



POLYU POSTGRADUATE
PROGRAMMES IN
**ACCOUNTING
AND
FINANCE**

MSc in ESG and Sustainability (Mixed-mode)

2023-2024

Programme Requirement Document

Programme Code: 21054-EFM/EPM

TABLE OF CONTENTS

	<u>Page No.</u>
CONTACT LIST	i
FOREWORD	ii
ACADEMIC CALENDAR FOR 2023/24	iii
Part I: General Information	
1. Programme Overview	1
2. Programme Aims and Objectives	1
3. Programme Learning Outcomes and Learning Objectives	1
4. Entrance Requirements	2
5. Programme Structure	
5.1 Programme Information	2
5.2 Credit Requirements	2
5.3 Mode and Duration of Study	3
5.4 Subject Offerings	3
5.5 Recommended Progress Pattern	4
6. Curriculum Map	4
7. Programme Management and Operation	6
8. Communication with Students	6
9. Subject Registration	
9.1 Add/Drop of Subjects	6
9.2 Withdrawal of Subjects	6
10. Subject Exemption and Credit Transfer	7
11. Retaking of Failed Subjects	8
12. Zero Subject Enrollment	8
13. Deferment of Study	9
14. Withdrawal of Study	
14.1 Official Withdrawal	10
14.2 Discontinuation of Study	10
14.3 De-registration	10
15. Assessment Methods	11
16. Grading	11
17. Progression and De-registration	12
18. Academic Probation	13
19. Eligibility for Award	13
20. Award Classifications	14
21. Late Assessment	14
22. Procedures for Appeal	
22.1 Appeals against Decisions on De-registration	14
22.2 Appeals against Decisions on Subject Results	15
23. Dismissal of Class	15
24. Plagiarism and Bibliographic Referencing	16
25. Copyright and Usage of Online Learning Materials	16
26. Prevention of Bribery Ordinance	16
Part II: Subject Syllabuses	17

CONTACT LIST

For information on programme administration, please contact:

Tel: 2766 5645
Email: af.esg@polyu.edu.hk

For information on academic matters, please contact:

Prof Qiang WU, Programme Director
Tel: 2766 7078
Email: qiang.wu@polyu.edu.hk

Dr Colin ZENG, Deputy Programme Director
Tel: 2766 4072
Email: cheng-colin.zeng@polyu.edu.hk

Master of Science in ESG and Sustainability Web Page

<https://www.polyu.edu.hk/af/study/ESG>

PolyU Student Handbook Webpage Address: <http://www.polyu.edu.hk/ar>

Office of Postgraduate Studies
School of Accounting and Finance (AF)
M736, Li Ka Shing Tower
The Hong Kong Polytechnic University
Hung Hom, Kowloon, Hong Kong

Tel: 3400 3232
Fax: 2330 9845
Email: afpgmail@polyu.edu.hk
Homepage: <http://www.af.polyu.edu.hk>

Office hours:

Weekdays:	8:45am – 1:00pm; 2:00pm – 5:35pm
Saturday, Sundays & Public Holidays:	Closed

FOREWORD

It is our pleasure to welcome you to the Master of Science in ESG and Sustainability programme jointly offered by the School of Accounting and Finance (as host department) and the Department of Civil and Environmental Engineering at The Hong Kong Polytechnic University.

This programme aims to provide you with interdisciplinary knowledge in ESG and sustainability (e.g., economic, accounting, finance, management, and technology) and relevant skills to prepare you to become effective leaders, consultants, policymakers, and managers in ESG, sustainable and green project financing, sustainable and green instrument and product development, and other related fields.

This Programme Requirement Document contains important information that is of direct relevance to your studies. You are strongly advised to read it carefully and use it as a guide for working out your study plan.

We wish you an enjoyable and rewarding experience with the University.

With warmest regards

A handwritten signature in black ink, appearing to be 'Nancy SU', with a horizontal line extending to the right.

