

implications to the performance of their future professional duties; (3) prepare students for their professional development as activity leaders, programmers, recreation managers/providers, policy makers and physical educators; (4) help students to develop a strong theoretical base for their subsequent studies in the course, and a firm base for their future professional practice; and (5) provide students an opportunity to examine contemporary issues of recreation and physical education from different disciplinary perspectives, including psychological, sociological, philosophical and management perspectives.

PERM 2170 Prevention and Care of Sports Injuries (3,3,0)

Prerequisite: PERM 1120 Human Anatomy and Physiology
Upon completion of the course, students are expected to (1) identify the basic classification of injury etiology and mechanisms, (2) demonstrate the skills of proper handling of acute sports injuries, (3) have a solid understanding of indications and contraindications of treatments related to specific injury trauma, and (4) obtain a certificate of first aid and safety.

PERM 2220 Internship (2,0,2)

This two-unit course requires the second year students to work in an organization for at least 300 hours. Students can choose their placement in different types of sports and recreation agencies locally as well as overseas. These agencies could be public, private, voluntary or commercial.

PERM 2610 Health Fitness Evaluation and Assessment (3,3,1)

Prerequisite: PERM 1120 Human Anatomy and Physiology
This course enables students to have (1) a thorough understanding of both the laboratory and field assessment of various health fitness components, (2) practical hands-on experiences for such assessment, and (3) the ability to interpret health fitness testing results as well as to prescribe proper health fitness programmes thereafter.

PERM 2760 Sociology of Sport and Recreation (3,3,0)

Prerequisite: PERM 1110 Historical and Philosophical Foundation in Physical Education and Recreation
This course enables students to (1) understand the sociological method of enquiry, its key ideas, concepts and perspectives and its application to the study of the relationships between sport, recreation, culture and society; (2) understand the different issues of sport and recreation in society with key sociological concepts; (3) critically evaluate modern organized sport and recreation in the society; and (4) think critically about sports and recreation as parts of social life.

PERM 3110 Research Methods (3,3,0)

Prerequisite: PERM 1160 Tests and Measurement
This course is designed as an introduction to basic research methods that are applicable to physical education and recreation. Knowledge acquired in this course will assist students in (1) understanding the nature of the research process and the differentiation of various types of researches, (2) developing the skills necessary for conducting physical education and recreation researches, (3) acquiring the ability and knowledge to understand physical education and recreation journal articles, (4) recognizing some key statistical concepts, and (5) selecting and applying the appropriate research method to conduct research at the undergraduate level.

PERM 3140 Recreation Programming and Event Management (3,3,0)

Prerequisite: PERM 2120 Theory and Practice in Physical Education and Recreation

This course focuses on skills and techniques in programme planning by examining elements, processes, and problem solving in planning. The objectives of the course are to (1) develop techniques and skills common in programme planning, (2) identify existing and potential problems in planning, (3) propose alternatives in solving problems in planning, and (4) provide opportunities for students to implement the plan.

PERM 3590 Honours Project (3,*,*)

Prerequisite: Year III Physical Education and Recreation Management majors

A required project for all BA (Hons) in Physical Education and Recreation Management students. Students will pursue in-depth research on a specific topic of interest to the student under the guidance of appointed lecturers from the Department offering the programme. Students are to consult with their advisers regarding the necessary field study, experimentation, library or archival research required, and how best to integrate this into their Honours Project. The purpose of the project is to integrate the professional skill which has been taught in the preceding two years with specific application to a topic to produce a well-argued and documented report.

PERM 3640 Nutrition and Health (3,3,0)

Prerequisite: PERM 1120 Human Anatomy and Physiology
This course enables students to (1) learn basic knowledge of nutrition for health and fitness, (2) examine the importance of nutrition throughout the human life cycle, and (3) tackle nutritional problems and concerns facing the world today.

