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)
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, (3,3,0) Surface Chemistry and Catalysis
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 (3,3,1) (E) Modelling
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 (3,3,0) (E) Differential Equations
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) (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 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, (3,3,0) Surface Chemistry and Catalysis
Prerequisite: Research Postgraduate student 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.

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 (3,3,0) (E) Management
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 (3,3,0) (E) Communications
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) (E)
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 (3,2,1) (E) and Leisure Facilities
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 (3,3,0) (E) Services
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.

SLM 7060 Financial Management (3,3,0) (E)
This course aims to revisit and explore the basic information contained in financial statements. It also aims to further provide students with concepts and techniques in cost and management accounting and to develop students' ability in using relevant accounting data for management policy determination, decision making and performance evaluation.

SLM 7070 Seminar on Contemporary Issues (3,1,2) (E) in Sport and Leisure
This course provides a forum for the discussion of contemporary issues related to sport and leisure. Discussion topics may include social, legal, ethical and policy issues shaping the delivery and practice of sport and leisure.

SLM 7080 Health Promotion (3,3,0) (E)
This course provides a forum for the discussion of current concepts and roles of sport and leisure in the promotion of health, wellness and quality living.