BACHELOR OF SCIENCE IN BIOMEDICAL SCIENCES

This program is meant for persons aspiring to work in scientific laboratories or wanting to pursue a career in academia or teaching related to diagnosis and disease management

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1.3 Aim of the Programme

To produce Biomedical Scientists who are competent in the diagnosis and monitoring of disease, management of public health promotion, teaching and application of research skills in the field of Biomedical Sciences, industrial employment and further study.

1.4 Objectives of the Programme

At the end of the programme, the graduate should be able to:

- Conduct laboratory screening, diagnosis and confirmation of disease
- Evaluate and monitor drug treatment of patients
- Contribute to the monitoring and control of infections
- Manage the laboratory, logistics, human resource and quality assurance
- Teach, superviseand evaluate trainees in the field of Biomedical Sciences.
- Conduct research in the field of Biomedical Sciences
- Implement Good Laboratory Practice, health and safety guidelines, and professional ethics.

1.5 Major Competences

Upon completion of the Biomedical Sciences degree programme, graduates are expected to demonstrate the following competences:

- Performance of diagnostic procedures.
- Performance of therapeutic and drug monitoring processes.
- Monitoring of patient treatment.
- Execution of laboratory activities aimed at monitoring and controlling of disease.
- Management of a laboratory.
- Performance of Biomedical Science research.
- Teaching of Biomedical Sciences in academic and clinical settings.
- Effective communication with clients and other health professionals.
- Appropriate collection and processing of specimens
- Preparation of reagents.
- Maintenance of quality assurance programmes.
- Development of transferable skills in information systems and commodity security, communication, teamwork and independent learning.
- Adherence to Good Laboratory Practice, health and safety guidelines, and professional ethics.

- **BSc Biomedical Sciences Curriculum Map**
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Level	Term I			Term II			Term III			Term IV		
	April	**May**	**June**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**March**
Year I	Introduction to Biomedical Sciences: BMS 210											
	Medical Genetics: MGE 210						Introductory Medical Microbiology: MMB 210					
	Human Anatomy: HAN 210											
	Medical Physiology: PGY 210											
	General and Metabolic Biochemistry: MBC 210											
Year II	Analytical Biochemistry: ABC 310						Pharmacology: PMY 310					
	Medical Microbiology: MMB 320											
				Immunology: IMM 310								
							Medical Parasitology: MPA 310					
	General Pathology: GPT 310						Systemic Pathology: SPT 320					
	Community-Based Education: CBE 319											
Year III	Cellular Pathology: CPT 410											
	Biostatistics: BSE 410						Blood Transfusion Science: BTS 410					
	Haematology: MHT 410						Molecular Biology: MBI 410					

	Toxicology: TOX 410	Research Methodology: RMD 410
Year IV	Laboratory Placement: LPL 519	Laboratory Management: LMA 510
		Public Health: PHE 510
		Optional Course: Medical Microbiology: MMB 530, Medical Parasitology: MPA 520, Medical Biochemistry: MBC 530, or Cellular Pathology: CPT 520
	Research Project: RPT 519	

The Academic Year consists of four terms, each of 7 weeks duration. Year 1 of the programme focuses on fundamental sciences that include Medical Genetics, Human Anatomy, Medical Physiology, General and Metabolic Biochemistry, Introductory Medical Microbiology, which give a sound base for the understanding of the normal life processes, as well as Introduction to Biomedical Sciences, which develop important transferable skills such as numeracy, computing, study and presentational methods.

The programme becomes progressively more clinically-oriented throughout levels 2, 3 and 4. At level two, seven courses are offered and these include Analytical Biochemistry, Pharmacology, Medical Microbiology, Immunology, Medical Parasitology, General Pathology and Systemic Pathology. The third year level of the programme includes Cellular Pathology, Biostatistics, Haematology, Toxicology, Blood Transfusion Science, Research Methodology and Molecular Biology.

Finally, at level four, four optional courses are offered to the students. Thus, advanced aspects Medical Microbiology,Medical Parasitology,Medical Biochemistry or Cellular Pathology are studied. Two compulsory courses, Laboratory Management and Public Health, are also taught at this level. This final year of the programme also includes a Research Project in which students carry out investigations which are mainly laboratory-based. A Laboratory Placement period of 24 weeks at the beginning of the final year is now available to enable students to gain practical experience in recognised laboratories.

1.9.1 Scheme of Courses, Course Codes and Curriculum Map

Year 1

- Introduction to Biomedical Sciences: BMS 210
- Introductory Medical Microbiology: MMB 210
- Medical Genetics: MGE 210
- Human Anatomy: HAN 210
- Medical Physiology: PGY 210
- General and Metabolic Biochemistry: MBC 210

Year 2

- Analytical Biochemistry: ABC 310
- Pharmacology: PMY 310
- Medical Microbiology: MMB 320
- Immunology: IMM 310
- Medical Parasitology: MPA 310
- General Pathology: GPT 310
- Systemic Pathology: SPT 320
- Community-Based Education: CBE 319

Year 3

- Cellular Pathology:CPT 410
- Biostatistics BST 410
- Haematology:HMT 410
- Toxicology: TOX 510
- Blood Transfusion Science: BTS 410
- Molecular Biology: MBI 410
- Research Methodology: RMD 410

Year 4 (Final Year)

Courses Common to All Options

- Laboratory Placement: LPL 519
- Laboratory Management: LMA 510
- Public Health: PHE 510
- Research Project: RPT 519

Optional Courses (Only One Course to be Selected)

- Medical Microbiology: MMB 520
- Medical Parasitology: MPA 520
- Medical Biochemistry: MBC 530
- Cellular Pathology: CPT 420