

MD Program With Pre-Clinical Sciences

BIMS SOM-HP

FOUR-YEAR MD PROGRAM

BIMS SOM-HP is over 100,000 Sq ft of newly built campus offers an energetic, welcoming and an igniting environment that both supports and challenges the students during medical school.

This campus is the prelude to our 65 acres new campus coming up at our proposed **GRAND MED CITY** township currently being developed by the parent entity BIOPRIST GROUP.

EDUCATIONAL PROGRAMS

School of Medicine & Health Professions: **Graduate Degree Program**

Title of Degree: **MD – Doctor of Medicine**

Pre-Clinical Sciences

The BIMS – SOM-HP aims to provide:

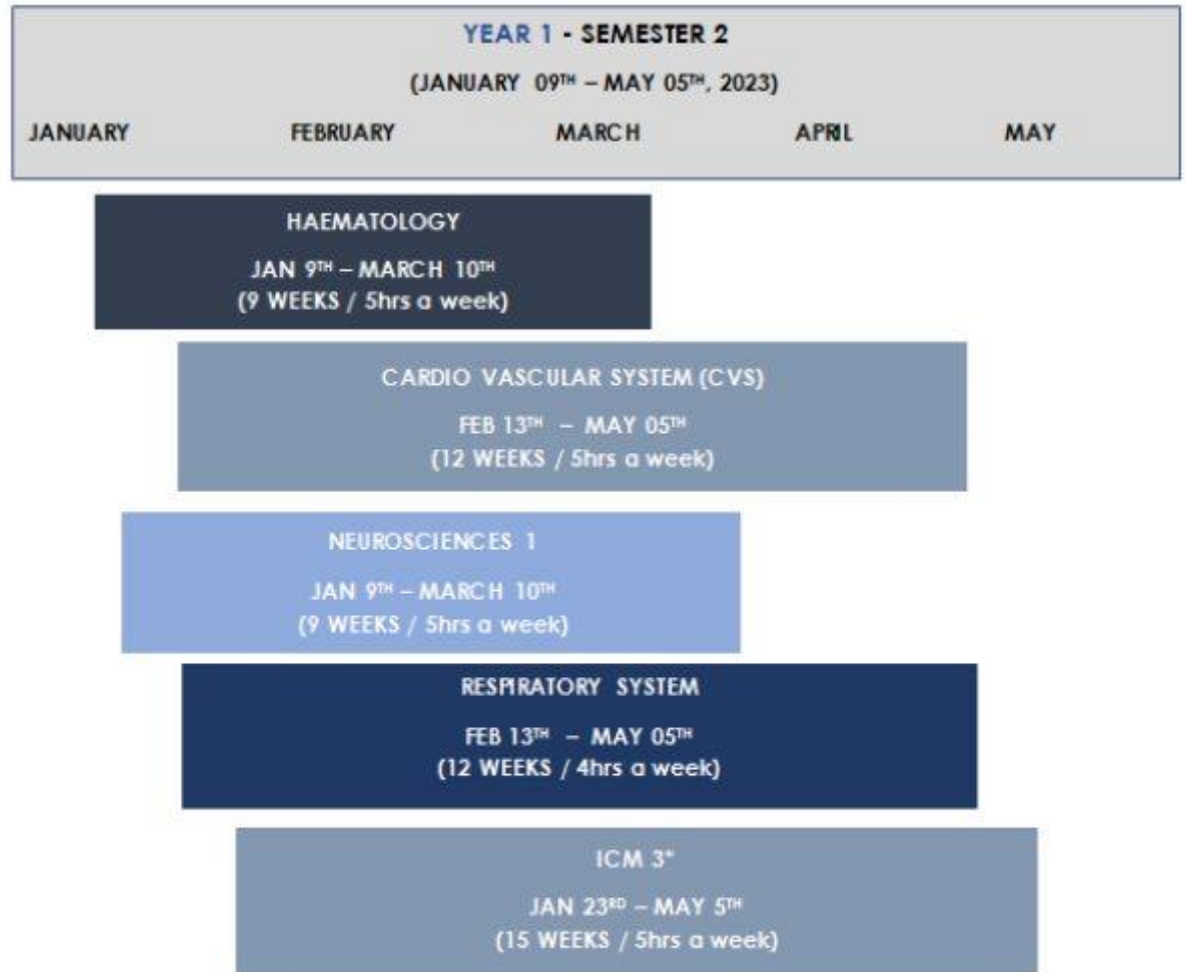
An integrated and flexible curriculum that promotes the skill and art of medicine, critical thinking, and lifelong learning needed to succeed as a practicing physician.

