ANALYTIC NUMBER THEROY									
1	Course Title:	ANALYTIC NUMBER THEROY							
2	Course Code:	MAT3052							
3	Type of Course:	Optional							
4	Level of Course:	First Cycle							
5	Year of Study:	3							
6	Semester:	6							
7	ECTS Credits Allocated:	5.00							
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. İSMAİL NACİ CANGÜL							
15	Course Lecturers:	Doç. Dr. Ahmet TEKCAN, Yrd. Doç. Dr. Musa DEMİRCİ, Yrd. Doç. Dr. Hacer ÖZDEN							
16	Contact information of the Course Coordinator:	cangul@uludag.edu.tr, 0224 2941756, Fen-Edebiyat Fakültesi, Matematik Bölümü, 16059, Görükle / Bursa							
17	Website:	http://www.ismailnacicangul.com/							
18	Objective of the Course:	To obtain results concerning the distribution of prime numbers and to make an introduction to analytic numbers							
19	Contribution of the Course to Professional Development:								
20	Learning Outcomes:								
		1	Can define prime numbers and state the known results on their distribution						
		2	Can establish relations between aritmetic functions						
		3	Can apply the theorems on the distribution of prime numbers						
		4							
		5							
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		9							
		10							
21	Course Content:								
		Co	urse Content:						
	Theoretical		Practice						
1	Prime number theorem								
2	Results of the prime number theorer								
3	The analytic proof of prime number t	heorem							
4	Fundamental theorem of arithmetic								

5	Arithmetic functions															
	Dirichlet Product of Arithmetic functions															
7	Mobious inversion Formula															
8	Applications of Mobious inversion Formula															
9	Relations between aritmetic functions															
10	Primitive roots															
11	Quadratic reciprocity law															
12	Legendre symbol															
13	Quadratic congruences															
14	Riemann-Zeta function															
						1. Tom M. Apostol, Introduction to Analytic Number Theory, Springer, 2000										
						2.	Kiran S	Sridhar	a Kedla	aya, Ana	alytic N	lumber	Theory,	(Ders		
							noi 3.	tları) M Paul T	1IT, 20 . Bater	06 nan an	d Harol	d G. D	iamond	, Analyti	С	
								Nu	mber	Theory	an Intr	oductor	y Cou	rse, wo	rld Scien	tific,
								20	09							
23	Assesm	ent														
TERM L	EARNING	G ACTI	VITIES	;			UMBE	EWE	IGHT							
Activite	es					IR	2	1	Number			Dura	Duration (hour) Tota			Vork
													Load			
Hamay		<u> </u>				- 10		- 150	00							
Theoret	werk-project 2					50	50,00			3.00			42.00			
	cals/Labs							0						0.00		
	study and preperation 3							100400						56.00		
Homew	works							2	2			20.00			40.00	
Projects	pjects											0.00			0.00	
Field St	Studies								0			0.00			0.00	
Midterm	m exams							10	0			0.00			0.00	
Others	ſS							C	0			0.00			0.00	
	ERTS / WORK LOAD TABLE										15.00			15.00		
Total W	Work Load													153.00		
	work load/ 30 hr													5.10		
ECTS C	Credit of the Course													5.00		
25			CON	TRIE	UTIO	N O						S TO I	PROC	GRAM	ME	
	QUALIFICATIONS PQ1 PQ2 PQ3 PQ4 PQ5 PQ6 PQ7 PQ8 PQ9 PQ1 PQ11 PQ12 PQ1 PQ14 PQ15 PQ1									PQ16						
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ÖK1	5	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
ÖK2	0	4	0	0	5	0	0	3	0	0	0	0	0	0	0	0
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ÖK3	0	4	0	0	5	0	Ŭ	5	ľ	Ŭ	U	Ŭ	ľ	ľ	Ŭ	Ŭ

Contrib ution	1 very low	2 low	3 Medium	4 High	5 Very High
Level:					