

as pornography, prostitution, marriage and family, homosexual relations, procreation and new birth technologies, and gender roles. The course ends with an evaluation of the relevance of religious values in a pluralistic society.

本科目由基督教觀點介紹性與人的整合關係。它探討西方近數十年來性價值觀的轉變，以及隨後在香港的有關運動，及其背後的意識形態。它從基督教聖經、歷史和神學論述基督教的性價值觀。它嘗試從不同的課題（如色情、娼妓、婚姻與家庭、同性戀關係、生殖和生殖科技，及性別角色等課題），來比較及評論當代性文化價值觀和基督教傳統價值觀。本課程以宗教價值在多元社會的意義作總結。

**R.P. 1460 Religious Values and Pop Culture (3,2,1)**

This is a course that helps students to analyse pop culture and to learn to utilize various forms and manifestations of pop culture to critically reflect on life and society, in doing so students would be able to demonstrate their value-enhancement and intellect-enhancement gained through higher education. The course utilizes various forms of pop culture such as films, games, Internet web innovations and modern play and drama as powerful new cultural media comparable to literature as modern people's main venue for experiencing, appreciating and reflecting on human life. Such reflections of modern life would be taken to the religious dimension in its search for meaning and value that seeks to transcend temporality and secularity of life, and reaches for the ultimate elevation of the human spirit. The course examines the various ways in which modern people's myriad endeavors in socio-cultural actions embark on a profound search for human reality, possibility, value and meaning in this globalized and networked world.

**R.P. 1510 Virtuous Living in a Virtual World (3,2,1)**

The advent of the Internet has produced a revolutionary set of possibilities for technologically sophisticated people, but simultaneously it has created new temptations and complicated traps which threaten wise and virtuous forms of life. After introducing a modern history of the emergence of the World Wide Web, students will be introduced to a vision of reality (including playfulness, serious life, and transformation) by which the multiform nature and uses of the Internet can be discerned. Subsequently, several forms of ethical thinking and moral considerations will be introduced, so that students will be enabled to address and evaluate ethical problems found within cyberspace. Problems to be discussed will include cyber-utopianism, addictive practices leading to social alienation, telling lies within virtual contexts, deceitful tactics involving false identities, sexual ploys applied in cyberspace and their negative consequences, and various forms of cyber-bullying. It will be argued that actual caring communal relationships, virtuous familial ties and friendships assist persons in bringing balance, humility, humour, discernment and integrity to virtual relationships.

**R.P. 1520 Biotechnology, Altering Nature, and Being Human (3,2,1)**

This course integrates knowledge in molecular biology and philosophy (including the religious perspectives). New biotechnology is a key part of the biological revolution in the 21st century, which makes news headlines from time to time. It includes assisted reproduction, genetic therapy, genetic engineering, cloning, and stem cell manipulation. It can modify our food and our environment, alter ourselves and our offspring. It offers high hopes and arouses deep fears at the same time. This course is divided into three parts. Part I: Biology—understanding the molecular biology behind the latest biotechnological advances (e.g. molecular cloning, stem cell, the Human Genome Project, regenerative medicine). Part II: From Biology to Philosophy—understanding the notions of “nature”, “altering nature”, “improving nature”, and “unnatural” from both the biological and philosophical perspectives. Part III: Philosophical Anthropology—exploring how we can set the moral guidelines so that, via biotechnological intervention of nature, human beings will neither play god nor play slave of nature, but just being human. This course begins with basic literacy in

molecular biology and ends with the philosophical puzzle, “what is humanity?”.

**R.P. 2040 Philosophy of the Christian Religion (3,2,1)**  
**基督教哲學**

This course expresses the Christian faith in a philosophically comprehensible way. It starts with the Christian perception of reality and concept of knowledge, and then presents the Christian understanding of the knowledge of God and human existence. It further introduces the Christian notions of creation and redemption, and the significance of Jesus Christ in the unfolding of human history. The relevance of Christian faith for modern man will also be discussed.

