

CHEM 1005 Introduction to Chemistry (3,3,0)

To provide all science students with some fundamental concepts and principles of chemistry as well as to demonstrate to them the diverse and important applications of chemistry in everyday life.

CHEM 1006 Chemistry for Life Sciences (3,3,0)

Prerequisite: DSE Level Chemistry or Combined Science (Chemistry) or CHEM 1005 or consent of instructor

This course is to provide students with some fundamental concepts and principles of chemistry as well as to demonstrate to them the diverse and important applications of chemistry in everyday life. This course is not open to Chemistry or Analytical and Testing Sciences major students.

CHEM 1007 Chemistry for Life Sciences Laboratory (1,0,3)

Co-requisite: CHEM 1006 Chemistry for Life Sciences

This course aims to provide selected experiments on basic and physical chemistry which are relevant to pharmaceutical and biomedical studies and to illustrate basic chemical laboratory techniques. It also aims to provide clear illustrations of the chemical principles of thermodynamics, kinetics, stereochemistry discussed in the lecture course.

CHEM 1010 Ocean Voyage—Science in the Sea (3,3,0)

This course is for students who are curious to learn about the ocean and its science, history and more. Students will be introduced the concepts of marine and environmental science, as well as cultural, economic and political impacts to address marine-environmental issues at local and regional scales.

CHEM 1015 Foundation of Chemistry (3,3,0)

Prerequisite: HKDSE Chemistry or equivalent level

This course aims to provide those science students with HKDSE chemistry or equivalent background the essential concepts and principles of chemistry required for further course study in chemistry. This course is particularly suitable to students who are interested in pursuing their Major studies in Chemistry or Analytical and Testing Sciences.

CHEM 1111-2 Organic Chemistry I & II (3,3,0)

Prerequisite: A-Level Chemistry or Foundation of Chemistry
Co-requisite: CHEM 1251 Integrated Chemistry Tutorials I (for CHEM 1111) and CHEM 1252 Integrated Chemistry Tutorials II (for CHEM 1112)

This course provides a mechanistic approach to the studies of organic reactions with special emphasis on stereochemistry, conformation and the use of modern spectroscopic methods in structure determination. It also stresses molecular rearrangement, aromatic chemistry, di- and poly-functional compounds, and the design of multi-step synthesis.

CHEM 1121-2 Organic Chemistry Laboratory I & II (1,0,3)

Prerequisite: A-Level Chemistry (for CHEM 1121) and CHEM 1121 Organic Chemistry Laboratory I (for CHEM 1122)

Co-requisite: CHEM 1111-2 Organic Chemistry I & II
This laboratory course is designed to familiarize the students with the application of organic chemistry. The preparation skills of the students are to be developed by performing different types of organic reactions. This course is open to Chemistry majors only.

CHEM 1220 Analytical Chemistry Laboratory (1,0,3)

Co-requisite: CHEM 1230 Analytical Chemistry
This course provides students with practical experience in applying the techniques studied in Analytical Chemistry and Instrumental Analysis to the solution of analytical problems, including those of a practical nature. This course is open to Chemistry majors only.

CHEM 1230 Analytical Chemistry (3,3,0)

Prerequisite: A-Level Chemistry or consent of instructor

Co-requisite: CHEM 1252 Integrated Chemistry Tutorials II or CHEM 2045 Analytical & Testing Science Tutorials II

The fundamental principles of classical quantitative chemical analysis, gravimetric and volumetric analysis will be introduced, together with the statistical treatment of analytical data.

CHEM 1251 Integrated Chemistry Tutorials I (0,0,1)

An integrated tutorial course supporting the courses CHEM 1260 Fundamentals of Chemistry and CHEM 1111 Organic Chemistry I. Students will engage in small group discussion and find solutions to assigned problems under the guidance of staff members of the Department of Chemistry.

CHEM 1252 Integrated Chemistry Tutorials II (0,0,1)

An integrated tutorial course supporting the courses CHEM 1112 Organic Chemistry II and CHEM 1230 Analytical Chemistry. Students will engage in small group discussion and find solutions to assigned problems under the guidance of staff members of the Department of Chemistry.

CHEM 1260 Fundamentals of Chemistry (3,3,0)

Prerequisite: A-Level Chemistry or Foundation of Chemistry

Co-requisite: CHEM 1251 Integrated Chemistry Tutorials I

This is intended to be the first chemistry programme course for all Chemistry majors. It is aimed to provide the students with a solid understanding of all the fundamental concepts and physical principles in chemistry necessary for the study of the more advanced or specialized programme course that follow. The topics discussed include atomic and molecular structures, chemical bonding, intermolecular forces and states of matter, and acid-base chemistry.

CHEM 1310 Physical Chemistry I (3.5,3,1)

Prerequisite: A-Level Chemistry

Co-requisite: CHEM 1252 Integrated Chemistry Tutorials II

This course provides students with the fundamental concepts of chemical thermodynamics and its application in electrochemistry solution properties, phase equilibria.

CHEM 1320 Physical Chemistry Laboratory I (1,0,3)

Prerequisite: CHEM 1330 Physical Chemistry I

CHEM 1510 Chemistry for Life Science (3,3,0)

Prerequisite: A-Level Chemistry or AS-Level Chemistry or consent of instructor

This course gives a detailed treatment of topics selected from Organic and Physical Chemistry. The discussion of stereochemistry, molecular rearrangements, and chemistry of carbonyl compounds, carbanions and natural products is to be preceded by bonding, thermodynamics, chemical kinetics and surface catalysis. This course is offered to Non-Major Students only.

CHEM 1520 Chemistry for Life Science Laboratory (1,0,3)

Prerequisite: A-Level Chemistry or AS-Level Chemistry or consent of instructor

Co-requisite: CHEM 1510 Chemistry for Life Science

Experiments are selected to illustrate the principles discussed in Chemistry for Life Science.

CHEM 1660 Better Living through Chemistry (3,3,0)

This course is designed for those non-science majors who are interested in the underlying chemistry of the many facets in modern living. Topics to be discussed include the chemistry of foods, cooking and wine-making, the chemistry of drugs, health and beauty products, the chemistry of new materials, the design of miniature machines and molecular devices, the chemical tools in crime scene investigations, the molecular evolution of life, the chemistry of textiles and modern fabrics and archaeological

chemistry. Live chemical demonstrations, online resources and case studies will be provided when applicable. About 4 to 5 topics from the above list will be discussed each time.

CHEM 1670 Better Living through Technologies and Innovations (3,3,0)

Prerequisite: A-Level Chemistry

Designed as a free elective for science majors, the course aims to demonstrate, through daily life examples, the many important contributions and relevance of chemical sciences and technology to the betterment of humankind.