PERM 3650 Kinesiology (3,3,0)

Prerequisite: PERM 1120 Human Anatomy and Physiology
This course is to (1) provide the students with the basic biomechanical information necessary for adequate assessment, description, and analysis of human movement and exercise, (2) provide practical laboratory experience to assess fundamental mechanical concepts, and (3) emphasize the application of these principles in physical and recreational activities.

PERM 3660 Financial and Human Resources Management in Leisure Services (3,2,1)

Prerequisite: PERM 1190 Organization and Administration in Physical Education and Recreation

This course enables students to (1) understand the fundamental concepts on how financial and human resources are managed and utilized effectively in an organization, and (2) obtain experience in the practical aspects of problem-solving and decision making techniques used to manage the financial functions and human resources in leisure services.

PERM 3670 Fitness and Recreation for Selected Population (3,3,0)

This course enables students to (1) evaluate and identify the health fitness and recreation programmes needs of selected populations, (2) prescribe exercise and/or life-style inventory programmes according to their needs, (3) be able to explain the available benefits of such exercise and/or life-style inventory programmes, and (4) provide opportunities for students to plan and implement the activity programme for the special population.

PERM 3710 Public and Community Recreation (3,3,0)

Prerequisite: PERM 2120 Theory and Practice in Physical Education and Recreation

This course aims to (1) enhance students' understanding of how different leisure service providers operate to meet the diverse needs and demands of individuals, families, and societies; (2) help students to appraise the professional recreation management practice and the fundamental forms of the activities promoted and developed as public and community recreation; (3) introduce to students different approaches in the management of recreation; (4) provide students with a greater awareness of the ways in which community sports may differ from traditional sport; and (5) develop students' understanding of the roles of recreation and leisure in our society.

PERM 3720 Marketing in Leisure Services (3,2,1)

Prerequisite: PERM 1190 Organization and Administration in Physical Education and Recreation

This course focuses on the importance of marketing in leisure services. The techniques and applications are also included in the course so as to enable the students to understand the concepts through implementation as a whole. The objectives of the course

are to (1) understand the differences between service and physical product, (2) identify the role of marketing in leisure sport services, and (3) provide application of marketing knowledge in leisure sport.

PERM 3740 Facility Management (3,3,0)

Prerequisite: PERM 1190 Organization and Administration in Physical Education and Recreation

This course covers structures and space necessities for planning facilities. It provides guidelines, principles, construction, use and maintenance of outdoor and indoor facilities. The objectives of the course are to (1) provide basic steps of the facilities planning process; (2) understand the objectives and needs affecting the planning process; (3) become familiar with the problems, forces and issues shaping facilities; (4) become aware of the legal concepts in facility construction; and (5) become familiar with landscape design, construction and turf management.

PERM 3750 Outdoor Recreation (3,3,0)

Prerequisite: PERM 1290 Outdoor Pursuits

This course enables students to (1) comprehend the fundamentals of outdoor recreation; (2) understand the nature and outdoor resources for recreation; and (3) acquire essential skills to be leaders in outdoor recreational activities.

PHYS 1121 General Physics I (3,3,0)

Prerequisite: AS-Level Physics, or O-Level Physics and Mathematics, or consent of the instructor

This course covers classical mechanics and thermodynamics at an introductory level. After a brief review of Newton's three laws, a number of applications illustrating the use of conservation laws with the help of calculus are discussed. This is followed by an elementary treatment of rigid body and fluid mechanics. The last part deals with thermal phenomena and the uses of statistical concepts in describing the gaseous state.

PHYS 1122 General Physics II (3,3,0)

Prerequisite: PHYS 1121 General Physics I or consent of the instructor

Introductory concepts of electricity, magnetism, electromagnetic wave and optics will be presented.

PHYS 1160 Electronics (3,3,0)

Co-requisite: PHYS 1170 Electronics Laboratory

This course aims at instilling the basic knowledge of electronic circuits, devices, and transducers (both for discrete components and integrated circuits). Operational knowledge of instruments for electrical measurement will be emphasized.