本科目由一個整全的哲學進路來闡釋基督教信仰。它自基督教本體論及知識論開始，帶出基督教的上帝觀和人觀，進而介紹基督教的創造和救贖概念，以及耶穌基督在人類歷史上所展現的意義。本課程也會討論基督教信仰對現代人的關係。

**R.P. 2100 Art and Aesthetics (3,2,1)**  
**藝術與美學**

This course begins by probing the nature of artistic phenomena and the relation of art to human development. This discussion will be followed by an introduction to representative aesthetic theories in the Chinese and Western contexts, illustrated by appropriate masterpieces. The course will then identify the nature of different art media, including discussions of visual arts and performing arts. It will then outline the fundamentals of art appreciation and then discuss the relation among art, culture and society. Students will attend talk by invited artists, art exhibitions and performances.

本科目探究藝術現象的本質問題和藝術與人類發展的關係。課程內容包括：（一）介紹中國及西方中具代表性的藝術及美學理論，並以相關之藝術作品說明；（二）認識不同藝術媒體的性質，包括視覺藝術與表現藝術等；（三）實踐藝術欣賞，並討論藝術、文化和社會三者的關係。學生將出席藝術工作者的分享座談，並參觀藝術展覽及演出。

**SCI 2110 Systems and Control Theory (3,3,0)**

Prerequisite: MATH 1120 Linear Algebra, MATH 1140 Computational Mathematics, MATH 1550 Calculus and Linear Algebra or MATH 1590 Calculus and Linear Algebra for Chemistry

Many problems in social science, economics, and engineering, can be modelled as linear systems. This course studies the properties of linear systems and how they can be controlled. Emphasis will be placed in understanding the important issues involved in the design and implementation of linear systems, in particular the stability analysis of feedback systems. Examples will be drawn from a wide range of fields.

**SCI 2910 Logistics—Planning, Management, and Analysis (3,3,0)**

This course introduces the fundamental modelling techniques and analysis for logistics problems. This course will address all major issues in logistics. The course will mainly concentrate on establishing the mathematical models for various logistics problems. The solution techniques and algorithms will be also mentioned for the resulting mathematical problems. Numerous practical examples will be discussed and analysed to illustrate the modeling techniques for logistics problems. The students will learn through various examples illustrated in class to master the techniques in establishing the mathematical models for logistics problems. In addition, some computer packages will be also used to solve the resulting mathematical problems.

**SCI 3110 Environmental Chemistry and Pollution Control (3,3,0) (E)**

Prerequisite: Year III standing

This course describes the sources, transport, reactivity and sink of contaminants in the environment together with various technology options used for pollution control.

**SCI 3120 Environmental Studies Laboratory (1,0,3)**

Prerequisite: Year III standing (Environmental Studies Concentration)

These are practical sessions consisting of experiments utilizing the techniques commonly used in environmental studies. In addition to laboratory exercises, a field-based project will be undertaken. Visits to waste treatment plants and/or chemical industries in Hong Kong and neighbouring areas will be arranged at appropriate times. This course is open to Chemistry majors only.

**SCI 3210 Simulation (3,2,1) (E)**

Prerequisite: MATH 1111 Mathematical Analysis I, MATH 1140 Computational Mathematics, MATH 1550 Calculus and Linear Algebra, MATH 1570 Advanced Calculus or MATH 1590 Calculus and Linear Algebra for Chemistry

This course aims to introduce basic technique in computer simulation. Two computer software packages (one for continuous systems and one for discrete systems) will be taught. Various practical problems will be modelled, discussed, and simulated through computer simulation. Upon completion of this course, students should be able to simulate a wide range of practical problems in the daily life.

