

**REGULATIONS FOR THE DEGREES OF  
MASTER OF SCIENCE (MSc) AND MASTER OF SCIENCE IN ENVIRONMENTAL  
MANAGEMENT (MSc[EnvMan])**

For students admitted in 2021-22 and thereafter

*(See also General Regulations and Regulations for Taught Postgraduate Curricula)*

Any publication based on work approved for a higher degree should contain a reference to the effect that the work was submitted to the University of Hong Kong for the award of the degree.

The degree of Master of Science is a postgraduate degree awarded for the satisfactory completion of a prescribed course of study in one of the following five fields: Applied Geosciences, Food Industry: Management and Marketing, Food Safety and Toxicology, Physics and Space Science.

The degree of Master of Science in Environmental Management is a postgraduate degree awarded for the satisfactory completion of a prescribed course of study in Environmental Management.

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**Admission requirements**

**Sc21**

- (a) To be eligible for admission to the courses leading to the degree of Master of Science or Master of Science in Environmental Management, a candidate
    - (i) shall comply with the General Regulations and the Regulations for Taught Postgraduate Curricula;
    - (ii) shall hold a Bachelor's degree with honours of this University; or another qualification of equivalent standard of this University or another University or comparable institution accepted for this purpose;
    - (iii) in respect of the courses of study leading to the degree of Master of Science in the field of Space Science, shall hold a Bachelor's degree in a relevant science or engineering discipline, and prior knowledge expected in basic college-level physics, mathematics, statistics, and computer programming;
    - (iv) in respect of the courses of study leading to the degree of Master of Science in the field of Physics, a Bachelor's degree with honours in a relevant science (e.g. physics, astronomy, earth science, mathematics) or engineering, and prior knowledge expected in university-level electromagnetism, quantum mechanics and thermodynamics, university-level linear algebra and multi-variable calculus, basic statistics, and some computer programming experience (e.g. coding in C++, Mathematica, Matlab or Python); and
    - (v) shall satisfy the examiners in a qualifying examination if required.
  - (b) A candidate who does not hold a Bachelor's degree with honours of this University or another qualification of equivalent standard may in exceptional circumstances be permitted to register if the candidate demonstrates adequate preparation for studies at this level and satisfies the examiners in a qualifying examination.
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**Qualifying examination**

**Sc22**

- (a) A qualifying examination may be set to test the candidate's academic ability to follow the course of study prescribed. It shall consist of one or more written papers or equivalent and may include a project proposal.
- (b) A candidate who is required to satisfy the examiners in a qualifying examination shall not

be permitted to register until he/she has satisfied the examiners in the examination.

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### **Award of degree**

**Sc23** To be eligible for the award of the degree of Master of Science or Master of Science in Environmental Management, a candidate

- (i) shall comply with the General Regulations and the Regulations for Taught Postgraduate Curricula; and
  - (ii) shall complete the curriculum and satisfy the examiners in accordance with these regulations and syllabuses.
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### **Advanced standing**

**Sc24** In recognition of studies completed successfully before admission to the Master of Science in Environmental Management, Master of Science in the field of Applied Geosciences and Master of Science in the field of Space Science, advanced standing of up to 12 credits may be granted to a candidate with appropriate qualification and professional experiences, on production of appropriate certification, subject to the approval of the Board of the Faculty. Credits gained for advanced standing shall not be included in the calculation of the GPA but will be recorded on the transcript of the candidate. The candidate should apply before commencement of first year of study via the Department and provide all the supporting documents.

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### **Period of study**

**Sc25** The curriculum of the Master of Science or the Master of Science in Environmental Management shall normally extend over one academic year of full-time study or two academic years of part-time study. Candidates in either degree shall not be permitted to extend their studies beyond the maximum period of registration of two academic years of full-time study or three academic years of part-time study, unless otherwise permitted or required by the Board of the Faculty.

