Course Description Form

1. Course Name:	
Biochemistry	
2. Course Code:	
BIC204	
3. Semester / Year:	
The first autumn semester 2024-2025	
4. Description Preparation Date:	
1/2/2025	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
Theoretically 2+3 practical / 3.5 unit	
7. Course administrator's name (mention all, if more than one name)	
Name: Dr. Yuosra Amer Ali Email: yuosra_amer@uomosul.edu.iq Afkar Yahya Ahmed	
8. Course Objectives	
Theoretical:	Practical:
Enabling the student to understand and comprehend wl is related to food compounds and their importance. Providing students with knowledge, teaching modern principles and methods in studying biochemical scienc and using modern technologies in practical study in laboratories.	Enabling the student to become familiar w the principles and modern methods of studying biochemical sciences as well as studying Synthesis of proteins, carbohydrates, and f 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 reve leadership skills. Assigning tasks and reporting for ea experiment.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2theoretical 3 practical	theoretical: Explains the conce of cell science and	theoretical: The cell and its components.	Auditory methods, writing	Short exams, assignments, discussions

		its components (general properties of the cell) practical: Safety in Laboratories	practical: applies rules And safety specifications in laboratories.	method on t board, direc dialogue method	Short exams, assignments, discussions
2	2theoretical 3 practical	theoretical: Explains the natur of water, solutions and pH in the body practical : Carbohydrates And its types.	theoretical: Water and pH practical: Classified Carbohydrates of kinds.	Auditory methods, writing method on t board, direc dialogue method	Short exams, assignments, discussions
3	2theoretical 3 practical	theoretical: He is familiar with the nature of carbohydrates and their biological an physiological functions. practical : the exams General carbohydrates	theoretical: Carbohydrates practical: Solubility test And the Mulch te	Auditory methods, writing method on t board, direc dialogue method	Short exams, assignments, discussions
4	2theoretical 3 practical	theoretical: Identify derived monosaccharides and oligosaccharides. practical: Tests Carbohydrates	theoretical: Classification of carbohydrates practical: the exams Carbohydrate reductionism	Auditory methods, writing method on t board, direc dialogue method	Short exams, assignments, discussions
5	2theoretical 3 practical	theoretical: Explains the structure, function and classification fats. practical: the exams Descriptive 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, direc dialogue method	Short exams, assignments, discussions
6	2theoretical 3 practical	theoretical: Recognizes compl (conjugated) lipids	theoretical: Complex fats practical:	Auditory methods, writing	Short exams, assignments, discussions

		practical: Fats	Special tests With fat	method on t board, direc dialogue method	
7	2theoretical 3 practical	theoretical: The most importar fats are derived fat acids (saturated ar unsaturated) practical: Tests To detect Clycerol	theoretical: Derived fats practical: Acrolein test To detect cholesterol	Auditory methods, writing method on t board, direc dialogue method	Short exams, assignments, discussions
8	2theoretical 3 practical	theoretical: Recognizes the general properties amino acids and th division of amino acids. practical: Structured solution	theoretical: amino acids practical : pH	Auditory methods, writing method on t board, direc dialogue method	Short exams, assignments, discussions
9	2theoretical 3 practical	theoretical: Understands peptides and pepti bonds in proteins. practical : amino acids	theoretical: Peptides practical : General tests And the descriptic of acids Amino	Auditory methods, writing method on t board, direc dialogue method	Short exams, assignments, discussions
10	2theoretical 3 practical	theoretical: Understands proteins and the biological and physiological functions of proteins. practical: amino acids	theoretical: Learn about the process of theoretical: Biological functic of proteins practical : Detection of acids Amino containing Sulfur	Auditory methods, writing method on t board, direc dialogue method	Short exams, assignments, discussions
11	2theoretical 3 practical	theoretical: Identifies plasma proteins practical: amino acids	theoretical: Plasma proteins practical: Mellon test And xanthoprotic test	Auditory methods, writing method on t board, direc	Short exams, assignments, discussions

				dialogue method	
12	2theoretical 3 practical	theoretical: Understands enzymes and their properties. practical : Proteins	theoretical: Enzymes practical: the exams Description of proteins	Auditory methods, writing method on t board, direc dialogue method	Short exams, assignments, discussions
13	2theoretical 3 practical	theoretical: Explains vitamins and their classification. practical : proteins n	theoretical: Vitamins practical: Biuret test	Auditory methods, writing method on t board, direc dialogue method	Short exams, assignments, discussions
14	2theoretical 3 practical	theoretical: Explains mineral elements and their classification. practical: Proteins	theoretical: Metal elements practical: Precipitation of proteins With heavy metal salts	Auditory methods, writing method on t board, direc dialogue method	Short exams, assignments, discussions
15	2theoretical 3 practical	theoretical: Describes the body metabolism. practical : Solve the problem	theoretical: Metabolism practical: A scientific visit t someone Biochemistry laboratories	Auditory methods, writing method on t board, direc 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)	4theoretical 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)	'o Dalali, Basil Kamel, 1994, Basics of ochemistry, Dar Al-Kutub for Printing .and Publishing, Mosul, Iraq
Main references (sources)	Dalali, Basil Kamel, 1994, Basics of Biochemistry, Dar Al-Kutub for Printi and Publishing, Mosul, Iraq.
Recommended books and references (scientific journals, reports...)	- 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.

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