BIMS SOM-HP'S educational program utilises the most innovative and current methods for delivery of a medical education leading to the MD – Doctor of Medicine (MD) degree after Four (4) years of study:

BASIC SCIENCES – CURRICULUM

(PRECLINICAL)

- Two years
- 78 weeks
- 80 Credits



*ICM = Introduction to Clinical Medicine

Year 1 – Semester 2

Haematology (3 credits)

The students will learn the basics of haematopoiesis including the requirements for haemoglobin production with respect to dietary needs and enzymes. The structural features of the blood cells and their role in the maintenance of blood cell integrity. The processes required to stop bleeding including the formation and dissolution of clots. Blood typing and transfusion processes and how they impact disease processes. The structure and roles of the white blood cells.

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Respiratory System (4 credits)

The structure and function of the Respiratory system will be covered in this course which will also focus on the biomedical significance of haemoglobin and the primary function of respiratory system to obtain transport and supply oxygen to the cells, and to remove carbon dioxide from these cells. The students will learn the functions and anatomy of the muscles of respiration, the functions of the various parts of this system as they relate to alveolar ventilation, mechanics of respiration, gas diffusion and transport, lung perfusion, combined ventilation and perfusion, acid-base balance and the non-respiratory functions of the lung. The control of breathing and the changes that occur in respiration during physiologic stress, high altitudes, diving, and during sleep will also be studied

Neurosciences 1 (3 credits)

This course will cover the structure and function of the Peripheral nervous system including the Autonomic Nervous System

This course forms the foundation for the Neuroscience 2 course offered in year 2 of the programme which will delve into the Central Nervous System and its neuropathology and psychopathology.

Cardiovascular System (4 credits)

In this course students will study the structure and function of the human cardiovascular system. They will learn about the heart as the driving force for blood flow and delivery of nutrients to the body, macro-circulation and a micro-circulation of blood, lymph within the blood and lymphatic vessels: anatomic and physiologic considerations, interactions between the cardiovascular and other organ systems in the integration of functioning of the body as a whole (gastrointestinal, nervous, endocrine systems) to understand the delivery of nutrients to all organs, the coupling blood flow and neural signaling, cardiovascular changes to body stresses and heart failure.

Introduction to Clinical Medicine 3 (4 credits)

This system integrates the disciplines of Pathology, Pharmacology and Microbiology building on the foundational knowledge acquired in the disciplines of Physiology, Histology and Immunology for the Haematology, Respiratory, Neuroscience 1 and Cardiovascular systems.

It will include a study of red blood cell disorders with a focus on anaemias as well as platelet and bleeding disorders. This will be integrated with therapeutic approaches to anemias and the role of hematinics and hematopoietic growth

