



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Solution of Biochemical Analyses and Preparation							
Course Code		VBY636		Course Level		Third Cycle (Doctorate Degree)			
ECTS Credit	4	Workload	100 (<i>Hours</i>)	Theory	1	Practice	2	Laboratory	0
Objectives of the Course		Calculations used in the laboratory to teach, to teach international units and translated into each other, calculation and preparation of solutions used in the laboratory to gain skills							
Course Content		Solutions, molar solutions, the normal solutions, the preparation of dilute and concentrated solutions, the qualitative and quantitative analytical methods, laboratory calculations.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Experiment, Demonstration, Individual Study					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Final Examination	1	100

Recommended or Required Reading

1	Klinik biyokimya (Yüregir, Güneş T.)
2	Clinical biochemistry for medical students(Laker, M. F.)
3	Klinik biyokimya analiz metodları (Adam, Bahattin)

Week	Weekly Detailed Course Contents	
1	Practice	Laboratory presentation materials
2	Theoretical	Conversion of units
	Practice	Use of Laboratory equipments
3	Theoretical	Volumetric measurements
	Practice	Applications of Volumetric Measurement
4	Theoretical	Titrimetric measurements
	Practice	Titration
5	Theoretical	Gravimetric measurements
	Practice	Gravimetric measurement applications
6	Theoretical	pH measurement
	Practice	The use of pH meters
7	Theoretical	Solutions
	Practice	Properties of chemical substances
8	Theoretical	Percent solutions
	Practice	Preparation of solution
9	Practice	Preparation of solution
	Intermediate Exam	Midterm exam
10	Theoretical	Molal solutions
	Practice	Preparation of solution
11	Theoretical	Molar solutions
	Practice	Preparation of solution
12	Theoretical	Normal solutions
	Practice	Preparation of solution
13	Theoretical	Calculations dilution
	Practice	Application of dilution
14	Theoretical	Preparation of calibration curve
	Practice	Plotting the calibration curve
15	Theoretical	Colorimetric methods
	Practice	Make application on the Spectrophotometer



16	Final Exam	Final exam
----	------------	------------

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	15	1	1	30
Lecture - Practice	15	1	2	45
Term Project	1	5	0	5
Midterm Examination	1	8	1	9
Final Examination	1	10	1	11
Total Workload (Hours)				100
[Total Workload (Hours) / 25*] = ECTS				4

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To learn what were the units used in the International
2	To learn the transformation of the units to each other
3	Calculate and prepare of solutions
4	To learn the use of laboratory materials
5	To learn properties of chemicals

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
P1	5	5	5	5	5
P2	5	5	5	5	5
P3	5	5	5	5	5
P4	5	5	5	5	5
P8	5	5	5	5	5

