



Jordan University of Science and Technology
Faculty of Science & Arts
Chemistry Department

CHEM262 Biochemistry

First Semester 2017-2018

Course Catalog

3 Credit Hours. This course deals with structure and properties of biomolecules, such as amino acids, proteins, carbohydrates, lipids, and nucleic acids. The focus of this course will be on the relationship between protein structure and its biological function, generation and storage of metabolic energy, main metabolic pathways and their key steps. In addition, the role of phospholipids in determining the properties of biological membranes and their function will be discussed

Text Book

Title	ESSENTIAL BIOCHEMISTRY
Author(s)	C.W. Pratt and K. Cornely
Edition	3rd Edition
Short Name	BIOCHEMISTRY
Other Information	Publisher: John Wiley and Sons, Inc., USA.

Course References

Instructor

Name	Dr. Ayat Bani Rashaid
Office Location	-
Office Hours	Sun : 10:00 - 11:00 Sun : 14:15 - 15:15 Mon : 11:30 - 12:30 Mon : 13:30 - 14:30 Tue : 11:00 - 12:00 Thu : 09:00 - 10:00
Email	ahbanirashaid@just.edu.jo

Class Schedule & Room

Section 1:

Lecture Time: Sun, Tue, Thu : 10:30 - 11:30

Room: NB57

Prerequisites

Line Number	Course Name	Prerequisite Type
931030	BIO103 General Biology	Prerequisite / Study
912120	CHEM212 Organic Chemistry (2)	Prerequisite / Study

Tentative List of Topics Covered

Weeks	Topic	References
Week 1	Aqueous Chemistry	
Week 2	Protein Structure	
Week 3	Protein Structure	
Week 4	How Enzymes Work?	
Week 5	Enzyme Kinetics and Inhibition	
Week 6	Lipids Membranes	
Week 7	Membrane Transport	
Week 8	Carbohydrates	
Week 9	Metabolism and Bioenergetics	
Week 10	Glucose Metabolism	
Week 11	The Citric Acid Cycle	
Week 12	Electron Transport and Oxidative Phosphorylation	
Week 13	Lipid Metabolism	

Mapping of Course Objectives to Program Student Outcomes¹**Assessment method**

To learn the structure and functions of proteins (amino acids, enzyme kinetics and inhibitors) [1a, 1e]	
To study the various properties of water as a biological solvent. [1a]	
To study the structure and function of lipids and carbohydrates macro molecules [1a, 1e]	
To study the metabolism of macro-molecules (gluconeogenesis, glycolysis, citric acid cycle, electron transport and oxidative phosphorylation) [1a, 1e]	

Relationship to Program Student Outcomes (Out of 100%)										
a	b	c	d	e	f	g	h	i	j	k
55				45						

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