

## Module (Course Syllabus) Catalogue 2023-2024

College/ Institute	Erbil Medical Technical Institute	
Department	MLT Department	
Module Name	Biochemistry	
Module Code	BIO202	
Degree	Technical Diploma <input checked="" type="checkbox"/>	Bachelor <input type="checkbox"/>
	High Diploma <input type="checkbox"/>	Master <input type="checkbox"/> PhD <input type="checkbox"/>
Semester	2rd	
Qualification	Master degree	
Scientific Title	lecturer	
ECTS (Credits)	7	
Module type	Prerequisite <input type="checkbox"/>	Core <input checked="" type="checkbox"/> Assist. <input type="checkbox"/>
Weekly hours	4	
Weekly hours (Theory)	( 2 )hr Class	( 3 )Total hrs Workload
Weekly hours (Practical)	( 2 )hr Class	( 1 )Total hrs Workload
Number of Weeks	16	
Lecturer (Theory)	Sangar Sabah Sabir	
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Lecturer (Practical)	Sangar Sabah Sabir	
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## Course Book

<b>Course Description</b>	This course is an introduction to chemistry where students are urged to understand the concentrations and how to extract them and the types of solutions that exist.			
<b>Course objectives</b>	Identify of the bio chemistry and the importunes of the living , which are the basis in the analysis of blood and clinical chemistry for the next stage and how to link the practical results with the theoretical results			
<b>Student's obligation</b>	<p>1-The student attention in all theoretical and practical lectures in academic year.</p> <p>2-Completion of all tests.</p> <p>3-Attendance in exams.</p> <p>4-Write or prepare reports.</p>			
<b>Required Learning Materials</b>	lecture halls with data show equipment for lecture presentations, white board, overhead projector, posters			
<b>Evaluation</b>	<b>Task</b>	<b>Weight (Marks)</b>	<b>Due Week</b>	<b>Relevant Learning Outcome</b>
	Paper Review	1	1	
	Homework	0.5	4	
	Class Activity	2	2	
	Report	1	1	
	Seminar	1	1	
	Essay	0	0	

	Project	0	0	
	Quiz	1	4	
	Lab.	2	12	
	Midterm Exam	1	2	
	Final Exam	1	3	
<b>Specific learning outcome:</b>	<ul style="list-style-type: none"> <li>- Ability to develop general knowledge</li> <li>- Knowledge and understanding of the subject area and understanding of the profession</li> <li>- Ability to identify, differentiate, pose and resolve problem</li> <li>- Demonstrate the ability to think critically and solve problems in a laboratory setting</li> <li>- Ability to apply knowledge in practice</li> <li>- Ability to search for process and analyse information from a variety of Sources</li> </ul>			
<b>Course References:</b>	<ul style="list-style-type: none"> <li>- <b>Course Reading List and References:</b></li> <li>- <b>Biochemistry Thomas m. Devlin six edition</b></li> <li><b>Biochemistry harbans lal , Rajesh pandey third edition</b></li> </ul>			
<b>Course topics (Theory)</b>	<b>Week</b>	<b>Learning Outcome</b>		
Introduction to the biochemistrty	1	Identified to the biochemistry		
Types of the Carbohydrates	2	Identify the types of carbohydrates and classification		
Monosaccharide and types	3	Identify the glucose and fructose		
Di and polysaccharides	4	Know types of the sugar		
Classification of lipids	5	Known types of lipids		

Types of fatty acid	6	Identify the types of fatty acids
Definition of protein	7	Study of the protein and the effective
Classification of protein about the composition	8	Classification of the protein
Enzymes	9	I identified of the enzymes
Nucleic Acids	10	I identified of the Nucleic Acids
Vitamins	11	I identified of the vitamins
Hormones	12	I identified of the hormones
<b>Practical Topics (If there is any)</b>	<b>Week</b>	<b>Learning Outcome</b>
Types of carbohydrates	1	I identified of Monosaccharaides
Testes of the Disaccharides	2	I identified of disaccharides
Testes of the Polysaccharides	3	Identified to polysaccharides
Lipids	4	Identified to lipids
Fatty asides type	5	Identified to fatty asides
Types of proteins	6	Identified to proteins
Tester of the portions	7	Identified to tester of the proteins
Vitamins	8	Identified to vitamin D
Test of the vitamins	9	Identified to vitamin K

Test of the vitamins	10	Identified to vitamin B <sub>12</sub> Identified to calcium
Test of the minerals	11	Identified to iron
Test of the minerals	12	

**Examinations (question design):**

Q1: define the following.

1. Carbohydrate
2. Proteins
3. Hormones
4. Cholesterol
5. Polysaccharides

Q2: write the difference between.

1-

cholesterol	triglyceride

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2-

Polysaccharide	Discharide

Q3: What is biochemistry and its uses?

Q4: Draw the structure of Monosaccharide and disaccharide, give example for each one.

- **Extra notes:**

- **External Evaluator**

**The outcome of course book evaluation is commonly more explicit and follows the principles and rules in general.**

**MUHARAM YASEEN MUHAMAD**

**Lecturer in chemistry**