

Republic of Iraq
**The Ministry of Higher
Education
& Scientific Research**

بسم الله الرحمن الرحيم



University: Diyala
College: Agriculture
**Department: Horticulture and
landscaping**
Stage: Second
**Lecturer name: Eman Rahman
Mahdi**
Qualification: Msc
Place of work: Coll. of Agriculture

Flow up of implementation celli pass play

Course Instructor	Eman Rahman Mahdi				
E-mail	emanrahman@uodiyala.edu.iq				
Title	Biochemistry				
Course Coordinator	First				
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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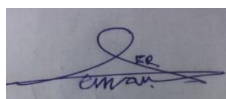


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week	Data	Topics Covered	Practical Part
1		introduction of biochemistry, the components of a living cell and their functions	Introduction and instructions
2		carbohydrates -its definition -importance-classification (mono,oligo,poly-saccharides)	qualitative detection of carbohydrate (general detection-reducing and non-reducing sugars-reducing power-aldoses and ketoses-pentoses and hexoses
3		monosaccharides-isomerism-derivatives of monosaccharides -cyclic structure of monosaccharide	qualitative detection of disaccharides from monosaccharide reducing property test - iodine test
4		oligosaccharides-reducing and non-reducing sugars	qualitative detection of polysaccharides (general detection reducing property test-iodine test)
5		polysaccharides -homo and hetro-polysaccharides	hydrolysis of starch -detection of starch hydrolytic products
6		1st exam	the first exam and unknown
7		amino acids-classification -structure-some important reaction-properties of amino acids	detection of aromatic amino acid in protein
8		Proteins - their composition, structure, and divisions	detection of basic amino acid in protein
9		fatty acids classification -structures-some importance of fatty acids	protein precipitation –denaturation
10		simple lipids-fat and oils -waxes-fat index	2nd exam +unknown
11		Compound and derived lipids - their composition - their divisions	detection of lipids (saturated and unsaturated fatty acid -copper acetate test -iodine test)

12		2nd exam	saponification and emulsification test
13		enzyme-definition -classification - mechanism action of enzyme-active and inactive enzyme-the effective factors on enzymes activity	3rd exam
14		nucleic acids-biological roles-nucleotides- function of nucleotide-structure- classification	General (carbohydrates and proteins)
15		3rd exam	General (carbohydrates and proteins)



Teacher's signature
Dr. Nisreen Mohammed Hathal
15/1/2025



Dean'ssignature
Prof. Dr. Raaed Ibrahim Khali
15/1/2025