جامعة الحكمة، إلورن–نيجيريا

Al-Hikmah University, Ilorin – Nigeria

Adewole Housing Estate, Adeta Road, PMB 1601, Ilorin, Kwara State

FACULTY OF NATURAL AND APPLIED SCIENCES
DEPARTMENT OF BIOLOGICAL SCIENCES
B.Sc. BIOCHEMISTRY PROGRAMME
2019/2020 ACADEMIC SESSION
B. Sc. BIOCHEMISTRY PROGRAMME
COURSE OUTLINE FOR

COURSE CODE: BCH 202
COURSE TITLE: INTRODUCTION TO PHYSICAL BIOCHEMISTRY
CREDIT UNIT: 3
26 LECTURE PERIODS: Mondays, 11 am – 1 pm; Wednesdays 3 – 4 pm
STUDENTS SHOULD NOTE THAT AFTER EVERY TOPIC THERE SHALL BE A SHORT CONTINUOUS ASSESSMENT TEST ON GOOGLE CLASSROOM PLATFORM

LECTURE PERIOD	DATE	TOPIC	COURSE LECTURER
1	24th February, 2020	Water • Physical Properties • Structure of water molecules • As Universal Solvent	Dr. Lambe, M.O.
2	26th February, 2020	Water • Weak Interactions in Aqueous Solutions • Van der Waals Interactions	Dr. Lambe, M.O.
3	2nd March, 2020	Solutions • Definition • Types/forms and their preparations	Dr. Lambe, M.O.
4	4th March, 2020	Solutions • Forms of Expressing Solution Concentration • Inter- conversion of the various form of Solution Concentration Expression • Solution Preparation	Dr. Lambe, M.O.
5	9th March, 2020	pH and Buffer • Ionization of water, weak acids and weak bases • pH Scale • Bronsted-Lowry Concept of Acid and Base	Dr. Lambe, M.O.
6	11th March, 2020	pH and Buffer • Titration of a weak acid by a strong base • Henderson-Hasselbach Equation	Dr. Lambe, M.O.
7	16th	Buffer and Biological Buffer Systems	Dr. Lambe, M.O.

	March, 2020	• Henderson-Hasselbach Equation • The Phosphate Buffer System • The Bicarbonate Buffer System	
8	18th March, 2020	Biological Buffer Systems • The Protein Buffer System • The Amino acids Buffer System • The Heamogblobin Buffer System	Dr. Lambe, M.O.
9	23rd March, 2020	Donnan equilibrium - Definition and Characteristic features - Assumptions, Calculations and Applications	Mr. Balogun, A.
10	25th March, 2020	Donnan equilibrium - Definition and Characteristic features - Assumptions, Calculations and Applications	Mr. Balogun, A.
11	30th March, 2020	Chemical Kinetics - Definition and Characteristic features - Rate law of Reaction orders	Mr. Balogun, A.
12	1st April, 2020	Chemical Kinetics - Integrated Rate Laws: Concentration Changes over Time - Reaction Half-Life of Reaction orders	Mr. Balogun, A.
13	6th April, 2020	Chemical Kinetics - Reaction Half-Life of Reaction orders - The Effect of Temperature on the Rate Constant and the Rate	Mr. Balogun, A.
14	8th April, 2020	Chemical Equilibrium - Definition and Basic concept - Features of Biochemical reactions	Mr. Balogun, A.
15	13th April, 2020	Applied Thermodynamics - Basic concepts of thermodynamics - Laws of thermodynamics	Mr. Balogun, A.
16	15th April, 2020	Applied Thermodynamics - Free energy and equilibrium - temperature dependence of equilibrium constant	Mr. Balogun, A.
17	20th April, 2020	Redox reactions - Basic concepts - free energy changes in redox reactions	Mr. Balogun, A.
18	22nd April, 2020	Redox reactions - Basic concepts - free energy changes in redox reactions	Mr. Balogun, A.
19	27th April, 2020	Electrochemical cells - Half-cell electrode potentials - Derivation and Applications of Nernst equation	Mr. Balogun, A.
20	29th April, 2020	Electrochemical cells - Half-cell electrode potentials - Derivation and Applications of Nernst equation	Mr. Balogun, A.

21	4th May, 2020	Final C.A. Test	
22	6th May, 2020	Final C.A. Test	
23	11th May, 2020	Final C.A. Test	
24	13th May, 2020	Final C.A. Test	
25	18th May, 2020	Revision Week	
26	20th May, 2020	Revision Week	