Professor Nancy SU
Head and Professor
School of Accounting and Finance

August 2023

The Hong Kong Polytechnic University
Academic Calendar 2023/24 (by Semester Week)

Month	Week	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Sem. Week	Events	General Holidays
Aug 2023	--	28	29	30	31	1	2	3	--		
Sept	1	4	5	6	7	8	9	10	1	4 Sept: Sem. 1 teaching commences 4 - 16 Sept: Add/Drop Period for Sem. 1	
	2	11	12	13	14	15	16	17	2		
	3	18	19	20	21	22	23	24	3		
Oct	4	25	26	27	28	29	30	1	4	29 Sept: Mid-Autumn Festival (all evening classes/exams suspended)	30 Sept: The day following the Chinese Mid-Autumn Festival 2 Oct: The day following National Day
	5	2	3	4	5	6	7	8	5		
	6	9	10	11	12	13	14	15	6		
	7	16	17	18	19	20	21	22	7		
	8	23	24	25	26	27	28	29	8		23 Oct: Chung Yeung Festival
Nov	9	30	31	1	2	3	4	5	9		
	10	6	7	8	9	10	11	12	10		
	11	13	14	15	16	17	18	19	11		
	12	20	21	22	23	24	25	26	12		
Dec	13	27	28	29	30	1	2	3	13	2 Dec: Sem. 1 teaching ends	
	14	4	5	6	7	8	9	10	Exam.	4 - 6 Dec: Revision Days for Sem. 1 7 - 22 Dec: Examination Period for Sem. 1	
	15	11	12	13	14	15	16	17			
	16	18	19	20	21	22	23	24	Exam. result processing	22 Dec: Winter Solstice (all evening classes/exams suspended) 24 Dec: Christmas Eve (all evening classes/exams suspended)	25 - 26 Dec: Christmas Day and the first weekday after Christmas Day 1 Jan: The first day of January
	17	25	26	27	28	29	30	31			
Jan 2024	18	1	2	3	4	5	6	7	1	15 Jan: Sem. 2 teaching commences 15 - 27 Jan: Add/Drop Period for Sem. 2	
	19	8	9	10	11	12	13	14	2		
	20	15	16	17	18	19	20	21	3		
Feb	21	22	23	24	25	26	27	28	4		
	22	29	30	31	1	2	3	4	3		
	23	5	6	7	8	9	10	11	4	9 Feb: Lunar New Year's Eve (all evening classes/exams suspended) 10 - 18 Feb: Lunar New Year Break (all day-time and evening classes suspended)	10 - 13 Feb: Lunar New Year Holidays
	24	12	13	14	15	16	17	18	Lunar New Year Break		
	25	19	20	21	22	23	24	25	5		
Mar	26	26	27	28	29	1	2	3	6		
	27	4	5	6	7	8	9	10	7		
	28	11	12	13	14	15	16	17	8		
	29	18	19	20	21	22	23	24	9		
	30	25	26	27	28	29	30	31	10		29 Mar - 1 Apr: Easter Holidays 4 Apr: Ching Ming Festival
Apr	31	1	2	3	4	5	6	7	11		
	32	8	9	10	11	12	13	14	12		
	33	15	16	17	18	19	20	21	13	20 Apr: Sem. 2 teaching ends 22 - 24 Apr: Revision Days for Sem. 2 25 Apr - 11 May: Examination Period for Sem. 2	
	34	22	23	24	25	26	27	28	Exam.		1 May: Labour Day
May	35	29	30	1	2	3	4	5	Exam. result processing		15 May: The Birthday of the Buddha
	36	6	7	8	9	10	11	12			
	37	13	14	15	16	17	18	19			
	38	20	21	22	23	24	25	26			
Jun	39	27	28	29	30	31	1	2	1	27 May: Summer Term teaching commences 27 May - 1 Jun: Add/Drop Period for Summer Term	
	40	3	4	5	6	7	8	9	2		
	41	10	11	12	13	14	15	16	3		10 Jun: Tuen Ng Festival
	42	17	18	19	20	21	22	23	4		
	43	24	25	26	27	28	29	30	5		1 Jul: The HKSAR Establishment Day
Jul	44	1	2	3	4	5	6	7	6		
	45	8	9	10	11	12	13	14	7	13 Jul: Summer Term teaching ends	
	46	15	16	17	18	19	20	21	Exam.	15 - 20 Jul: Examination Period for Summer Term	
	47	22	23	24	25	26	27	28	Exam. result processing		
Aug	48	29	30	31	1	2	3	4			
	49	5	6	7	8	9	10	11			
	50	12	13	14	15	16	17	18			
	51	19	20	21	22	23	24	25			
	52	26	27	28	29	30	31	1		1 Sept: Academic Year 2023/24 ends	

