

specifically relating to personality, intelligence, and vocational interests will be examined. Related concepts in statistics such as reliability, validity, item analysis will also be explored.

APSY 3210 Motivation and Emotion (3,3,0) (E)

This course aims to introduce students to the theories and research related to human motivation and emotion. By integrating a strong theoretical foundation with current research and practical application, this course will enhance students' understanding of why people do what they do and why people feel how they feel.

APSY 3220 Psychology of the Chinese People (3,3,0) (E)

This course aims to introduce students to the challenge of developing a psychology of Chinese people. Recent research findings in cognitive psychology, developmental psychology, social psychology, abnormal psychology, and educational psychology will be examined.

APSY 3810 Issues and Practice in Educational Settings (3,3,0) (E)

This course aims to introduce students to the major contemporary issues and professional practice in the area of educational psychology. While students will develop an understanding of the importance of a lifespan approach in educational psychology, this course focuses specifically on the child and adolescent stages and their key contexts such as family and school.

APSY 3820 Advanced Research Methods (3,3,0) (E)

Prerequisite: APSY 2150 Research Methods and Design in Psychology or equivalent

This course aims to introduce to students the design and data analytical techniques required for multivariate data analysis. The focus of the course will be on multiple regression, structural equation modelling, factor analysis, and item response analysis. The course is both theoretical and applied in nature. Students will also learn to input and analyse data using the SPSS and AMOS. This course serves to provide a foundation for future research at the Masters and PhD level.

APSY 3830 Counselling Psychology (3,3,0) (E)

Prerequisite: APSY 2130 Personality Psychology or equivalent

This course aims to provide an overview of the counselling profession. Research in efficacy and assessment will be included based on the scientist-practitioner model. Students will be introduced to various professional settings to enable them to understand the mechanisms and strategies involved in counselling psychology.

APSY 3890 Psychology in Applied Settings (3,0,3) (Practicum)

This course aims to give students an opportunity to apply the psychological theories that they have learned to the different sectors of the community, such as business, education, and social services.

APSY 3900-1 Honours Project I & II (6,0,6)

Prerequisite: APSY 2150 Research Methods and Design in Psychology or equivalent

Students will work on a research project on an approved topic. Each individual project must include: a research question, a review of current literature, analysis of data, reporting of results, and discussion of the findings. The total length of the report should be between 9,000 and 15,000 words. Data collected for each research project are course to inspection and review.

BIOL 1005 Introduction to Biology (3,3,0) (E)

This course is intended to train up students with broad background knowledge in biological sciences with emphasis on its relevance to human health and environmental science. Students will learn the main principles and mechanisms in biological and environmental sciences to get prepared for more in-depth studies in other courses in the BSc. degree in Biology.

BIOL 2005 Biological Chemistry (3,3,0) (E)

Prerequisite: BIOL 1005 Introduction to Biology

This course provides students with the fundamental knowledge of the building blocks of life forms as well as the major biochemical pathways that link up with carbohydrate, lipid, protein and nucleotide metabolisms. The significance of the biochemical pathways in relation to cellular and physiological phenomenon is also discussed.

BIOL 2006 Microbiology (3,3,0) (E)

Prerequisite: BIOL 1005 Introduction to Biology

This course covers the basic principles of microbiology and selected aspects of applied microbiology. The learning materials will include microbial morphology, taxonomy and cultivation, and the roles of microorganisms in the ecosystem, pollution control process, causing disease and biotechnological industries. The objectives of this course are to stimulate the awareness of the vast diversity of microbes which are related to our daily living and equip students with the knowledge foundations for more advanced courses.

BIOL 2007 Microbiology Laboratory (1,0,3)

The laboratory exercise provides a wide spectrum of microbiological techniques suitable for use in the study of microbiology. This course is designed to enhance, augment and reinforce the series of lecture and to provide students with the techniques to properly handle and study microorganisms.

BIOL 2015 Biodiversity (3,3,0) (E)

Prerequisite: BIOL 1005 Introduction to Biology

This course covers the diversity of plant and animal kingdoms. The part on plant covers the main characteristics of the major plant groups, their economic importance, distribution and morphology of representative genera. The animal part of the course presents a survey of the animal kingdom with emphasis on diversity and evolutionary relationships.

BIOL 2016 Biodiversity Laboratory (1,0,3)

This practical course trains students to observe, characterize and identify representatives of various plant and animal groups, with emphasis on local fauna and flora.

