AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title		Methods in Enzymatic Analysis							
Course Code		KİM558		Couse Level		Second Cycle (Master's Degree)			
ECTS Credit	6	Workload	149 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		This course aims to teach the graduate students how to deal with the principles and methods of enzymatic analysis.							
Course Content		It presents theoretical knowledge as well as principles that are necessary for practical work.							
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	Principles of Enzymatic Analysis, H. U. Bergmeyer, K. Gawehn, 1978, Werlag Chemie, ISBN 3-527-25678-4
2	Enzim Bilgisi, 1994. Understanding Enzymes'dan çeviren S. Cengiz, M. Cengiz. Bilimsel ve Teknik Yayınları Çevri Vakfı.

Week	Weekly Detailed Course Contents	
1	Theoretical	Terminology, importance and limits of enzymatic analysis.
2	Theoretical	Theoretical principles: Reaction kinetics.
3	Theoretical	Determination of Michaelis constant.
4	Theoretical	Determination of metabolites.
5	Theoretical	Determination of catalytic activity of enzymes.
6	Theoretical	NAD(P) – dependant reactions.
7	Theoretical	Principles of enzyme – immunoassays.
8	Theoretical	Reagents for enzymatic analysis.
9	Theoretical	Sample handling.
10	Intermediate Exam	Midterm
11	Theoretical	Absorption photometry.
12	Theoretical	Automation of analysis.
13	Theoretical	Enzymatic analysis with radiobiochemicals.
14	Theoretical	Evaluation of experimental results.
15	Theoretical	Discussion
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 terminology of enzymology.

2	to be able to recognize Michaelis-Menten kinetics.
3	to be able to identify the principles of enzymatic analysis.
4	to be able to acquire knowledge on how to evaluate the results of enzymatic analysis.
5	to able to acquire knowledge about special enzymatic techniques

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		5	5
P3	3				
P4			5	5	5
P5	4		3		4
P7	3		3		4