General Holidays (tentative for 2024)

Important dates on assessment:

Finalisation of all subject assessment results
Finalisation of overall assessment results
Announcement of overall assessment results

Semester 1	Semester 2	Summer Term
9-Jan	21-May	30-Jul
17-Jan	29-May	7-Aug
18-Jan	30-May	8-Aug

PART I: GENERAL INFORMATION

1 PROGRAMME OVERVIEW

Environmental, social, and governance (ESG) emphasize firms' positive contributions to their community, environment, and society with the goal to achieve sustainable economic growth. With the rapid growth of global population and the excessive use of natural resources by human activities, problems such as environmental pollution, resource depletion and climate change have become increasingly prominent. At present, sustainable development has become the timely and important topic in political, economic, social and commercial activities. Worldwide, the sustainable development in the post epidemic era has reached a new historical turning point. The market needs for ESG/sustainability-related talents are urgent.

The Master of Science in ESG and Sustainability programme intends to train students to become effective leaders, consultants, policymakers, and managers in ESG, sustainable and green project financing, sustainable and green instrument and product development, and other related fields. Upon graduation, students will equip with professionals knowledgeable in finance, sustainability, climate change, and related technology solutions to ESG strategies into business, and eventually contribute to economic and social development.

2 PROGRAMME AIMS AND OBJECTIVES

This programme aims to provide graduates with interdisciplinary knowledge in ESG and sustainability (e.g., economic, accounting, finance, management, and technology) and relevant skills for the related practices.

The programme emphasizes both core knowledge in ESG and sustainability (e.g., economic, accounting, finance, management, and technology) and hands-on skills to solve ESG related business and/or technological problems faced in real-life situations.

3 PROGRAMME LEARNING OUTCOMES AND LEARNING OBJECTIVES

Programme Learning Outcomes provide a broad description of the knowledge, skills, intellectual abilities and behaviours to be developed in all students. Underpinning each Learning Outcome, there is one or more Learning Objectives that set out specifically what students are expected to achieve or perform upon completion of the programme:

- (i) Understand contemporary ESG and sustainability issues.

Learning Objective 1:

To learn the conceptual frameworks needed to evaluate contemporary issues about environmental, social, governance, sustainability and ethics.

- (ii) Understand business and technical requirements and methods for ESG and sustainability.

Learning Objective 2:

To understand the fundamental economic and business requirements and technological methods to deal with ESG and sustainability.

- (iii) Apply business and technical skills to ESG and sustainability.

Learning Objective 3:

To apply economic, accounting, finance, and technical skills to solve ESG related problems faced in real-life situations.

4 ENTRANCE REQUIREMENTS

The minimum entrance requirement for this award is:

- A Bachelor's degree from a recognized university.
- Preference will be given to applicants with at least one year of relevant working experience.
- If the applicant is not a native speaker of English, and his/her Bachelor's degree or equivalent qualification is awarded by institutions where the medium of instruction is not English, he/she is expected to fulfil the University's minimum English language requirement for admission purpose.

5 PROGRAMME STRUCTURE

5.1 Programme Information

Programme Code and Title:

21054 Master of Science in ESG and Sustainability

Stream Code:

EFM (Full-time)

EPM (Part-time)

Award:

Master of Science in ESG and Sustainability

Medium of Instruction:

English

5.2 Credit Requirements

Students are required to obtain the credit requirements specified below for the relevant award:

Award	No. of Credits	No. of Required Subjects
MSc	30	8 Compulsory Subjects + 2 Elective Subjects
PgD	21	7 Compulsory Subjects

The programme is leading to the Master of Science in ESG and Sustainability award. Students admitted to the MSc programme may apply for early exit with a Postgraduate Diploma (PgD), subject to meeting the specified credit requirements.

Students who subsequently decide to graduate with a PgD must apply to the School of Accounting and Finance by submitting an application for graduation **Form AR84c**.

