

aspects: (1) Anatomy and physiology of the nervous system; (2) Major manifestations of nervous system diseases; (3) Investigation of neurological diseases; (4) Overview of neurological diseases: Infection of the nervous system, Cerebrovascular disease, Trauma, Degenerative diseases, Diseases of nerves and muscles, Disorders of the spine and spinal cord, Intracranial mass lesions; and (5) Study of clinical cases.

BMS 2630 Surgery and Emergency Medicine (4,4,0) (E)

Surgery is a discipline of medicine that treats diseases, injuries, and deformities by manual or operative methods. The objective of this course is to provide the CM students with basic vocabulary, general knowledge, and surgical principles rather than operational technical details. Students are expected to know basic knowledge about surgery and surgical patients, how to treat minor wounds, burns, fractures and other minor injuries.

Emergency medicine is a branch of medicine that deals with evaluation and initial treatment of medical conditions caused by trauma or sudden illness. It is a relatively new discipline and may involve different branches of medicine. It is important that students have a general view of various emergency conditions commonly encountered in clinical practice, their clinical features, diagnosis, investigations and the initial emergency management. The aim of this course is to give students a basic knowledge of Emergency Medicine in particular for the following aspects: (1) Emergency service in Hong Kong; (2) Principles of Cardiopulmonary Resuscitation and life support; (3) Common emergent conditions including medical, surgical, pediatric, obstetric, gynecological and environmental; (4) Poisoning and pharmacovigilance; and (5) Trauma and common injuries.

BMS 3190 Medical Statistics (2,2,0) (E)

The course aims at furnishing medical students with statistical concepts and methodologies which are useful in medicine. The class examples are all related to medicine and hygiene.

BMS 3581-2 Honours Project I & II (3,0,*)

The aim of the honors project is to provide students with first hand experience on scientific or scholarly research. Each student will conduct an independent research project under the supervision of a teaching staff of the School of Chinese Medicine. The topic of the project will be determined upon the discussion between the student and the supervisor in an area related to Chinese Medicine. The format of the project could be clinical studies, epidemiological studies, laboratory-based studies and pure literature studies. During the span of the project, students are expected to learn the theoretical, methodological basis as well as the statistical data analysis of scientific research, and to develop the skills for professional thesis writing and oral presentation. Upon the completion of the project, students should be capable of searching on database and research papers, and to have possessed the ability of objective and logical experimental design and data analysis. The findings from the research project will be collected in the writing of a dissertation and presented in an open oral presentation by each student.

BMSC 1005 Anatomy (3,3,0) (E)

This course aims to introduce the fundamental knowledge of anatomy to Chinese medicine students so as to prepare them for future elaborated training in various organ-based systems. Anatomy is the study of the morphological structures of the human body. In the beginning of the course, the musculoskeletal system will be emphasized, with concurrent practical sessions in a co-requisite lab course. This will be followed by presentation of different system anatomy, including digestive, respiratory and cardiovascular, urogenital and neuronal systems. The lecture teachings will include in-class model demonstrations, and supplemented with small group discussion tutorials in a problem-based approach.

BMSC 1007 Physiology (3,3,0) (E)

In this module the students are introduced a basic knowledge of the mechanisms of human body functions. The mastering of this course would provide a foundation for other medical courses.

BMSC 1008 Biomedical Sciences Lab I (1,0,3)

The laboratory sessions cover Anatomy and Physiology. Through these practical classes, concepts taught in lectures will be reinforced and enriched by means of audio-visual aids, models, specimens, tissue sections and hand-on experiences. The students will learn anatomical, and functional aspects of human body by conducting various tests, and to apply their knowledge and techniques to perform selected biochemical and molecular biology experiments, with special emphasis on their applications in medicine.

BMSC 1009 Biomedical Sciences Lab II (1,0,3)

The laboratory sessions cover Biochemistry and Molecular Biology. Through these practical classes, concepts taught in lectures will be reinforced. In the beginning, students will be taught the basic techniques on molecular biology and biochemistry, followed by protein analysis, extraction of genomic DNA and then gene amplification and analysis using PCR. Special emphasis is on individual hands-on experiences in which the performance of students and results of the experiments will be assessed.

BMSC 1015 Biochemistry and Molecular Biology (3,3,0) (E)

This course aims to provide students with fundamental knowledge on the principles of biochemistry. In the beginning, the structures and functions of bio-macromolecules will be introduced. This is followed by mechanisms of enzymes, and the key metabolic pathways and their relevance to diseases. Basic concepts of gene expression, regulation and manipulation will be introduced to students, and they will be exposed to common techniques used by molecular biologists, with special emphasis on the applications in medicine. The knowledge will be reinforced by practical sessions in BMSC1009. Students' learning will also be enhanced by group discussions and case studies.

