

Republic of Iraq

The Ministry of Higher
Education

& Scientific Research

بسم الله الرحمن الرحيم



University: Diyala

College: Agriculture

Department: Animal Production

Stage: Second

Lecturer name: Elaf Abdul

wahab Shihab

Qualification: Master's degree

Place of work: Coll. Of Agriculture

Flow up of implementation celli pass play

Course Instructor	Elaf Abdul wahab Shihab Ahmed				
E-mail	elafshihab@uodiyala.edu.iq				
Title	Biochemistry				
Course Coordinator	First Course\ 2024-2025				
Course Objective	Introducing students to the basics of biochemistry according to the vocabulary of the biochemistry curriculum for second stage students				
Course Description	The curriculum items included introducing the science of biochemistry and its importance and studying (carbohydrates, lipids, proteins, enzymes, and nucleic acids)				
Textbook	1- Agricultural Biochemistry, written by (Dr. Ali Mohammed Hassan and Dr. Saad Khalil Shihab) 2- Internet				
Course Assessments	Term Tests	Laboratory	Quizzes	Project	Final Exam
	20%	15%	5%		60%
General Notes					

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week	Data	Topics Covered	Practical Part
1	1 st Week	introduction of biochemistry, the components of a living cell and their functions	Introduction and instructions
2	2 nd Week	carbohydrates -its definition -importance- classification (mono, oligo, poly-saccharides)	qualitative detection of carbohydrate (general detection-reducing and non-reducing sugars-reducing power-aldoses and ketoses-pentose and hexoses
3	3 rd Week	monosaccharides-isomerism-derivatives of monosaccharides -cyclic structure of monosaccharide	qualitative detection of disaccharides from monosaccharide reducing property test -iodine test
4	4 th Week	Oligo Saccharides-reducing and non-reducing sugars	qualitative detection of polysaccharides (general detection reducing property test-iodine test)
5	5 th Week	polysaccharides -homo and hetro-polys saccharides	hydrolysis of starch -detection of starch hydrolytic products
6	6 th Week	1 st Exam	1 st Exam
7	7 th Week	amino acids-classification -structure-some important reaction-properties of amino acids	detection of aromatic amino acid in protein
8	8 th Week	Proteins - their composition, structure, and divisions	detection of basic amino acid in protein
9	9 th Week	fatty acids classification -structures-some importance of fatty acids	protein precipitation –denaturation
10	10 th Week	simple lipids-fat and oils -waxes-fat index	2 nd Exam
11	11 th Week	Compound and derived lipids - their composition - their divisions	detection of lipids (saturated and unsaturated fatty acid -cupper acetate test -iodine test)
12	12 th Week	2 nd Exam	saponification and emulsification test
13	13 th Week	enzyme-definition -classification -mechanism action of enzyme-active and inactive enzyme-the effective factors on enzymes activity	3 rd Exam
14	14 th Week	nucleic acids-biological roles-nucleotides-function of nucleotide-structure-classification	General (carbohydrates and proteins)
15	15 th Week	3 rd Exam	General (carbohydrates and proteins)

Instructor Signature
Elaf Abdul wahab Shihab
15/1/2025

Dean Signature:
Prof. Dr.Raaed Ibrahim Khalil
15/1/2025