5.3 Mode and Duration of Study

The programme is operated in mixed-mode. Students enrolling on the programme are classified as mixed-mode students. They may engage in a full-time or part-time study load by attending classes in the daytime, evening or a combination of both. If the mixed-mode students take subjects of 9 credits or more in a semester, they will be given full-time status in that semester. Otherwise, they will be given part-time status.

The academic year is organized into Semester 1 (13 weeks), Semester 2 (13 weeks) and Summer Term (7 weeks), where appropriate.

Classes will be scheduled on weekday evenings, daytime or weekends. The number of class contact hours will depend on the approach to learning and teaching adopted in the subject. While students' effort need not necessarily be defined in terms of class contact, most subjects require 39 hours of class contact. In a regular semester, most subjects have 3 hours contact time per week. Actual number of class meetings may vary in light of certain conditions in the offering semester, such as the arrangement of public holidays; or other pedagogical needs of subject lecturers.

The duration of the programme is as follows:

Full-time study load

	MSc	PgD
Normal Duration	1 year	1 year

Part-time study load

	MSc	PgD
Normal Duration	2 years	2 years

5.4 Subject Offerings

Subjects	
<i>Compulsory Subjects for MSc and PgD (21 credits)</i>	
AF5115	Accounting for Business Analysis
AF5312	Principles of Corporate Finance
AF5336	Business Risk Management
AF5373	ESG Investment and Green Finance
AF5510	Corporate Governance
AF5634	Economics of Sustainability
CSE544	Sustainable Development and Environmental Planning
<i>Compulsory Subject for MSc (3 credits)</i>	
CSE548	Global Climate Change and Society Response

Elective Subject* for MSc (any two) (6 credits)	
AF5344	Investments
AF5633	Economics of World Energy Markets
AF5343	Quantitative Methods for Finance
AF5942	Capstone Project on ESG and Sustainability
AF5xxx	ESG Disclosure and Rating Analysis (<i>subject to approval</i>)
BSE5411	Building Carbon Footprint Assessment
CSE508	Environmental Impact Assessment
CSE539	Environmental Management Systems and Audit
LGT5073	Risk Management in Operations
LSGI523	Smart Cities: Technologies and Solutions
MM5681	Ethics, Responsibility and Sustainability
MM5453	Transformation to Sustainable Smart Cities

* Subject to university's minimum enrolment requirement, not all subjects will be offered each year. Registration is subject to the availability of quota.

Students should observe carefully on the pre-requisite, co-requisite and/or exclusion requirements before enrolling the subject(s) in the programme. Failing to comply with the requirements may result in a delay in subject registration and/or programme completion.

5.5 Recommended Progress Pattern

The programme offers a structured progression patterns¹, and students should follow the progression pattern to complete the programme within the normal duration.

Full-time study load

	Year One
Semester One	4 Compulsory Subjects and 1 Elective Subject
Semester Two	4 Compulsory Subjects and 1 Elective Subject

Part-time study load

	Year One	Year Two
Semester One	2 Compulsory Subjects	2 Compulsory Subjects and 1 Elective Subject
Semester Two	3 Compulsory Subjects	1 Compulsory Subject and 1 Elective Subject

6 CURRICULUM MAP

The **institutional learning outcomes** are as follows:

- a. **Professional competence of specialists/leaders of a discipline/profession** - Graduates of PolyU TPg programmes will possess in depth-knowledge and skills in their

¹ Patterned subjects on offer are subject to change without prior notice. Students can enquire the class timetable of the semester concerned via <http://www.polyu.edu.hk/student> upon release of the relevant class timetable.

- area of study and be able to apply their knowledge and contribute to professional leadership.
- b. **Strategic thinking** - Graduates of PolyU TPg programmes will be able to think holistically and analytically in dealing with complex problems and situations pertinent to their professional practice. They will be versatile problem solvers with good mastery of critical and creative thinking skills, who can generate practical and innovative solutions.
 - c. **Lifelong learning capability** - Graduates of PolyU TPg programmes will have an enhanced capability for continual professional development through inquiry and reflection on professional practice.