BMSC 1025 Anatomy and Physiology (3,3,0) (E)

In this module the students are introduced a basic knowledge on the anatomy of the human body and the mechanisms of body functions. The mastering of this course would provide a foundation for other biomedical courses.

BMSC 2005 General Pathology (3,3,0) (E)

Pathology is a subject about structural changes and functional disturbances in tissues and organs of the body caused by diseases. It is a mandatory course to link between basic and clinical medical sciences. Students will be introduced to the basis of histopathology and pathophysiology, and learn the fundamental mechanisms, morphological changes, as well as physiological impacts of commonly seen diseases. General pathology that deals with common and basic pathological changes will be taught here to lay foundation for systemic pathology where individual diseases will be taught in each organ-system in Clinical Medicines. The knowledge will be re-enforced by practical sessions (BMSC 2007). The students' learning and analytical ability will be enhanced by means of case studies, and examination of gross and microscopic specimens. Problem-based learning is implemented whenever possible after the students have been equipped with the basic knowledge, and students are encouraged to address some questions by themselves analytically.

BMSC 2007 Pre-clinical Sciences Lab (1,0,3)

The laboratory sessions cover Microbiology, Pathology, and Pharmacology. Through these practices, the concepts regarding pathogenesis and manifestations taught in lectures will be demonstrated and enhanced by case studies and hand-on experiences, and some common skills in medicine and scientific research will be learnt.

BMSC 2015 Clinical Sciences Lab (1,0,3)

This laboratory course aims to provide students with a practical experience in pharmacology. Students will be enriched to have a better picture of the concepts acquired from the pharmacology lecture course BMSC 2017 by participation in a series of

experimental sessions involving animal studies and general pharmacological lab techniques. Besides, demonstrations on fundamental medical diagnosis will also be provided in this lab course.

BMSC 2016 Fundamental Diagnosis (4,4,0) (E)

This course aims at teaching students how to apply the knowledge of basic medical science to clinical practice. The basic techniques of history taking, doing a thorough physical examination of the body and writing out a comprehensive and precise medical record are taught. Students will learn how to make a preliminary diagnosis and list out differential diagnoses. Investigative procedures and interpretation of their results will be introduced. They will also learn how to utilize these ancillary investigations to help them confirm their preliminary diagnoses. Ample examples of the investigations will be shown e.g. ECG of a patient with myocardial infarction, normal X rays of different parts of the body and X rays of diseased states, CT's, MRI's, and isotopic scans of common conditions. Applications and indications for these investigations will also be explained.

BMSC 2017 Pharmacology (3,3,0) (E)

This course aims to provide students with fundamental knowledge on the use of xenobiotics as orthodox Western drugs in the treatment of human diseases. In the beginning of the course, the important principles of pharmacology will be introduced. This is followed by a series of topics on the therapeutic approach in tackling inflammation and pain management. Subsequently, a systematic coverage on the mechanisms of action of drugs that on various organ systems will be covered, from different components of the nervous system to the cardiovascular and renal systems. The last section of the course is on chemotherapeutic agents, ranging from the use of antibiotics to the different classes of anti-tumor drugs. In addition, students also have the opportunity to participate in a semester-end group presentation on approved topics relevant to pharmacology. By the end of the course, students are expected to acquire essential knowledge on the classes and clinical uses of different drugs currently commonly used in Hong Kong, plus a general idea about toxicology.

BMSC 2025 Microbiology and Immunology (3,3,0) (E)

Microbiology is the study of microorganisms, which are responsible for much of the breakdown and natural recycling of organic material in the environment. Of the vast number of species of microbes, only a few have the capacity to cause disease by invading the tissues of other living organisms and producing toxic substances. The purpose of this course is to introduce to the students the basic principles and concepts of medical microbiology, the various classes of microorganisms that interact with humans. Other disease-producing multicellular parasites, helminthes and flukes will also be briefly covered in this course.

The following aspects at basic theory and advanced topics are covered: (1) Overview of Microbiology in human perspective; (2) Diversity of Prokaryotic and Eukaryotic organisms; (3) Prokaryotic cell structure and growth; (4) Microorganisms identification; (5) Virus, Viroids and Prions; (6) Bacterial and Viral Pathogenicity; and (7) Helminthes and parasites.