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### **Completion of curriculum**

**Sc26** To complete the curriculum of the Master of Science or Master of Science in Environmental Management, a candidate

- (a) shall satisfy the requirements prescribed in TPG 6 of the Regulations for Taught Postgraduate Curricula;
  - (b) shall follow courses of instruction and complete satisfactorily all prescribed written, practical and field work;
  - (c) shall complete and present a satisfactory dissertation or project on an approved subject or complete courses with equivalent credits as a replacement; and
  - (d) shall satisfy the examiners in all courses prescribed in the respective syllabuses.
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### **Dissertation or Project**

**Sc27** The title of the dissertation or project shall

- (a) for the full-time mode of Master of Science (except MSc in Environmental Management), be submitted for approval by October 15 and the dissertation or project report shall be

- (b) submitted not later than August 15 in the subsequent year; for the full-time curriculum of MSc in Environmental Management, be submitted by October 30 and the dissertation or project report shall be submitted not later than the last Friday in June of the first year of study, unless otherwise permitted or required by the course coordinator(s);
- (c) for the part-time curriculum (except Master of Science in the field of Applied Geosciences, Master of Science in the field of Physics and MSc in Environmental Management), be submitted for approval by March 15 of the first year of study and the dissertation or project report shall be submitted not later than July 1 of the second year of study;
- (d) for the part-time curriculum of MSc in Environmental Management, be submitted by June 30 of the first academic year, unless otherwise permitted or required by the course coordinator(s). The dissertation shall be submitted not later than the last Friday in May of the second year of study and the project report shall be submitted not later than the last Friday in June of the second year of study, unless otherwise permitted or required by the course coordinator(s);
- (e) for the full-time curriculum of Master of Science in the field of Physics, be submitted by October 15 and the dissertation or project report shall be submitted not later than the last Friday in May of the first year of study;
- (f) for the part-time curriculum of Master of Science in the field of Physics, be submitted by October 15 of the first academic year and the dissertation or project report shall be submitted not later than the last Friday in May of the second year of study.

**Sc 28** A candidate shall submit a statement that the dissertation or project represents his/her own work (or in the case of co-joint work, a statement countersigned by his/her worker, which shows his/her share of the work) undertaken after registration as a candidate for either degree.

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### Assessments

**Sc29** The assessment in any course shall consist of elements prescribed by the course teachers, and will normally comprise either written coursework alone, or coursework combined with formal examinations; in either case participation in field work or practical work may form part of the assessment.

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**Sc30** A candidate who has failed to satisfy the examiners

- (a) at his/her first attempt in any course in the examination held during any of the academic years of study may be permitted to present himself/herself for re-examination in the course or courses at a specified subsequent examination, with or without repeating any part of the curriculum;
  - (b) at his/her first submission of dissertation or project report may be permitted to submit a new or revised dissertation or project report within a specified period;
  - (c) in any prescribed fieldwork or practical work may be permitted to present himself/herself for re-examination in fieldwork or practical work within a specified period.
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**Sc31** Failure to take the examination as scheduled, normally results in automatic course failure. A candidate who is unable because of illness to be present at any examination of a course, may apply for permission to be present at some other time. Any such application shall be made on the form prescribed within two weeks of the examination.

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### Discontinuation

- Sc32** A candidate who
- (a) has failed to satisfy the examiners in more than half the number of credits of courses during any of the academic years or in any course at a repeated attempt, or
  - (b) is not permitted or fails to submit a new or revised dissertation or project report, or
  - (c) has failed to satisfy the examiners in their dissertation or project report at a second attempt, may be recommended for discontinuation of studies.
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### Assessment results

**Sc33** On successful completion of the curriculum, candidates who have shown exceptional merit may be awarded a mark of distinction, and this mark shall be recorded in the candidates' degree diploma.

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### Grading systems

**Sc34** Individual courses shall be graded according to one of the following grading systems as determined by the Board of Examiners:

- (a) Letter grades, their standard and the grade points for assessments as follows:

Grade	Standard	Grade Point
A+	Excellent	4.3
A		4.0
A-		3.7
B+	Good	3.3
B		3.0
B-		2.7
C+	Satisfactory	2.3
C		2.0
C-		1.7
D+	Pass	1.3
D		1.0
F	Fail	0

or

- \*(b) 'Pass' or 'Fail'

Courses which are graded according to (b) above will not be included in the calculation of the GPA.

\*Only applies to certain courses in MSc in the field of Applied Geosciences and MSc in the field of Physics

**SYLLABUSES FOR THE DEGREE OF  
MASTER OF SCIENCE IN ENVIRONMENTAL MANAGEMENT  
MSc(EnvMan)**

For students admitted in 2021-2022 and thereafter

A candidate shall follow and be examined in at least 60 credits of courses including core courses (42 - 51 credits) and elective courses (9 -18 credits). For Part-time candidates, they will normally take 30 credits in their first year of study and 30 credits in their second year of study. A 3-credit course will normally consist of 18-24 hours of lectures, seminars, workshops and/or field trips.

