

International School of Medicine / Medicine (English)

2023 - 2024 Academic Year

CLINICAL BIOCHEMISTRY (Elective)

Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
CLINICAL BIOCHEMISTRY (Elective)	ISM5014637	Yearly	0+60	0	4
Prerequisites Courses					
Recommended Elective Courses					
Language of Instruction	English				
Course Level	First Cycle (Bachelor's Degree)				
Course Type	Elective				
Course Coordinator	Assist.Prof. Gözde ÜLFER				
Name of Lecturer(s)	Assist.Prof. Gözde ÜLFER				
Assistant(s)					
Aim	To teach the importance of proteins, enzymes and lipoproteins in blood in clinical biochemistry and their place in monitoring the diagnosis and treatment of diseases. To teach the role of lipoproteins in atherosclerosis diagnosis and monitoring of treatment, other factors in atherosclerosis, blood sugar elevation and regulation, liver function tests, oral glucose tolerance test, bilirubin measurement, and the meaning and importance of blood gases in clinical biochemistry.				
Course Content	This course contains; Plasma proteins,Enzymes,Tumor markers,Interpretation of laboratory results,Blood collection, sample acceptance and analysis stages in the laboratory,Lipid metabolism,Liver function tests,Acid base balance and blood gas measurements,Oral glucose tolerance test,Urine biochemistry.				
Course Learning Outcomes			Teaching Methods	Assessment Methods	
1. Explains plasma proteins and protein measurement methods			5	E	
2. Explain what the enzymes used in the clinic at the cellular level.			5	E	
3. Explain tumor markers.			5	E	
4. Explain the importance of clinical biochemistry laboratory results.			5	E	
5. Explains the processes of blood collection, sample acceptance and analysis in the laboratory.			5	E	
6. Explains lipid metabolism.			5	E	
7. Explains liver function tests			5	E	
8. Explains the importance of acid-base balance and blood gas laboratory data.			5	E	
9. Explain the glucose tolerance test.			5	E	
10. Explains urine biochemistry			5	E	
Teaching Methods	5: Cooperative Learning				
Assessment Methods	E: Homework				
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
1	Plasma proteins	1, 2, 3, 4, 5, 6			
2	Enzymes	1, 2, 3, 4, 5, 6			
3	Tumor markers	1, 2, 3, 4, 5, 6			
4	Interpretation of laboratory results	1, 2, 3, 4, 5, 6			
5	Blood collection, sample acceptance and analysis stages in the laboratory	1, 2, 3, 4, 5, 6			
6	Lipid metabolism	1, 2, 3, 4, 5, 6			
7	Liver function tests	1, 2, 3, 4, 5, 6			
8	Acid base balance and blood gas measurements	1, 2, 3, 4, 5, 6			
9	Oral glucose tolerance test	1, 2, 3, 4, 5, 6			
10	Urine biochemistry	1, 2, 3, 4, 5, 6			
Evaluation Methods		Weight(%)			
Midterm Exam		40			
General Exam		60			

Resources	
1.Temel ve Uygulamalı Biyokimya(Nesrin Emekli), 2.Biyokimya (Fügen Gürdöl ve Evin Ademoğlu), 3.Biyokimya Laboratuvarı(Türkan Yiğitbaşı,Nesrin Emekli). 4.Harper's Biochemistry, 5.Lehninger Principles of Biochemistry, 6.Henry's Clinical Diagnosis and Management by Laboratory Methods.	