'Immunology' is a basic science about immune system, including immune organs, cells, molecules and clinical relevance involved in immune response. The objective of this course is to give the students a general introduction in immunology and to provide a basis for the advanced clinical course 'Immunology Diseases'.

The following aspects at basic theory and advanced topics are covered (1) Anatomy and principle of the immune system and organs; (2) Cells and molecules of the innate immune system; (3) HLA molecules and antigen presentation; (4) Cell Migration; (5) Cells and molecules of the adaptive immune system; (6) The immune system in concert; (7) Laboratory investigations of the immune system; (8) Disorders in immune system; (9) Immune-based therapies; (10) T cell differentiation and maturation; (11) T cell receptors and T cell activation; (12) B cell differentiation and maturation; (13) B cell receptors and B cell activation; (14) Cytokines; and (15) Cytokine receptors.

BMSC 2026 Microbiology and Immunology Lab (1,0,3)

To introduce the fundamental concepts of microbiological and immunological techniques to students taking the course of Chinese medicine. These include: (1) the basic techniques in handling microscopic observation of pathogenic microorganisms; (2) the identification of lymphoid organs, antigen-antibody interactions, generation of humoral and cell-mediated immune responses; and (3) the application of immunological techniques in diagnosis.

BMSC 3005 Hematology (2,2,0) (E)

Blood disorders cover a wide spectrum of illnesses ranging from the commonly encountered anemias to rarely seen conditions such as congenital coagulation disorders. Diseases affecting other systems can also affect the hematopoietic functions, making their study an integral part of the assessment of any medical diseases.

The objective of this course therefore aims at giving the students a general overview of hematopoietic functions and diseases affecting these functions. This should be achieved in the following aspects:

(a) Composition of blood: plasma & blood cells; physiology of blood, blood cells and clotting; (b) Hematopoiesis: bone marrow structure, stem cell; (c) Clinical manifestations of blood diseases; (d) Investigation of diseases of blood; (e) Anemias; (f) Myeloproliferative disorders; (g) Leukemias; (h) Lymphomas and myeloma; (i) Bleeding disorders; (j) Venous thrombosis; (k) Blood transfusion; and (l) Clinical case studies.

BMSC 3006 Cardiovascular System (2.5,2.5,0) (E)

In the modern era, cardiovascular disease contributes greatly to the burden of the healthcare system. In industrialized societies, it is the most frequent cause of adult death. It is important that students should be quite familiar with diseases affecting this system.

This course aims at offering students a general overview of the Cardiovascular System in the following aspects: (1) The gross anatomy of the heart and its great vessels; (2) The physiology of the circulatory system; (3) The cardiovascular system in the diseased state: pathological changes and pathophysiological changes; (4) Clinical manifestations of cardiovascular disorders; (5) History taking and physical examination of the cardiovascular system; (6) Investigative methods of the cardiovascular system; (7) Drugs that affect the cardiovascular system and medications that treat cardiovascular disorders; (8) Overview of the following common cardiovascular disorders: Heart failure, Ischemic heart diseases, Valvular heart diseases, Hypertensive heart diseases, Congenital heart diseases, Arrhythmias, Myocardial diseases, Pericardial diseases, Endocardial diseases, Pulmonary heart diseases, Diseases of blood vessels; and (9) Study of clinical cases.

BMSC 3007 Digestive System and Hepatobiliary System (2.5,2.5,0) (E)

The digestive and hepatobiliary systems are responsible for digestion and absorption of nutrition for all metabolic activities of the body. The liver, apart from taking part in digestion, also participates in a number of important functions. Diseases of these two systems are a major cause of morbidity and mortality.

The objective of this course is to give the students a general view of the structure and function of the digestive and hepatobiliary systems and the common diseases affecting it.

This is achieved in the following aspects: (1) The anatomy and physiology of the gastrointestinal tract and the hepatobiliary system; (2) Investigation of gastrointestinal and hepatobiliary diseases; (3) Major manifestations of gastrointestinal and hepatobiliary diseases; (4) Overview of diseases affecting the gastrointestinal tract: Esophagus, Stomach and duodenum, Small intestines, Pancreas, Colon and rectum; (5) Overview of diseases affecting the hepatobiliary system: Liver, Biliary system; and (6) Study of clinical cases.

BMSC 3015 Infectious Diseases and Immunology Diseases (2,2,0)

Infectious diseases cause morbidity and mortality in man despite the advent of immunization and antibiotics. It is important