

**International School of Medicine / Medicine (English)**

**2023 - 2024 Academic Year**

**CLINICAL BIOCHEMISTRY (Elective)**

**Syllabus**

<b>Course Description</b>					
<b>Name</b>	<b>Code</b>	<b>Semester</b>	<b>T+A Hour</b>	<b>Credit</b>	<b>ECTS</b>
CLINICAL BIOCHEMISTRY (Elective)	ISM6014781	Yearly	0+40	0	2
<b>Prerequisites Courses</b>					
<b>Recommended Elective Courses</b>					
<b>Language of Instruction</b>	English				
<b>Course Level</b>	First Cycle (Bachelor's Degree)				
<b>Course Type</b>	Elective				
<b>Course Coordinator</b>	Assist.Prof. Gözde ÜLFER				
<b>Name of Lecturer(s)</b>	Assist.Prof. Gözde ÜLFER				
<b>Assistant(s)</b>					
<b>Aim</b>	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.				
<b>Course Content</b>	This course contains; Plasma proteins,Enzimes,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.				
<b>Course Learning Outcomes</b>			<b>Teaching Methods</b>	<b>Assessment Methods</b>	
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	
<b>Teaching Methods</b>	5: Cooperative Learning				
<b>Assessment Methods</b>	E: Homework				
<b>Lecture Schedule</b>					
<b>Sequence</b>	<b>Topics</b>	<b>Preliminary Preparation</b>			
1	Plasma proteins	1, 2, 3, 4, 5, 6			
2	Enzimes	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			
<b>Evaluation Methods</b>		<b>Weight(%)</b>			
Midterm Exam		40			
General Exam		60			

<b>Resources</b>	
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.	