Course Specifications

General Information

Course name	Introduction to Biochemistry
Course number	BIOL2303
Faculty	
Department	
Course type	Major Needs
Course level	2
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - To know the structure and importance of chemical functional groups
2 - To realize the importance of studying biochemistry and its branches
3 - To study the major constituents of cells
4 - To know how biochemical reactions take place

Course Contents

1 - Introduction to biochemistry, similarities and differences between all livings
2 - Functional groups in chemistry, and major constituents of cells in E.coli
3 - Structure and function of water as a universal solvent
4 - Structure and function of carbohydrates
5 - Structure and function of proteins, 1ry, 2ry, 3ry, and quaternary structure of proteins
6 - Amino acids, classification, structure, isoelectric point
7 - Buffer action, amphoterism of amino acids, diseases related to wrong translation of amino acids, Haemoglobine
8 - Lipids, classification, general properties, function, fatty acids
9 - Saturated, unsaturated, essential, and non essential fatty acids, steroids
10 - Cholesterol, structure and function of steroid hormones
11 - Enzymes as biochemical catalysts, Michaelis-Menten equation
12 - Some diseases caused by enzyme deficiency
13 - Enzyme inhibitors

Students Assessment

Assessment Method	TIME	MARKS
First hour exam	60minutes	20
Second hour exam	60minutes	20
Attendence		10
Final exam	120minutes	50

Books and References

Recommended books	Principles of biochemistry, 7th edition, Smith et al., McGraw- Hill
	Principles of biochemistry, Lehninger
	Biochemistry, 5th edition, Campbell, M.K., Farrell, S.O. (2006)