

Course Description Form

1. Course Name:					
Biochemistry					
2. Course Code:					
BIC204					
3. Semester / Year:					
Second semester (Spring) / 2024-2025					
4. Description Preparation Date:					
1/2/2025					
5. Available Attendance Forms:					
Presence					
6. Number of Credit Hours (Total) / Number of Units (Total)					
2 theoretical hours + 3 practical hours (75 hours) / 3.5 units					
7. Course administrator's name (mention all, if more than one name)					
Name: Dr.Yuosra Amer Ali Email: yuosra_amer@uomosul.edu.iq Name: Tamadhur turki khala Tamadhur.tu@uomosul.edu.iq					
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					
Theoretical: 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.			Practical: - Assigning group work to reveal leadership skills. Assigning tasks and reporting for each experiment.		
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	2theoretical 3 practical	Theory: a1: Understand the concept of cell biology and its components (general properties of the cell). Practical: b1: Understand laboratory safety procedures.	theoretical: The cell and its components. practical: applies rules And safety specifications in laboratories.	Auditory methods, writing method on t board, direct dialogue method	Short exams assignments, discussions Short exams assignments, discussions
2	2theoretical 3 practical	Theory: C1: Explain the nature of water, solutions, and pH the body. Practical: A1: Understand carbohydrates and their types.	theoretical: Water and pH practical: Classified Carbohydrates of kinds.	Auditory methods, writing method on t board, direct dialogue method	Short exams assignments, discussions
3	2theoretical 3 practical	Theory: A2: Understand the nature of carbohydrates and their biological and physiological functions. Practical: B2: Perform general carbohydrate tests	theoretical: Carbohydrates practical: Solubility test And the Mulch test	Auditory methods, writing method on t board, direct dialogue method	Short exams assignments, discussions
4	2theoretical 3 practical	Theory: A1: Understand derived monosaccharides and oligosaccharides. Practical: C2: Identify some types of carbohydrates.	theoretical: Classification of carbohydrates practical: the exams Carbohydrate reductionism	Auditory methods, writing method on t board, direct dialogue method	Short exams assignments, discussions



5	2theoretical 3 practical	Theory: C1: Explain the structure, function and classification of lipids. Practical: A1: Identify descriptive tests for carbohydrates.	theoretical: Fats practical: Hydrolysis of sucrose And iodine test And hydrolysis of starch With mineral acid	Auditory methods, writing method on t board, direct dialogue method	Short exams assignments, discussions
6	2theoretical 3 practical	Theoretical: A1: Identify complex (conjugated) lipids Practical: B1: Demonstrate skill in performing specific lipid tests	theoretical: Complex fats practical: Special tests With fat	Auditory methods, writing method on t board, direct dialogue method	Short exams assignments, discussions
7	2theoretical 3 practical	Theoretical: A2: Understand the most important lipid derivatives (saturated and unsaturated fatty acids). Practical: C1: Demonstrate the method of detecting glycerol	theoretical: Derived fats practical: Acrolein test To detect cholesterol	Auditory methods, writing method on t board, direct dialogue method	Short exams assignments, discussions
8	2theoretical 3 practical	Theoretical: A1: Identify the general properties of amino acids and the classification of amino acids. Practical: B1: Demonstrate skill in identifying buffer solutions.	theoretical: amino acids practical : pH	Auditory methods, writing method on t board, direct dialogue method	Short exams assignments, discussions
9	2theoretical 3 practical	Theoretical: A1: Identify	theoretical: Peptides	Auditory methods,	Short exams assignments,

		peptides and peptide bonds in proteins. Practical: B1: Demonstrate skill in performing general and descriptive tests for amino acids.	practical : General tests And the description of acids Amino	writing method on the board, direct dialogue method	discussions
10	2 theoretical 3 practical	Theory: A1: Identify proteins and their biological and physiological functions. Practical: A2: Understand general and descriptive tests for amino acids.	theoretical: Learn about the process of theoretical: Biological function of proteins practical : Detection of acids Amino containing Sulfur	Auditory methods, writing method on the board, direct dialogue method	Short exams assignments discussions
11	2 theoretical 3 practical	Theory: A1: Identify plasma proteins. Practical: B2: Perform the Millon test and the xanthoprotic test.	theoretical: Plasma proteins practical: Millon test And xanthoprotic test	Auditory methods, writing method on the board, direct dialogue method	Short exams assignments discussions
12	2 theoretical 3 practical	Theory: A1: Identify enzymes and their properties. Practical: A2: Understand descriptive tests for proteins.	theoretical: Enzymes practical: the exams Description of proteins	Auditory methods, writing method on the board, direct dialogue method	Short exams assignments discussions
13	2 theoretical 3 practical	Theory: C1: Explain vitamins and their classification. Practical:	theoretical: Vitamins practical: Biuret test	Auditory methods, writing method on the board, direct dialogue	Short exams assignments discussions

		B1: Perform the biuret test.		method	
14	2 theoretical 3 practical	Theory: C1: Explain mine elements and their classification. Practical: C2: Explain how proteins are precipitated by heavy metal salts.	theoretical: Metal elements practical: Precipitation of proteins With heavy metal salts	Auditory methods, writing method on the board, direct dialogue method	Short exams assignments, discussions
15	2 theoretical 3 practical	Theory: A1: Understand metabolism in the body. Practical: A2: Conduct a scientific visit to a biochemistry laboratory.	theoretical: Metabolism practical: A scientific visit to someone Biochemistry laboratories	Auditory methods, writing method on the board, direct dialogue method	Short exams assignments, discussions

11. Course Evaluation

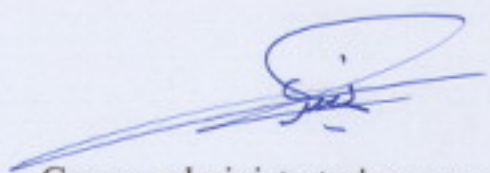
No.	Evaluation methods	Evaluation date (week)	Grade	Relative weight%
1	Final theoretical report,	week 15	7 theoretical 6 practical	13%
2	Short test (1) Quiz	a week (3)	4 theoretical 2 practical	6%
3	Midterm Exam	week (9)	10 theoretical 5 practical	15%
4	Short test (2) Quiz	week (12)	4 theoretical 2 practical	6%
5	Final practical exam	practical exams week	20	20%
6	Final theoretical exam	theoretical exams week	40	40%
	The Total		100	100%

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Dr. Dalali, Basil Kamel, 1994, Basics of Biochemistry, Dar Al-Kutub for Printing and Publishing, Mosul, Iraq
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Main references (sources)	Dalali, Basil Kamel, 1994, Basics of Biochemistry, Dar Al-Kutub for Printing and Publishing, Mosul, Iraq.
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> - Voet, D. Voet J.G . Biochemistry. - Nelson, D. L., Lehninger Principles of Biochemistry. - Robyt. J.F., White, B. J . Biochemical Techniques (Theory and Practice).
Electronic References, Websites	World Health Organization, Food and Drug Administration.



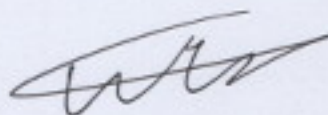
Course administrator's name :

Dr. Yuosra Amer Ali



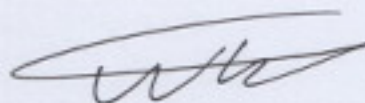
Practical part teacher :-

Tamadhur Turki khala



Head of Scientific council:-

Dr. Taha Mohammed Taki



Head of Department:-

Dr. Taha Mohammed Taki

