P-ADIC ANALYSIS II

1	Course Title:	P-ADIC ANALYSIS II
2	Course Code:	MAT6118
3	Type of Course:	Optional
4	Level of Course:	Third Cycle
5	Year of Study:	2
6	Semester:	4
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:	
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Doç. Dr. HACER ÖZDEN AYNA
15	Course Lecturers:	
16	Contact information of the Course Coordinator:	hozden@uludag.edu.tr 02242941664
17	Website:	
18	Objective of the Course:	The aim of this course is to teach former notions intensively and in detail and to make them differentiate between results on different structures
19	Contribution of the Course to Professional Development:	Can establish correspondence between mathematical concepts and can think analytically
20	Learning Outcomes:	

	1	Knows the properties of p-adic analysis in details
	2	Knows the properties of p-adic zeta functions, L-functions and gamma functions
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21	Course Content:	

Course Content:	

Week	Theoretical	Practice
1	p-adic zeta functions L-functions and gamma functions	
2	p-adic Dirichlet L functions	
3	Leopoldt's formula	
4	p-adic gamma function	
5	Gauss and Jacobi Sums	

6	Fermat Curves	
7	Cohomology	
8	p-adic formula for Gauss Sums	
9	Stickleberger's theorem	
10	Regulators and L-functions	
11	Leopoldt's p-adic regulator	
12	Gross's p-adic regulator	
13	The Shnirelman integral and p-adic Stieltjes transform	
14	p-adic spectral theorem	
22	Textbooks, References and/or Other Materials:	A Course in p-adic Analysis, Robert, Alain M., Springer.
23	Assesment	

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	1	50.00
Quiz	0	0.00
Home work-project	0	0.00
Final Exam	1	50.00
Total	2	100.00
Contribution of Term (Year) Learning Activities to		50.00

Activites	Number	Duration (hour)	Total Work Load (hour)
Total	100.00		
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	14	6.00	84.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	27.00	27.00
Others	0	0.00	0.00
Final Exams	1	27.00	27.00
Total Work Load			207.00
Total work load/ 30 hr			6.00
ECTS Credit of the Course			6.00

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	0	3	3	0	2	5	4	0	3	0	0	0	0	0	0	0
ÖK2	0	3	3	0	2	5	4	0	3	0	0	0	0	0	0	0

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