



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Extracellular Matrix							
Course Code		VBY641		Couse Level		Third Cycle (Doctorate Degree)			
ECTS Credit	8	Workload	200 (<i>Hours</i>)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		Extracellular fluid composition, structural features and differences of the components, to give information about laminin, collagen and fibronectin, pathological cases and the ability to use this information to investigate							
Course Content		The composition of extracellular fluid, the properties of protein, carbohydrates and lipids in extracellular fluid, collagen structure, properties and functions, elastin structure, properties and functions, fibronectin structure, properties and functions, laminin structure, properties and functions, proteoglycans, glycosaminoglycans							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion					
Name of Lecturer(s)		Prof. Serap ÜNÜBOL AYPAK							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Final Examination	1	100

Recommended or Required Reading

1	Temel Klinik Biyokimya(Prof. Dr. Bahattin ADAM, Dr. Zeynep GÖKER, Dr. Yasemin ARDIÇOĞLU)
2	Lippincott Biyokimya 3. Baskı(Doç. Dr. Engin ULUKAYA)
3	The biochemistry of cell signalling (Helmreich, E. J. M.)

Week	Weekly Detailed Course Contents	
1	Theoretical	Overview of the structure of the extracellular matrix
2	Theoretical	The composition of extracellular fluid
3	Theoretical	Properties of protein, carbohydrates and lipids in the Extracellular fluid
4	Theoretical	Structure of collagen
5	Theoretical	Features and functions of collagen
6	Theoretical	Collagen synthesis and degradation
7	Intermediate Exam	Midterm exam
8	Theoretical	Structure of Elastin
9	Theoretical	Properties and functions of Elastin
10	Theoretical	Elastin synthesis
11	Theoretical	Structure, properties and functions of Fibronectin
12	Theoretical	Proteoglycans
13	Theoretical	Glycosaminoglycans
14	Theoretical	Structure, properties and functions of Laminin
15	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	15	3	2	75
Assignment	5	2	1	15
Reading	10	6	0	60
Quiz	3	8	1	27
Midterm Examination	1	10	1	11



Final Examination	1	11	1	12
Total Workload (Hours)				200
[Total Workload (Hours) / 25*] = ECTS				8
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	Having information about the chemical structure of extracellular matrix
2	To learn Synthesis and degradation of extracellular fluid components
3	To learn the differences between species for extracellular structure
4	To gain the ability to compare with the results of clinical biochemistry learning information
5	To have information about the functions of proteins that make up the extracellular matrix

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
P2	5	5	5	5	5
P4			5		5
P9			5		5
P13	5	5		5	5

