Ltd. England, 1959.

4.M. Lewin, “Fiber Chemistry”, Marcel Dekker Inc., New York, 1985.

5.H. Dayioglu, H. Karakas, “Elyaf Bilgisi”, ITU, 2007.

TERM LEARNING ACTIVITIES	**NUMBE**	**WEIGHT**
Midterm Exam	1	40.00
Quiz	0	0.00
Home work-project	0	0.00
Final Exam	1	60.00
Total	2	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		

24	**ECTS / WORK LOAD TABLE**

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	**PQ2**	**PQ3**	**PQ4**	**PQ5**	**PQ6**	**PQ7**	**PQ8**	**PQ9**	**PQ10**	**PQ11**	**PQ12**	**PQ13**	**PQ14**	**PQ15**	**PQ16**
ÖK1	4	0	3	0	0	0	0	0	0	3	0	0	0	2	1	5
ÖK2	0	0	4	0	0	0	0	0	0	3	0	0	0	2	1	5
ÖK3	3	0	3	0	0	0	0	0	0	0	0	0	0	3	0	5
ÖK4	3	0	0	0	4	0	4	0	0	0	0	0	0	0	0	5
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	**1 very low**		**2 low**			**3 Medium**			**4 High**			**5 Very High**				