

Course Description Form

1. Course Name:	
Biochemistry	
2. Course Code:	
AGPP24_F3131	
3. Semester / Year:	
First semester (fall) 2023-2024	
4. Description Preparation Date:	
1/2/2024	
5. Available Attendance Forms:	
Presence	
6. Number of Credit Hours (Total) / Number of Units (Total)	
75 hours / 3.5 units	
7. Course administrator's name (mention all, if more than one name)	
Name: Dr.Arkam Mohamad Alomary and Afkar Yahya Ahmed	
8. Course Objectives	
<p>Theoretical</p> <ul style="list-style-type: none"> - To enable students to know the importance of the basic principles of Biochemistry - The importance of the biochemistry program in everyday life and the economic and medical importance of this program _ Finding the best means to explain the proposed program and identify the characteristics of the devices accurately _ How to use modern technology and technologic machines to improve and develop the proposed program _ Enable the student to apply and employ this program and use it as one of the most important criteria for future employment in the communit _ Finding civil and governmental organizations or specializationsWho is interested in this program and how to connect or recruit students <p>By understanding the concepts of Life Technologie</p>	<p>Practical</p> <ul style="list-style-type: none"> - Enable the student to get acquainted with the principles and methods recent developments in the study of life chemistry Sciences - Study of carbohydrate synthesis Fats, proteins and all the tests that Conducted and disclosed <div style="text-align: center; margin-top: 20px;"> </div>
9. Teaching and Learning Strategies	
<p>Theoretical</p> <ul style="list-style-type: none"> - Interactive lecture . -dialogue and discussion . 	<p>Practical</p> <ul style="list-style-type: none"> Interactive lecture . -dialogue and discussion .

-Assignment of tasks and report

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- Practical tests conducted in the laboratory.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2Theoretical 3Practical	THEORETICAL b1 Shows the concept of water And its relation to properties Chemist and Physicist PRACTICAL b1 Applies rules Safety specifications in Laboratories	THEORETICAL Water PRACTICAL Safety in laboratories	THEORETICAL Lectures Audio media Reports and other methods PRACTICAL Follow Instructions Found in laborator	discussions
2	2Theoretical 3Practical	THEORETICAL c1 Shows the most important differences in composition Carbohydrate chemis PRACTICAL a1 Classify carbohydrates Types and type	THEORETICAL Carbohydrates PRACTICAL Carbohydrates and th types	THEORETICAL Lectures Audio media Reports and metho Other PRACTICAL Procedure Tests Operation	reports Quiz discussions
3	2Theoretical 3Practical	THEORETICAL b2 Familiar with the influencing factors For amino acids PRACTICAL b2 Solubility test is applied and the mulch test	THEORETICAL Amino acids: And peptides PRACTICAL The tests General principles of carbohydrates	THEORETICAL Lectures Audio media Reports and metho Other PRACTICAL Procedure Tests Operation	reports Quiz discussions
4	2Theoretical 3Practical	THEORETICAL a1 Recognizes the mechanics of the acti of proteins inside the body	THEORETICAL Protein PRACTICAL	THEORETICAL Lectures Audio media Reports and metho Other	Exams reports discussions

		PRACTICAL a2 Recognizes carbohydrate reductive tests	The test Carbohydrates	PRACTICAL Procedure Tests Operation	
5	2Theoretical 3Practical	THEORETICAL c2 It shows the changes that you get into Felts PRACTICAL b3 Tests types of carbohydrate description	Theoretical lipidis PRACTICAL Hydrolysis of sucrose and iodine testing and hydrolysis of starch with mineral acids	THEORETICAL Lectures Audio media Reports and metho Other PRACTICAL Procedure Tests Operation	reports Quiz discussions
6	2Theoretical 3Practical	THEORETICAL c3 Suggests a suitable method For the action of enzymes PRACTICAL b4 Performs lipid-specific tests	THEORETICAL Enzymes PRACTICAL Special tests With fat	THEORETICAL Lectures Audio media Reports and metho Other PRACTICAL Procedure Tests Operation	Exams reports Quiz discussions
7	2Theoretical 3Practical	THEORETICAL c4 Notice the changes That you get into the main article and his work with enzymes PRACTICAL a3 Selects fat constants	THEORETICAL Basic material PRACTICAL Basic material Acrolein testing For the detection of glycerol	THEORETICAL Lectures Audio media Reports and metho Other PRACTICAL Procedure Tests Operation	reports Quiz discussions
8	2Theoretical 3Practical	THEORETICAL a1 Recognize the most important Changes that enzymes PRACTICAL a2 Understands the pH	THEORETICAL Mechanical work Enzymes PRACTICAL PH is the pH value	THEORETICAL Lectures Audio media Reports and metho Other PRACTICAL Procedure Tests Operation	Exams reports Quiz discussions