CHEM 2005 General Chemistry (3,3,0)

Prerequisite: CHEM 1005 Introduction to Chemistry or CHEM 1015 Foundation of Chemistry

Co-requisite: CHEM 2006 Integrated Tutorials I

To provide students with a good grasp of the fundamental concepts and basic principles and skills in chemistry necessary for the study of more advanced courses.

CHEM 2006 Integrated Chemistry Tutorials I (0,0,1)

Co-requisite: CHEM 2008 Organic Chemistry I or CHEM 2005 General Chemistry

To enhance in-depth understanding of the lecture materials presented in the courses CHEM 2008 Organic Chemistry I and CHEM 2005 General Chemistry through small group discussion and guided problem solving.

CHEM 2007 Integrated Chemistry Tutorials II (0,0,1)

Co-requisite: CHEM 2009 Organic Chemistry II, CHEM 2015 Analytical Chemistry

To enhance in-depth understanding of the lecture materials presented in the courses CHEM 2009 Organic Chemistry II and CHEM 2015 Analytical Chemistry through small group discussion and guided problem solving.

CHEM 2008-9 Organic Chemistry I and II (3,3,0)

Prerequisite: CHEM 1005 Introduction to Chemistry or CHEM 1015 Foundation of Chemistry or CHEM 1006 Chemistry for Life Sciences or with consent of instructors (for CHEM 2008) and CHEM 2008 Organic Chemistry I or CHEM 2036 Fundamentals of Organic Chemistry (for CHEM 2009)

Co-requisite: CHEM 2006 Integrated Chemistry Tutorials I (for CHEM 2008) and CHEM 2007 Integrated Chemistry Tutorials II (for CHEM 2009)

To introduce students to the fundamentals of the mechanistic approach for organic reactions, to stress structures and syntheses, with special emphasis on stereochemistry, conformation and the use of spectroscopic techniques. CHEM 2008 is not open to Analytical and Testing Sciences major students.

CHEM 2015 Analytical Chemistry (3,3,0)

Prerequisite: CHEM 1005 Introduction to Chemistry or CHEM 1015 Foundation of Chemistry

Co-requisite: CHEM 2007 Integrated Chemistry Tutorials II or CHEM 2045 Analytical & Testing Science Tutorials II

This course aims to educate students to understand the concepts of chemical analysis and to apply these fundamental principles to the analysis of environmental, clinical, industrial and other applied chemical systems.

CHEM 2016 Analytical Chemistry Laboratory (1,0,3)

Prerequisite: CHEM 1005 Introduction to Chemistry or CHEM 1015 Foundation of Chemistry

Co-requisite: CHEM 2015 Analytical Chemistry

This course aims to educate students to understand the concepts of chemical analysis and to apply these fundamental principles to the analysis of environmental, clinical, industrial and other applied chemical systems.

CHEM 2018-9 Organic Chemistry Laboratory I and II (1,0,3)

Prerequisite: CHEM 1005 Introduction to Chemistry or CHEM 1015 Foundation of Chemistry or CHEM 1006 Chemistry for Life Sciences or with consent of instructors (for CHEM 2018) and CHEM 2018 Organic Chemistry Laboratory I (for CHEM 2019)

Co-requisite: CHEM 2008 Organic Chemistry I (for CHEM 2018) and CHEM 2009 Organic Chemistry II (For CHEM 2019)

To make students familiar with all fundamental purification and separation techniques applicable in organic chemistry. To develop appreciation of the need for practical skill and the importance of performing different types of organic reactions.

CHEM 2035 Better Living through Technologies and Innovations (3,3,0)

Prerequisite: CHEM 1005 Introduction to Chemistry or CHEM 1015 Foundation of Chemistry

Designed as a free elective for science majors, the course aims to demonstrate, through daily life examples, the many important contributions and relevance of chemical sciences and technology to the betterment of humankind.

CHEM 2036 Fundamentals of Organic Chemistry (3,3,0)

Prerequisite: CHEM 1005 Introduction to Chemistry or CHEM 1015 Foundation of Chemistry

Co-requisite: CHEM 2037 Analytical and Testing Sciences Tutorials I

This course describes functional group and mechanistic approaches in studying the chemistry of organic and biological compounds. Correlation between structures and properties/activities will be discussed. Important organic reactions will be discussed with special emphasis on stereochemistry, reaction mechanisms and the use of modern spectroscopic methods in structural determination.

CHEM 2037 Analytical and Testing Science Tutorials I (0,0,1)

Co-requisite: CHEM 2036 Fundamentals of Organic Chemistry
This course enhances in-depth understanding of the lecture materials presented in the course CHEM 2036 Fundamentals of Organic Chemistry through small group discussion and guided problem solving.

CHEM 2045 Analytical and Testing Science Tutorials II (0,0,1)

Co-requisite: CHEM 2015 Analytical Chemistry and CHEM 2046 Physical and Inorganic Chemistry

This course enhances in-depth understanding of the lecture materials presented in the courses CHEM 2046 Physical and Inorganic Chemistry and CHEM 2015 Analytical Chemistry through small group discussion and guided problem solving.

CHEM 2046 Physical and Inorganic Chemistry (3,3,0)

Prerequisite: CHEM 1005 Introduction to Chemistry or CHEM 1015 Foundation of Chemistry

Co-requisite: CHEM 2045 Analytical and Testing Science Tutorials II

To provide students with a solid understanding of the fundamental concepts and physical principles in physical and inorganic chemistry. This course also aims at preparing the students for several advanced level courses.

CHEM 2047 Chemistry Laboratory for Analytical (1,0,3) and Testing Sciences

Prerequisite: CHEM 1005 Introduction to Chemistry or CHEM 1015 Foundation of Chemistry

To provide clear illustrations of the chemical principles of thermodynamics, kinetics and surface adsorption through laboratory activities. To equip students with basic synthetic,

extraction and purification techniques which are relevant to students majoring in analytical and testing sciences.

CHEM 2120 Inorganic Chemistry Laboratory (1,0,3)

Co-requisite: CHEM 2190 Inorganic Chemistry
This course provides students with practical work related to the principles studied in Inorganic Chemistry. Experiments are designed for students to gain practical experiences in Inorganic Chemistry after they have studied the lecture course.

CHEM 2170 Instrumental Analysis (3,3,0)

Prerequisite: CHEM 1230 Analytical Chemistry
Co-requisite: CHEM 2250 Integrated Chemistry Tutorials III
Instrumental techniques like spectroscopy, flame emission and atomic absorption, solvent extraction and chromatography will be studied. This course forms the basis for advanced studies in instrumental analysis, environmental studies and industrial studies.

CHEM 2180 Biochemistry (3,3,0)

Prerequisite: CHEM 1112 Organic Chemistry II
This course gives an introduction to the basic concepts of biochemistry. Topics covered include carbohydrates, lipids, proteins, and nucleic acids. Special attention is given to their structures, properties, catabolisms and biosyntheses. Enzymes will also be discussed.