The above institutional learning outcomes are appropriately addressed by the totality of the programme learning outcomes of the MSc in ESG and Sustainability programme, as set out below:

Programme Learning Outcomes and Learning Objectives	Addressed by Subjects
<p>1. Understand contemporary ESG and sustainability issues</p> <p>Learning Objective 1: To learn the conceptual frameworks needed to evaluate contemporary issues about environmental, social, governance, sustainability and ethics.</p>	<p><u>Compulsory subjects</u></p> <p>AF5336 Business Risk Management AF5510 Corporate Governance AF5634 Economics of Sustainability CSE544 Sustainable Development and Environmental Planning CSE548 Global Climate Change and Society Response</p> <p><u>Reinforced by elective subjects</u></p> <p>MM5681 Ethics, Responsibility and Sustainability MM5453 Transformation to Sustainable Smart Cities</p>
<p>2. Understand business and technical requirements and methods for ESG and sustainability</p> <p>Learning Objective 2: To understand the fundamental economic and business requirements and technological methods to deal with ESG and sustainability.</p>	<p><u>Compulsory subjects</u></p> <p>AF5115 Accounting for Business Analysis AF5312 Principles of Corporate Finance</p> <p><u>Reinforced by elective subjects</u></p> <p>AF5343 Quantitative Methods for Finance AF5344 Investments AF5xxx ESG Disclosure and Rating Analysis LGT5073 Risk Management in Operations</p>

<p>3. Apply business and technical skills to ESG and sustainability</p> <p>Learning Objective 3: To apply economic, accounting, finance, and technical skills to solve ESG related problems faced in real-life situations.</p>	<p><u>Compulsory subjects</u> AF5373 ESG Investment and Green Finance</p> <p><u>Reinforced by elective subjects</u> AF5633 Economics of World Energy Markets AF5942 Capstone Project in ESG and Sustainability BSE5411 Building Carbon Footprint Assessment CSE508 Environmental Impact Assessment CSE539 Environmental Management Systems and Audit LSGI523 Smart Cities: Technologies and Solutions</p>
--	---

7 PROGRAMME MANAGEMENT AND OPERATION

A Programme Committee is formed to exercise the overall academic and operational responsibility for the Programme and its development within policies, procedures and regulations defined by the University. Its composition comprises academics and student representatives.

The Programme Director and/or Deputy Programme Director and/or Programme Manager are responsible for the day-to-day management and operation of the programme, student admissions, teaching and learning matters, quality assurance (QA) and programme development. Their prime role is to ensure the programme is delivered according to the established QA mechanism.

8 COMMUNICATIONS WITH STUDENTS

While we work to communicate clearly and in a timely manner with students according to University regulations and procedures, it is the **responsibility of students** to help maintain the effectiveness of the communication process. The main communication channel for disseminating information and notices to students within the University will be through PolyU e-mail (i.e. PolyU Connect account) and the University Portal. Therefore, students are advised to check for messages in their PolyU Connect accounts **regularly** to obtain the latest information regarding their studies and the status of any related applications (e.g. late assessment, appeal of subject results, add/drop of subjects, deferment, etc) lodged. Failure in doing so will not constitute any grounds for appeals/complaints against consequences / decisions of the relevant matters and applications.

9 SUBJECT REGISTRATION

9.1 Add/Drop of Subjects

In addition to programme registration, students need to register for subjects at specified period prior to the commencement of the semester.

If you wish to make changes to your subject registration, you may do so through the add/drop at the [eStudent](#) during the 2-week add/drop period (one week for summer term). You are advised not to make any changes to the subjects pre-assigned to you by the Department without consulting your Department/Academic Advisor. In case you wish to drop all subjects in a semester, you must first seek approval from your Department for zero subject enrolment. Otherwise, you will be considered as having decided to withdraw from study on the programme concerned. Dropping of subjects after the add/drop period is not allowed. If you have a genuine need to do so, it will be handled as withdrawal of subject.

If you have taken more credits, you will receive a second debit note on the remaining tuition fee about 5 weeks after the commencement of the semester. If you have taken less credits, a refund will be made.

9.2 Withdrawal of Subjects

If you have a genuine need to withdraw from a subject after the add/drop period, you should submit a written request for withdrawal of subject to your programme offering department. Such requests will first be considered by the subject teacher concerned and followed by the programme leader if there are strong justifications and when the tuition fee of the subject concerned has been settled. Requests for subject withdrawal will not be entertained after the commencement of the examination period for your programme.