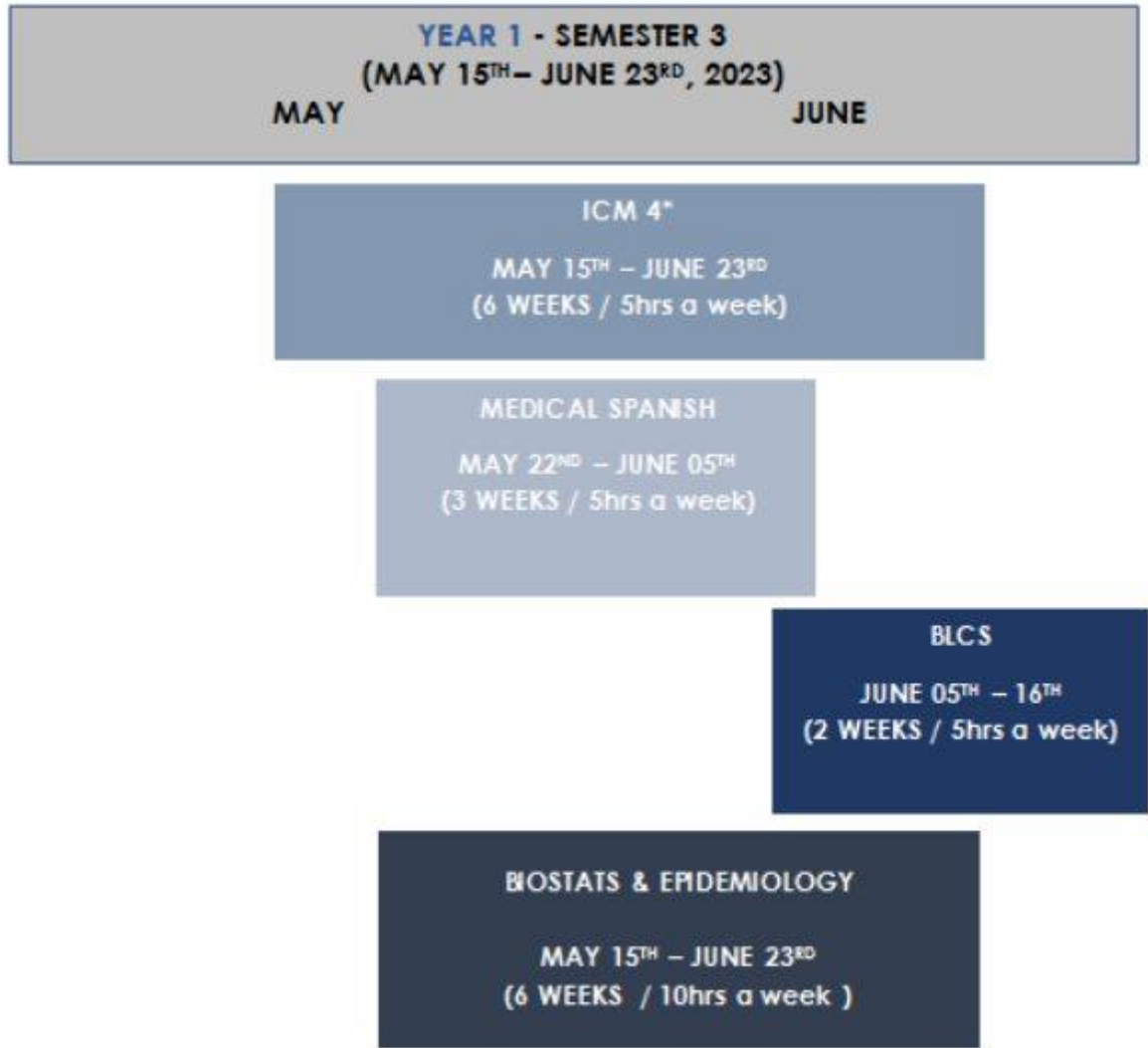


factors. The emphasis then shifts to non-neoplastic and neoplastic disorders involving white blood cells followed by disorders of the thymus and spleen. It also introduces the principles of neoplasia and anti-cancer drugs.

The module provides an overview of the abnormal processes and diseases that can affect the structure and function of the respiratory passage: upper and lower respiratory tract disorders, obstructive lung diseases, restrictive lung diseases, vascular diseases, pulmonary infections, lung neoplasia.

This course will discuss with impaired defences, introduction to microbes and microbial pathogenesis, the basic biology of pathogenic bacteria, viruses, fungi, and parasites, and how it relates to microbial pathogenesis, together with principles of antimicrobial therapy

Students will learn about the diseases of the cardiovascular system and will formulate a pathophysiological explanation for presenting symptoms and signs related to cardiovascular diseases, interpret electrocardiograms, develop a differential diagnosis, and make a plan for further diagnostic evaluation and/or management.



