AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Enzymology								
Course Code	TBY305		Couse Level	First Cycle (Bachelor's Degree)					
ECTS Credit	3	Workload	79 *(Hours)*	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	Giving general information about enzymes , making them aware of the latest developments on the production and purification of enzymes is to inform about methods to obtain enzymes with different properties								
Course Content	İntroduction of enzyme and historical uses of enzymes. Production and prufication of industrial enzymes								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Problem Solving								
Name of Lecturer(s)	Lec. Zehra Burcu BAKIR								

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	40
Assignment	1	20

Recommended or Required Reading	
1	Kulkarni, N.S. Deshpande, M.S.,2007 : General Enzymology, Global Media, IND
2	Telefoncu, A, 1997: Enzimoloji, Türkiye
3	Nelson, D.L., Cox, M.M., 2013: Lehninger Principles of Biochemistry, Palme Publishing
4	Engel P.C., 1996: Enzymology, Academic Press
5	Suckling C.J., Gibson C.L., Pitt A.R., 1998: Enzyme Chemistry Impact and Applications, Blackie Academic and Professional
6	Copeland R.A., 2000: Enzymes: A practical introduction to structure, mechanism and data analysis, WILEY-VCH

Week	Weekly Detailed Course Contents	
1	Theoretical	Biology of enzymes and historical uses of enzymes
2	Theoretical	The terms used in enzymology
3	Theoretical	The classification and nomenclature of enzymes
4	Theoretical	Control of enzyme activities
5	Theoretical	Enzyme kinetics
6	Theoretical	Enzyme sources: Microorganisms (Bacteria, fungi and yeast)
7	Theoretical	Enzyme technology, Enzyme production methods
8	Theoretical	Production of industrial enzymes by Recombinant DNA Technology
9	Intermediate Exam	Midterm exam
10	Theoretical	Enzyme isolation, purification and charaterization
11	Theoretical	Enzyme isolation, purification and charaterization
12	Theoretical	Enzyme immobilization
13	Theoretical	Enzymes in food industry
14	Theoretical	Enzymes obtained from extreme environmental
15	Final Exam	Final exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	3	2	70
Assignment	1	3	0	3
Midterm Examination	1	2	1	3

Final Examination	1	2	1	3
			Total Workload (Hours)	79
			[Total Workload (Hours) / 25*] = **ECTS**	3
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Learn the structure and classification of enzymes
2	Learns the functioning of enzymes in living systems
3	Learns the methods of determining enzyme activity
4	Learn the production, purification and characterization of enzymes
5	Learn industrial production methods of enzymes

Programme Outcomes *(Agricultural Biotechnology)*	
1	To be able to develop skills in identifying, modeling and solving problems in agricultural biotechnology
2	To be able to synthesize life and engineering sciences for the effective resource planning of agricultural biotechnology applications
3	To be able to interpret about living organisms structure, metabolic and physiological processes in order to propose biotechnological solutions to the agricultural problems
4	To be able to analyze genomic, metabolomic and proteomic information via bioinformatic tools.
5	To have the ability to analyze collected data and interpret the results.
6	To have the ability of individual working ability and to make independent decisions, to work in inter-disciplinary and interdisciplinary teamwork, to communicate by expressing their ideas orally and in writing, clearly and concisely
7	To have the awareness of professional liabilities and ethics
8	To be able to follow current national and international problems

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

	L1	L2	L3	L4	L5
P1	4	3	3	3	4
P2	4	3	4	3	4
P3	3	4	4	4	4
P4	4	4	3	5	5
P5	5	4	5	5	5
P6	4	5	5	5	5
P7	4	5	5	5	5
P8	5	5	5	5	5