For approved cases, the tuition fees paid for the withdrawn subjects will not be refunded. The withdrawn subjects will still be reported in your Assessment Result Notification and Transcript of Studies although they will not be counted in GPA calculation.

10 SUBJECT EXEMPTION AND CREDIT TRANSFER

Irrespective of the extent of previous study or credits recognised, all students studying in PolyU should complete at least one third of the normal credit requirement in order to be eligible for the PolyU award.

If you consider your previous study relevant to your current programme, you may apply for subject exemption (**Form AR41e**) or credit transfer (**Form AR41c**) via [eStudent](#).

Subject Exemption

You may be granted exemption from taking certain subjects if you have successfully completed similar subjects in another programme. The credits associated with the exempted subject will not be counted for satisfying the credit requirements of your programme. You should consult your Department and take another subject in its place.

Credit Transfer

You should submit an application for credit transfer upon your initial enrolment on the programme or before the end of the add/drop period of the first semester of your first year of study. Late applications may not be considered. For students whose tuition fees are charged by credits, a credit transfer fee will be charged.

The validity period of subject credits earned is eight years from the year of attainment, i.e. the year in which the subject is completed, unless otherwise specified by the Department responsible for the content of the subject (e.g. the credit was earned in 2018/19, then the validity period should count from 2019 for eight years). Credits earned from previous studies should remain valid at the time when the student applies for transfer of credits.

There is a limit on the maximum number of credits that could be transferred. If the credits attained from previous study are solely from PolyU, the total credits transferred should not exceed 67% of the required credits for the award. If the credits gained are from other institutions, the total credits transferred should not exceed 50%. In cases where both types of credits are transferred, not more than 50% of the required number of credits for the academic award may be transferred. Grades may or may not be given for the transferred credits.

For students admitted with advanced standing (i.e. by virtue of route (iii) of the Entrance Requirements specified in Section 3 of this document), no more credit transfer will be granted. However, he/she may apply for exemption to study a compulsory subject by virtue of his/her previous study. In such case, student will be required to take another elective subject as a replacement for the subject exempted. Core subjects are NOT allowed to be taken as replacement subjects.

Credit transfer for elective subjects would not be considered. Students are encouraged to broaden their knowledge by taking subjects which they have not exposed to in their prior studies.

11 RETAKING OF Failed SUBJECTS

Students may only retake a subject which they have failed (i.e. Grade F or S or U). After the announcement of subject results in a semester, you should check whether you have failed any subject via the eStudent and arrange for retaking of the subject during subject registration.

The number of retake of each subject is restricted to a maximum of two. The second retake of a failed subject requires the approval of the Faculty / School Board. Students who have failed a compulsory subject after two retakes will be de-registered.

Students can retake a failed subject the first time via eStudent directly during the subject registration period and add/drop period. For a second retake of a failed subject, students should complete form AR160 instead and return it to the programme offering departments to seek approval.

When you retake a failed subject, only the grade obtained in the final attempt of the retake will be included in the calculation of Grade Point Average (GPA) and GPA for award classification. Although the original grade will not be included in the calculation of GPAs, it will be shown on the transcript of studies.

Students paying credit fee will be charged for the subjects retaken.

12 ZERO SUBJECT ENROLLMENT

If you do not wish to take any subject in a semester, you must seek approval from your Department to retain your study place by submitting your application **via eStudent** before the start of the semester and in any case not later than the end of the add/drop period. Otherwise, your registration and student status with the University will be withdrawn. The semesters during which you are allowed to take zero subject will nevertheless be counted towards the total period of registration (or maximum period of registration for students admitted in or before 2019/20).

You will receive notification from the Department normally within 2 weeks if your application is successful. Students who have been approved for zero subject enrolment

are allowed to continue using campus facilities including library facilities. A fee of HK\$2,105 per semester for retention of study place will be charged.

For Non-local students, if you need to apply for deferment of study/zero subject enrolment, it is necessary for you to seek approval from the Director of Immigration.

