	ME	EASUF	RETHEORY						
1	Course Title:	MEASU	RE THEORY						
2	Course Code:	MAT405	0						
3	Type of Course:	Optional							
4	Level of Course:	First Cyc	le						
5	Year of Study:	4							
6	Semester:	8							
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 f	ace						
14	Course Coordinator:	Prof. Dr.	OSMAN BİZİM						
15	Course Lecturers:	Prof. Dr.	Osman Bizim						
16	Contact information of the Course Coordinator:	Uludağ Ü Matemat obizim@	Üniversitesi Fen-Edebiyat Fakültesi ik Bölümü, Görükle Bursa-TÜRKİYE 0 224 294 17 50 / uludag.edu.tr						
17	Website:								
18	Objective of the Course:	The aim integrabl the conc	and goals of the course are extend the space of Riemann e functions and introduce the measure concept that include epts the length in R and the area in R2, the volume in R3.						
19	Contribution of the Course to Professional Development:								
20	Learning Outcomes:								
		1	Learns measure, measure function, probability measure, measure space.						
		2	Learns outer measure and the Lebesque outer measure.						
		3	Learns measurable sets and the measurable functions and their properties.						
		4	Learns integrals of simple functions.						
		5	Learns the monotone convergence theorem and its properties.						
		6							
		7							
		8							
		9							
	-	10							
21	Course Content:								
		Co	urse Content:						
Week	Theoretical		Practice						
1	Rings of sets, algebras and algebras Boole algebras	s of sets,							
2	Measure, measure space, measurat and its examples, measure function.	ole space							

3	Outer r	esque	outer	meası	ure														
4	The me nonme	s, Leb	besque	meas	sure,														
5	The me propert	ctions	and th	eir															
6	The Rie simple	al and	its pro	perties	s and														
7	The Le and the	besgue ir prope	integr erties.	al of s	simple	functio	ons												
8	The Le functio	besgue is and t	integr their p	al of r ropert	nonneg ies	ative													
9	The mo applica	ergen	ce theo	orem a	nd its														
10	The Le functio	besgue is and t	integr their p	als of ropert	any m ies	easur	able												
11	The Le applica	besgue tions	conve	ergeno	e theo	rem a	nd its												
12	The Le the Rie	besgue mann ii	integra	al and	d comp	aratio	n with												
13	Uniforn theorer	า integr า	al and	the V	itali co	nverge	ence												
14	The co its prop	nverger erties	nce the	eorem	in me	asure	and												
22	22 Textbooks, References and/or Other									[1] Real Analysis, H.L.Roydan , I.B. Fitzpatrick									
Activit	Activites								Numb	ber	<u>eory, rx.</u>	Duration (hour)			Total Work Load (hour)				
	Fheoretical									14				3.00					
Theore	tical							1	14			3.00			42.00				
Theore TFRM I Practic	tical FARNIN als/Labs	G ACTI	VITIES	3		N	UMBE		14 E <b>IGHT</b> )			3.00 0.00			4 <u>2.00</u> 0.00				
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ÖK5	5	5	5	5	5	5	5	5	5	5	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contrib 1 very low ution Level:			2 low			3 Medium			4 High			5 Very High				