



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Fundamentals of Enzymology							
Course Code		KİM555		Course Level		Second Cycle (Master's Degree)			
ECTS Credit	6	Workload	149 (Hours)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		The aim of this course is to give a broad account of enzymology. The ultimate goal of the course is to point out the crucial role that enzymes play in the metabolic processes of living organisms.							
Course Content		In this course behaviour, kinetics and applications of enzymes and enzyme systems in vitro and in cell are discussed.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Case Study, Individual Study					
Name of Lecturer(s)									

### Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	20
Final Examination	1	35
Assignment	3	45

### Recommended or Required Reading

1	Fundamentals of Enzymology, 1999, Nicholas C. Price, Lewis Stevens. Oxford University Pres, USA. ISBN 019850229X.
2	Fundamentals of enzymology unpublished Lecture notes (in Turkish). Prof. Dr. A. Alev Karagözler.

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to enzymology.
2	Theoretical	The purification of enzymes.
3	Theoretical	The structure of enzymes.
4	Theoretical	Introduction to enzyme kinetics.
5	Theoretical	Mechanism of enzyme action.
6	Theoretical	Control of enzyme activity.
7	Theoretical	Enzymes in organized systems.
8	Theoretical	Enzymes in organized systems.
9	Theoretical	Enzymes in the cell.
10	Intermediate Exam	Midterm
11	Theoretical	Enzymes in the cell.
12	Theoretical	Enzyme turnover and its significance.
13	Theoretical	Clinical aspects of enzymology.
14	Theoretical	Enzyme technology.
15	Theoretical	Immobilized enzymes.
16	Final Exam	Final exam

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	3	42
Assignment	5	0	5	25
Midterm Examination	1	48	2	50
Final Examination	1	30	2	32
Total Workload (Hours)				149
[Total Workload (Hours) / 25*] = ECTS				6

\*25 hour workload is accepted as 1 ECTS



**Learning Outcomes**

1	to be able to define the methods for enzyme purification and identification.
2	to be able to recognize the enzyme kinetics.
3	to be able to analyse the mechanisms of enzyme behaviour.
4	to be able to identify the basic principles of enzyme technology.
5	to be able to a knowledge about the clinical applications of enzymes

**Programme Outcomes (Chemistry Master)**

1	To be able to gain proficiency in depths and analysis by statistical methods in the same or a related area depending on the undergraduate competence,.
2	To be able to use the knowledge of his/her field and the skills to solve problems and/or applications in interdisciplinary research.
3	To be able to adopt to evaluate the information and skill his/her field by critical approach.
4	To be able to evaluate the effect of important persons, case and fact on his/her field applications.
5	To be able to gain the ability to discuss write and orally present to a group of literate listener.
6	To be able to communicate orally and written in a foreign language at least at European language B2 level.
7	To be able to use computer programs related to his/her field and have skills for informatics communication.
8	To be able to be careful in protecting social, scientific and cultural ethics in collection data, application and presentation.
9	To be able to develop strategic, political and application plans in his/her field and may evaluate the outcomes in quality periods.

**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	5	5	5	5	5
P2	4	4	4	4	4
P3	4				
P5	3	4	4	2	4
P7		4	4		4