CHEM 2190 Inorganic Chemistry (3,3,0)

Prerequisite: CHEM 1112 Organic Chemistry II, CHEM 1260 Fundamentals of Chemistry and CHEM 2330 Physical Chemistry II

This course is aimed to provide the students with a solid understanding of all the fundamental concepts and physical principles in modern inorganic chemistry necessary for the study of the more advanced or specialized courses that follow. The topics discussed include coordination chemistry, organometallic chemistry, main group chemistry and their applications in industry and our daily life.

CHEM 2220 Instrumental Analysis Laboratory (1,0,3)

Prerequisite: CHEM 1230 Analytical Chemistry
Co-requisite: CHEM 2170 Instrumental Analysis
Students are required to practise the techniques they have learned in the corresponding lecture course in the laboratory. This course is open to Chemistry majors only.

CHEM 2250 Integrated Chemistry Tutorials III (0,0,1)

An integrated tutorial course supporting the courses CHEM 2170 Instrumental Analysis and CHEM 2330 Physical Chemistry II. Students will engage in small group discussion and find solutions to assigned problems under the guidance of staff members of the Department of Chemistry.

CHEM 2310 Physical Chemistry II (3.5,3,1)

Prerequisite: CHEM 1310 Physical Chemistry I
This course continues to present to students the physical concepts in quantum chemistry, chemical kinetics and symmetry, and is an important prerequisite to spectroscopic techniques in structure determination, applied spectroscopy and materials science.

CHEM 2320 Physical Chemistry Laboratory II (1,0,3)

Prerequisite: CHEM 2330 Physical Chemistry II
These courses provide students with practical work related to the principles studied in Physical Chemistry I & II. This course is open to Chemistry majors only.

CHEM 2510 Chemical Analysis (3,3,0)

Prerequisite: A-Level/AS-Level Chemistry or CHEM 1510 Chemistry for Life Science or equivalent chemistry course

This course emphasizes the presentation of the techniques and instrumentation involved in modern chemical analysis. This course is not for Chemistry majors.

CHEM 2520 Chemical Analysis Laboratory (1,0,3)

Co-requisite: CHEM 2510 Chemical Analysis
This course provides students with the practical experience of applying the techniques studied in Chemical Analysis to the solution of analytical problems. This course is open to Applied Biology and Pharmacy in Chinese Medicine majors only.

CHEM 3005 Instrumental Analysis (3,3,0)

Prerequisite: CHEM 2015 Analytical Chemistry
This course aims to educate students to understand the fundamental knowledge in the basic theory, structure, operating principle of chemical instrumentation which can aid in the analysis of a chemical system effectively.

CHEM 3006 Instrumental Analysis Laboratory (1,0,3)

Prerequisite: CHEM 2015 Analytical Chemistry
Co-requisite: CHEM 3005 Instrumental Analysis
This course aims to allow students to practise the techniques they have learned in the corresponding lecture course in the laboratory.

CHEM 3007 Physical Chemistry II (3.5,3,1)

Prerequisite: CHEM 3037 Physical Chemistry I or CHEM 2046 Physical and Inorganic Chemistry

This course presents to students the physical concepts in quantum chemistry, chemical kinetics and symmetry, and is an important prerequisite to spectroscopic techniques in structure determination, applied spectroscopy and materials science.

CHEM 3015 Inorganic Chemistry (3,3,0)

Prerequisite: CHEM 1005 Introduction to Chemistry or CHEM 1015 Foundation of Chemistry; CHEM 2009 Organic Chemistry II or CHEM 2036 Fundamentals of Organic Chemistry; CHEM 3007 Physical Chemistry II or CHEM 2046 Physical and Inorganic Chemistry

To provide students with a solid understanding of all the fundamental concepts and physical principles in inorganic chemistry and the relevance of these topics to our daily life. This course also aims at preparing the students for several advanced level courses such as Organometallic Chemistry, Organic Synthesis and Advanced Materials.

CHEM 3016 Inorganic Chemistry Laboratory (1,0,3)

Co-requisite: CHEM 3015 Inorganic Chemistry
This course provides students with practical work related to the principles studied in Inorganic Chemistry.

CHEM 3017 Physical Chemistry Laboratory II (1,0,3)

Prerequisite: Chemistry major students
This course provides students with practical experimental knowledge/skills related to the principles acquired from CHEM 2017 Physical Chemistry I and CHEM 3007 Physical Chemistry II.

CHEM 3025 Chemical Analysis (3,3,0)

Prerequisite: DSE Level Chemistry or Combined Science (Chemistry) or CHEM 1006 Chemistry for Life Sciences or equivalent Chemistry course or CHEM 1005 Introduction to Chemistry or CHEM 1015 Foundation of Chemistry

This course aims to familiarize students with the principles of analytical chemistry and basic analytical techniques including volumetric, gravimetric and instrumental analysis. This course is not open to Chemistry or Analytical and Testing Sciences major students.

CHEM 3026 Chemical Analysis Laboratory (1,0,3)

Co-requisite: CHEM 3025 Chemical Analysis
This course provides students with the practical experience of applying the techniques studied in Chemical Analysis to the solution of analytical problems.

CHEM 3027 Materials Testing and Characterization (3,3,0)

Prerequisite: CHEM 3037 Physical Chemistry I or CHEM 2046 Physical and Inorganic Chemistry or consent of Instructors

Basic principles, methodologies, and instrumentation concerning major techniques for the characterization of the bulk properties of solid will be discussed. Emphasis will be placed on applications of the techniques in the characterization of materials of industrial importance, such as polymers, catalysts and adsorbents, electronic and other functional materials.

CHEM 3035 Integrated Laboratory for Analytical & Testing Sciences (1,0,3)

Prerequisite: CHEM 2015 Analytical Chemistry or CHEM 3005 Instrumental Analysis

This course aims to allow students to integrate the knowledge and the techniques gained in analytical chemistry and instrumental analysis in solving real analytical problems encountered in the analytical and testing industry.

CHEM 3036 Biochemistry (3,3,0)

Prerequisite: CHEM 2009 Organic Chemistry II or CHEM 2036 Fundamentals of Organic Chemistry

This semester course introduces the principles of Biochemistry with special reference to the common needs of chemistry students. This course is to comprehensively provide students a basic understanding of the enzymatic kinetics, structures and properties of biomolecules, their metabolisms in living organisms, and the metabolic regulation.

CHEM 3037 Physical Chemistry I (3.5,3,1)

Prerequisite: CHEM 1005 Introduction To Chemistry or CHEM 1015 Foundation of Chemistry

Co-requisite: CHEM 2005 General Chemistry

This is a foundation course in modern chemistry which provides students with fundamental concepts of physical chemistry for their further studies in most branches of advanced chemistry. The course provides students with the concepts of chemical thermodynamics and its applications in phase equilibria and solution electrochemistry.

