AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Enzymatic Reactions and Enzyme Kinetics								
Course Code	VBY603		Couse Level		Third Cycle (Doctorate Degree)				
ECTS Credit	4	Workload	100 *(Hours)*	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	to acquire the ability to use the information and to inform about Structure of enzymes, general properties, classifications, principles of enzymatic reactions, action mechanism of cofactors, regulation of enzyme activities, izoenzyms, inhibition of enzyme.								
Course Content	Sturucture of enzymes, general properties, classifications, principles of enzymatic reactions, action mechanism of cofactors, regulation of enzyme activities, izoenzyms, inhibition of enzyme								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion								
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading	
1	Lippincott's Illustrated Reviews Biyokimya Seri Editörleri Richard A HARVEY, Pamela C. CHAMPE Biyokimya Çeviri Editörü Doç.Dr. Engin ULUKAYA, Nobel Tıp Kitabevleri 2007
2	Lehninger Biyokimyanın İlkeleri. David L. Nelson Michael M. COX. Çeviri Editörü Prof.Dr. Nedret KILIÇ, Palme Yayıncılık
3	Harper Biyokimya Robert K. Murray, Daryl K. Granner, Peter A. Mayes, Victor W. Rodwell. Çeviri Editörleri: Nurten DİKMEN, Tuncay ÖZGÜNEN. Nobel Tıp Kitabevleri

Week	Weekly Detailed Course Contents	
1	Theoretical	Enzymes and their place
2	Theoretical	Chemical structures of enzymes
3	Theoretical	Enzymatic reactions and activation energy
4	Theoretical	Enzymatic catalysis
6	Theoretical	Classifications of enzymes
7	Theoretical	Using of enzymes in medicine and industry
8	Theoretical	Enzyme kinetic
9	Theoretical	Factors affecting the speed of enzymatic reaction
10	Intermediate Exam	Midterm exam
11	Theoretical	Enzyme inhibition
12	Theoretical	Allosteric enzymes
13	Theoretical	Isoenzymes
14	Theoretical	Coenzymes
15	Theoretical	Discussion
16	Final Exam	Final Exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	15	2	2	60
Assignment	2	6	0.5	13
Midterm Examination	1	11	1	12

Final Examination	1	14	1	15
			Total Workload (Hours)	100
			[Total Workload (Hours) / 25*] = **ECTS**	4
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	to learn structure and general properties of enzymes
2	to learn classifications of enzymes
3	to learn enzymatic reaction
4	to understand control of enzyme activity
5	to learn isoenzymes
6	to learn enzyme inhibition
7	to acquire the ability to use the information

Programme Outcomes *(Biochemistry (Veterinary Medicine) Doctorate)*	
1	Has a deep and broad knowledge about the field and the interdisciplinary area related with the field through the achievements gained in undergraduate and professional levels.
2	Has the knowledge to create original ideas, analyze them and develop definition/product/diagnosis methods by using the knowledge gained in undergraduate and/or professional experience, when needed.
3	Is knowledgeable about theories and practices in methodological and scientific research methods to run an independent research.
4	Excels in the laboratory, clinical and similar fields by using the theoretical and practical information gained in former education, and has the ability to create solutions in related fields.
5	Designs and develops scientific methodology for the advanced level/newly defined/emerged problems about the field.
6	Excels in the known scientific methods in the field for the advanced level/ newly defined/emerged problems.
7	Designs unique researches and implements independently.
8	Analyzes, synthesizes and evaluates the new ideas in related fields by using critical thinking.
9	Plans, creates teams and carries out the interdisciplinary research projects in order to create solutions to the known/newly defined problems.
10	Joins to congresses, panels, symposiums, workshops, seminars, article discussions and problem solving sessions in different disciplines, and exchanges information with the other professionals to contribute to the solutions.
11	Broadens the borders of scientific information by publishing scientific articles in national and/or international peer-reviewed journals.
12	Creates new ideas and methods to contribute to the technological, social and cultural progress, or to help the development of information society by using the theoretical, practical, independent research, abilities responsibly.
13	Designs and implements social projects with the awareness of creating an information society.
14	Compiles and interprets any type of data (field observation, scientific knowledge etc.) in accordance with the aims.
15	Develops and uses strategies about related topics with the field.
16	Implements and defends institutional and practical information and abilities in accordance with the needs of the country and the world, and changes when necessary.
17	Follows up and uses all the updates about the field (scientific information, legislations etc.), and has the qualification to change them.
18	Adopts lifelong learning as a principle and acknowledges that the information gained through research is the most valuable gain.

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5	L6	L7
P1	4	4	4	4	4	4	
P4	4	4	4	4	4	4	
P5							4
P6							3
P8	5	5	5		5	5	
P12	3	3	3	3	3	3	
P16	4	4	3	4		4	
P17	4	4	4	4	4	3	
P18							3