	VITAMINS A	AND \	/ITAMINS ANALYSIS						
1	Course Title:	VITAMIN	NS AND VITAMINS ANALYSIS						
2	Course Code:	VBK 60°	16						
3	Type of Course:	Optional	ı						
4	Level of Course:	Third Cy	rcle						
5	Year of Study:	1							
6	Semester:	2							
7	ECTS Credits Allocated:	5.00							
8	Theoretical (hour/week):	1.00							
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:	Yrd.Doç	.Dr. Duygu UDUM KÜÇÜKŞEN						
15	Course Lecturers:								
16	Contact information of the Course Coordinator:	0535 95	@uludag.edu.tr 53078 eriner Fakültesi Biyokimya ABD						
17	Website:								
18	Objective of the Course:	which ar	hension of chemical structure and functions of vitamins re essential to living organims as well as their excess intake ciencies, their tests and association with diseases.						
19	Contribution of the Course to Professional Development:								
20	Learning Outcomes:								
		1	Ability to comprehend chemical structure, functions and types of vitamins						
		2	Being able to explain relationship between vitamins and coenzymes.						
		3	Being able to comprehend the importance of vitamins in mechanism of metabolic processes						
		4	Ability to set up analysis conditions.						
		5	Ability to measure levels of various vitamins						
		6	Ability to make connections between excess intake and deficiencies of vitamins and disease and disorders						
		7	Ability to reach novel findings about vitamins						
		8	Ability to disseminate knowledge gained about vitamins						
		9							
		10							
21	Course Content:								
		Co	ourse Content:						
Week			Practice						
1	Vitamins and types		Introduction of laboratory environment						
2	Vitamin A, properties, metabolism, for and deficiencies	unctions	Introduction of analysis materials and use						

3	Vitamin D, properties, metabolism, fu and deficiencies	ınctions	Introduction of methods of spectrophotometric measurements, learning of spectrophotomer use.								
4	Relationship between vitamin A and metabolism	calcium	Introduction of methods of spectrophotometric vitamin measurements, learning of spectrophotomer use.								
5	Vitamin E, properties, metabolism, fu	ınctions	Vi	tamin A analysis.							
6	Properties of Vitamin K, its role in coagulation, and deficiency		Vitamin A analysis.								
7	Nicotinic acid, structure, properties, r metabolism, and deficiency	ole in	Evaluation of vitamin A analysis results								
8	Thiamine, riboflavine, properties, role metabolism and deficiencies	es in	Vitamin E analysis								
9	Pantothenic acid and folic acid, properoles in metabolism	erties,	Vi	tamin E analysis							
10	Pyridoxine and biotin, properties, role metabolism and deficiencies	es in	Е١	valuation of vitamin an	alysis results						
11	Structure of cobalamin, properties, ty functions	rpes, and	C	omparison of vitamin a	nalysis methods.						
12	Structure of Vitamin C, properties, fur and deficiency	nctions,	Vi	tamin C analysis.							
13	Vitamin-like compounds, properties, functions.		Vi	tamin C analysis.							
14	Importance of vitamins in veterinary rand application	medicine	Evaluation of Vitamin C analysis results								
00	Taythacks Deferences and/or Other		D:	a ab a miatru / dan artman	t course notes						
22	Textbooks, References and/or Other			ochemistry departmen		-					
Activit	ies			Number	Duration (hour)	Load (hour)					
Theore	tical		L: B:	ab ₄ Manual to Accompa aker Thomson Inc. Co	ⴄყ _{ეტ} ames B. Lawh anada 2005	dado¶yeecee					
Practic	als/Labs			14	2.00	28.00					
Self stu	dy and preperation			ınıcai Cnemistry, Third 199	5.00 Saunders, Ph	iladelphia, 70.00					
Homew	vorks				8.00	8.00					
Pr 2 3ect	Assesment			0	0.00	0.00					
Field S	tudies			0	0.00	0.00					
Midterr	n exams n Exam	0		80	0.00	0.00					
Others		10			5.00	15.00					
Final E	xarns work-project	1		do	15.00	15.00					
	work-project Vork Load	11	Ю	00		150.00					
Total w	vork load/ 30 hr			200		5.00					
	Credit of the Course	2	110	00.00		5.00					
•••••	ss Grade		ال								
Contrib	oution of Final Exam to Success Grade	Э	10	00.00							
Total		-		00.00							
	rement and Evaluation Techniques Us	sed in the									
24	ECTS / WORK LOAD TABLE										
25	CONTRIBUTION (OFIFAI	R۱	NING OUTCOMES	TO PROGRAM	MF					
25	CONTRIBUTION			LIFICATIONS	. o i kookan						

25		CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS Q1 PQ2 PQ3 PQ4 PQ5 PQ6 PQ7 PQ8 PQ9 PQ1 PQ11 PQ12 PQ1 PQ14 PQ15 PQ16														
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16
ÖK1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ÖK8	0	very		0 Lea r	ning 2 lov			o s F		0 Progra	4 am Qu 4 Hig	3 Ialifica	0 ations		0 y High	0
ÖK7	0	0	0	0	4	0	0	0	3	0	0	0	0	0	0	0
ÖK6	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
ÖK4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
ÖK3	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0