**A. COURSE STRUCTURE**

The list of courses, and their contents set out thereafter, will be changed from time to time.

<b>Programme Structure of the <u>Part-time</u> Mode (from 2021-2022 onwards):</b>	
The list of courses and their contents may be changed from time to time.	
<b><u>Year 1:</u></b>	
<b>Core courses (30 – 33 credits):</b>	
ENVM7003	Introduction to ecology (3 credits)
ENVM7012	Environmental economics and analysis (3 credits)
ENVM7013	Sustainability, society and environmental management (3 credits)
ENVM7014	Environmental quality management (6 credits)
ENVM7015	Research methods and report writing in environmental management (6 credits)
ENVM7016	Environmental policy (3 credits)
ENVM7017	Environmental law in Hong Kong (3 credits)
<b>Select at least one field study course:</b>	
ENVM7018	Environmental field studies (3 credits)
ENVM7019	Ecological field studies (3 credits)
<b><u>Year 2:</u></b>	
<b>Core courses (12 – 18 credits):</b>	
ENVM8006	Environmental impact assessment (3 credits)
<b>Select either one of the two capstone experience courses, i.e. ENVM8004 or ENVM8021</b>	

ENVM8004 #	Dissertation (15 credits) [ <i>Capstone experience</i> ]
ENVM8021	Project (9 credits) [ <i>Capstone experience</i> ]
<p><b>Elective courses (9 – 18 credits):</b>  <b>(Depending on the core courses taken):</b></p> <p>[Indicative only: courses' availability will vary from year to year]</p>	
ENVM8003	Conservation biology and management (3 credits)
ENVM8011	Environmental auditing and reporting (3 credits)
ENVM8012	Environmental health and risk assessment (3 credits) (May be taken in Year 1 summer semester)
ENVM8013	Air and noise pollution control and management (3 credits)
ENVM8014	Special topics in environmental management (3 credits)
ENVM8015	Directed studies in environmental management (6 credits)
ENVM8016	Conservation and management of freshwater resources (3 credits)
ENVM8017	Conservation and management of marine resources (3 credits)
ENVM8018	Urban planning and environmental management (3 credits)
ENVM8019	Corporate sustainability (3 credits)
ENVM8020	Green buildings and energy management (3 credits)
<p><b>Notes:</b> <i>Alternative courses from all other taught Masters' programmes at HKU might be accepted at the discretion of the Programme Director.</i></p> <p><b>#</b> <i>If a part-time student wishes to take ENVM8004 Dissertation, he/she must obtain a Grade B+ or above in ENVM7015 Research methods and report writing in environmental management by May of the first study year. Students must have submitted their dissertation titles and supervisor's names to the School of Biological Sciences by June 30 and are expected to commence work on their dissertation during the summer vacation between their first and second years of study. Students are also required to attend a dissertation research colloquium in their first and second years of study. They have to deliver presentations based on their dissertation project. The presentations will be assessed and this will contribute to the final grade awarded for the dissertation. Part-time students must submit their dissertation to the School of Biological Sciences on or before the last Friday in May in the second academic year of study, unless otherwise permitted or required by the course coordinator(s). On the successful completion of the degree, a copy of the outstanding dissertation may be lodged in the University Library for public access.</i></p>	

**Programme Structure of the Full-time Mode (from 2021-2022 onwards):**

The list of courses and their contents may be changed from time to time.