9	2Theoretical 3Practical	THEORETICAL b2 Judging the efficiency of the work Nucleic acids Inside the body PRACTICAL a2 Specifies general and Descriptive Tests for amino acids	THEORETICAL Nucleic acids PRACTICAL General tests Description distribution of Acids Aminism	THEORETICAL Lectures Audio media Reports and metho Other PRACTICAL Procedure Tests Operation	Exams reports Quiz discussions
10	2Theoretical 3Practical	THEORETICAL a2 Identify the most important materials Chemical constituent of DNA PRACTICAL b2 Explains the methods of detection of sulfur-containing amino acids	THEORETICAL DNA PRACTICAL Acid detection Amino acids containi Sulfur	THEORETICAL Lectures Audio media Reports and metho Other PRACTICAL Procedure Tests Operation	reports Quiz discussions
11	2Theoretical 3Practical	THEORETICAL b4 Mastered the ingredients The main types of RNA nucleic acids and their types PRACTICAL a6 He tries the Mello test and the xanthoproteic test	THEORETICAL RNA PRACTICAL Tests Amino acids:	THEORETICAL Lectures Audio media Reports and metho Other PRACTICAL Procedure Tests Operation	reports Quiz discussions
12	2Theoretical 3Practical	THEORETICAL e1 Defines the components of Basic nucleosides PRACTICAL c1 Recall Descriptive Tests for proteins	THEORETICAL Nucleosides PRACTICAL The tests Description distribution of protein	THEORETICAL Lectures Audio media Reports and metho Other PRACTICAL Procedure Tests Operation	Exams reports Quiz discussions
13	2Theoretical	THEORETICAL	THEORETICAL	THEORETICAL	Exams

	3Practical	a2 Recognize the most important Biological qualities For nucleic acids PRACTICAL a2 The puritanical test is called	Biological qualities For nucleic acids PRACTICAL The purite test	Lectures Audio media Reports and metho Other PRACTICAL Procedure Tests Operation	reports Quiz discussions
14	2Theoretical 3Practical	THEORETICAL b5 Familiar with the sources of composition and vitamin damage PRACTICAL a3 Characterizes the precipitation of prote with salts of heavy metals	THEORETICAL Vitamins PRACTICAL Precipitation of prote Salts of heavy metals	THEORETICAL Lectures Audio media Reports and metho Other PRACTICAL Procedure Tests Operation	Exams reports Quiz discussions
15	2Theoretical 3Practical	b5 Solves a problem	A scientific visit to one Life chemistry laboratories	Getting to know One-to-One devices and tools f laboratories Life chemistry	Write a report on devices and tests that were identified during scientific visit

11. Course Evaluation

t	Evaluation methods	Evaluation date (one week)	Grade	Relative weight %
1	Final theoretical report + theoretical practical reports	Theoretical 15 weeks Practical 1-15 weeks	7theoretical + 6 practical	13%
2	Short test 1 Quiz	3 weeks	4theoretical + 2practical	6%
3	- Semester exam 1 (theoretical and practical) - Semester exam 2 (theoretical and practical)	5 weeks 10 weeks	10theoretical + 5 practical	15%
4	Short test 2 Quiz	12 weeks	4 theoretical + 2 practical	6%
5	Final practical test	practical exams week	20	20%
6	Final theoretical exam	theoretical exams week	40	40%
			100	100

12. Learning and Teaching Resources

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جامعة المدخل
كلية الزراعة والغابات
قسم وقاية النباتات

<p>Theoretica</p> <p>Required textbooks (curricular books, if any)</p> <p>Theoretical approach to the course of principles</p> <p>Biotechnology / counter: D. Faten</p> <p>Dhawi Al-Muhanna/ PhD in philosophy</p> <p>Biochemistry science</p> <p>Department of Molecular Biology and Biotechnology</p>	<p>Practical</p> <p>The basics of Biochemistry</p> <p>Basil Kamel Al-Dlaly</p>
<p>Main references (sources)</p> <p>A library , scientific sites on the internet, access lectures for other Iraqi universities.</p>	<p>Basics of biochemistry by Basil Kamel Al-Dlaly</p>
<p>Electronic References, Websites</p>	<p>The World Health Organization(WHO) , the US Food and drug organization (USFDA)</p>



مدرس المادة العملي
م.م. أفكار يحيى أحمد



رئيس قسم وقاية النباتات
أ.م.د. فراس كاظم الجبوري



مدرس المادة النظري
: أ.د. أرقام محمد أزهر العمري



رئيس اللجنة العلمية
أ.د. جهينة ادريس محمد