*ICM = Introduction to Clinical Medicine

Year 1 – Semester 3

Introduction to Clinical Medicine 4 (3 credits)

Students will learn to analyze the challenges facing the health and human rights issues specific to immigrant, migrant, internally displaced, and refugee populations. They will understand the specific needs of vulnerable populations including the medically underserved and uninsured, demonstrate knowledge of effective advocacy strategies for health systems improvement within the global context Governance (Health Systems, Economics, Ethics, etc.). They will learn about the burden of Disease (Child Health, Women Health and the health of

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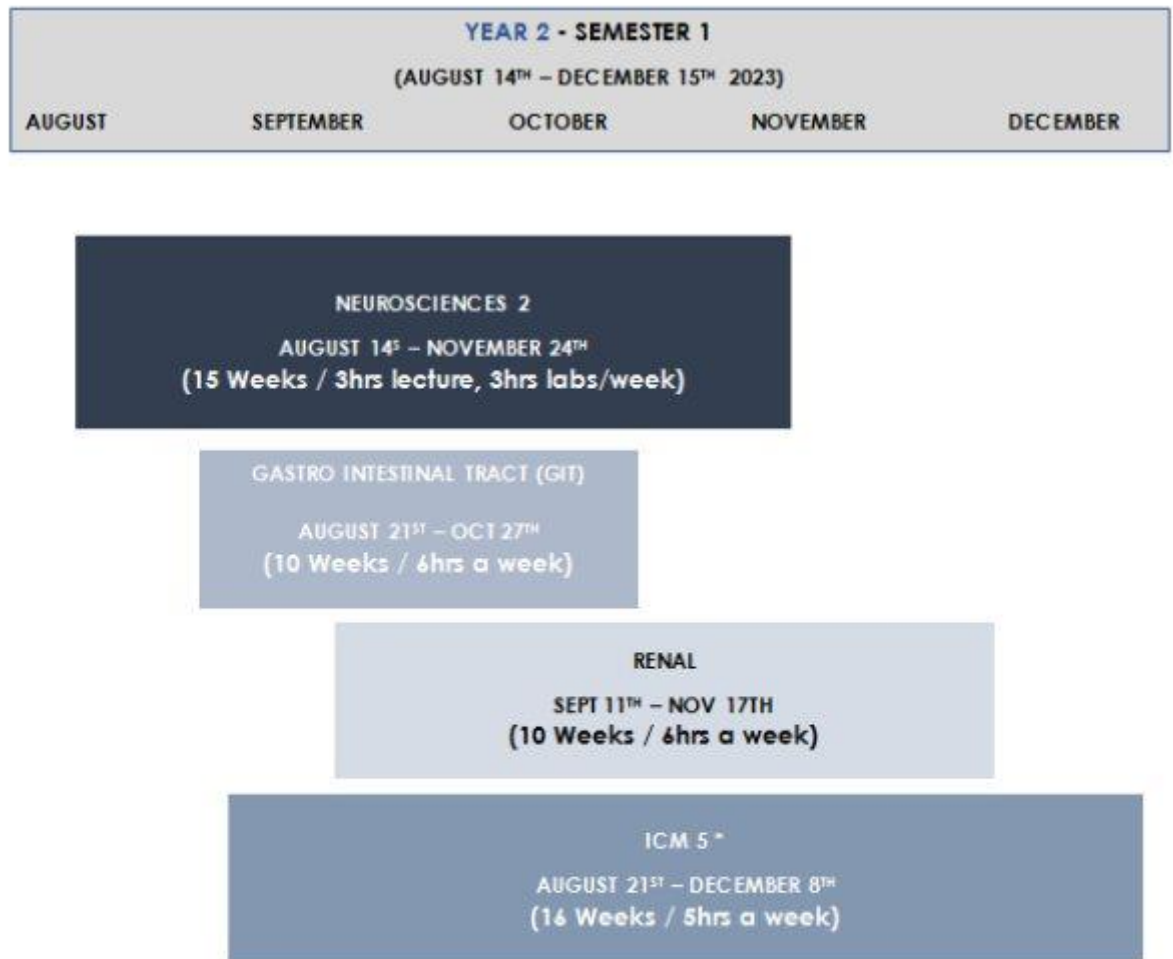
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other vulnerable populations, Communicable Diseases, Non-Communicable Diseases, etc.)