<b>Core Courses (42 – 51 credits):</b>	
ENVM7003	Introduction to ecology (3 credits)
ENVM7012	Environmental economics and analysis (3 credits)
ENVM7013	Sustainability, society and environmental management (3 credits)
ENVM7014	Environmental quality management (6 credits)
ENVM7015	Research methods and report writing in environmental management (6 credits)
ENVM7016	Environmental policy (3 credits)
ENVM7017	Environmental law in Hong Kong (3 credits)
ENVM8006	Environmental impact assessment (3 credits)
<b>Select at least one field study course:</b>	
ENVM7018	Environmental field studies (3 credits)
ENVM7019	Ecological field studies (3 credits)
<b>Select either one of the two capstone experience courses, i.e. ENVM8004 or ENVM8021</b>	
ENVM8004 #	Dissertation (15 credits) [ <i>Capstone experience</i> ]
ENVM8021	Project (9 credits) [ <i>Capstone experience</i> ]
<b>Elective courses (9 – 18 credits): (Depending on the core courses taken):</b>	
[Indicative only: courses' availability will vary from year to year]	
ENVM8003	Conservation biology and management (3 credits)
ENVM8011	Environmental auditing and reporting (3 credits)
ENVM8012	Environmental health and risk assessment (3 credits)
ENVM8013	Air and noise pollution control and management (3 credits)
ENVM8014	Special topics in environmental management (3 credits)
ENVM8015	Directed studies in environmental management (6 credits)
ENVM8016	Conservation and management of freshwater resources (3 credits)
ENVM8017	Conservation and management of marine resources (3 credits)

ENVM8018	Urban planning and environmental management (3 credits)
ENVM8019	Corporate sustainability (3 credits)
ENVM8020	Green buildings and energy management (3 credits)
ENVM8022	Environmental management internship (6 credits)
<p><b>Notes:</b> <i>Alternative courses from all other taught Masters' programmes at HKU might be accepted at the discretion of the Programme Director.</i></p> <p><b>#</b> <i>If a full-time student wishes to take ENVM8004 Dissertation, he/she must pass a qualification assessment in September / October of the first study year. Students must have submitted their dissertation titles and supervisor's names to the School of Biological Sciences by October 30. Students are also required to attend a research colloquium at which presentations are made by students based on their dissertation project. The presentations will be assessed and this will contribute to the final grade awarded for the dissertation. Full-time students must submit their dissertation to the School of Biological Sciences on or before the last Friday in June in the first academic year of their study, unless otherwise permitted or required by the course coordinator(s). On the successful completion of the degree, a copy of the outstanding dissertation may be lodged in the University Library for public access.</i></p>	

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## B. COURSE CONTENTS

### Core Courses

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#### ENVM7003 Introduction to ecology (3 credits)

This course deals with the ecological processes determining the distribution and abundance of organisms, and which in turn govern the structure and function of communities and ecosystems. The focus of the course is on how an understanding of ecology is important for environmental management. Together with lectures and student-centered learning, this course also incorporates a practical fieldwork component.

Assessment: Written examination (100%)

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#### ENVM7012 Environmental economics and analysis (3 credits)

The aim of this course is to equip students with the ability to undertake economic analyses of the environment. The course provides an introduction to economic concepts and principles and applies them to the analysis and management of environmental problems. The course covers the economic understanding of environmental problems (e.g. external costs and benefits, public goods, resource scarcity), economic instruments for environmental management (e.g. taxes, subsidies, tradable permits), methods for valuing environmental goods and services (market and non-market approaches), and economic tools for supporting decision-making (e.g. cost-benefit analysis). All topics will be illustrated with current environmental and policy issues to emphasize their relevance and applicability.

Assessment: Course work (60%) and written examination (40%)

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#### ENVM7013 Sustainability, society and environmental management (3 credits)



This course begins with intellectual debates on the definitions, conceptions and different interpretations of the notion of sustainable development. The course then moves on to explore and analyse the implementation of the sustainability concept at the macro- and the micro- levels, covering a wide range of issues from international agreements and campaigns to local projects and practice. This will be followed by a number of implementation tools and techniques including community engagement and sustainability assessment. The course concludes with a series of real-life case investigations on innovative models to achieve sustainability in different contexts.

Assessment: Course work (100%)

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#### **ENVM7014 Environmental quality management (6 credits)**

This course introduces students to the types, sources and effects of environmental pollution and some of the key principles and strategies used in combating pollution and managing environmental quality. Topics include water and air quality management, solid waste management and noise pollution control, with an emphasis on the situation in Hong Kong.

Assessment: Course work (30%) and written examination (70%)

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#### **ENVM7015 Research methods and report writing in environmental management (6 credits)**

This course is intended both as preparation for the dissertation or project course and as a general introduction to writing reports on environmental issues. Subjects covered include: research design, research methodology (quantitative and qualitative methods; basic data processing and analysis) and report writing. Other research skills such as avoiding plagiarism, literature search and review and giving oral presentations may also be taught.

