







Course Description Form

1. Course Name:

Biochemistry

2. Course Code:

BICH204

3. Semester / Year:

The second semester / 2 Stage /2024-2025

4. Description Preparation Date:

1/2/2025

5. Available Attendance Forms:

Attendance +Electronic

6. Number of Credit Hours (Total) / Number of Units (Total)

Theoretically 2/3 practical (5 hours) / 3.5 unit

7. Course administrator's name (mention all, if more than one name)

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Afkar Yahya Ahmed

8. Course Objectives

Theoretical:

Enabling the student to understand and comprehend what is related to food compounds and their importance.

Providing students with knowledge, teaching modern principles and methods in studying biochemical sciences, and using modern technologies in practical study in laboratories.

Practical:

Enabling the student to become familiar with the principles and modern methods of studying biochemical sciences as well as studying

Synthesis of proteins, carbohydrates, and fats and the tests performed on them.

9. Teaching and Learning Strategies

Interactive lecture.

- -Brainstorming.
- -Dialogue and discussion.
- -Assigning tasks and reporting.

The student is assigned to prepare a report entitled from his own diligence and prepares it for discussion with the students.

- Assigning group work to reveal leadership skills.
- -Assigning group work to reveal leadership skills.
- Assigning tasks and reporting for each experiment.

	10. Course Structure								
Week	Hours			Learning	Evaluation				
1	2.1 .: 1	Outcomes	name	method	method				
1	2theoretical	B1:Explains the	The cell and its	Auditory	Short				
		concept of cell	components.	methods,	exams,				
		science and its		writing	assignments,				
		components (gener		method	discussions				
		properties of the ce		on the	Short				
			a Stranger Has a las o	board,	exams,				
		*	المام	dielegy	assignments,				
			The said	dialogue method	discussions				
	3 practical	B1:Safety in	apylies wiss	Auditory	Short				
	- <u>F</u>	Laboratories	Anc safe 5	methods,	exams,				
			specifications in	writing	assignments,				
			laboratories.	method	discussions				
				on the	Short				
				board,	exams,				
				direct	assignments,				
				dialogue	discussions				
				method					
2	2theoretical	C1:Explains the	Water and pH	Auditory	Short				
		nature of water,	•	methods,	exams,				
		solutions, and pH in		writing	assignments,				
		the body.		method	discussions				
		·		on the					
				board,					
				direct					
				dialogue					
				method					
	3 practical	A1:Carbohydrates	Classified	Auditory	Short				
		And its types.	Carbohydrates of		exams,				
			all kinds.	writing	assignments,				
				method	discussions				
				on the					
				board,					
				direct					
				dialogue					
2	0.:	D0 11 1 2 111		method	G1				
3	2theoretical	B2:He is familiar	Carbohydrates	Auditory	Short				
		with the nature of		methods,	exams,				
		carbohydrates and		writing	assignments,				
		their biological and		method	discussions				
		physiological		on the					
		functions.		board,					
				direct					

				dialogue method	
	3 practical	B2:the exams General carbohydrates	Solubility test And the Mulch to	Auditory methods, writing method on the board, direct dialogue method	Short exams, assignments, discussions
4	2theoretical	A2:Identify derived monosaccharides at oligosaccharides.		Auditory methods, writing method on the board, direct dialogue method	Short exams, assignments, discussions
	3 practical	A2:Tests Carbohydrates	the (xar) Carbonydrate reductionism	Auditory methods, writing method on the board, direct dialogue method	Short exams, assignments, discussions
5	2theoretical	C2:Explains the structure, functions and classification of fats.		Auditory methods, writing method on the board, direct dialogue method	Short exams, assignments, discussions
	3 practical	B3:the exams Descriptive For carbohydrates	Hydrolysis of sucrose And iodine test	Auditory methods, writing	Short exams,

			And hydrolysis o	method	assignments,
			starch	on the	discussions
			With mineral aci	board,	
				direct	
				dialogue	
				method	
6	2theoretical	A2:Recognizes	Complex fats	Auditory	Short
		complex (conjugate	-	methods,	exams,
		lipids		writing	assignments,
		1		method	discussions
				on the	
				board,	
				direct	
				dialogue	
				method	
	3 practical	B4:Fats	Special tests	Auditory	Short
	S praetical	2 111 405	With fat	methods,	exams,
			VV ICII ICC	writing	assignments,
				method	discussions
				on the	aiseassions
				board,	
				direct	
				dialogue	
				method	
7	2theoretical	B3:The most	Derived fats	Auditory	Short
,	Zincorettear	important fats are	Derived fats	methods,	exams,
		derived fatty acids		writing	assignments,
		(saturated and		method	discussions
		unsaturated)	in the	on the	discussions
		unsaturated)		board,	
			المحلية الزراعة والعوال	direct	
			والغليان	dialogue	
				method	
	2	B5:Tests	A drolair & data		Short
	3 practical	To detect	Acrolei	Auditory	
			To detect	methods,	exams,
		Clycerol	cholesterol	writing	assignments,
				method	discussions
				on the	
				board,	
				direct	
				dialogue	
	1	1.2.7		method	G1
8	2theoretical	A3:Recognizes the		Auditory	Short
		general properties		methods,	exams,
		amino acids and the		writing	

