

**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,\*,\*)**

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.