Assessment: Course work (100%)

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#### **ENVM7016 Environmental policy (3 credits)**

This course focuses on key aspects of environmental policy-making and policy-implementation processes, such as how policy agendas emerge and evolve, how environmental discourse shapes policy outputs; and how institutions affect the trajectories and outcomes of environmental policy measures. Making references to local, national and international cases of successful and not-so-successful policies that pertain to the sustainable development agenda, the course also examines the theories and praxis of policy transfer and policy convergence, as well as the perennial problematics of policy integration, policy learning and policy failure.

Assessment: Course work (100%)

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#### **ENVM7017 Environmental law in Hong Kong (3 credits)**

This course focuses on the statutory interpretation of the four principal Ordinances and subsidiary legislation dealing with pollution and environmental protection in Hong Kong; namely the Water Pollution Control Ordinance, the Air Pollution Control Ordinance, the Noise Control Ordinance and the Wild Animal Protection Ordinance. Some consideration will also be given to the Environmental Impact Assessment Ordinance, the Protection of Endangered Species of Animals and Plants Ordinance and international conventions effecting the law. Students will study the nature of environmental offences,

including the requirement for proving “mens rea” (intent) in order for certain offences to be successfully prosecuted. Students will also be introduced to the principles of judge made law (the Common Law) and will learn to read and interpret relevant case law in order to better understand the current sentencing policies towards environmental offenders, both locally and in other Common Law jurisdictions.

Assessment: Course work (100%)

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### **ENVM7018 Environmental field studies (3 credits)**

This is an experiential learning course. This course aims to broaden students' horizon and knowledge base on key aspects of environmental management and nature conservation through a series of field studies and visits to local and/or overseas organizations. Topics include, but not limited to, conservation and biodiversity management, waste and wastewater treatment processes, water treatment processes, and corporate environmental management in practices. Field studies will be conducted in form of guided visits, field work, service learning and invited lectures or forums according to the topics involved. Study trips outside Hong Kong such as Macau, Mainland China and Taiwan may be considered. Students are required to attend at least 6 sessions organized over the study period and may need to pay the participation fee of some local and/or non-local activities.

Assessment: Course work (100%)

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### **ENVM7019 Ecological field studies (3 credits)**

This is an experiential learning course. This course aims to teach students with the field survey and study skills in biodiversity assessment through an intensive residential field course and some optional field trips. Rapid biodiversity assessment methods and report writing skills will be taught. Students taking this course have to conduct hands on field surveys of common plant and animal groups in Hong Kong such as vascular plants, mammals, birds, amphibians, reptiles and butterflies. Students completing this course shall be able to take part in ecological assessments.

Assessment: Course work (100%)

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### **ENVM8004 Dissertation (15 credits) [*Capstone experience*]**

The dissertation is an individual, independent research project carried out under the supervision of one or more faculty members. Students may propose their own topics and approach possible supervisors, or they may consider those topics suggested by faculty members. Normally, the student develops the research outline in collaboration with his or her Faculty advisor(s) and then collects data, carries out analysis and writes the report prior to the research colloquium where the student will present his/her work. The candidate shall make a formal presentation on the subject of his/her during the second semester of the teaching programme. Substantial work, in particular, data collection and analysis, is required in this course.

Assessment: Individual presentation (10%), and a dissertation report of at least 15,000 words, excluding reference list and appendices (90%)

Prerequisite: Part-time students must obtain a Grade B+ or above in ENVM7015 Research methods and report writing in environmental management by May of the first study year. Full-time students must pass a qualification assessment in September / October of the first study year.

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**ENVM8006 Environmental impact assessment (3 credits)**

Environmental Impact Assessment (EIA) is one of the most important contemporary instruments of environmental management. Used widely around the world to identify the environment impacts of development projects as well as strategic plans and policies. EIA plays a key role in many regulatory systems for the environment. This course reviews the development of different approaches to EIA, basic analytical principles, administrative and legal systems for EIA, assessments at the project and strategic levels (SEA), and case study applications in Hong Kong.

Assessment: Course work (50%) and written examination (50%)

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**ENVM8021 Project (9 credits) [Capstone experience]**

This is a group project (2-3 students per group) to be carried out under the supervision of one or more teachers. The topic and content of the project will be agreed individually between students and the supervisor(s) which have to be endorsed by the respective course coordinators. Students may propose their own topics and approach potential supervisors, or they may consider those suggested by teachers. Apart from research projects, creative projects such as the production of field guides, books, websites, videos, apps about the environment, and action projects such as waste upcycling; biodiversity conservation, environmental education and public campaigns are encouraged.

