ANALYSIS II

1	Course Title:	ANALYSIS II	
2	Course Code:	MAT1002	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	1	
6	Semester:	2	
7	ECTS Credits Allocated:	8.00	
8	Theoretical (hour/week):	4.00	
9	Practice (hour/week):	2.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. İSMAİL NACİ CANGÜL	
15	Course Lecturers:	Prof. Dr. Metin ÖZTÜRK, Prof. Dr. Sibel YALÇIN TOKGÖZ, Prof. Dr. Osman BİZİM, 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:		
18	Objective of the Course:	To give the notion of integral, applications of integral together with sequences and series including power series	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Knows the notion of integral
		2	Knows integral applications
		3	Can obtain power series expansion of a given function
		4	Knows the notions of sequence and series and makes their applications
		5	Can transfer between cartesian, polar and parametric coordinate systems and can differentiate the differences
		6	Knows the origins and history of the main notions
		7	Knows the corresponding English meanings of the main notions
		8	
		9	
		10	
21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	Definition of indefinite integral, basic notions	Applications of the definition
2	Basic integration rules	Applications of basic integration rules

3	Change of variables, partial integration	Examples of change of variables and partial integration
4	Seperating into simple fractions, trigonometric variable changes	Examples of seperating into simple fractions and trigonometric variable changes
5	Binomial integrals, fundamental theorems of integral	Examples of Binomial integrals, applications of the fundamental theorems of integral
6	Definition of definite integral, basic notions	Applications of basic notions
7	Upper and lower sums, Riemann integral	Calculation of upper and lower sums for several functions, finding Riemann integral
8	Arc length and area	Examples of arc length and area calculations
9	Midterm exam and general review	Mixed examples
10	Area and volume of revolutionary surfaces	Examples of calculating area and volume of revolutionary surfaces
11	Sequences, properties of sequences, subsequences, limit of a sequence	Examples of sequences, finding subsequences, calculating limits
12	Series, special series	Calculations with series, examples of arithmetic and geometric series
13	Convergency tests	Examples of convergency tests
14	Power series, expansion of a function into a power series, approximation	Examples of power series, examples of expansion of a function into a power series, use of this expansion in approxiamation

22	Textbooks, References and/or Other Materials:	Calculus, İsmail Naci CANGÜL (Editör), Nobel Yayınları, 2012 Genel Matematik II, Osman BİZİM, Betül GEZER, Ahmet TEKCAN, Dora Yayınları, 2011
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		

24	**ECTS / WORK LOAD TABLE**

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	4.00	56.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	14	7.00	98.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	20.00	20.00
Others	0	0.00	0.00
Final Exams	1	34.00	34.00
Total Work Load			236.00
Total work load/ 30 hr			7.87
ECTS Credit of the Course			8.00

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	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	5	0	0	5	0	0	5	4	0	0	0	0	0	0	0	0
ÖK3	5	0	0	5	0	0	5	4	0	0	0	0	0	0	0	0
ÖK4	2	4	0	0	5	0	2	5	0	0	0	0	0	0	0	0
ÖK5	5	3	0	0	5	0	2	4	0	3	0	0	0	0	0	0
ÖK6	0	0	0	0	5	0	0	2	0	3	0	0	0	0	0	0
ÖK7	0	0	0	0	0	5	0	0	0	3	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**