PHYS 1170 Electronics Laboratory (1,0,3)

Co-requisite: PHYS 1160 Electronics or consent of the instructor
This is a laboratory course which provides a set of experiments complementing the course PHYS 1160 Electronics.

PHYS 1320 Experimental Physics I (2,0,3)

Prerequisite: PHYS 1121 General Physics I or consent of the instructor

This course consists of a series of laboratory experiments (and lectures, for PHYS 1320) complementing the following courses: PHYS 1121-2 General Physics I & II.

PHYS 1330 Mathematical Methods of Physics (3,3,0)

Prerequisite: MATH 1570 Advanced Calculus or consent of the instructor

Ordinary differential equations, partial differential equations, Fourier series, Fourier transform, Laplace transform, function of a complex variable, and applications to physics problems are discussed.

PHYS 1620 Introduction to Astronomy (3,3,0)

Introductory astronomy, from the solar system to the large scale structure of the universe, will be presented to both science and

non-science students. Physical concepts will be emphasized. Presentation will be mainly on a qualitative level.

PHYS 1640 Energy, Environment and Sustainability (3,3,0)

Climate change and the depletion of energy resources are issues of major international concern in the contemporary world. The focus of this course is on the multiple and intricate relationships between energy, environment and sustainability issues. It allows students to fully understand the subject matter from both the natural science and social science perspectives. Through appropriate real-life examples, the course aims to guide students, in an exploration of viable alternative energy sources and to enable them to embark on a way of life that promotes a clean and sustainable use of energy resources. In addition to classroom learning, the teaching will be supplemented by field visits, demonstrations, group projects and debates.

PHYS 1650 Nano-Living: Impact of Nanoscience and Nanotechnology (3,3,0)

This course will popularize basic knowledge of nanoscience and nanotechnology, introduce an increasing range of pragmatic applications in daily life, establish critical consciousness of their social consequences (in environment, safety and human health), and prevent misleading.

PHYS 2130 Electromagnetism I (3,3,0)

Prerequisite: PHYS 1122 General Physics II or consent of the instructor

Review of vector field theory, Coulomb's law, electric field, Gauss's law, electric potential, Poisson's equation, Laplace's equation, electric energy, boundary value problems, multiple expansion, electric fields in matter, magnetic field, Lorentz force, Ampère's law, and Biot Savart law.

PHYS 2140 Electromagnetism II (3,3,0)

Prerequisite: PHYS 2130 Electromagnetism I or consent of the instructor

Magnetic fields in matter, Maxwell's equations, vector potential, gauge transformation, electromagnetic energy and momentum, Poynting's theorem, electromagnetic waves, polarization, reflection and refraction, electromagnetics waves in conducting media, dispersion, wave guides, electromagnetic radiation, retarded potential and Liénard-Wiechert potential, and relativistic electrodynamics.

PHYS 2260 Modern Physics (3,3,0)

Prerequisite: PHYS 1121-2 General Physics I & II, or consent of the instructor

This course introduces the key concepts of 20th-century physics: special relativity, light quantization, wave-particle duality, and quantum physics.

PHYS 2330 Mechanics I (4,4,0)

Prerequisite: PHYS 1121 General Physics I or consent of the instructor

Lagrangian and Hamiltonian Mechanics, central force motion, harmonic oscillations, coupled oscillations and waves. Teaching will be illustrated with applications.

PHYS 2340 Experimental Physics II (2,0,3)

Prerequisite: Year II standing or consent of the instructor

This course consists of a series of laboratory experiments complementing the following courses: PHYS 1121-2 General Physics I & II.

PHYS 2350 Atoms, Molecules, and Solids (3,3,0)

Prerequisite: PHYS 2260 Modern Physics, or consent of instructor

By using the framework of quantum physics, this course explains the rich and diverse properties of matter ranging from atoms to solids.