AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Carbonyhdrates Determination Methods								
Course Code	VBY629	Couse Level	Third Cycle (Doctorate Degree)						
ECTS Credit	4	Workload	96 *(Hours)*	Theory	1	Practice	2	Laboratory	0
Objectives of the Course	Carbonhydrate analayses of various biological samples with cromotographic and spectrophotometric methods and to evalute the results; Çeşitli biyolojik örneklerde kromotografik ve spektrofotometrik yöntemlere dayalı karbonhidrat analizleri ve sonuçların değerlendirilmesi, to use the obtained information								
Course Content	Carbonhydrate analayses of various biological samples with cromotographic and spectrophotometric methods and to evalute the results.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Demonstration								
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

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

Week	Weekly Detailed Course Contents	
1	Theoretical	What are the biological samples?
	Practice	Demonstration of laboratory equipment
2	Theoretical	collecting and preserving of samples
	Practice	Preparation of work plan
3	Theoretical	research method according to the sample
	Practice	Preparation of used tools and equipment
4	Theoretical	selection method according to the sample
	Practice	Sample preparation
5	Theoretical	Analysis of carbohydrate
	Practice	Carbohydrate recognition experiment
6	Theoretical	Analysis of carbohydrates in the blood
	Practice	Reduction reactions of carbohydrates
7	Theoretical	Midterm Exam
	Practice	Recognition experiment of ketose sugars
8	Theoretical	Carbohydrate analysis in urine
	Practice	Recognition experiment of pentose Sugars
9	Theoretical	Carbohydrate analysis of CSF
	Practice	Osazone experiment
10	Theoretical	comparison of methods
	Practice	hydrolysis of sucrose
11	Theoretical	Nişastanın hidrolizi
	Practice	hydrolysis of starch
12	Theoretical	Discussion of results
	Practice	Determination of blood glucose by the Folin wu method
13	Theoretical	Statistical evaluation
	Practice	Determination of blood glucose using commercial kits

14	Theoretical	Interpretation of results
	Practice	Determination of glucose in the urine

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	1	28
Lecture - Practice	14	0	2	28
Reading	1	10	0	10
Midterm Examination	1	14	1	15
Final Examination	1	14	1	15
			Total Workload (Hours)	96
			[Total Workload (Hours) / 25*] = **ECTS**	4

**25 hour workload is accepted as 1 ECTS*

Learning Outcomes

1	to learns the collection and storage conditions of biological sample
2	to have information about the selection of appropriate methods of analysis.
3	to gain the ability to hypothesis and analyze.
4	to have information on the evaluation and interpretation of analysis results
5	To have knowledge about carbohydrate recognition experiments

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	4				4
P2		4			
P3	4				
P4		3	3		3

P5			3		3
P8	3				
P10			3		3
P12		4			4
P13	3				
P14				3	3
P15	3				
P17	3			3	3
P18		4			