

handling, and treatment of solid waste with due emphasis on the importance of adopting an integrated approach in managing waste.

EPHM 7070 Research and Environmental Monitoring Methodology (3,3,0) (E)

The course focuses on different approaches and methods to conduct environmental monitoring and environmental research. Basic principles of these research and monitoring methods will be dealt with adequately so that students will be able to formulate their own research or monitoring strategies to deal with new environmental problems when they have completed the course.

EPHM 7110 Principles of Environmental Management (3,3,0) (E)

This course studies ecosystems and its relationship with atmospheric, hydrological and geomorphological systems. The impacts of human activities on the delicate balance of ecosystems, as well as the ethical bases of conservation biology, will also be examined. The course introduces the basic principles in environmental management, illustrates scientific principles by building on worldwide and familiar examples, and encourages students to become personally involved with solving environmental problems.

EPHM 7311-2 MSc Dissertation (3,*,*)

This project is designed for students to apply and integrate theories learnt to real-life problems so that better understanding of the environmental issues will be resulted. Through the execution of the project, students will also learn the proper ways of conducting research and preparing documents for review.

EPHM 7320 Occupational Health and Safety Management (3,3,0) (E)

This course provides an understanding on occupational health and safety with due emphasis on a variety of commonly adopted management approaches and methods. This includes the identification procedures for the principal causes of ill health and poor safety at workplace and strategies for eliminating or ameliorating them. The legal and operational aspects of occupational health and safety are also adequately dealt with.

EPHM 7330 Food Quality, Law and Safety Management (3,3,0) (E)

The course is designed to introduce students to the growing consumer demand in food safety and growing awareness of the food industry in the importance of maintaining high food quality. This course covers the principles and international standards of food quality and safety management, and provides an understanding of the legislative control related to food quality, safety and human health protection in Hong Kong.

EPHM 7340 Carbon and Energy Management (3,*,*) (E)

This course provides students with an understanding on carbon and energy management with due emphasis on a variety of commonly adopted management approaches and methods. This includes carbon accounting or the identification and quantification of greenhouse gas emission sources and sinks, carbon footprinting of products and services, carbon neutrality, energy audit and management, measurement and verification of energy performance projects, and the related carbon and energy standards.

ERMT 2005 Global Environmental Issues (3,*,*) (E)

This course aims to provide an introduction to global environmental issues for students with or without a science background. Special emphasis will be placed on the evaluation of the impacts of human activities on the environment and the examination of solutions to environmental problems.

ERMT 2015 Physical Geography (3,*,*) (E)

This course aims to introduce the major geological and geomorphological processes that contribute to formation of

various landforms and natural geographical features. The first part of this course introduces tectonic processes that contribute to the development of Earth's major relief features, and the processes of weathering, erosion and deposition with regard to landform development especially in Hong Kong. The second part introduces climatology with emphases on the formation of major climatic regions. This is followed by a comprehensive analysis of the development and characteristics of soils and vegetation on the Earth's surface. Emphasis is placed on their distribution, soil-plant interactions and their significance in human's use of land.

ERMT 3005 Anthropogenic Climate Change and Society (3,*,*) (E)

This course provides students with a broad perspective of the topic of climate change, with an emphasis of the natural and anthropogenic causes of climate changes and its socio-economic consequences. The central theme is to illustrate the determinants of global climate, the ways in which human activities affect global climate, how environment and human societies are affected by climate change, and the approaches and efforts that have been adopted to minimize anthropogenic climate change.

ERMT 3015 Natural Resources Management (3,2,1) (E)

This course aims to introduce students to the problems associated with the use or misuse of our natural resources and current management practices associated with the conservation of natural resources. This course aims to introduce a wide spectrum of practices specific to particular habitat, wildlife and energy resources management. In addition, emphasis will be placed on the review and discussion of current programs and issues in natural resources management in Hong Kong and other countries. This course also provides students with an opportunity to investigate and formulate solutions to the problems in natural resources management.

ERMT 3025 Research Methods and Statistics (3,2,1) (E)

This course aims to introduce students to experimental design and statistical data analysis at an elementary to intermediate level, with an emphasis on practical applications of statistical methods to experimental and observational data in biology, ecology and environmental sciences. Students will explore the process by which scientists formulate research questions, set null hypotheses, design experiments, collect data and apply statistics to test the hypotheses.

ERMT 3035 Geo-environmental and Ecological Field Study (3,*,*) (E)

This course aims to provide students with hand-on experiences of the local environment and its associated biological communities. In addition to introducing the geological, geographical, ecological and biological features of major habitats of Hong Kong, this course will introduce students to the basic techniques in the collection of geographical data and in the sampling and analyzing of major biological communities and their applications in the local context. In addition to lectures, the course will be conducted mainly through field surveys carried out in the countryside of Hong Kong.

ERMT 3045 Global Energy Development (3,*,*) (E)

This course aims to examine a wide range of topics in global energy development, including oil and natural gas, coal, electricity policy, renewable energy, nuclear power, energy efficiency, and climate change. One objective of this course is to examine the relationship between energy security and climate change, which are both key challenges facing the world. It also introduces students to the basic tools (e.g. economic theories) used to analyze and assess energy options. Lastly, emphasis will be placed on the political context, both domestic and international, concerning the design and implementation of governments' energy policies.

ERMT 3055 Laboratory Environmental Analysis (3,*,*) (E)

This course aims to familiarise students with background knowledge related to detection and quantification techniques

commonly used in environmental analyses. The lectures will inform students about the use of instrumentation and techniques in the biological, chemical and physical analysis of the environment. The laboratory exercises and field survey are designed to enhance, augment and reinforce the lecture series and explore the process of conducting environmental assessments.

