Course Specification
(Bachelor)

Course Title:	GENERAL BIOCHEMISTRY
Course Code:	HLT 201
Program:	Bachelor Program
Department:	General Courses
College:	Nursing and Health sciences
Institution:	Jazan University
Version:	2025
Last Revision Date:	09/09/2025

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (2)					
2. Course type					
A.	☐University	☒ College	☐Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (3rd &4th Levels/ 2nd Year)					
4. Course General Description:					

1. **Introduction to Biochemistry – definition, scope, and relationship with other sciences.**
2. Importance of Water **as a universal solvent, medium for biochemical reactions, temperature regulation, and maintaining pH and homeostasis.**
3. **The course will prepare the students to understand the structure, properties, and functions of biological macromolecules (carbohydrates, proteins, lipids and nucleic acids).**
4. **Nomenclatures of enzymes and its functions and role in chemical reactions.**
5. **Study of functions of minerals and vitamins in the body.**
6. **Introduction to hormones and its functions.**
7. **Overview on bioenergetics and metabolism**

5. Pre-requirements for this course (if any)**:**

6. Co-requisites for this course (if any)**:**

7. Course Main Objective(s):

1. **Define macromolecule types and functions.**
2. **Understand the macromolecules structures.**
3. **List the actions of enzymes and factors affecting them.**
4. **Recall the main function and deficiency syndromes of vitamins and minerals.**

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	30	100

No	Mode of Instruction	Contact Hours	Percentage
2	E-learning		
3	Hybrid • Traditional classroom • E-learning		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	30
2.	**Laboratory/Studio**	
3.	**Field**	
4.	**Tutorial**	
5.	**Others (specify)**	
Total		30

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Recall the theoretical knowledge related to basic biochemistry	**K1**	Classroom lectures. Group discussions tutorial	Multiple choice questions, matching, filling the blanks, short questions
1.2	Describe the diseases due to macromolecules, vitamins minerals, enzyme, and hormone.	**K1**	Classroom lectures. Group discussions tutorial	Multiple choice questions, matching
1.3	List the name and functions of vitamins, minerals, and hormones	**K3**	Classroom lectures. Group discussions tutorial	Multiple choice questions, matching, filling the blanks, short questions
2.0	**Skills**			

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
2.1	Demonstrate the comparison between different macromolecules and their main biochemical functions	**S1**	Classroom lectures, Group discussion tutorial	Tables of comparisons Assignments & HomeWorks
2.2				
...				
3.0	**Values, autonomy, and responsibility**			
3.1	Enhance responsibility towards the goals and objective of college and university	**V1**	Group discussions Small group work	Individual observation by continuous assessment sheet
3.2				
...				

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction to biochemistry	2
2.	Cellular organelles	2
3.	Acid base balance / Buffers	2
4.	Carbohydrates structure and function	4
5.	Amino Acids & Proteins structure and function	4
6.	Introduction to Enzymes	4
7.	Lipids structure and function	4
8.	Nucleic acids structure and function	2
9.	Introduction to vitamins	2
10.	Introduction to hormones	2
11.	Introduction to minerals	1
12.	Introduction to metabolism	1
Total		**30**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quiz(Short questions)	4th	5%
2.	Mid-term theory exam	6th	30%
3.	Presentation	13th	10%
4.	Final theory exam	15th	50%
5.	Attendance	All lectures weeks	5%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Harpers Biochemistry. R.K Murray. 1996 Essentials of Biochemistry second Edition2017 Leininger Principles of Biochemistry Lippincott's Illustrated Reviews of Biochemistry
Supportive References	
Electronic Materials	Saudi Digital Library (SDL)
Other Learning Materials	Blackboard software

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classrooms
Technology equipment (projector, smart board, software)	Data show, Smart Screen, Blackboard software
Other equipment (depending on the nature of the specialty)	

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Direct
Effectiveness of Students assessment	Faculty	Indirect

Assessment Areas/Issues	Assessor	Assessment Methods
Quality of learning resources	Program Leaders	Indirect
The extent to which CLOs have been achieved		
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	
REFERENCE NO.	
DATE	