



Golestan University of Medical Sciences
Center for Studies and Development of Medical Sciences Education
International Campus Education Development Office
Educational group Biochemistry and Biophysics Teaching Group
daily lesson plan

Name of the course/ lesson	Kidney biochemistry	Academic year	2025-2026		
Field of study	medicine	Degree	Professional Doctorate		
Session's number	first	Date	According to the training program		
The name of teacher	Dr. Seyed Mustafa Mir	The venue	Faculty of Medicine - Class Affairs		
General purpose of the lesson					
Gaining knowledge about kidney status, related disease disorders, and interpreting laboratory findings					
The topic of the session					
Examining the condition of the kidney, its associated disease disorders, and interpreting laboratory findings					
Outlines	behavioral objectives	the field (cognitive, attitude and skills)	teaching method	media and educational aids	evaluation method
Kidney function and types of biochemical disorders	1-1 Know the biochemical function of the kidney 2-1 Explain the biochemical disorders of the kidney	Cognitive-knowledge Cognitive-knowledge	Lecture with presentation of educational slides and PowerPoints and class Q&A	Whiteboard Projector	Written exam at the end of the semester
Kidney function tests	1-1 Know the tests for kidney function 2-1 Know the interpretation of biochemical tests for kidney disorders	Cognitive-knowledge Cognitive-knowledge			



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Name of the course/ lesson	Kidney biochemistry	Academic year	2025-2026		
Field of study	medicine	Degree	Professional Doctorate		
Session's number	Second	Date	According to the training program		
The name of teacher	Dr. Seyed Mustafa Mir	The venue	Faculty of Medicine - Class Affairs		
General purpose of the lesson					
Gain knowledge about maintaining blood pH and electrolyte balance along with disorders and diseases related to electrolytes, acid-base, and blood gases					
The topic of the session					
Maintaining blood pH and electrolyte balance, along with disorders and diseases related to electrolytes, acid-base, and blood gases					
Outlines	behavioral objectives	the field (cognitive, attitude and skills)	teaching method	media and educational aids	evaluation method
1- Regulate blood pH and acid-base disorders	1-1 Know the types of acid-base disorders? 1-2 Know the calculation of anion gap and how to use it to diagnose the cause and type of acid disorder? 1-3 Know the interpretation of ABG and be able to diagnose the types of acid-base disorders based on it?	Cognitive-knowledge Cognitive-knowledge	Lecture with presentation of educational slides and PowerPoints and class	Whiteboard Projector	Written exam at the end of the semester



2-Electrolytes and related clinical disorders	1-1 Know the functions of sodium and explain the types of disorders related to its decrease and increase 1-2 Know the functions of potassium and explain the types of disorders related to its decrease and increase	Cognitive-knowledge Cognitive-knowledge	Q&A		
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