ERMT 3065 Terrestrial and Aquatic Ecology (3,*,*) (E)

This course will focus on the ecology of terrestrial habitats and aquatic habitats of streams, rivers, wetlands and lakes. The first part of this course will introduce terrestrial ecology at population and community level, with emphasis on the role of local ecological processes in modifying the terrestrial ecology of the tropics, especially tropical East Asia, and an overview of patterns and processes on a global scale. The second part introduces sciences of freshwater habitats by integrating the physical and biological components of rivers and lakes and their drainage basins, and introducing the impacts of human influences on these habitats at local and regional scales.

ERMT 3105 Environmental Biotechnology (3,*,*) (E)

This course aims to develop students' understanding of current biotechnological approaches and technologies. The focus will be on microbes and/or other organisms used to: 1) improve environmental quality; 2) prevent discharge of pollutants; 3) clean up contaminated environments; 4) renew resources; and 4) generate valuable products for human society.

ERMT 3115 Environmental Pollution and Toxicology (3,*,*) (E)

The course aims to examine and evaluate the causes, effects and solutions to land, air, water and noise pollution in Hong Kong. This course provides students with the fundamental principles and techniques in the assessment of environmental toxicology, as well the skills need to apply these principles and techniques in toxicology. The laboratory exercises in this course provide students with hands-on experience about the basic techniques and experimental procedures used in ecotoxicology.

ERMT 3125 Internship for Environment and Resources Management (3,*,*) (E)

The course is designed to help students to connect their academic studies to real world applications for environmentally focused work. The internship is intended to be flexible, designed to meet students' needs and interests while affording opportunities for practical hands-on experience in a variety of environmental fields. Such experience will also assist the student in developing a strategy for employment. Students are required to achieve a deep understanding of the service nature and daily operations of an attached organization through observation, training, interactions with staff members, and practice. Students are required to work at a partner organization for up to 200 hours and to attend pre-internship workshops and sharing seminars. Students will need to submit weekly journal, or keep similar notes, for a final report developed from their activities, the role of the attached organization and the relevance of scientific knowledge to their work.

ERMT 3135 Renewable Energy System and Technology (3,2,1) (E)

Renewable energy is currently an important element in most energy markets, with a significant growth each year. This course aims to examine the potential for renewable energy resources as a solution to the global energy crisis and climate change. Emphasis will be placed on the examination of these existing renewable energy resources, involving their theory and practice, as well as their benefits and drawbacks in different circumstances. In addition, this course will review and compare government policies and incentives in different countries for fostering the development of renewable energy resources.

ERMT 3145 Urban Development and Environment (3,*,*) (E)

Urban development is among the most pervasive and ubiquitous forms of land cover change. Thus, urbanization poses significant challenges to many organisms, including humans. This course will focus on the global urbanization and urban developmental impacts on the 1) patterns of abundance and distribution of organisms in urban ecosystems; 2) the interactions among organisms in the urban environment; 3) the interactions between humans (and societies) and nature in urban environments; and 4) some aspects of urban planning as it relates to ecology and the environment.

ERMT 4005 Environmental Impact Assessment and Management (3,*,*) (E)

The course aims to develop an understanding of environmental impact assessment (EIA) and the EIA process in Hong Kong. Emphasis will be placed on the requirements and components of an EIA report including air, noise, water, waste management, environmental risk, ecological impact, and socio-economic impact assessments. In addition, the course examines environmental law, environmental management and the importance of public participation. Case studies in Hong Kong will be used as comparison with EIA in other regions (e.g. Mainland China).

ERMT 4008-9 Honours Project I & II (6,*,*) (E)

The Honours Project is an extensive piece of work that aims to develop students' ability to work independently. As such, a major objective is to develop a variety of practical skills relevant to Environment and Resources Management and which are of particular value to employers. It is also intended that the project should enhance a student's confidence to work by himself/herself. In this course, students will undertake an environmental research project under the supervision of a faculty member. Research work will commence during the summer vacation immediately preceding the student's final year. Students will meet periodically with the supervisor to discuss and interpret their research data. These discussions will culminate in the production of a comprehensive written report which will be submitted for assessment at the end of the student's final term of attendance.

ERMT 4015 Advanced Topics in Environmental Planning and Management (3,*,*) (E)

Environmental management has evolved from a popular movement to a profession, demanding complex analytical and decision-making skills. These skills are essential to the development and implementation of policies about the impacts of human activity on the natural environment. Scientific, legal, administrative and political factors shaping these policies and public attitudes are critical components of environmental management and planning.

Consequently, this course aims to provide students with an understanding of the principles behind planning, public administration and political approaches that are important for the protection of environmental resources in urban and natural environmental contexts. This course aims to develop 1) student abilities in measuring air and water quality, water supply safety, environmentally sensitive natural resources, and solid and hazardous wastes; 2) an understanding of global and trans-national problems, such as global warming, ozone depletion and acid rain, and energy usage; and 3) abilities to critically assess environmental policy and management issues.

ERMT 4105 Biodiversity and Conservation (3,*,*) (E)

Prerequisite: ERMT 3065 Terrestrial and Aquatic Ecology
This course aims to introduce students to the need for biodiversity conservation and its implementation. Threats to biodiversity will be introduced and discussed with a basic overview of relevant ecological and population genetic processes. Biodiversity conservation at species, population and community levels will be introduced and discussed, with an emphasis on the interplay of socio-economic, political, and cultural factors. Students will be introduced to the principles of biodiversity conservation through lectures, group discussions, field visits, and reflective essays.