CHEM 3045 Physical Chemistry Laboratory I (1,0,3)

Prerequisite: Chemistry major students

This course provides students with practical experimental knowledge/skills related to the principles acquired from CHEM 3037 Physical Chemistry I.

CHEM 3150 Polymer Chemistry (3,3,0)

Prerequisite: CHEM 1112 Organic Chemistry II and CHEM 2310 Physical Chemistry II, or consent of instructor

This course is designed to introduce topics covering polymerization processes, characterization of polymers and polymer related technology.

CHEM 3160 Chemical Information Search (1,1,0)

Prerequisite: CHEM 1112 Organic Chemistry II, CHEM 1260 Fundamentals of Chemistry, CHEM 2170 Instrumental Analysis and CHEM 2330 Physical Chemistry II

This course is designed to teach all Chemistry majors how to carry out an efficient search for chemical information from a variety of sources, including the primary and secondary chemical literature, the relevant scientific and technological databases and on the Internet. A hands-on workshop teaching approach will be adopted.

CHEM 3170 Environmental Analysis (3,0,3)

Prerequisite: Chemistry major with Year III standing or CHEM 2510 Chemical Analysis

This course deals with the analysis of atmospheric, terrestrial and aquatic pollutants in the environment. An introduction of

environmental quality models and modern monitoring techniques will also be covered.

CHEM 3190 Spectroscopic Techniques for Structure Determination (3,3,0)

Prerequisite: CHEM 1112 Organic Chemistry II and CHEM 2330 Physical Chemistry II, or CHEM 2510 Chemical Analysis

This course covers the basic principles and applications of several major spectroscopic techniques used in the determination of molecular structures. The techniques to be discussed include infrared (IR), Raman, nuclear magnetic resonance (NMR), electron paramagnetic resonance (EPR) spectroscopy and mass spectrometry.

CHEM 3210 Advanced Instrumental Analysis (3,3,0)

Prerequisite: CHEM 2170 Instrumental Analysis or CHEM 2510 Chemical Analysis

Basic principles, methodologies, and instrumentation concerning major analytical techniques, such as mass spectrometry, gas and liquid chromatography, electrochemistry, and atomic spectroscopy will be covered. Emphasis will be placed on the application of these analytical techniques to solving real-world problems, based on case studies borrowed from commercial and government laboratories. Such practical knowledge will be helpful to students in search for employments upon graduation, in which market demand for analytical chemists in Hong Kong/China should remain relatively high in the foreseeable future.

CHEM 3220 Structural Methods in Chemistry (3,3,0)

Prerequisite: CHEM 1112 Organic Chemistry II and CHEM 2330 Physical Chemistry II

This course is aimed to introduce the various physical techniques commonly used in structure determination to students in chemistry. The emphasis will be on the practical applications of these techniques in solving structural problems in chemistry rather than on a detailed discussion of the physical principles behind each technique. The techniques that will be covered include NMR, EPR, mass spectrometry and X-ray crystallography.

CHEM 3430 Pharmaceutical Chemistry (3,3,0)

Prerequisite: BIOL 1160 Biological Chemistry, CHEM 1111-2 Organic Chemistry I & II, CHEM 1510 Chemistry for Life Science or CHEM 2180 Biochemistry

This course provides a systematic study of the various mechanisms of drug action and how effective therapeutic agents are developed.

CHEM 3440 Bioorganic and Natural Products Chemistry (3,3,0)

Prerequisite: BIOL 1160 Biological Chemistry, CHEM 1112 Organic Chemistry II or CHEM 2180 Biochemistry

This course deals with the biosynthesis of natural products of all kinds. The interaction of some natural and synthetic molecules with living systems are to be discussed.

CHEM 3450 Organic Synthesis (3,3,0)

Prerequisite: CHEM 1111-2 Organic Chemistry I & II

This course gives an outline on the basic concepts methodologies of building up an organic molecule. Topics covered include carbon-carbon bonds formation, functional groups transformations and total synthesis of several selected molecules of widely differing types of structure.

CHEM 3460 Organometallic Chemistry (3,3,0)

Prerequisite: CHEM 2190 Inorganic Chemistry

The objective of this course is to provide a concise introduction to organometallic chemistry. Upon completion of the course, the students will have a fundamental understanding of (1) reaction mechanisms, (2) synthesis and reactivities, and (3) industrial applications of organometallic complexes.

CHEM 3480 Advanced Materials (3,3,0)

Prerequisite: Year III standing

This course is to expose students to the study of current and important topics in the selected area of materials chemistry, and to enable students to gain an overview of recent research development of those selected areas.

CHEM 3550 Integrated Chemistry Laboratory (1,0,3)

Prerequisite: Year III standing with CHEM 1112 Organic Chemistry II and CHEM 2310 Physical Chemistry II and/or Advanced Level Chemistry

This course aims to introduce students to application of chemistry principles from Year II and Year III chemistry courses. Industrial chemical analysis, material processing, and separation processes are treated with illustrations chosen from modern industry.

CHEM 3560 Bioanalytical Chemistry (3,3,0)

Prerequisite: CHEM 2170 Instrumental Analysis or CHEM 2510 Chemical Analysis

This course is aimed at students in chemistry, biology and biomedical sciences who are interested in learning the basic principles and instrumental techniques in the analysis of biomolecules, such as proteins and nucleic acids. Topics covered include sample preparation and separation techniques, molecular recognition techniques, nucleic acids amplification and sequencing, protein sequencing and analysis, and applications of mass spectrometry in bioanalysis.

CHEM 3591-2 Final Year Project I & II (3,0,9)

Co-requisite: Year III standing

An individual project which is usually of interdisciplinary or applied courses in the final year, and requires knowledge and skill acquired in the course. A thesis and an oral presentation are required upon completion of the project. This course is open to Chemistry majors only.

CHEM 3610 Dissertation in Chemistry (3,*,*)

Prerequisite: Year III standing

This course provides opportunities for students to be engaged in literature research (i.e. non-laboratory based) in a particular topic in pure or applied chemistry. The students are expected to work, as individuals or in small groups, closely with a member of the teaching staff. The outcome of this research work will be presented orally as well as in the form of a written dissertation for grading at the end of the study period.

CHEM 3910 Special Topics in Chemistry (3,3,0)

Prerequisite: Chemistry major with Year II standing or consent of instructor

This course is devoted to the study of up-to-date and important topics in different areas of chemistry. Emphasis is laid on the continuation and consolidation of those fundamental courses offered in the programme. This course will also take care of those topics that have not been specifically included in programme.

CHEM 4006 Environmental Chemistry and Pollution Control (3,3,0)

Prerequisite: CHEM 1005 Introduction to Chemistry or CHEM 1015 Foundation of Chemistry

This course describes the sources, transport, reactivity and sink of contaminants in the environment together with various technology options used for pollution control. The interconnection between air, water, land pollution and human activities will be addressed.