		division of amino		method	assignments,
		acids.		on the	discussions
				board,	
				direct	
				dialogue	
				method	
	3 practical	A3:Structured	Ph	Auditory	Short
		solutions		methods,	exams,
				writing	assignments,
				method	discussions
				on the	
				board,	
				direct	
				dialogue	
				method	
9	2theoretical	A4:Understands	Peptides	Auditory	Short
	2000000000	peptides and peptid	-	methods,	exams,
		bonds in proteins.		writing	assignments,
		conds in proteins.		method	discussions
				on the	aiscassions
				board,	
				direct	
				dialogue	
				method	
	3 practical	A4:amino acids	General tests	Auditory	Short
	3 practical	A4.ammo acius		•	
			And the description of acids		exams,
				writing	assignments,
			Amino	method	discussions
				on the	
				board,	
				direct	
				dialogue	
10	2.1 1	A 5 . I I	T 1	method	C1
10	2theoretical	A5:Understands	Learn about the	Auditory	Short
		proteins and the	process of	methods,	exams,
		biological and	Biological	writing	assignments,
		physiological	functions of	method	discussions
		functions of protein	proteins	on the	
				board,	
			1	direct	
			& Zles Wass Il	dialogue	
		Y	الرزاعة فوصل	method	
	3 practical	A4:amino acids	Ceiec and acid	Auditory	Short
			Amino	riethods,	exams,
			Su fur	writing	
_			0	-	_

				method	assignments,
				on the	discussions
				board,	
				direct	
				dialogue	
				method	
11	2theoretical	A6:Identifies plasm	Plasma proteins	Auditory	Short
		proteins	1	methods,	exams,
				writing	assignments,
				method	discussions
				on the	
				board,	
				direct	
				dialogue	
				method	
	3 practical	B6:amino acids	Mellon test	Auditory	Short
	P		And xanthoprotic	•	exams,
			test	writing	assignments,
				method	discussions
				on the	
				board,	
				direct	
				dialogue	
				method	
12	2theoretical	A7:Understands	Enzymes	Auditory	Short
		enzymes and their	· ·	methods,	exams,
		properties.		writing	assignments,
				method	discussions
				on the	
				board,	
				direct	
				dialogue	
				method	
	3 practical	A6:Proteins	the exams	Auditory	Short
			Description of	methods,	exams,
			proteins	writing	assignments,
			Je Saraha Je	method	discussions
		4	الزراعة وحل	on the	
		1	والعالمات	board,	
			فيع إلى المناه	direct	
			الخسينة وهندي	dialogue	
			3	method	
13	2theoretical	C3:Explains vitami	Vitamins	Auditory	Short
		and their		methods,	exams,
		classification.		writing	Ź
		<u> </u>		<u> </u>	<u> </u>

				method	assignments,
				on the	discussions
				board,	
				direct	
				dialogue	
				method	
	3 practical	C1:Proteins	Biuret test	Auditory	Short
				methods,	exams,
				writing	assignments,
				method	discussions
				on the	
				board,	
				direct	
				dialogue	
				method	
14	2theoretical	C4:Explains minera	Metal elements	Auditory	Short
		elements and their		methods,	exams,
		classification.		writing	assignments,
				method	discussions
				on the	
				board,	
				direct	
				dialogue	
				method	
	3 practical	A7:Proteins	Precipitation of	Auditory	Short
			proteins	methods,	exams,
			With heavy meta	writing	assignments,
			salts	method	discussions
				on the	
				board,	
				direct	
				dialogue	
				method	
15	2theoretical	A8:Describes the	Metabolism	Auditory	Short
		body's metabolism.		methods,	exams,
			- CS	writing	assignments,
			& King Shape	method	discussions
		¥	الزراعة والماسي	on the	
			العالمات الع	board,	
			فسع الدرانية	direct	
			الخطالة وهندية	dialogue	
				method	
			Med . a	A 1.	G1
	3 practical	A8:Solve the proble	A scientific visit	Auditory	Short
	3 practical	A8:Solve the proble	A scientific visit someone	Auditory methods,	Short exams,

					Bioch labora		•	method on the board, direct dialogue method		assignments, discussions
		11. Cours	e Evaluatio	n						
,	No.	Evaluation methods		Evaluation date (week)		Grade			elative eight%	
	1	Final theore report,	etical	week 15	5		7 theo 6 prac	retical tical	13	3%
	2	Short test (1	l) Quiz	a week	(3)		4 theo 2 prac	retical	69	%
	3	Midterm Ex	kam	week (9)))		_	oretical	15	5%
4	4	Short test (2	2) Quiz	week (1	2)		4theor	etical	69	%
	5	Final praction	cal exam	practica week	ıl exam	S	20		20)%
	6	Final theore exam	etical	theoreti week	cal exa	ms	40		4()%
		The Total		1			100		10	00%
Carle .	12. Learning and Teaching Resource Required textbooks (curricular books, if any) Main references Sources)					Dal Prin	Bioch nting an ali, Bas chemis	emistry, I nd Publish sil Kamel	Dar ning , 19	994, Basics of Al-Kutub for g, Mosul, Iraq 994, Basics of Kutub for g, Mosul,
jc	Recommended books and references (scientific journals, reports) Electronic References, Websites				ïc		- N - F - F	Principles Biochemis Robyt. J.F Biochemic Theory an	stry . L. of stry ., V cal nd	Vhite, B. J. Techniques Practice).
Е	lectro	nic References	, Websites				ld Health inistratio		on, I	Food and Drug



Dr. Yuosra Amer Ali



Afkar Yahya Ahmed

Chairman of the Scientific Committee

Head of the department

Prof. Dr. Jassim Mohammed Alwan

Prof. Dr. Asmaa Muhammad Adel