



**Jordan University of Science and Technology**  
**Faculty of Applied Medical Sciences**  
**Allied Medical Sciences Department**

LM313 Clinical Biochemistry (1) Practical - JNQF Level: 7

First Semester 2023-2024

**Course Catalog**

1 Credit Hours. This course discusses the general fundamentals and principles of clinical bioanalytical chemistry methods. It is a laboratory course covering methods of analysis, practical skills in clinical chemistry laboratories, sources of errors in clinical chemistry tests, and quality control.

**Teaching Method:** On Campus

**Text Book**

<b>Title</b>	Clinical Chemistry-Techniques, Principles, and Correlations
<b>Author(s)</b>	Michael L. Bishop, Edward P. Fody, Carleen Van Sclen, James March Mistler, Michelle Moy
<b>Edition</b>	9th Edition
<b>Short Name</b>	Ref #1
<b>Other Information</b>	

**Instructor**

Name	<b>Mr. Bilal Al-Omari</b>
Office Location	-
Office Hours	
Email	bomari@just.edu.jo

**Class Schedule & Room**

Section 1:  
Lecture Time: Mon : 14:30 - 16:30  
Room: LAB 1

Section 2:  
Lecture Time: Tue : 10:30 - 12:30  
Room: LAB 1

Section 3:  
Lecture Time: Tue : 12:30 - 14:30  
Room: LAB 1

Section 4:  
Lecture Time: Wed : 10:30 - 12:30  
Room: LAB 1

Section 5:  
Lecture Time: Wed : 12:30 - 14:30  
Room: LAB 1

#### Tentative List of Topics Covered

Weeks	Topic	References
Weeks 1, 2	Lab safety, introduction to clinical chemistry, centrifugation, & spectrophotometry	<b>Manual in clinical chemistry &amp; kit sheets</b> From <b>Ref #1</b>
Week 3	Phlebotomy	<b>Manual in clinical chemistry &amp; kit sheets</b> From <b>Ref #1</b>
Week 4	Serum total protein determination by Biuret method	<b>Manual in clinical chemistry &amp; kit sheets</b> From <b>Ref #1</b>
Week 5	Serum albumin determination by BCG method	<b>Manual in clinical chemistry &amp; kit sheets</b> From <b>Ref #1</b>
Week 6	Electrolytes (Calcium determination)	<b>Manual in clinical chemistry &amp; kit sheets</b> From <b>Ref #1</b>
Week 7	Aminoacidopathes (Cystinurea)	<b>Manual in clinical chemistry &amp; kit sheets</b> From <b>Ref #1</b>
Week 8	Enzyme activity measurement (ALP)	<b>Manual in clinical chemistry &amp; kit sheets</b> From <b>Ref #1</b>
Week 9	kidney function test: Urea & BUN	<b>Manual in clinical chemistry &amp; kit sheets</b> From <b>Ref #1</b>
Week 10	Serum creatinine determination by Jaff reaction	<b>Manual in clinical chemistry &amp; kit sheets</b> From <b>Ref #1</b>
Week 11	Uric Acid	<b>Manual in clinical chemistry &amp; kit sheets</b> From <b>Ref #1</b>

Week 12	Blood glucose	<b>Manual in clinical chemistry &amp; kit sheets</b> From Ref #1
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<b>Mapping of Course Outcomes to Program Outcomes and NQF Outcomes</b>	<b>Course Outcome Weight (Out of 100%)</b>	<b>Assessment method</b>
Learn the basic concepts related to biochemical assays, reagents, kit sheets, and lab safety [1SLO1] [1L7K1]	20%	
Understand the clinical significance of biochemical assays [1SLO1] [1L7K1]	15%	
Ability to interpret the laboratory findings [1SLO3] [1L7S1]	10%	
Applying quality control and quality assurance measures to achieve a precise and accurate diagnosis of diseases with no or minimized errors and false results. [1SLO4] [1L7S3]	15%	
Explain the proper use of laboratory equipment and supplies [1SLO2] [1L7C4]	15%	
Correlate altered concentrations of biochemical components in body fluids with specific diseases. [1SLO3] [1L7C2]	10%	
Learn the appropriate specimen types, collection techniques, transport protocols, storage conditions, and principles of measurement methods for components in body fluids. [1SLO2] [1L7C4]	15%	

<b>Relationship to Program Student Outcomes (Out of 100%)</b>											
SLO1	SLO2	SLO3	SLO4	SLO5	SLO6	MSLO1	MSLO2	MSLO3	MSLO4	MSLO5	MSLO6
35	30	20	15								

<b>Relationship to NQF Outcomes (Out of 100%)</b>				
L7K1	L7S1	L7S3	L7C2	L7C4
35	10	15	10	30

<b>Policy</b>	
Attendance policy:	Students are expected to attend more than 80% of lectures. All absences will be entered electronically into the University site If absence is more than 20%, the student will be banned from the course after electronic notification from the university through student e-mail
Expected workload:	Students are expected to take every effort to ensure satisfactory learning of the material given.
Feedback:	Concerns or complaints should be expressed in the first instance to the course instructor. If no resolution is forthcoming, then the issue should be brought to the attention of the department chair and, if still unresolved, to the dean. Questions about the material covered in the lecture, notes on the content of the course, its teaching and assessment methods can be discussed with the course instructor at the designated office hours or by e-mail.

Date Printed: 2024-03-21