BIOL 2017 Cell Biology (3,3,0) (E)

Prerequisite: BIOL 1005 Introduction to Biology

To provide a general understanding of cellular functions and the ultra structures of eukaryotic and prokaryotic cells. To introduce basic research tools used by cell biologists to increase the knowledge of structure and function of cells, and also to prepare students to undertake advanced biological studies.

BIOL 2025 Cell Biology Laboratory (1,0,3)

To expose students to the basic research tools in cell biology. To enhance the understanding of the theories covered in the BIOL 2017 Cell Biology course.

BIOL 2026 Genetics (3,3,0) (E)

Prerequisite: BIOL 1005 Introduction to Biology

This course provides a general understanding of the structure, expression, regulation and mutation of genes. Various patterns and processes involved in the transmission of inheritable characteristics are introduced. Contributions of population genetics to the study of evolution, concepts of evolutionary genetics, and the recent hypothesis of molecular evolution are compared and discussed.

BIOL 2027 Genetics Laboratory (1,0,3)

There are a series of experiments exposing students to basic tools and techniques used in the study of Genetics. Various organisms are used in the laboratory to enhance the understanding of genetic theories and principles.

BIOL 2035 Introduction to Environmental Sciences (3,3,0) (E)

Prerequisite: BIOL 1005 Introduction to Biology

This course aims to introduce to students the scientific principles and issues in environmental sciences. It is a combination of scientific evidence and technical appraisals of processes and problems in relation to environmental quality. The topics selected will demonstrate how environmental issues are related to our everyday life. By showing how environmental and resource problems are interrelated, students should be able to understand the concepts and apply the principles to solve environmental and resource problems.

BIOL 2110 Ecology (3,3,0) (E)Prerequisite: *For Biology students:* BIOL 1130 Biodiversity and BIOL 1310 Microbiology

This course emphasizes biological functioning at the levels of population, community, and ecosystem, and is organized around the principles of energy flow and nutrient cycles. Human interventions such as urbanization, harvesting renewable and non-renewable resources, and pollution generation are considered in relation to natural limits, natural regulations and regeneration mechanisms, and long-term ecosystem stability.

BIOL 2120 Ecology Laboratory (1,0,3)

Co-requisite: BIOL 2110 Ecology

This course aims to develop students' competence in modern methods of ecological research and environmental assessment, to utilize appropriate experimental techniques and to collect and interpret data. Ecological projects of local relevance will be emphasized.

BIOL 2160 Genetics and Evolution (3,3,0) (E)

Prerequisite: BIOL 1160 Biological Chemistry and BIOL 1210 Cell Biology

This course provides a general understanding of the structure, expression, regulation and mutation of genes. Various patterns and processes involved in the transmission of inheritable characteristics are introduced. Contributions of population genetics to the study of evolution, concepts of evolutionary genetics, and the recent hypothesis of molecular evolution are compared and discussed.

BIOL 2170 Genetics and Evolution Laboratory (1,0,3)

Co-requisite: BIOL 2160 Genetics and Evolution

This laboratory exercise exposes students to basic tools and techniques used in the study of genetics. Various organisms are used in the laboratory to enhance the understanding of genetic theories and principles.

BIOL 2210 Animal Physiology (3,3,0) (E)

Prerequisite: BIOL 1130 Biodiversity and BIOL 1210 Cell Biology

This course aims to provide a fundamental knowledge on the basic principles and the interrelation between the anatomical and functional organization of animal body. Regulatory mechanisms that cause the functional systems to operate in homeostasis are discussed. Emphasis throughout is placed on the human physiology. Comparative physiology of lower animals is also introduced. Students will come to understand the major physiological systems involved in the maintenance of body functions.

BIOL 2220 Animal Physiology Laboratory (1,0,3)

Co-requisite: BIOL 2210 Animal Physiology

This course (1) provides students with practical experience of applying important physiological concepts in animal physiology, (2) illustrates some basic but important physiological concepts by means of experiments, and (3) provides an opportunity to practise the methods and utilize the apparatus most frequently used in experimental physiology.

BIOL 2230 Plant Physiology (3,3,0) (E)

Prerequisite: BIOL 1130 Biodiversity and BIOL 1210 Cell Biology

This course deals with the plant physiological processes such as plant water relations, plant nutrition, photosynthesis, translocation, plant hormones and their roles during plant growth and development, plant morphogenesis and the control of flowering. Students are expected to use physiological principles to explain many plant performances, which are required in the applied aspects of plant sciences, such as horticulture and agronomy.

