INFINITE SERIES

1	Course Title:	INFINITE SERIES	
2	Course Code:	MAT4088	
3	Type of Course:	Optional	
4	Level of Course:	First Cycle	
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 face	
14	Course Coordinator:	Prof. Dr. SİBEL YALÇIN TOKGÖZ	
15	Course Lecturers:	Prof.Dr.İsmail Naci CANGÜL, Doç. Dr. Hacer ÖZDEN AYNA	
16	Contact information of the Course Coordinator:	syalcin@uludag.edu.tr, 0(224)2941758, B.U.Ü. Fen Edebiyat Fakültesi Matematik Bölümü, 16059 BURSA	
17	Website:		
18	Objective of the Course:	To characterize infinite series and infinite products. To determine the absolute and conditional convergence of the series. To teach pointwise and uniform convergence concepts. To apply Abel's and Dirichlet's Criteria. To calculate series numerically.	
19	Contribution of the Course to Professional Development:	Determines the convergence of series and calculates the sum of some convergent series.	
20	Learning Outcomes:		
		1	He/she determines the character of the infinite series
		2	He/she determines the absolute and conditional convergence of the series
		3	He/she determines pointwise and uniform convergence
		4	He/she applies Abel's and Dirichlet's Criteria
		5	He/she calculates series numerically.
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21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	Infinite Series	
2	Infinite Product	
3	Series of Arbitrary Terms	
4	Absolutely Convergent Series	

5	Conditionally Convergent Series	
6	Pointwise Convergence	
7	Uniform Convergence	
8	Sequences of Complex Terms	
9	Cauchy Sequences	
10	Series of Complex Terms	
11	Abel's Criteria	
12	Dirichlet's Criteria	
13	Sequences of Variable Terms	
14	Numerical Calculation of Series	

22	Textbooks, References and/or Other Materials:	1)Musayev, Binali; "Fonksiyonel Analiz", Balcı Yayınları, 2000, İstanbul, 2)Maddox,I.J.; "Elements of Functional Analysis", Cambridge Un.Press,1970,London, 3)Theory and Applications of Infinite Series, K. Knopp, 1990. 4.Şuhubi, Erdoğan; "Fonksiyonel Analiz", İTÜ Vakfı, 2001, İstanbul.
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**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		The system of relative evaluation is applied.

24 ECTS / WORK LOAD TABLE

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	14	3.00	42.00
Homeworks	14	4.00	56.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	14.00	14.00
Others	0	0.00	0.00
Final Exams	1	26.00	26.00
Total Work Load			194.00
Total work load/ 30 hr			6.00
ECTS Credit of the Course			6.00

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	5	5	0	4	4	0	3	5	5	5	0	0	0	0	0	0
ÖK2	5	5	0	4	4	0	3	5	5	5	0	0	0	0	0	0
ÖK3	5	5	0	4	4	0	3	5	5	5	0	0	0	0	0	0
ÖK4	5	5	0	4	4	0	3	5	5	5	0	0	0	0	0	0
ÖK5	5	5	0	4	4	0	3	5	5	5	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**				