Biostatistics and Epidemiology (4 credits)

This course is designed to introduce students to basic concepts of epidemiology and biostatistics. They will learn to identify health-related problems or phenomena in communities and describe their epidemiological distribution and possible determinants, basic measures of morbidity and mortality and learn to calculate them. Students will learn and apply appropriate statistical methods in health data analysis; organize and present analysed data in logical and meaningful ways. The importance of basic concepts and principles of public health surveillance systems, including screening programs, in monitoring the health status of a population will be reviewed.

The course will describe and discuss the concept of disease outbreak and its detection, investigation and control and explain how epidemiological studies contribute towards the overall health and well-being of population groups and communities.



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Year 2 – Semester 1

Neurosciences 2 (5 credits)

The neuroscience module will study the structure and function of the CNS, the cranial and spinal nerves, and the neurophysiology of sleep and hearing, vision, speech.

The course emphasizes the relationship between the gross organization of the Central Nervous System (CNS), its subdivision into specialized regions and the corresponding perceptions of sensory information, intracranial fluids and

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pressure, neurotransmitter systems and the nervous system control of behavior, pain, touch, spatial distribution and memory. In this course the student will also learn about the anatomy and function of the Special senses i.e. vision, hearing, taste, smell and balance.

Gastrointestinal Tract / System 1 (4 credits)

This course looks at what happens to food from entry into the body to its transformation into energy, storage and building blocks needed for growth, renewal and daily functioning. It will also cover the elimination of undigested and unutilized food as waste.

The detailed relationship of structure to function of the various parts of the gastrointestinal tract, the innervation to effect motility, vascularity and the neurohormonal signals needed for the food transport, digestion into simpler and their absorption. The structure of the anterior abdominal wall, its divisions (quadrants etc) and the significance to the clinician with respect to several gastrointestinal ailments will be discussed.

The students will also study of the accessory organs of the GIT: the liver, gallbladder and pancreas and how they contribute to the digestive process and the conversion of food into energy or storage, including the regulation of energy stores in starvation and fasting

Renal System (4 credits)

The student will learn the basic structure and function of the renal system, including both the upper and lower urinary systems and the biochemical significance of kidney tubular processes and dynamics.

Students will learn the key functions of the Renal System: the production and storage of urine, the excretion of metabolic waste products, the maintenance of Blood Pressure (BP). The endocrine functions: regulation of calcium and phosphates, red blood cell formation through erythropoietin release will also be studied.

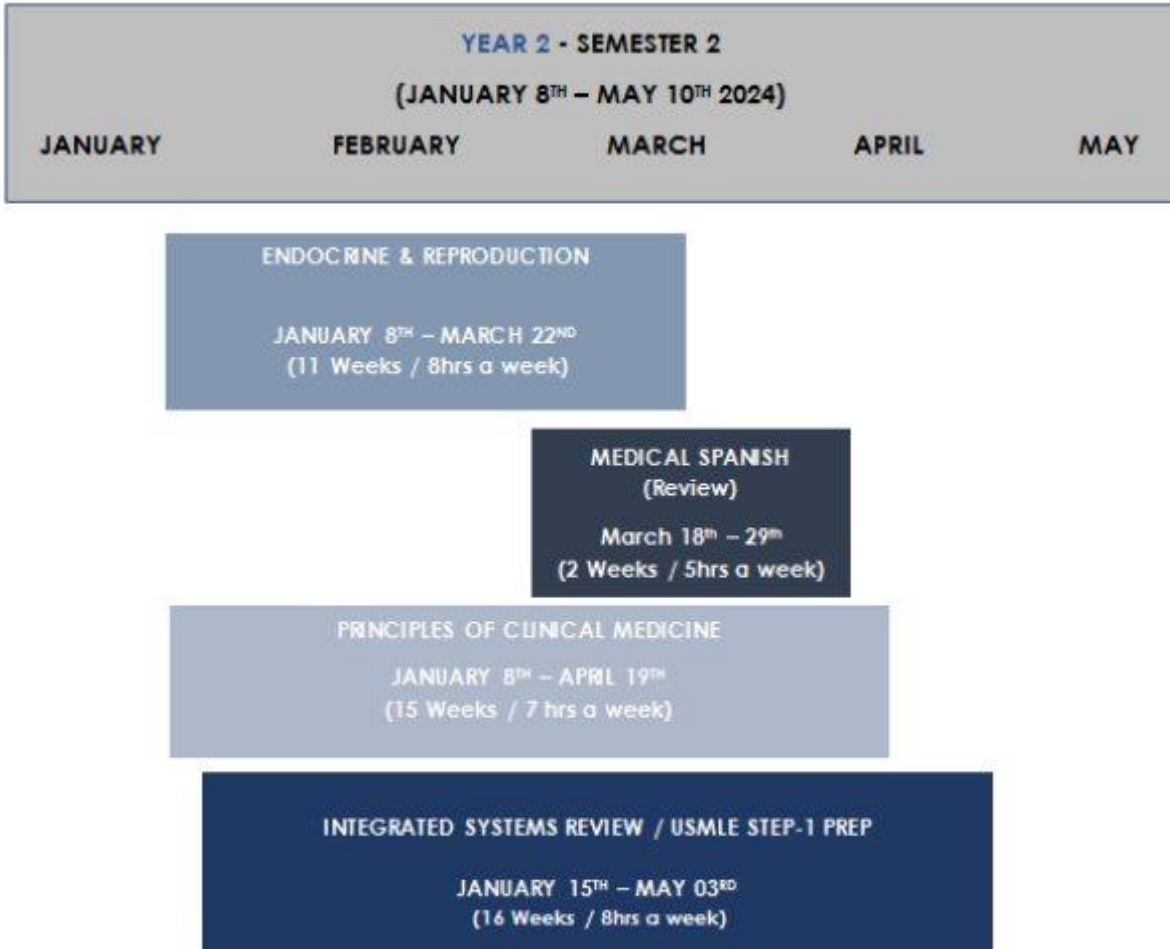
Introduction to Clinical Medicine 4 (6 credits)

