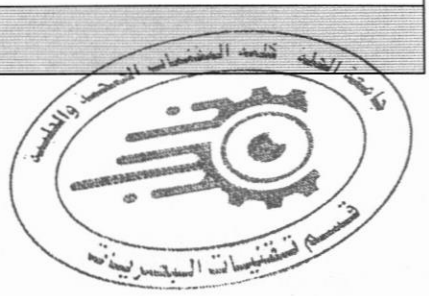
Course Description Form

1. Course Name: General chemistry
2. Course Code: Hpht61104
3. Semester / Year: Semester
4. Description Preparation Date: 27/3/2024
5. Available Attendance Forms: Weekly
6. Number of Credit Hours (Total) / Number of Units (Total):60
7. Course administrator's name (mention all, if more than one name)
Name: Basma jawad ameen Email: alamedybasma@gmail.com
8. Course Objectives

Course Objectives	1. To introduce the student to the science of chemistry 2. how to deal with chemical materials 3. to detect and separate materials and prepare standard materials 4. skills for developing Algorithmic (math) problem solving 5. Concept analysis and construction 6. Writing objective reports and statements 7. Use of laboratory equipment/safety
9. Teaching and Learning Strategies	



Strategy	1- lectures 2- Illustrations such as video 3- Discussion

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5		The atom • molecular structure • electronically distribution • Chemical bonding	Lecture& PowerPoint	Quiz
2	5		Liquid mixture, • Buffer solutions-types	Lecture& PowerPoint	Quiz
3	5		Quantitative & qualitative analysis methods.	Lecture& PowerPoint	Quiz
4	5		Molar & normal concentrations & method. Problems & discussion.	Lecture& PowerPoint	Quiz
5	5		Acids, base –examples.	Lecture& PowerPoint	Quiz
6	5		Oxidation & reduction.	Lecture& PowerPoint	Quiz
7	5		Principles of organic chemistry	Lecture& PowerPoint	Quiz
8	5		Alcohols – Ketones - Aldehydes - Carboxylic acids classification & properties.	Lecture& PowerPoint	Quiz
9	5		Aromatic hydrocarbons Carbohydrates – classification & reactions.	Lecture& PowerPoint	Quiz
10	5		Amines aryl amines	Lecture& PowerPoint	Quiz



11	5		Introduction to biochemistry, and the machinery of life	Lecture& PowerPoint	Quiz
12	5		Biochemistry and nutrition.	Lecture& PowerPoint	Quiz
13	5		Sugars, starches and fibers	Lecture& PowerPoint	Quiz
14	5		Isomers, classifications	Lecture& PowerPoint	Quiz
15	5		Electrolytes, electrochemistry.	Lecture& PowerPoint	Quiz

11. Course Evaluation

quiz (3%)- 1

Monthly exams (30%) and final exams (60%)-2(

Seminars (5%) - 3

Attendance (2%)-4

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Lecture
Main references (sources)	Solutions for General Chemistry: Principles and Modern Applications 11th Ralph H. Petrucci, F. Geoffrey Herring, Jeffry D. Madura, Carey Bissonnette Solutions for CHEMISTRY: The Molecular Nature of Matter and Change 7th Martin S. Silberberg, Patricia G. Amateis
Recommended books and references (scientific journals, reports...)	Scientific research
Electronic References, Websites	

Yasmeen

د. ياسمين رياض

رئيس القسم

م.م بسمة جواد

العميد

زينب علي المبارك

جامعة الحلة كلية التقنيات الصحية والطبية

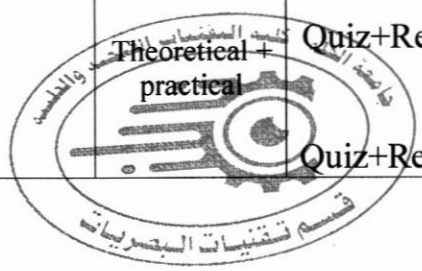
قسم تقنيات البصريات

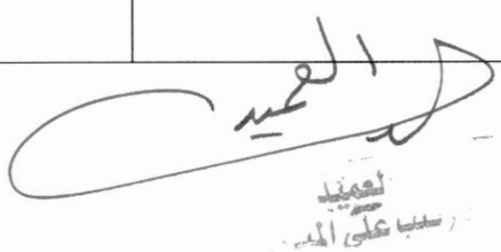
Course Description Form

1. Course Name: Biochemistry
2. Course Code: Hopt71202
Optometry
3. Semester : second Semester
4. Description Preparation Date:
2026/4/4
5. Available Attendance Forms: Theoretical- practical
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours
7. Course administrator's name (mention all, if more than one name)
Assist .lecturer ; Hussein turkey Hilal
8. Course Objectives
Course Objectives .General Objective: To learn the fundamentals of chemistry and chemical structures Specific Objective: To learn about biochemistry and the chemical components of the human body.
9. Teaching and Learning Strategies
Strate A- Cognitive Objectives -Understand basic concepts of Biochemistry and biomolecules. -Learn metabolic pathways (theoretical and practical.(-Link biochemical knowledge to clinical applications and lab tests. B- Skills Objectives -Use videos and lab experiments to enhance understanding. -Interpret laboratory results. - Analyze clinical cases (e.g., diabetes, enzyme disorders).
10. Course Structure

We ek	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**

1	2 theoretical+ 2practical	Carbohydrates: classification, origin, and optical activity	Theoretical+ practical	Quiz+Reports
2	2 theoretical + 2 practical	Monosaccharides, Disaccharides, and Polysaccharides	Theoretical+ practical	Quiz+Reports
3	2 theoretical + 2 practical	Hydrolysis of Polysaccharides by (saliva and acid(	Theoretical+ practical	Quiz+Reports
4	2 theoretical + 2 practical	Metabolism of Carbohydrate	Theoretical+ practical	Quiz+Reports
5	2 theoretical + 2 practical	Metabolic cells (glycolysis(	Theoretical+ practical	Quiz+Reports
6	2 theoretical + 2 practical	Proteins: sources, function, classification	Theoretical+ practical	Quiz+Reports
7	2 theoretical + 2 practical	Problems and questions	Theoretical+ practical	Quiz+Reports
8	2 theoretical + 2 practical	Peptide (classification, properties(		
9	2 theoretical + 2 practical	Role of protein in the cornea, lens, and retina	Theoretical + Practical	Quiz+Reports
10	2 theoretical + 2 practical	Lipid: properties, classification	Theoretical + practical	Quiz+Reports
11	2 theoretical + 2 practical	Lipids in the retina		
12	2 theoretical + 2 practical	Vitamins	Theoretical + practical	Quiz+Reports
13	2 theoretical + 2 practical	Hormones	Theoretical + practical	Quiz+Reports
14				Quiz+Reports





15	2 theoretical + 2 practical 2 theoretical + 2 practical		Theoretical + practical Theoretical + practical	Quiz+Reports

11.Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

35monthly exam

5reports + Quiz

60 Final exam

12.Learning and Teaching Resources

Required textbooks (curricular books, any)	-Biochemistry - Harper's Biochemistry
Main references (sources)	-Lehninger Biochemistry - Lippincott Biochemistry
Recommended books and references (scientific journals, reports...)	- Scientific journals -Research articles - Online resources
Learning Methods	-Lectures and discussions -Notes and printed materials - Individual and group learning
Electronic References, Websites	The Internet, YouTube, and e-book

Yasmeen

د. ياسمين رياض

رئيس القسم

م.م حسين تركي هلال

جامعة الحلة . كلية التقنيات الصحية والطبية

قسم تقنيات البحريات

العميد

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