Assessment: Individual project report (50%) and group presentation (50%)

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**Elective Courses**

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**ENVM8003 Conservation biology and management (3 credits)**

Conservation biology is the essential scientific element in biodiversity conservation. The course will cover the basic principles and methods of conservation biology from a management perspective. In reality, successful biodiversity conservation projects often require an integration of the welfare of local communities. As such, practical examples from Hong Kong and elsewhere will be used as case studies to illustrate the importance of different elements in conserving the world's biodiversity.

Assessment: Course work (50%) and written examination (50%)

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**ENVM8011 Environmental auditing and reporting (3 credits)**

This course provides an introduction on the concepts of environmental management, auditing and reporting. Detailed explanation of the development, implementation and continuous improvement of an environmental management system (EMS) based on ISO14001:2015 standards will be covered. With the understanding on the key elements of an EMS, audit methodology and skills based on ISO19011:2011 would be introduced with focus on environmental audit. Process of carbon audit which is becoming important in environmental management by acting as a useful greenhouse gases measuring tool will also be explained. The function and importance of environmental reporting will be explained along with the contents of Global Reporting Initiative which is a guide for sustainability reporting.

Assessment: Course work (100%)

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**ENVM8012 Environmental health and risk assessment (3 credits)**

Environmental Risk Assessments (ERAs) are a tool to determine the likelihood that contaminant releases, either past, current, or future, pose an unacceptable risk to human health or the environment. Currently, ERAs are required under various regulations in many developed countries so as to support decision-makers in risk characterization or the selection of cost-effective remedial clean-up. This course introduces the theory and practice of human and ecological risk assessments. Students completing the course will gain a sound knowledge of the concepts and principles of ERAs, risk management and risk communication as applied in practice; understand the basic risk assessment tools (i.e. prospective, retrospective and tiered approaches) to environmental risk management; be able to select and apply the simpler tools to tackle risk issues; and appreciate the interpretations of risk and its role in environmental policy formulation and decision making.

Assessment: Course work (100%)

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**ENVM8013 Air and noise pollution control and management (3 credits)**

This advanced course focuses on various technical aspects related to air and noise pollution control and their management issues. The topics include micrometeorology; air dispersion modelling; advanced air pollution control (e.g. process modification, energy audit and emission trading); case studies on control of emissions from stationary and mobile source; concept of sound propagation; basic principles of noise control; noise impact assessment and technical mitigation measures for construction, industrial, road traffic, railway and aircraft noise.

Assessment: Course work (30%) and written examination (70%)

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**ENVM8014 Special topics in environmental management (3 credits)**

The contents of this course will vary from year to year, depending on the availability of teachers and topics, and will be announced before course selection each year. Hot topics in Hong Kong or overseas that are related to environmental management will be selected. Examples of such topics could include urban tree management; slope greening; nature conservation versus development in rural Hong Kong and China, sustainable development movements. With careful consideration of different needs of various stakeholders, various management options are reviewed and evaluated.

Assessment: Course work (100%)

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**ENVM8015 Directed studies in Environmental Management (6 credits)**

This course provides an opportunity for students to study a topic of particular interest under the supervision of a teacher or an experienced environmental practitioner. The contents of this course will be agreed individually between the student and the supervisor, which has to be endorsed by the course coordinator. Directed studies may include traditional research projects generating scientific paper or other study projects with creative outputs in environmental management such as audit reports; booklets; pamphlets; field guides; manuals; teaching modules and so on. The course was designed to allow a flexible approach in fixing the content and output of the directed studies.

Assessment: A written report or other form of output to be agreed by the supervisor (50%); Supervisor's assessment (20%); Oral presentation (30%)

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**ENVM8016 Conservation and management of freshwater resources (3 credits)**

The overall aim of this course is to introduce the global importance of freshwater resources to sustainable development of mankind. This course offers an introduction to the problems associated with human use of water and current patterns of water resource management, and explains how the characteristics of natural systems constrain sustainable use of water. Emphasis will be placed on examples of river and lake management that can indicate the reasons for success and failure of sustainable water resource use, with particular emphasis placed on regional examples. Students taking this course will gain an appreciation of the trade-offs inherent in water resource management, and the practices that can be adopted to conserve freshwater biodiversity in the complex context of maintaining human livelihoods.

