

UNDERGRADUATE PROGRAMMES

BSc. Biochemistry Level I

First Semester (15 weeks)

	Course Code	Course Title
1	HBC 101	Cell Biology
2	HBC 102	Mammalian Histology
3	HBC 103	Mammalian Physiology
4	HBC 104	Elements of Mathematics
5	HBC 105	Inorganic Chemistry
6	HBC 106	Physical Chemistry
7	HBC 107	Organic Chemistry

Second Semester (15 weeks)

	Course Code	Course Title
1	HBC 109	Plant Physiology
2	HBC 110	Evolutionary Biology
3	HBC 111	Computer Skills
4	CCS 009	Elements of Economics
5	CCS 001	Communication Skills
6	CCS 010	HIV AIDS

Third Semester (14 weeks)

	Course Code	Course Title
1	HBC 108	Biomolecules
2	HBC 112	Laboratory Practice & Instrumentation

BSc. Biochemistry Level II

First Semester (22 weeks)

	Course Code	Course Title
1	HBC 201	Enzymology
2	HBC 202	Metabolism
3	HBC 204	Protein Biochemistry
4	HBC 209	Immunochemistry
5	HBC 210	Biochemical Endocrinology I
6	HBC 212	Biostatistics
7	HBC 213	Biochemical Techniques and Instrumentation I

Second Semester (22 weeks)

Course Code	Course Title
HBC 203	Regulation & Intergration of Mammalian Tissue Metabolism
HBC 205	Plant Biochemistry
HBC 206	Comparative Biochemistry
HBC 207	Biomembranes
HBC 208	Biochemical Endocrinology I
HBC 211	Molecular Biology I

BSc. Biochemistry Level III has (Options for Medical, Nutritional & Molecular Biology & Biotechnology) with options for:-

- Medical Biochemistry
- Nutritional Biochemistry
- Molecular Biology and Biotechnology

FIRST SEMESTER (22 WEEKS)

No.	Course Code	Course Title	Medical Option	Nutritional Option	Molecular Biology & Biotechnology Option
1	HBC 301	Advanced Enzymology	✓	✓	✓
2	HBC 302	Microbial Biochemistry	✓	✓	✓
3	HBC 304	Research methods & Communication	✓	✓	✓
4	HBC 306	Biochemical Techniques & Instrumentation II	✓	✓	✓
5	HBC 307	Clinical Chemistry	✓		
6	HBC 309	Biochemical Parasitology	✓	✓	
7	HBC 311	Biochemical Pharmacology	✓		
8	HBC 313	Nutritional Biochemistry		✓	
9	HBC 314	Food & Industrial Microbiology		✓	✓
10	HBC 315	Molecular Biology II			✓
11	HBC 316	Biotechnology & Genetic Engineering			✓

SECOND SEMESTER (22 WEEKS)

No.	Course Code	Course Title	Medical Option	Nutritional Option	Molecular Biology & Biotechnology Option
1	HBC 303	Molecular Immunology	✓	✓	✓
2	HBC 305	Research Project	✓	✓	✓
3	HBC 308	Biochemical Endocrinology II		✓	
4	HBC 310	Forensic Biochemistry			✓
5	HBC 312	Biochemical Toxicology	✓		

MBCbB – HBC 100, BPharm – UPC 102, BDS – VBC 100

First Half (22 weeks)

- Foundations of Biochemistry
- Structures & Functions of biomolecules
- Enzymology
- Metabolism part I
- **Practicals, Tutorials & CATs**

Second Half (22 weeks)

- Metabolism part II
- Biochemical genetics
- Biochemistry of vitamins
- Neurochemistry
- Drug Metabolism
- Introduction to Clinical Enzymology
- Biochemical Endocrinology & Integration of tissue metabolism
- **Practicals, Tutorials & CATs**

University end of year Examination

BSc NURSING I – HNS 103

First Quarter

- Introduction to Biochemistry
- Structures and functions of Biomolecules: Proteins, Carbohydrates, Lipids, Nucleic Acids

Second Quarter

- Bioenergetics
- Metabolism of carbohydrates, amino acids, lipids

Third Quarter

- Heme metabolism, Protein Biosynthesis
- Purine and pyrimidine nucleotide metabolism *-de novo* and salvage pathways
- Vitamins; classification and Biochemical functions.
- Hormones; classification and Biochemical functions, metabolic profiles of liver, adipose tissue and muscle.

MASTER PROGRAMMES

MSc BIOCHEMISTRY

First Semester

HBC 605	Micronutrient Biochemistry
HBC 601	Advanced Protein Biochemistry
HBC 603	Advanced Molecular Immunology

Second Semester

HBC 602	Molecular Biology and Biotechnology
HBC 604	Bioinformatics
HBC 606	Biochemical Techniques
HBC 607	Research Methods & Biostatistics
HBC 608	Research Project and Thesis