CHEM 4007 Environmental Studies Laboratory (1,0,3)

Prerequisite: CHEM 1005 Introduction to Chemistry and Year III or above standing

This course aim to give students practical experience in the following areas: (1) quantitative determinations of selected environmental pollutants, (2) monitoring of their ecological impacts, and (3) some treatment methods for their removals. Problems of local concern will be emphasized.

CHEM 4015 Integrated Chemistry Laboratory (1,0,3)

Prerequisite: Final year Chemistry students with CHEM 2009 Organic Chemistry II and CHEM 3007 Physical Chemistry II

This course aims to introduce students to the application of chemical principles acquired from final and previous year chemistry related major courses. Chemical manufacturing, material processing, separation process, environmental and food-related topics are treated with illustrations chosen from modern chemical technology.

CHEM 4016 Dissertation In Chemistry (3,*,*)

Prerequisite: Chemistry major Year IV standing

This course aims to train students to (1) conduct detailed and extensive literature search on current topics in pure and applied chemistry, and (2) organize and present the relevant information gathered from such search in a dissertation format.

CHEM 4017 Environmental Analysis (3,3,0)

Prerequisite: CHEM 3005 Instrumental Analysis or CHEM 3025 Chemical Analysis

This course aims to train students with knowledge of various pollution monitoring techniques, and cause and effect relationships so that they will be able to select the appropriate procedure in the solution of environmental problems.

CHEM 4025 Advanced Instrumental Analysis (3,3,0)

Prerequisite: CHEM 3005 Instrumental Analysis or CHEM 3025 Chemical Analysis

Basic principles, methodologies, and instrumentation concerning major analytical techniques, such as mass spectrometry, gas and liquid chromatography, electrochemistry, and atomic spectroscopy will be covered. Emphasis will be placed on the application of these analytical techniques to solving real-world problems, based on case studies borrowed from commercial and government laboratories. Such practical knowledge will be helpful to students in pursuing a career in analytical science.

CHEM 4026 Advanced Materials (3,3,0)

Prerequisite: Year III or above standing

This course aims to expose students to the study of current and important topics in the selected area of materials chemistry, and to enable students to gain an overview of recent research development in these selected areas.

CHEM 4027 Bioanalytical Chemistry (3,3,0)

Prerequisite: CHEM 3005 Instrumental Analysis or CHEM 3025 Chemical Analysis

To introduce students to the basic principles and techniques in the analysis of biomolecules.

CHEM 4035 Bioorganic and Natural Products Chemistry (3,3,0)

Prerequisite: BIOL 2005 Biological Chemistry or CHEM 2009 Organic Chemistry II or CHEM 2036 Fundamentals of Organic Chemistry

This course deals with the biosynthesis of several important classes of natural products including polyketides, terpenoids, steroids and alkaloids. The interaction of some natural and synthetic molecules with living systems and the relevance of natural products to the well being of humankind are to be discussed.

CHEM 4036 Fundamentals and Applications of Chemical Processes (3,3,0)

Prerequisite: CHEM 3007 Physical Chemistry II, CHEM 2046 Physical and Inorganic Chemistry or consent from instructor

This course aims to introduce students to the fundamentals of modern chemical industries. Students will learn materials and energy balance, basic kinetics and reactors design, examples in separation technology, and economic consideration of modern chemical industries. Students will come to understand some

of the major issues involved in modern industrial chemistry via analysis of their processes.

CHEM 4037 Materials Science: Solid State, Surface Chemistry and Catalysis (3,3,0)

Prerequisite: Chemistry or Physics majors with Year IV standing
This course provides a foundation of solid state and surface chemistry. It deals with the modern surface techniques and the application of surface science to various important industrial fields with particular reference to surface catalysis. The objective is to provide students with exposure to solid state and surface chemistry as well as to familiarize them with some techniques for material characterization and surface analysis.

CHEM 4045 Organic Synthesis (3,3,0)

Prerequisite: CHEM 2008 Organic Chemistry I and CHEM2009 Organic Chemistry II; or with consent of instructor
This course gives an outline on the basic concepts and methodologies of building up an organic molecule. Topics covered include carbon-carbon bonds formation, functional groups transformations and total synthesis of several selected molecules of widely differing types of structure. Recent development on asymmetric synthesis will be addressed.

CHEM 4046 Organometallic Chemistry (3,3,0)

Prerequisite: CHEM 3015 Inorganic Chemistry
The objective of this course is to provide a concise introduction to organometallic chemistry. Upon completion of the course, the students will have a fundamental understanding of (1) reaction mechanism, (2) synthesis and reactivity, and (3) industrial applications of organometallic complexes.

CHEM 4047 Pharmaceutical Chemistry (3,3,0)

Prerequisite: BIOL 2005 Biological Chemistry; or CHEM 2008-9 Organic Chemistry I & II; or CHEM 2036 Fundamentals of Organic Chemistry
To provide a systematic study of various mechanisms of drug action and how effective therapeutic agents are developed.

CHEM 4055 Polymer Chemistry (3,3,0)

Prerequisite: CHEM 2009 Organic Chemistry II and CHEM 3007 Physical Chemistry II; or CHEM 2036 Fundamentals of Organic Chemistry and CHEM 2046 Physical and Inorganic Chemistry; or with consent of instructor
This course aims to introduce students to the fundamental principles of polymer materials science. Students will learn the meanings of synthetic polymers, their synthesis, their properties, and their applications to modern technology. Students will come to understand all the current issues involved how polymers are made, characterized and applied.

CHEM 4056 Special Topics in Chemistry (3,3,0)

Prerequisite: Chemistry majors with Year III standing or above or consent of instructor
This course is devoted to the study of those current and important topics in chemistry that are not covered in the core and elective courses within the programme curriculum.

CHEM 4057 Spectroscopic Techniques for Structure Determination (3,3,0)

Prerequisite: CHEM 2009 Organic Chemistry II and CHEM 3007 Physical Chemistry II; or CHEM 2036 Fundamentals of Organic Chemistry and CHEM 2046 Physical and Inorganic Chemistry; or CHEM 3025 Chemical Analysis
To enable students to understand the basic principles of some modern spectroscopic techniques commonly used in chemical structure determination. To apply the spectroscopic techniques learnt in the determination of unknown molecular structures.

CHEM 4065 Structural Methods in Chemistry (3,3,0)

Prerequisite: CHEM 2009 Organic Chemistry II and CHEM 3007 Physical Chemistry II; or CHEM 2036 Fundamentals of Organic Chemistry and CHEM 2046 Physical and Inorganic Chemistry
To equip students with a working knowledge of the major structural techniques in chemistry.

