PROTEIN AND ENZYME BIOCHEMISTRY Course Title: PROTEIN AND ENZYME BIOCHEMISTRY 1 Course Code: MBG5415 2 Type of Course: Optional 3 Level of Course: Second Cycle 4 Year of Study: 5 1 Semester: 1 6 ECTS Credits Allocated: 6.00 7 Theoretical (hour/week): 3.00 8 9 Practice (hour/week): 0.00 10 Laboratory (hour/week): 0 None 11 Prerequisites: Turkish 12 Language: Mode of Delivery: Face to face 13 Prof. Dr. SEZAİ TÜRKEL Course Coordinator: 14 15 **Course Lecturers:** Yok Contact information of the Course Prof.Dr. Sezai Türkel 16 Coordinator: sturkel@uludag.edu.tr 17 Website: Objective of the Course: To teach structure and functions of amino acids and proteins, to 18 teach biochemical principles of enzyme reactions and control mechanisms, to teach industrial applications of enzymes Contribution of the Course to 19 Professional Development: 20 Learning Outcomes: 1 Knows structure and functions of amino acids and proteins 2 Knows protein isolation and analysis methods 3 Knows biological functions of amino acids and proteins 4 Knows control mechanisms of enzyme reactions 5 Knows enzyme kinetics 6 Knows industrial applications of enzymes 7 8 9 10 Course Content: 21 **Course Content:** Practice Week Theoretical 1 Introduction, chemical features of amino acids and proteins Classifications and biochemical features of 2 amino acids, acid-base chemistry and titration of amino acids Modifications of proteins and amino acids, 3 amino acid derivatives and biological significance

4	Prot sequ	ein s uenci	tructu ing	res, pi	rotein	folding	i, pept	ide											
5	Pep [.] ribos	tide s soma	synthe al prote	esis by ein syr	chem nthesi	nical m s	ethods	s, non	-										
6	Half and	-lives ubiq	s of pr uitin p	oteins roteos	, N-er	nd rule, system	prote	ases											
7	Enzy enzy	yme ymes	classi	ficatio	ns, ge	eneral f	eature	es of											
8	Prin cata	ciple: Iyse	s of ei	nzyme	kinet	ics, en	zymat	ic											
9	Sing enzy	gle ar ymes	nd mu and r	lti-sub eactio	strate	enzym chanisr	nes, al ms	loster	ic										
10	Con enzy	trol n yme i	necha inhibit	nisms ion	of en	zymati	c reac	tions,											
11	Stru co-fa	cture actor	and f s in er	iunctio nzyme	ns of react	co-enz tions	ymes	and											
12	Mult path	ti-laye ways	ered ro s such	egulat as gl	ion of ycolyt	bioche ic path	emical ways												
13	Proc	ductio	on and	d purifi	catior	n of enz	zymes												
14	Industrial applications of enzymes, enzyme immobilization																		
22	Text Mate	tbook erials	ks, Re S:	ferenc	es an	d/or Ot	ther		1- Be Pa	1- Lehninger, Biyokimyanın ilkeleri Beşinci baskıdan çeviri Palme yayıncılık, 2013.									
Activites										Numb	er	"	Duration (hour)			Total Work Load (hour)			
Th 233 re	The reinsteament											14				42.00			
Practica	Practicals/Labs										0				0.00				
Selfterh	f¢ĕ&	nd pr	repera	ation			1		20	20.00				4.00			56.00		
Homeworks										1				17.00			17.00		
Figher	Nork-	·proie	ect				1		20	20.00				0.00			0.00		
Field S	tudie	S							C	0				0.00			0.00		
Nidtern	Midterm exams											100.00				30.00			
Others									0	0						0.00			
Sinades	SinatessaGnade											1				35.00			
Total W	Total Work Load															180.00			
T 8ŧal w	oad/	30 hr						10	0.00						6.00				
ECTS (ECTS Credit of the Course											6.00							
Course)	int an	u 210	liaalio		miquo		a in a											
24	EC.	TS /	WO	RK L	OAD	TAB	LE												
25				CON	TRIE	UTIO	N O	F LE	ARN	ING	ουτα	OME	S ТО I	PROG	GRAM	ME			
	QUALIFICATIONS																		
		PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1	PQ11	PQ12	PQ1	PQ14	PQ15	PQ16		
ÖK1		1	4	2	4	2	1	4	4	4	0 4	0	0	3 0	0	0	0		
ÖK2		2	1	4	4	2	2	4	4	4	4	0	0	0	0	0	0		
ÖV		4					_												
OK3		4	3	5	4	5	5	4	3	3	3	U	0	0	0	U	U		

ÖK4	4	4	3	5	4	1	4	3	3	3	0	0	0	0	0	0
ÖK5	2	1	3	5	3	2	3	3	4	4	0	0	0	0	0	0
ÖK6	4	5	5	4	5	5	4	4	3	5	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contrib ution Level:	1 very low			2 low			3 Medium			4 High			5 Very High			