

for environmental investigations; (2) provide students with the skills in management and evaluation of environmental data; and (3) provide students with hands-on experience in management techniques for conducting and evaluating an environmental project.

BIOL 4027 Molecular Biotechnology II (3,3,0) (E)

Prerequisite: Biology major Year IV standing

This course aims to cover the fundamental principles and current techniques in molecular biology with particular emphasis on the application of biotechnology in animal science, plant science and medicine.

BIOL 4035 Biological Resources and Management (3,3,0) (E)

Prerequisite: Biology major Year IV standing

This course is designed to promote an awareness of human beings' interaction with the abiotic and biotic environments through studying the principles of resource utilization and conservation that apply to biological systems. The course focuses on the management and rational exploitation of resources in terrestrial and aquatic ecosystems with particular emphasis on local and regional resources.

BIOL 4898-9 Applied Biology Project I & II (3,0,9)

Prerequisite: Biology major Year IV standing

This course aims to provide students with opportunities to conduct a literature survey or laboratory-based research on a specific biological question. Guidance will be provided to students in the development of an independent research plan and apply this plan to address the question.

BIOL 7010 Advanced Topics in Biotechnology (3,3,0)

Prerequisite: BSc (Hons) in Biology or with consent of instructor

This is a postgraduate course covering the principles and methods of biotechnology at an advanced level. It aims at providing more in-depth studies of selected topics, such as production of recombinant proteins, toxicological study of drugs, application of immunological techniques in research, and new developments of modern biotechnology.

BIOL 7020 Advanced Topics in Environmental Sciences (3,3,0)

Prerequisite: BSc (Hons) in Biology or with consent of instructor

This is a postgraduate course that provides update information in recent advance development in selected areas in environmental science and technology.

BMS 1230 Molecular Biology (1,1,0) (E)

An introduction to the basic concepts of gene expression, regulation and manipulation. Students will expose to few common techniques used by molecular biologists, with special emphasis on the applications in medicine. A one-credit hour laboratory course (BMS1240) is coupled with the lecture. Students will have hands-on experience of various tools and techniques for analysis of recombinant DNA. Daily life issues related.

BMS 1240 Molecular Biology—Laboratory (1,0,3)

To provide students the different methodologies in manipulation and detection, and where applicable.

BMS 1260 Medical Psychology (2,2,0) (E)

This course aims at providing students with basic knowledge about the theories and concepts in medical psychology, developing their ability to apply psychological explanations to individual's daily social behaviour, and examining current psychological issues related to people in Hong Kong.

BMS 1350 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. 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.

BMS 1370 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.

BMS 1380 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.

BMS 1460 Pre-clinical Sciences Lab (1,0,3)

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

BMS 1490 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.