REGULATION BY ENZYMES

1	Course Title:	REGULATION BY ENZYMES	
2	Course Code:	BIO6404	
3	Type of Course:	Optional	
4	Level of Course:	Third Cycle	
5	Year of Study:	1	
6	Semester:	2	
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:	Doç. Dr. EGEMEN DERE	
15	Course Lecturers:	Prof. Dr. Ferda ARI	
16	Contact information of the Course Coordinator:	Doç. Dr. Egemen DERE Bursa Uludağ Üniversitesi Fen Ed. Fak Biyoloji Bl. Moleküler Biyoloji Anabilim Dalı Tel: 0 224 41792 edere@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	The aim of the course is to comprehend structures of enzyme and regulations. To explain the importance of enzymes in metabolism.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	He/she can grasp in relation to Enzyme Substrate
		2	He/she can understand to enzyme inhibitory and inhibitions
		3	He/she can understand to enzyme activators and activations
		4	He/she can grasp the roles of high energy compounds in enzyme regulation
		5	He/she can grasp to structure and function of allosteric enzymes
		6	He/she can understand the importance of enzyme kinetic in enzymatic regulation
		7	He/she can learn to regulation of some metabolic pathways
		8	
		9	
		10	
21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	Enzyme Substrate Complex formation	
2	Investigation of enzyme activity center	

3	Enzyme inhibitory and inhibitions	
4	Enzyme activators and activations	
5	The roles of high energy compounds in enzyme regulation	
6	Allosteric enzymes	
7	Exam and answer of examination questions, general discussion	
8	Some important allosteric enzymes	
9	Enzyme kinetics	
10	Feedback mechanism in enzymatic regulation	
11	Regulation of metabolism	
12	Control of glycolisis metabolism	
13	Control of glycogen metabolism	
14	Control of protein metabolism	

22	Textbooks, References and/or Other Materials:	Allosteric Regulatory Enzymes, Thomas Traut Enzyme Biocatalysis, Andres Biochemistry, Zubay
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	25.00
Final Exam	1	60.00
Total	4	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Total		100.00

Measurement and Evaluation Techniques Used in the Course

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	13	6.00	78.00
Homeworks	2	14.00	28.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	3.00	3.00
Others	5	6.00	30.00
Final Exams	1	3.00	3.00
Total Work Load			184.00
Total work load/ 30 hr			6.13
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	3	3	4	2	4	3	3	4	3	3	3	0	0	0	0	0
ÖK2	2	3	4	2	4	3	3	3	3	3	2	0	0	0	0	0
ÖK3	2	3	4	2	4	3	3	3	3	3	3	0	0	0	0	0
ÖK4	4	3	4	2	4	3	4	3	4	3	2	0	0	0	0	0

ÖK5	4	4	4	2	4	4	4	4	4	5	3	0	0	0	0	0
ÖK6	5	4	4	2	4	4	4	4	4	5	3	0	0	0	0	0
ÖK7	2	3	4	2	4	3	3	3	3	3	3	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**