BIOL 2240 Plant Physiology Laboratory (1,0,3)

Co-requisite: BIOL 2230 Plant Physiology

This laboratory exercise is designed to provide students with laboratory experience related to the materials covered in the lectures. Students will be exposed to basic techniques in investigating plant functions and data interpretation. Computer-based statistical analysis and graphical interpretation will be introduced.

BIOL 3005 Animal Physiology (3,3,0) (E)

Prerequisite: Biology major Year III/IV standing

This course aims to provide students with the fundamental knowledge on the basic principles and the interrelation between the anatomical and functional organization of animal body. Regulatory mechanisms that cause the functional systems to operate in homeostasis are discussed. Throughout the course, emphasis is placed on human physiology. Comparative physiology of lower animals is also introduced. Students will come to understand the major physiological systems involved in the maintenance of body functions.

BIOL 3006 Animal Physiology Laboratory (1,0,3)

Prerequisite: Biology major Year III/IV standing

This course provides students with practical experience of applying important physiological concepts in Animal Physiology. Some basic but important physiological concepts are illustrated by means of experiments. It also provides an opportunity for students to practise the methods and utilize the apparatus most frequently used in experimental physiology.

BIOL 3007 Ecology (3,3,0) (E)

Prerequisite: Biology major Year III/IV standing

This course places emphasis on biological functioning at the levels of population, community, and ecosystem, and is organized around the principles of energy flow and nutrient cycles. Human interventions such as urbanization, harvesting renewable and non-renewable resources, and pollution generation are considered in relation to natural limits, natural regulations and regeneration mechanisms, and long-term ecosystem stability.

BIOL 3015 Ecology Laboratory (1,0,3)

Prerequisite: Biology major Year III/IV standing

This course aims to use local ecological topics to facilitate the students' learning of modern methods of ecological research and environmental assessment, utilization of appropriate experimental techniques, collecting and interpreting data, and writing of ecological reports.

BIOL 3016 Environmental Health and Toxicology (3,3,0) (E)

Prerequisite: Biology major Year III/IV standing

The course provides the general knowledge on the various routes of human exposure to toxic chemicals. Main emphasis will be placed on the biological responses to toxicants, methods for evaluating potential toxicity and applications of toxicological data to assess potential health risk.

BIOL 3017 Molecular Biology (3,3,0) (E)

Prerequisite: Biology major Year III/IV standing

This course aims to provide a solid foundation in describing the molecular and cellular mechanisms in the maintenance and the

regulation of the expression of the genome. Special attention will be given to the organization of eukaryotic genes, the flow of genetic information and the control of gene expression.

BIOL 3025 Plant Physiology (3,3,0) (E)

Prerequisite: Biology major Year III/IV standing

This course deals with plant physiological processes such as plant-water relations, plant-environment interactions, mineral nutrition, carbon and nitrogen metabolism, and plant growth and development. Students are expected to use physiological principles to explain how plants control their growth and development under natural and agricultural environments.

BIOL 3026 Plant Physiology Laboratory (1,0,3)

Prerequisite: Biology major Year III/IV standing

This laboratory session is designed to provide students with laboratory experience related to the materials covered in the lectures. Students will be exposed to basic techniques in investigating plant functions and data interpretation. Computer-based statistical analysis and graphical interpretation will be introduced.

BIOL 3027 Waste Treatment and Recycling (3,3,0) (E)

Prerequisite: Biology major Year III/IV standing

(1) Understand the origins of waste and the social, political and economic issues involved with waste disposal; (2) review the waste generation problem and to examine various physical, chemical and biological waste treatment methods; (3) introduce various technologies in reducing and reutilizing the various types of wastes; and (4) acquire a comprehensive knowledge of current and anticipated legislation regarding waste and their potential implications.

BIOL 3035 Immunology (3,3,0) (E)

Prerequisite: Biology major Year III/IV standing

This course is to provide basic concepts in the rapidly advancing field of Immunology, and to expose students to modern and current applications of Immunology in Cell Biology, Molecular Biology and Medical Sciences.

BIOL 3036 Neurobiology (3,3,0) (E)

Prerequisite: Biology major Year III/IV standing

The course studies neurobiology with main emphasis on how neuronal information is integrated in the CNS to control bodily functions such as visual recognition, sleep, memory and movement. The course also studies the autonomic nervous system with an emphasis on its control of body functions. Lastly, the relationship between the nervous system and the hormonal system will also be stressed.