Assessment: Course work (40%) and written examination (60%)

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**ENVM8017 Conservation and management of marine resources (3 credits)**

The marine environment has been an important source of its fortunes but today suffers from a range of perturbations, from pollution and habitat destruction, to community loss and over-exploitation. This course primarily deals with pressing issues of marine resource conservation and management in Hong Kong. An overview of the current global situation of marine resources will be presented with an emphasis on the local situation. The past and present exploitation of marine resources and human impacts on the marine ecosystem are addressed with a view to identifying problems and providing practical solutions. Real cases are taken from Hong Kong as example to illustrate the crisis and its management options. Various management options are reviewed and evaluated with careful consideration of different needs of various stakeholders. The key topics of this course include marine pollution, habitat destruction, biological invasion, biodiversity conservation, fisheries, mariculture and harmful algal bloom.

Assessment: Course work (50%) and written examination (50%)

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**ENVM8018 Urban planning and environmental management (3 credits)**

This course lays down the challenges of achieving sustainability in cities. It highlights the important role of urban planning and its related tools and instruments in managing development pressure, mitigating environmental impacts, conserving ecological sensitive areas and achieving the society's overall resilience. The course begins with an introduction to the fundamental functions and processes of planning. Illustrated with real-life case studies, the course then critically reviews the effectiveness of a series of planning tools, such as land use zonings, conservation trusts, partnership schemes, in resolving climate change and sustainability conflicts in both urban and rural contexts. The course adopts the Problem-based Learning (PBL) approach where students will take lead and debate on selected current environmental affairs such as planning and development on private land with high conservation value, planning for facilities with environmental nuisances, design and planning for inclusive open space and rural revitalisation for sustainable communities.

Assessment: Course work (100%)

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**ENVM8019 Corporate sustainability (3 credits)**

Corporate sustainability focuses on the business sector's role and contribution to achieving sustainability. In recent years, the expectations of business to act sustainably have increased. The scope has extended from contributing to the social welfare of society through philanthropic contributions or avoiding environmental degradation to a new business approach that creates long term value for both

the business and society as a whole, by their managing of risks deriving from economic, environmental and social developments, and through the creation of opportunities. The course examines the commonly used tools in corporate sustainability and corporate social responsibility (CSR), including reporting, environmental, health & safety, corporate community investment and clean production. It reviews the business relationships with the environment and society expressed in the concepts of sustainable production and consumption. The course also emphasizes the importance of learning about current practice in the business sector, and therefore case studies will be used.

Assessment: Course work (100%)

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### **ENVM8020 Green buildings and energy management (3 credits)**

One of the ways to tackle global climate change is to significantly enhance energy efficiency especially in buildings. This course will introduce the global trends in the green building movement with focuses on current energy management in new and existing buildings in Hong Kong e.g. BEAM Plus. The course will introduce various aspects of energy efficiency including laws and codes; assessment tools; methods to analyse energy uses in different types of buildings and practical energy conservation measures. This course stresses on practical knowledge and experiences in energy management in buildings. Thus, experienced practitioners in the field are engaged to deliver some of the course content. The course is accredited by Hong Kong Green Building Council Limited and BEAM Society Limited. Starting from the Academic Year 2020-21, the students upon passing the examination of the course and completing the MSc(EnvMan) programme will be able to register as BEAM Affiliate by the Hong Kong Green Building Council Limited.

Assessment: Course work (50%) and examination (50%)

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### **ENVM8022 Environmental management internship (6 credits)**

This course provides an opportunity for students to undertake an internship in environmental management in universities, NGOs or commercial companies under the supervision of an experienced Environmental Practitioner or Faculty member. The student needs to work for at least 160 hours for the internship employer on either the first, second or summer semester. During the internship, the student needs to conduct a desktop study on a topic related to the internship job duties, which should be endorsed by the course coordinator. The written report for the internship shall contain a fully referenced report for the desk top study and some sharing and reflection of the internship experiences.

Assessment: Written report (60%); Supervisor's assessment (20%); Oral presentation (20%)

Prerequisite: For Full-time students only