CHEM 4066 Dissertation in Environmental Studies (3,*,*)

Prerequisite: Chemistry majors (Year IV standing) in Environmental Studies Concentration
This course trains students to (1) conduct detailed and extensive literature search on current topics in environmental science, and (2) organize and present the relevant information gathered from such search in a dissertation format.

CHEM 4067 Atmospheric Science (3,3,0)

Prerequisite: CHEM 2017 Physical Chemistry I or CHEM 2046 Physical and Inorganic Chemistry or consent of the instructor
This course describes the fundamentals of photochemistry, kinetics, and mechanisms to the most important homogeneous and heterogeneous processes that take place in our natural and polluted atmosphere. Their critical interactions on local, regional and global scales will be addressed as well.

CHEM 4075 Marine Chemistry (3,3,0)

Prerequisite: Any Science majors with Year III standing
This course describes the nature and the chemical process in the marine environment. It aims to provide an in-depth understanding of the interrelationship of chemistry and other marine science disciplines and our daily life. Major ion composition of seawater, inputs to and outputs from the ocean via rivers, the atmosphere and the sea floor, biogeochemical cycles within the oceanic water column and sediments, recent discoveries and development in marine chemistry will be briefly discussed.

CHEM 4076 Chemical Testing Laboratory Management and Accreditation (4,*,*)

Prerequisite: CHEM 3005 Instrumental Analysis or CHEM 3025 Chemical Analysis
The course intends to introduce students the concept of quality management system in chemical and testing laboratories. In particular, concept of ISO 9001 and ISO/IEC 17025 will be emphasized. Through laboratory practice, students will also acquire adequate technical skills in the maintenance and calibration of analytical equipment and instruments.

CHEM 4077 Dissertation in Analytical and Testing Sciences (3,*,*)

Prerequisite: Analytical and Testing Sciences majors Year IV standing
To train students to conduct detailed and extensive literature search on current topics in pure and applied chemistry. To train students to organize and present the relevant information gathered from such search in a dissertation format.

CHEM 4085 Food Analysis (3,3,0)

Prerequisite: CHEM 3005 Instrumental Analysis or CHEM 3025 Chemical Analysis
This course addresses the basic principles, procedures, instrumentations, and applications of food analysis. Emphasis will be placed on the chemical, physical, and microbial analysis of the major components and harmful substances in foods.

CHEM 4086 Forensic Analytical Chemistry (3,3,0)

Prerequisite: BIOL 2005 Biological Chemistry or CHEM 2008-9 Organic Chemistry I & II, or CHEM 2036 Fundamentals of Organic Chemistry
To provide students the advanced analytical methods in forensic chemistry for their applications to the analysis of controlled substances and materials with an emphasis on new method development.

- CHEM 4878-9 Final Year Project I & II (3,0,9)**
Prerequisite: Analytical and Testing Sciences majors Year IV standing
To guide students in the development of research methodology appropriate to the practice of Analytical and Testing Sciences and to give opportunity to students to work on problems that have practical significance in the testing industry.
- CHEM 4885 Summer Research Project (3,0,9)**
Prerequisite: Chemistry majors of International Student Status
To guide students in the development of research and problem-solving skills appropriate to the practice of chemistry and to provide an opportunity to students to work on problems that have practical and intellectual significance.
- CHEM 4895 Research Project in analytical and Testing sciences (3,0,9)**
Prerequisite: Analytical and Testing Sciences minors Year IV standing and consent of the instructor
To guide students in the development of research methodology appropriate to the practice of analytical and testing sciences and to give opportunity to students to work on problems that have practical significance in the testing industry. (For Analytical & Testing Sciences Minors only)
- CHEM 4888-9 Environmental Studies Project I & II (3,*,*)**
Prerequisite: Chemistry majors (Year IV standing) in Environmental Studies Concentration
To guide students in the development of research methodology appropriate to the practice of environmental studies and to give opportunity to students to work on problems that have practical significance.
- CHEM 4898-9 Final Year Project I & II (3,0,9)**
Prerequisite: Chemistry majors Year IV standing
To guide students in the development of research methodology appropriate to the practice of chemistry and to give opportunity to students to work on problems that have practical significance.
- CHEM 7210 Analytical Process and Applied Statistics (2,2,0)**
Prerequisite: Postgraduate standing
The objective of this course is to help the students to develop an analyst's approach to solve chemical analytical problems by equipping them with important basic tools including statistics, sampling and analytical planning, data treatment and interpretation, and experimental design.
- CHEM 7220 Chemical Instrumentation (2,2,0)**
Prerequisite: Postgraduate standing
Important concepts and developments in chemical instrumentation will be introduced. The student will acquire a better appreciation of the capabilities and limitations of these new tools which will help them make better choices of instruments and methods in real life analytical problems. The material in this course will be updated from time to time to reflect the most recent trend in instrument development.
- CHEM 7240 Analytical Spectroscopy (2,2,0)**
Prerequisite: Postgraduate standing
This course reviews the basic principles of modern spectroscopy and their applications at an advanced level. Emphasis is laid on the instruments used most commonly in elemental analysis (atomic spectroscopies) on the one hand and those for the analysis of molecular and ionic species in solution (optical spectroscopies) on the other.
- CHEM 7250 Laboratory Management (2,2,0)**
Prerequisite: Postgraduate standing
The objective of this course is to introduce concepts of quality assurance, issues pertaining to laboratory management, basic principles of experimental design and chemometrics, and methods for efficient management of analytical laboratories.
- CHEM 7270 Electroanalytical Chemistry (1,1,0)**
Prerequisite: Students of MSc in Analytical Chemistry
This course illustrates the basic principles and applications of modern electroanalytical methods at the advanced level.
- CHEM 7280 Surface Analysis (1,1,0)**
Prerequisite: Students of MSc in Analytical Chemistry
This course provides a detailed treatment of surface analytical techniques, such as XPS, AES, SEM and EDX. Applications of these techniques in the studies of heterogeneous catalysis, polymer, semiconductor, material corrosion, etc. will be demonstrated to the students.
- CHEM 7331-2 Dissertation (3,*,*)**
Prerequisite: Students of MSc in Analytical Chemistry
A 15-month (part-time) dissertation on an analytical related topic is to be completed independently by each candidate under the supervision of faculty members in the Department of Chemistry or in conjunction with qualified scientists or experts in industrial, government, or other testing laboratories.
- CHEM 7340 Environmental Analysis and Monitoring (1,1,0)**
Prerequisite: Students of MSc in Analytical Chemistry
This course provides students with conceptual information, general principles and practical utility of important environmental sampling and analysis techniques most commonly used in environmental research and pollution control.
- CHEM 7350 Sample Pretreatment Methods (1,1,0)**
Prerequisite: Postgraduate standing
This course introduces the principles and applications of traditional and modern sample pretreatment methods, including Soxhlet extraction, microwave extraction, pressurized liquid extraction, supercritical fluid extraction and solid-phase microextraction. Emphases will be placed on the sample pretreatment of herbal materials and foods.
- CHEM 7380 Food Safety Analysis (2,2,0)**
Prerequisite: Postgraduate standing
This course addresses the principles and applications of various analytical tools in food safety analysis. Most up-to-date analytical techniques for food safety monitoring with local relevance will be discussed in details.
- CHEM 7390 Separation Science (3,3,0)**
Prerequisite: Postgraduate standing
This course provides a systematic study of the modern techniques of gas chromatography, high-performance liquid chromatography, ultra-performance liquid chromatography and capillary electrophoresis. Emphasis will be placed on the theory, principle and application of these analytical separation techniques to real-world chemical analysis.
- CHEM 7401-2 Seminar I & II (0.5,*,0)**
CHEM 7403-4 Seminar III & IV (0.5,*,0)
Prerequisite: Postgraduate standing
Regular seminars will be organized which must be attended by MSc students. Speakers from outside or inside institutions and industries who are experts of a particular field will deliver lectures on the topics of food analysis, drug analysis, and environmental analysis, etc. This will enlighten students on current trends and developments in chemical analysis, in analytical problems of global and local interests.
- CHEM 7411-2 Advanced Analytical Laboratory (2,*,*)**
Prerequisite: Students of MSc in Analytical Chemistry
These courses aim to provide thorough hands-on experience for students to perform and understand modern analytical instrumentation.

