AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Enzymatic Analytical Methods								
Course Code	BYK524		Couse Level		Second Cycle (Master's Degree)				
ECTS Credit	3	Workload	75 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	To have information about enzymatic analysis, preanalytical process and evaluation of post-analysis results								
Course Content	The importance and limits of terminology in enzymatic analysis, theoretical principles: reaction kinetics, determination of Michaelis constant, the determination of metabolites, determination of the catalytic activity of enzymes, NAD (P) - dependent reactions, principles of enzyme - immunoassay techniques, enzymatic reagents used in the analysis, sample preparation, absorption photometry, automation of analysis, enzymatic analyses using radiobiochemicals, evaluation of the experimental results								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Demonstration, Discussion, Individual Study								
Name of Lecturer(s)									

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

Recommended or Required Reading	
1	Biochemistry by lehninger
2	Enzymes: A Practical Introduction to Structure, Mechanism, and Data Analysis:Robert A. Copeland

Week	Weekly Detailed Course Contents	
1	Theoretical	Structure and properties of enzymes
2	Theoretical	Structure and properties of enzymes
3	Theoretical	Terminology, importance and limits of enzymatic analysis
4	Theoretical	Theoretical principles and reaction kinetics
5	Theoretical	Determination of metabolites
6	Practice	Determination of metabolites
7	Practice	Determination of Michaelis constant
8	Intermediate Exam	Quiz
9	Theoretical	Determination of catalytic activity of enzymes
	Practice	Determination of catalytic activity of enzymes
10	Theoretical	NAD(P) dependent reactions
	Practice	NAD(P) dependent reactions
11	Theoretical	Principles of enzyme immunoassay technique
12	Theoretical	Reagents used in enzymatic analysis, sample preparation, absorption photometry, automation of analysis, enzymatic analysis with radiobiochemicals and evaluation of experimental results
13	Theoretical	Reagents used in enzymatic analysis, sample preparation, absorption photometry, automation of analysis, enzymatic analysis with radiobiochemicals and evaluation of experimental results
14	Practice	Reagents used in enzymatic analysis, sample preparation, absorption photometry, automation of analysis, enzymatic analysis with radiobiochemicals and evaluation of experimental results
15	Practice	Reagents used in enzymatic analysis, sample preparation, absorption photometry, automation of analysis, enzymatic analysis with radiobiochemicals and evaluation of experimental results
16	Final Exam	Final exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	9	1	3	36
Lecture - Practice	5	1	3	20

Assignment	1	3	16	19
			Total Workload (Hours)	75
			[Total Workload (Hours) / 25*] = **ECTS**	3
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	To have information about structure and properties of enzymes
2	To be able to define the differences between enzymes and normal catalytic substances
3	To have information about enzymatic metabolite determination
4	Learning the principles of enzyme immunoassay technique
5	To have knowledge about preanalytical processes and postanalytic evaluations in enzymatic analysis

Programme Outcomes *(Biochemistry (Medical) Master)*	
1	To have basic theoretical knowledge about biochemistry and to help understanding biochemistry
2	To have the basic laboratory knowledge, apparatus and methods used in biochemistry
3	Analysis: To be able to analyze information critically
4	Synthesis: To be able to synthesize and adapt the knowledge in the field from different directions
5	Evaluation: To critically evaluate research in the field

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	4	5	5	5
P2	5	4	5	4	5
P3	5	5	5	5	5
P4	4	5	5	4	5
P5	4	4	4	5	5