This course covers the physical mental & social wellbeing of the patients. It will look at the impact of technology and climate change in Medicine.

This course will also address disorders of the central nervous system (raised intracranial pressure, developmental disorders, traumatic brain injury, demyelinating disorders, headaches, neurodegenerative disorders, brain tumors), sleep, mood, obsessive compulsive and anxiety disorders, somatic and dissociative disorders, feeding and eating disorders, renal system disorders

resulting from abnormal development, genetic mutations, vascular, immune, infectious and intrinsic disease, and their treatment.

Introduction to Medical Spanish course will commence during this module



Year 2 – Semester 2

Endocrine/Reproductive System (6 credits)

This course focuses on the structure, function, and cellular mechanisms in the endocrine and reproductive systems. The role of the endocrine system on the maintenance of homeostasis and regulation of organ systems will be taught. The

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clinical, cultural, and behavioural aspects associated with various physiological processes are also discussed such as the impact of cultural differences on people's views of sex, birth control, pregnancy, infant care and feeding and nutrition for a healthy body as a whole.

Principles of Clinical Medicine (6 credits)

This module will focus on aspects of pathology, microbiology, immunology and therapeutics with clinical correlations and application of areas not covered in the Introduction to Clinical Medicine courses. These include the study of disruptive, impulse control and conduct disorders,

personality disorders, substance abuse disorders, and sexual dysfunctions. Psychopharmacology, including drugs for mood disorders, antipsychotic drugs including cannabis, opioid analgesics, effects of alcohol on the CNS, and sedative-hypnotics will also be covered.

American Heart Association Instructor Training in Basic Cardiac Life Support (BLS) and Advanced Cardiac Life Support (ACLS)

Introduction to Medical Spanish course will be completed.

Integrated Systems Review/USMLE Step-1 Prep (7 credits)

This course is designed to engage students to integrate all of the knowledge acquired in the Preclinical Sciences courses completed during years 1 & 2 and help in the application of this knowledge to clinical scenarios in preparation for the mandatory National Board of Medical Examiners (NBME) – Comprehensive Basic Science Examination (CBSE on the Island) and the USMLE STEP 1.

The course will take the form of interactive review lectures by experts from multiple disciplines with the inclusion of integrated clinical cases and problems, to remind the students of relevant concepts (of Anatomy, Behavioral Science / Epidemiology / Biostatistics, Biochemistry and Genetics, Microbiology/Immunology, Physiology, Pathology, Pharmacology) and fostering their integration skills.