CHEM 7420 Mass Spectrometric Analysis (1,*,*)

Prerequisite: Postgraduate standing

This course aims to provide students with in-depth knowledge on mass spectrometry and its application for environmental analysis, pharmaceutical analysis, bioanalysis and food analysis.

CHEM 7430 Pharmaceutical and Traditional Chinese Medicinal Analysis (1,*,*)

Prerequisite: Postgraduate standing

This course aims to provide students with in-depth knowledge on selected topics in pharmaceutical and traditional Chinese medicinal analysis.

CHEM 7440 Bioanalysis (1,1,0)

Prerequisite: Postgraduate standing

This course intends to introduce students to methods that are used to analyse compounds of biological importance. Principles of modern bioanalytical techniques that are used to measure biomolecules and techniques that use biological processes for analyte detection will be discussed. Students will gain an overview of current advancements in bioanalysis.

CHEM 7450 Chemosensor and Biosensor (1,1,0)

Prerequisite: Postgraduate standing

Introduction to the field of chemosensor and biosensor, as well as an in-depth and quantitative view of the sensor design and performance analysis. Fundamental application of chemo/biosensor theory will be demonstrated including recognition, transduction, signal acquisition, and post processing/data analysis. Topics are selected to emphasize biomedical, bio-processing, environmental, and food safety application.

CHEM 7460 Forensic Analysis (1,1,0)

Prerequisite: Postgraduate standing

The course intends to introduce students the concept of forensic analysis using various daily-life scenarios. In particular, modern analytical approaches and techniques will be demonstrated in solving these forensic cases. Students will also gain an insight on the latest research trends of forensic science.

CHEM 7470 Food Analysis (3,3,0)

Prerequisite: Postgraduate standing

This course discusses methods for food analysis in relation to the nutrition and safety aspects of food products, which are of increasing importance as industries strive to meet rising consumer expectation and regulatory requirements. This course addresses the principles and applications of various analytical tools in food analysis. Most up-to-date analytical techniques for food monitoring with local relevance will be discussed in detail.

CHEM 7480 Food Microbiology for Chemists (1,1,0)

Prerequisite: Postgraduate standing

For students with minimal microbiology background, this course addresses the principles and applications of various analytical tools in food microbiological safety. Analytical techniques, both conventional and novel, for food microbiological safety monitoring with local relevance will be discussed in detail.

CHEM 7710 Current Topics in Chemistry (3,3,0)

Prerequisite: Research postgraduate student standing

This course is devoted to the study of important current topics in different areas of chemistry. Possible topics included Chemosensors and Biosensors, Advanced Polymer Chemistry, Structure and Chemistry of Nucleic Acids, Mass Spectrometry, Electroanalytical Chemistry, Total Synthesis of Natural Products, Physics and Chemistry in Display Technology.

CHEM 7720 Structural Methods in Chemistry (3,3,0)

Prerequisite: Research postgraduate student standing or consent of instructor

This course is aimed to introduce the various physical techniques commonly used in structure determination to the postgraduate research students in chemistry. The emphasis will be on the

practical applications of these techniques in solving structural problems in chemistry rather than on a detailed discussion of the physical principles behind each technique. The techniques that will be covered include NMR, EPR, mass spectrometry and X-ray crystallography.

CHEM 7730 Analytical Process and Applied Statistics (3,2,0)

Prerequisite: Postgraduate standing

The objective of this course is to help the students to develop an analyst's approach to solve chemical analytical problems by equipping them with important basic tools including statistics, sampling and analytical planning, data treatment and interpretation, and experimental design.

CHEM 7740 Chemical Instrumentation (3,2,0)

Prerequisite: Postgraduate standing

Important concepts and developments in chemical instrumentation will be introduced. The student will acquire a better appreciation of the capabilities and limitations of these new tools which will help them make better choices of instruments and methods in real life analytical problems. The material in this course will be updated from time to time to reflect the most recent trend in instrument development.

CHEM 7760 Analytical Spectroscopy (3,2,0)

Prerequisite: Postgraduate standing

This course reviews the basic principles of modern spectroscopy and their applications at an advanced level. Emphasis is laid on the instruments used most commonly in elemental analysis (atomic spectroscopies) on the one hand and those for the analysis of molecular and ionic species in solution (optical spectroscopies) on the other.

CHEM 7770 Polymer Chemistry (3,3,0)

Prerequisite: Research postgraduate student standing

This course is designed to introduce topics covering polymerization processes, characterization of polymers and polymer related technology.

CHEM 7780 Bioorganic and Natural Products Chemistry (3,3,0)

Prerequisite: Research postgraduate student standing

This course deals with the biosynthesis of natural products of all kinds. The interaction of some natural and synthetic molecules with living systems are to be discussed.

CHEM 7790 Organic Synthesis (3,3,0)

Prerequisite: Research postgraduate student standing

This course gives an outline on the basic concepts and methodologies of building up an organic molecule. Topics covered include carbon-carbon bonds formation, functional groups transformations and total synthesis of several selected molecules of widely differing types of structure.

CHEM 7800 Organometallic Chemistry (3,3,0)

Prerequisite: Research postgraduate student standing

The objective of this course is to provide a concise introduction to Organometallic Chemistry. Upon completion of the course, the students will have a fundamental understanding of (1) reaction mechanisms, (2) synthesis and reactivities, and (3) industrial applications of organometallic complexes.