BIOL 3045 Developmental Biology (3,3,0) (E)

Prerequisite: Biology major Year III/IV standing

This course aims to equip students with a solid foundation in principles of animal and plant development, including embryogenesis, tissue formation and organogenesis, stem cell biology and tissue regeneration, plant and animal reproduction, and growth, cancer and aging. The course also challenges students to apply basic knowledge in cell biology, genetics, and molecular biology in understanding developmental processes.

BIOL 3046 Foundation of Bioanalysis (3,3,0) (E)

Prerequisites: BIOL 1005 Introduction to Biology

The course provides very strong foundation in the fundamental principles and theories for analysis of biological samples. Main emphasis will be focused on different biological aspects including cell biology, microbiology, biochemistry, molecular biology, physiology and immunology.

BIOL 3047 Foundation of Bioanalysis Laboratory (1,0,3)

Prerequisite: SCIE 1005 Integrated Science Laboratory

Co-requisite: BIOL 3046 Foundation of Bioanalysis

The laboratory exercise provides a wide spectrum of bioanalytical techniques commonly used for the study of cell biology,

microbiology, molecular biology, immunology and physiology. This course is designed to enhance, augment and reinforce the specific topics introduced during the lecture.

BIOL 3140 Environmental Health and Toxicology (3,3,0) (E)

Prerequisite: BIOL 1160 Biological Chemistry and BIOL 2210 Animal Physiology

This course provides general knowledge concerning the various routes of human exposure to toxic chemicals. Main emphasis will be placed on the biological responses to toxicants, methods for evaluating potential toxicity and applications of toxicological data to assess potential health risk.

BIOL 3150 Principles of Environmental Management (3,3,0) (E)

Prerequisite: BIOL 2110 Ecology or Geography major Year III standing

This course discusses the anthropogenic causes of environmental degradation and the way sustainable growth can be brought about by environmental management. This course also examines the framework of environmental planning and management and the techniques for tackling environmental management. This course then applies principles of environmental science to help manage some of the diverse array of environmental problems, in different physical, biological and social environment.

BIOL 3160 Molecular Biology (3,3,0) (E)

Prerequisite: BIOL 1160 Biological Chemistry, BIOL 1210 Cell Biology, BIOL 1310 Microbiology and BIOL 2160 Genetics and Evolution

This course aims to provide a fundamental principle and current techniques in molecular biology with particular regard to topics related to application in biotechnology. Special attention will be given to the organization of eukaryotic genes, the flow of genetic information and the control of gene expression. The recombinant DNA technology in protein engineering will be emphasized.

BIOL 3170 Environmental Biotechnology (3,3,0) (E)

Prerequisite: BIOL 1160 Biological Chemistry and BIOL 1310 Microbiology

This course provides a general understanding of the principles and applications of biotechnology in environmental monitoring, pollution control and contaminants removal. Special emphasis will be placed in biological wastewater treatment, bioremediation and ecological engineering.

BIOL 3180 Fermentation and Enzyme Technology (3,3,0) (E)

Prerequisite: BIOL 1160 Biological Chemistry, BIOL 1210 Cell Biology, BIOL 1310 Microbiology and BIOL 2160 Genetics and Evolution

This course introduces basic principles and current techniques in industrial microbiology and enzyme technology.

BIOL 3260 Biological Resources and Management (3,3,0) (E)

Prerequisite: BIOL 2110 Ecology

This course is designed to promote an awareness of man's interaction with his abiotic and biotic environment through training in the principles of resource utilization and conservation as applied 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 3280 Waste Treatment and Recycling (3,3,0) (E)

Prerequisite: BIOL 2110 Ecology

This course is designed to understand the origins of waste and the social, political and economic issues involved with waste disposal and to review the waste generation problem and to examine various physical, chemical and biological waste treatment methods. The course also introduces the various technologies in reducing and reutilizing the various types of wastes. Students will

have a comprehensive knowledge of the current and projected legislation regarding waste and their potential implications.

BIOL 3320 Immunology (3,3,0) (E)

Prerequisite: BIOL 1210 Cell Biology, BIOL 2160 Genetics and Evolution and BIOL 2210 Animal Physiology

This course provides basic concepts in the rapidly advancing field of immunology and exposes students to modern and current applications of immunology in cell biology, molecular biology and medical sciences.

BIOL 3350 Neurobiology (3,3,0) (E)

Prerequisite: BIOL 2210 Animal Physiology

The course studies neurobiology with main emphasis on how neuronal information are integrated in the CNS to control functions such as visual recognition, sleep, memory and movement. The course also studies the autonomic nervous system with emphasis on its control of body functions. Lastly, the relationship between the nervous system and the hormonal system will also be stressed.

