

University of Baghdad
College of Nursing

Course Syllabus
Biochemistry
2022/2023

**This syllabus is subject to change. Changes will be announced to students.
It is the responsibility of the student to comply with any changes.**

**Created: February 20, 2023 by ©Dr.Noor Alhuda Khaleel Ibrahim
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General Information & Policies

Course Number and Title: Biochemistry

Number of Credit Hours: (3) credits

Times & Places: Sunday, Thursday @8:30 AM-11:30 AM , Hall (1)

Prerequisites: None

Course Description: A one semester course covering the fundamentals of biochemistry. Topics covered include: the structure and function of important biomolecules such as carbohydrates, lipids, amino acids, proteins and nucleic acids; enzyme and the use of cofactors & coenzymes; and metabolic pathways including glycolysis, TCA, electron-transport system, fatty acid and amino acid pathways. Laboratory work includes current biochemical laboratory techniques such as chromatography and electrophoresis, application of specific topics described above, and analysis of data from laboratory experiments.

Teaching Methods: Lectures, handouts, discussions, & assignments. Google Classroom shall be used for online discussion (Class Code: khugakd)

Evaluation Methods: Unit exam(s), worksheet exercises, & written assignments.

Faculty, Contact Information, & Office Hours:

Dr.Noor Alhuda Khaleel Ibrahim , Room No.1 in Basic sciencesDepartment- College of Nursing- University of Baghdad

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Office hours ► See my weekly schedule!

Required Textbook(s) and Other Materials:

1- Lippincott Biochemistry 6th EditionMudambi, S. R. (2007). 2-Clinical Chemistry: Principles, Techniques, Correlations 8th Edition by Michael Bishop ISBN-13:9781496335586 (978-1-4963-3558-6)ISBN-10:1496335589 (1-4963-3558-9).

Academic Dishonesty: Academic honesty is required in all aspects of a student's relationship with the university. **Students are advised that cheating are not tolerated.** If that happens, the student shall earn zero and be under the legal circumstances.

Course Objectives

By the completion of this course the student will be able to:

The biochemistry course is designed to:

- Introduce the nursing student to clinical distinguish between carbohydrate, proteins, and lipids.
- Understand the role of hormones and enzymes in the metabolism.
- Understand the metabolic reactions pathways in the body, and the metabolic disorders or diseases that may accompany them

Course Requirements

To complete the course successfully, the student must:

1. Adhere to the policies stated in this syllabus and printed in the *College of Nursing Student Handbook*.
2. Complete and submit each assignment by the due date and time. Failure to do so without prior permission will result in a **loss of 5%** of the points possible for the assignment per school day late.
4. Earn a grade of **50% or higher**. The aforementioned grade in NURS courses **is the minimum passing grade at the undergraduate level**.
5. Attend classes! Based on *The Student Guideline*, the student shall be marked “failure” if (s)he absents 10% of the total hours.

Evaluation & Grading

Distribution of Points:

Requirements	Possible Points
Four assignments*	5% for each assignment=10% (See Appendix A)
The midterm exam (2)	20%
Practical exam	10%
The total of 40% before the final exam.	
The Final exam	60%
Total	100%

Course Schedule and activities

Week	Date	Topics Covered	Lab. Assignment
1	27\11\2022	Chemical safety • -Chemical Safety definition • -Chemical Terrorism • -Chemical security • -Hazardous Material (HM) • -Hazardous waste (HW) -ID Hazardous - Hazardous material handling •	<ul style="list-style-type: none"> • Lab safety • Identificat ion of hazards • Health hazards on a chemicals label • Electric hazards • Fire hazards • Biological hazards
2	4/12/2022	Fundamentals of biochemistry •	<ul style="list-style-type: none"> • lab equipment and spectrophotome ter
3	11/12/2022	Biochemistry of Carbohydrate (digestion ,absorption)	Blood drawing and separation
4	18/12/2022	Metabolism of Carbohydrate	estimation of Glucose in the blood
5	25/12/2022	Metabolism of Carbohydrate	estimation of cholesterol in the blood
6	8/1/2023	Biochemistry of Lipids (Fats digestion ,absorption)	estimation of triglyceride in the blood
7	15/1/2023	Metabolism of lipids	estimation of HDL in the blood
7	22/1/2023	Metabolism of lipids	estimation of total protein in the blood
8	29/1/2023	Examination 1	Examination 1
9	5/2/2023	Proteins biochemistry (digestion • ,absorption)	Separation protein by electrophoreses

10	12/2/2023	(Protein metabolism)	estimation of urea in the blood
11	19/2/2023	(Protein metabolism)	estimation of creatinine in the blood
12	26/2/2023	Enzymes	estimation of uric acid in the blood
13	5/3/2023	Enzymes	estimation of ALP & AST activity in the blood
14	12/3/2023	Nucleic acid and Metabolism of Nucleic acid	estimation of bilirubin in the blood
15	19/3/2023	Examination 2	Examination 2

Appendix A. Grading Rubric for Assignments (four assignments)

	Points Possible	Points Earned
Assignments MUST be written academically, clear, professional, without grammar or spelling mistakes	2	
All the requirements in the assignment have been met	2	
Assignments indicate thoughtful consideration of questions posed including examples from student's own experiences (when appropriate)	1	
Points for each discussion	5*2	
Total Points	10	

Appendix B. Grading Rubric for the Main Paper

Grading Criteria	Possible Points
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estimation of Glucose in the blood estimation of cholesterol in the blood estimation of triglyceride in the blood estimation of HDL in the blood estimation of total protein in the blood	4
Separation protein by electrophoreses	2
estimation of urea in the blood estimation of creatinine in the blood estimation of uric acid in the blood estimation of ALP &AST activity in the blood estimation of bilirubin in the blood	4
	10