CHEM 7810 Advanced Materials (3,3,0)

Prerequisite: Research postgraduate student standing

This course is devoted to the study of important topics in different areas of advanced materials with current research interest.

CHEM 7820 Food Safety Analysis (3,2,0)

Prerequisite: Research postgraduate student standing

This course addresses the principles and applications of various analytical tools in food safety analysis. Most up-to-date analytical techniques for food safety monitoring with local relevance will be discussed in details.

CHEM 7830 Research Postgraduate Seminars I (0.5,*0)
CHEM 7840 Research Postgraduate Seminars II (0.5,*0)
CHEM 7850 Research Postgraduate Seminars III (0.5,*0)
 Prerequisite: Postgraduate standing
 The course aims to update and enlighten students on the current research and development in chemistry and related sciences.

CHEM 7860 Advanced Instrumental Analysis (3,3,0)
 Prerequisite: Postgraduate level and consent of course instructor
 Basic principles, methodologies, and instrumentation concerning major analytical techniques, such as mass spectrometry, gas and liquid chromatography, electrochemistry, and atomic spectroscopy will be covered. Emphasis will be placed on the application of these analytical techniques to solving real-world problems, based on case studies borrowed from commercial and government laboratories. Such practical knowledge will be helpful to students in pursuing a career in analytical science.

CHEM 7870 Bioanalytical Chemistry (3,3,0)
 Prerequisite: Postgraduate level and consent of course instructor
 This course aims to introduce students to the basic principles and techniques in the analysis of biomolecules.

CHEM 7880 Spectroscopic Techniques for Structure Determination (3,3,0)
 Prerequisite: Postgraduate level and consent of course instructor
 This course aims to enable students to understand the basic principles of some modern spectroscopic techniques commonly used in chemical structure determination. To apply the spectroscopic techniques learnt in the determination of unknown molecular structures.

CHI 7011-2 研究方法及研討會 (3,2,1) (C)/(P)
Research Method and Seminar
 本科旨在使研究生認識及熟悉一般學術研究方法，掌握中國文學、文化、語言學科專業研究方法。
 This course familiarizes students with research methodologies with particular reference to the studies in Chinese Literature, Language and Culture. Starting from basic training, students will acquire the ability to identify a research area, select a research topic; and write a research project, which will be presented orally and submitted in standard academic style and format.

CHI 7020 中國文學名著研究 (3,2,1) (P)
Selected Masterpieces of Chinese Literature
 本科目選取一部中國文學名著作深入研究，以加強學生研究文學作品的的能力。
 This course focuses on a masterpiece of Chinese literature. Through an in-depth study of the selected work, students' ability to do researches on literary works will be enhanced.

CHI 7030 中國文學專題研究 (3,2,1) (P)
Special Topics in Chinese Literature
 就中國文學中某一專題作深入研究，使學生透過課程了解此文學專題的內容、源流、發展、影響及前人研究成就等，旨在提高學生對中國文學研究的興趣，及加深他們對文學專門問題的認識。
 This course focuses on a selected topic in Chinese literature. Through an in-depth study, students will have a thorough understanding of the content, origin, development, and influence of the topic. Students will also be exposed to current scholarship on the topic. This course aims at stimulating students' interest in Chinese literary studies and deepening their knowledge of a given topic in Chinese literature.

CHI 7040 中國語言文字學名著選讀 (3,2,1) (P)
Selected Masterpieces of Chinese Linguistics and Etymology
 本科旨在讓學生通過精讀中國語言文字學方面的原典，掌握其語言理論和分析方法，以奠定研究中國語言文字學的堅實基礎。
 This course aims at enhancing students' understanding of the work selected for the course. Students will also be guided to

investigate the theoretical framework and evaluate the merits and shortcomings of the work. The training will help students establish a sound basis for research in Chinese linguistics and etymology.

CHI 7050 漢語專題研究 (3,2,1) (P)
Special Topics in Chinese Linguistics

本科旨在透過講授漢語的文字、聲韻、訓詁、語法、詞彙、修辭、方言等各個專題的研究，使學生深入了解漢語研究的最新成果及發展趨向，以助啟發確定研究漢語的興趣及方向。
 Through the study of selected topics in etymology, phonology, philology, grammar, phraseology and rhetoric, this course aims at enhancing students' understanding of the recent development and achievements of the study of Chinese linguistics. It will also stimulate students' research interest and illuminate possible research directions for them.

CHI 7060 中國文化專題 (3,2,1) (C)/(P)
Special Topics in Chinese Culture

本科旨在啟發學員從多角度思考與中國文化有關的課題，藉此拓闊學術視野。
 This course aims at broadening students' vision by encouraging them to reflect on selected issues related to Chinese culture from various perspectives.

CHI 7070 中國古代思想與今日社會 (3,2,1)
Traditional Chinese Thought and Modern Society

本課程旨在培養同學對傳統價值進行思考和討論的能力，主要著重引導學生討論中國古代思想衍生出來的重要傳統價值觀念，及其對現代社會的影響。
 This course aims to enhance students' ability to comprehend traditional values, to analyse the role, contribution and possible influences of traditional Chinese thought in modern life.

CHI 7090 中國文化思辨 (3,3,0)
Critical Thinking on Chinese Culture

本科旨在培養學生思辨能力，使能引導及評斷中國文化課題上的討論。
 This course is designed to develop students' critical thinking, equipping them with the ability to guide and evaluate discussions on issues on Chinese culture.

CHI 7100 中國記遊文學與人文景觀 (3,2,1)
Chinese Travel Literature and Human Scenery

遊觀文學是中國文學中的精華，中國名勝是自然和人文之美的結合。本科旨在把兩者結合起來學習，有助於從人文景觀中感知活的歷史，加深對中華傳統文明的理解。
 Travel literature is an essential part of Chinese literature, and Chinese sceneries are combinations of natural and human beauty. This course focuses on these two components and examines their relationship. Students' understanding of traditional Chinese culture will be enhanced.

CHI 7110 中國文學與宗教 (3,2,1)
Chinese Literature and Religion

本科講授中國文學與宗教（儒佛道以及基督教等等）的相互生發、影響，文學作品中的宗教關懷，宗教經典中的文學想像，重要作家的宗教信仰，使學生掌握文學與宗教文化之間的密切關聯。
 This course explores the relationship between Chinese literature and religion (such as Confucianism, Buddhism, Daoism, Christianity) focusing on the following aspects: the religious awareness in literary works, the literary imagination in religious classics, and the religious beliefs of seminal writers. Students' ability to grasp the intricate relationship between literature and religion will be enhanced.

CHI 7120 中國文化思考與觸覺 (3,2,1)
Thinking through Chinese Culture

本科旨在訓練學生綜合運用跨領域文化知識，旨在開拓視野、訓練思考、提升獨立批判及創意思考能力。
 This course is designed to enhance students' ability to integrate