BIOL 3380 Environmental Science Laboratory I (2,0,6)

Prerequisite: BIOL 2110 Ecology and Biology major Year III standing (Environmental Concentration); or BIOL 2110 Ecology and Geography major Year III standing

This course provides students with hands-on experience in the approach and techniques commonly used in environmental research. A local habitat will be selected and students will be trained the sampling and analytical techniques for various environmental matrices including water, soil and biological samples.

BIOL 3390 Environmental Science Laboratory II (2,0,6)

Prerequisite: Biology major Year III standing (Environmental Concentration)

This laboratory exercise provides students with training in analytical techniques, including physical, chemical and biological techniques, for environmental investigations, and with the skills in management and evaluation of environmental data, and with hands-on experience in management techniques for conducting and evaluating an environmental project.

BIOL 3440 Plant Propagation and Breeding (3,3,0) (E)

Prerequisite: BIOL 1130 Biodiversity and BIOL 2230 Plant Physiology

This course is divided into two main sections, plant propagation and plant breeding. Students are expected to understand the principles involved in the practices of the two important aspects of applied plant sciences. Both conventional and modern methods, and technology are introduced with emphasis on the plant micropropagation and conventional hybridization breeding.

BIOL 3460 Biotechnology Studies Laboratory I (2,0,6)

Prerequisite: Biology major Year III standing (Biotechnology Concentration)

This laboratory exercise introduces basic principles and current methods in biotechnology. The topics cover the basic technologies in molecular biology, enzymology and immunology.

BIOL 3470 Biotechnology Studies Laboratory II (2,0,6)

Prerequisite: Biology major Year III standing (Biotechnology Concentration)

This laboratory exercise introduces basic principles and current methods in biotechnology. The topics cover various techniques currently being used in the area of immunology, plant science, production of microbial products, neurobiology and physiology.

BIOL 3591-2 Applied Biology Project I & II (3,0,9)

Prerequisite: Biology major Year III standing

This course aims to guide students in the development of research methodology appropriate to the practice of biology. Opportunity will be given to students who work on problems of an applied or interdisciplinary nature that have real-world significance.

BIOL 4005 Biotechnology Studies Laboratory I (2,0,6)

Prerequisite: Biology major Year IV standing (Biotechnology Concentration)

The course is to introduce basic principles and current methods in biotechnology. The topics cover the basic technologies in molecular biology, enzymology and immunology.

BIOL 4006 Environmental Science Laboratory I (2,0,6)

Prerequisite: Biology major Year IV standing (Environmental Concentration)

This course provides students with hands-on experience in the approaches and techniques commonly used in environmental research. A local habitat will be selected and students will be trained the sampling and analytical techniques of various environmental matrices including water, soil and biological samples.

BIOL 4007 Molecular Biotechnology I (3,3,0) (E)

Prerequisite: Biology major Year IV standing

This course aims to introduce to students fundamental principle and current techniques in molecular biology with particular emphasis on biotechnology applications. The recombinant DNA technology in protein engineering will be emphasized.

BIOL 4015 Fermentation and Enzyme Technology (3,3,0) (E)

Prerequisite: Biology major Year IV standing

This course aims to introduce basic principles and current techniques in industrial microbiology and enzyme technology.

BIOL 4016 Principles of Environmental Management (3,3,0) (E)

Prerequisite: Biology major Year IV standing

This course aims to (1) discuss the anthropogenic causes of environmental degradation and the way sustainable growth can be brought about by environmental management; (2) examine the framework of environmental planning and management and the techniques for tackling environmental management; and (3) apply principles of environmental science to help manage some of the diverse array of environmental problems, in different physical, biological and social environments.

BIOL 4017 Environmental Biotechnology (3,3,0) (E)

Prerequisite: Biology major Year IV standing

This course provides a general understanding of the principles and applications of biotechnology in environmental monitoring, pollution control and contaminants removal. Special emphasis will be placed in biological wastewater treatment, bioremediation and ecological engineering.

BIOL 4025 Biotechnology Studies Laboratory II (2,0,6)

Prerequisite: Biology major Year IV standing (Biotechnology Concentration)

This course introduces basic principles and current methods in biotechnology. The topics cover various techniques currently in use in immunology, plant science, production of microbial products, neurobiology, and physiology.

BIOL 4026 Environmental Science Laboratory II (1,0,3)

Prerequisite: Biology major Year IV standing (Environmental Concentration)

This course aims to (1) provide students with training in analytical techniques, including physical, chemical and biological techniques,

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.