	PARTIAL DI	FFERE	ENTIAL EQUATIONS II						
1	Course Title:	PARTIA	_ DIFFERENTIAL EQUATIONS II						
2	Course Code:	MAT541	2						
3	Type of Course:	Optional							
4	Level of Course:	Third Cy	cle						
5	Year of Study:	1							
6	Semester:	2							
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. SEZAYİ HIZLIYEL							
15	Course Lecturers:	Doç. Dr. Emrullah Yaşar, Yrd. Doç. Dr. Setenay Doğan							
16	Contact information of the Course Coordinator:	hizliyel@uludag.edu.tr Tel:(0224)2941765 Uludağ Ünv. Fen Ed. Fakültesi Matematik Bölümü Görükle Yerleşkesi 16059 Bursa-Türkiye							
17	Website:								
18	Objective of the Course:	To provide the necessary infrastructure to do research in high level in partial differential equations							
19	Contribution of the Course to Professional Development:	Gaining analytical thinking skills and providing the necessary background in applied mathematics							
20	Learning Outcomes:								
		1	Knows Laplace, heat and wave equations and the boundary value, initial value, initial-boundary value problems defined for these equations.						
		2	Knows the method of spherical means, Hadamard Descend method and Duhamel Principle						
		3	knows existence and uniqueness theorems						
		4							
		5							
		6							
		7							
		8							
		9							
		10							
21	21 Course Content:								
	Course Content:								
Week	Theoretical		Practice						
1	The solution of Laplace's equation, didentities	Green's							
2	Some properties of harmonic function	ons, the							

3	Туре	es of	bound	dary-v	alue p	oroblen	าร.										
4	Solution of interior Dirichlet problem. Green's function.					5											
5	the s Neur	he solution of interior Neumann problem. Neumann function.															
6	Poiss	Poisson's integral formula and the results.															
7	Initia	nitial value problem for the wave equation.															
8	the n	nethe	od of	spher	ical n	neans.											
9	Hada	Hadamard Descend method.															
10	Duhamel Principle.																
11	Initia	l valu	ue pro	blem	for he	at equ	ation.										
12	Initia equa	I-bou ation.	undary	y value	e prob	olem fo	r heat										
13	Maxi	imun	n and	minim	um pi	rinciple	-										
14	Exist	tence	e and	unique	eness	theore	ems.										
22	Textbooks, References and/or Other Materials:						1. De 2. Pa	<ol> <li>M. Çağlıyan, Okay Çelebi, Kısmi Diferensiyel Denklemler, Vipaş, 2002.</li> <li>İbrahim Ethem Anar, Kısmi diferensiyel denklemler, Palme Yayıncılık, 2005.</li> </ol>									
23	Asse	esme	ent						-								
TERM L	EARN	NING	ACTI	VITIES			N	UMBE	WE	EIGHT							
Activites				1	Number			Duration (hour)			Total Work Load (hour)						
Home v	Kerk-I	proje	ect				0		00	14			3.00			42.00	
Practica	als/La	abs					<b>_</b>			0			0.00	0.00			
Self study and preperation						10	тор.00 14			7.00	7.00		98.00				
Homeworks							4			5.00			20.00				
Projects								100.00			0.00			0.00			
Field St	Field Studies							(	0			0.00			0.00		
Midtern	idterm exams							10	0			0.00			0.00		
Others									(	0			0.00			0.00	
Final E								1			20.00			20.00			
Total W	otal Work Load													180.00			
Total w	otal work load/ 30 hr													6.00			
ECTS (	ECTS Credit of the Course												6.00				
25	25 CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS																
	F	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16
ÖK1	C	)	0	3	0	4	0	0	0	4	4	0	0	0	0	0	0
ÖK2	C	)	0	3	0	3	0	0	0	5	4	0	0	0	0	0	0
ÖK3	C	)	0	3	0	4	0	0	0	4	4	0	0	0	0	0	0

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