**SCI 3310 Industrial Chemical Processes (3,3,0) (E)**

Prerequisite: (1) CHEM 1510 Chemistry for Life Science or CHEM 2310 Physical Chemistry II; and (2) MATH 1511 Mathematical Methods for Physical Science I, MATH 1550 Calculus and Linear Algebra or equivalent such as AS Level Applied Mathematics

The aim of this course is to familiarize students with the application of chemical principles learned from Year I and II Chemistry major courses in various chemical industries. Material balance and unit operations are treated with illustrations chosen from modern chemical and related industries.

**SCI 3450 Materials Science: Solid State, Surface Chemistry and Catalysis (3,3,0) (E)**

Prerequisite: Chemistry or Physics Major with Year III 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.

**SCI 3510 Mathematical and Statistical Modelling (3,3,1) (E)**

Prerequisite: (1) MATH 1120 Linear Algebra and (2) MATH 2110 Differential Equations or MATH 2230 Operations Research I

This course aims to facilitate students' working knowledge of the basic principles of mathematical and statistical modelling. It is designed to equip students with an understanding of how mathematics can be applied to solve problems arising in various disciplines. The case study approach is adopted in which the modelling process is described by means of a number of examples with different characteristics. Where possible, problems are modelled in more than one way to illustrate the flexibility and diversity involved in mathematical modelling, and students will gain first hand experience in a mini-project.

**SCI 3530 Numerical Methods for Partial Differential Equations (3,3,0) (E)**

Prerequisite: MATH 2220 Partial Differential Equations or MATH 1511-2 Mathematical Methods for Physical Science I & II

This course introduces the major numerical techniques for solving partial differential equations. Emphasis is placed on finite difference methods and finite element methods. Some typical engineering problems, such as shock waves, are analysed.

**SCI 3710 Digital Image Analysis (3,2,1)**

Prerequisite: MATH 1111 Mathematical Analysis I, MATH 1140 Computational Mathematics, MATH 1550 Calculus and Linear Algebra, MATH 1570 Advanced Calculus or MATH 1590 Calculus and Linear Algebra for Chemistry

This course aims to introduce students to the foundation of digital image analysis. Students will learn elementary point operation techniques for image enhancement, and advanced techniques (including the theory of Fourier transform) for image restoration and image analysis. Students will come to understand all the major issues involved in the design and implementation of a digital imaging system.

**SCI 7770 Materials Science: Solid State, Surface Chemistry and Catalysis (3,3,0)**

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.

**SCIE 1005 Integrated Science Laboratory (1,0,3)**

This course provides students with basic foundation knowledge in laboratory and practical experience in solving real life problems by integrating knowledge from various science perspectives.

**SLM 7010 Foundations in Sport and Leisure Management (3,3,0)**

This course aims to provide a common foundation for students by presenting a coherent vocabulary for conceptualizing and discussing sport and leisure management. It also aims to present a comprehensive perspective on subsequent courses within the programme and their relationships to sport and leisure management as a field of study.

**SLM 7020 Management Skills and Communications (3,3,0)**

This course revisits the basic theories shaping the roles and functions of management, in the development of management thoughts, the ethical and social responsibilities of management, and the application of information technology to management. Students are encouraged to apply these fundamental concepts to analyse management scenarios related to the sport and leisure industry. This course also aims to revisit theories of communication and students are expected to utilize their power of speech to increase effectiveness in interpersonal relationships and communications.

**SLM 7030 Management of Human Resources (3,3,0)**

This course aims to provide students with opportunities to examine human resources management models and their applications in sport and leisure services. Issues on the management of finance as related to human resources management will also be discussed.

**SLM 7040 Planning and Developing Sport and Leisure Facilities (3,2,1)**

This course provides an overview of sports facilities including indoor, outdoor and aquatic facilities. Opportunities will be provided to examine local sport and leisure facilities with emphasis on the process of planning, design, construction and management.

**SLM 7050 Marketing of Sport and Leisure Services (3,3,0)**

This course enables students to understand current theories and practices of marketing sport and leisure services, the economic impact of sport and leisure marketing, and the impact of technology on marketing trends.