Procedures

- Seek approval from your programme offering department by submitting the relevant AR forms.
- Once the department approves your application, the Academic Registry might report your application to the Director of Immigration.

To resume study upon expiry of the approved period of deferred study, you must hold a valid student visa. If your visa has expired, you need to apply to the Immigration Department for the student visa via the Academic Registry.

Procedures

- Submit all the necessary documents for student visa application to the Academic Registry by express post at least 8 weeks before you resume your study.

For details, please visit the AR Website (<http://www.polyu.edu.hk/ar> > Students in Taught Programme > Visa Matters for Non-local Students).

13 DEFERMENT OF STUDY

You may apply for deferment of study if you have a genuine need to do so, such as prolonged illness or being posted to work outside Hong Kong. The deferment period will not be counted towards the total period of registration (or maximum period of registration for students admitted in or before 2019/20).

You are required to submit an application for deferment of study via **eStudent** to the programme offering department. You will be informed of the result of your application in writing or via e-mail by the Department normally within three weeks from the date of application.

It is necessary for you to settle all the outstanding tuition fee and/or other fees in order to have your application for deferment processed if the application is submitted after the start of a semester. All fees paid are non-refundable. Students approved for deferment of study will normally not be eligible to access the campus facilities/services. Students can check for further details from the relevant service providing units. Alternatively, you may apply for zero subject enrolment to retain your study place.

Students who have been approved for deferment of study can retain their student identity card for use upon their resumption of study. You will be advised to settle the tuition fee and complete the subject registration procedures upon expiry of the deferment period. If you do not receive such notification one week before the commencement of the Semester, you should enquire at the Academic Registry.

The approval of deferment of study is not automatic; application should be submitted to the Department before the commencement of the examination period of the semester concerned. Students must observe the procedures and timelines as stipulated by the University.

For Non-local students, if you need to apply for deferment of study/zero subject enrolment,

it is necessary for you to seek approval from the Director of Immigration.

Procedures

- Seek approval from your programme offering department by submitting the relevant AR forms.
- Once the department approves your application, the Academic Registry might report your application to the Director of Immigration.

To resume study upon expiry of the approved period of deferred study, you must hold a valid student visa. If your visa has expired, you need to apply to the Immigration Department for the student visa via the Academic Registry.

Procedures

- Submit all the necessary documents for student visa application to the Academic Registry by express post at least 8 weeks before you resume your study.

For details, please visit the AR Website (<http://www.polyu.edu.hk/ar> > Students in Taught Programme > Visa Matters for Non-local Students).

14 WITHDRAWAL OF STUDY

14.1 Official Withdrawal

If you wish to discontinue your study at the University before completing your programme, it is necessary for you to complete the withdrawal procedure via **eStudent**. Fees paid for the semester which you are studying will not be refunded. Application for withdrawal of study for the current semester must be submitted before the commencement of the examination period. Application submitted after the commencement of the examination period will not be processed. Applications for withdrawal of study for the following academic year / semester should be submitted before the commencement of that academic year / semester.

Your application will not be processed if you have not cleared outstanding matters with the various departments/offices concerned, such as settling outstanding fees/fines and Library loans and clearing your locker provided by the Student Affairs Office.

The relevant Department will inform you in writing or via e-mail of the result of your application, normally within three weeks after you have cleared all the outstanding items as mentioned above.

Upon confirmation of your official withdrawal, you will be eligible for the refund of the caution money paid if you have no outstanding debts to the University.

All fees are non-refundable. However, current students who apply for withdrawal of study before the commencement of the relevant semester will be eligible for refund of the tuition fee paid for that semester.

If you discontinue your study at the University without completing proper withdrawal procedures, you will be regarded as having unofficially withdrawn and the caution money paid at first registration will be confiscated.

14.2 Discontinuation of Study

If you discontinue your study without following the proper procedures for official withdrawal, you will be regarded as having given up your study at the University. In such cases, you will not be eligible for the refund of caution money and shall not be considered for re-admission to the same programme in the following academic year.

14.3 De-registration

Students who have been de-registered on ground of academic failure shall not be considered for re-admission to the same programme in the following academic year.

For non-local students, once it is confirmed that you have discontinued, withdrawn your study at PolyU or have been de-registered from your programme, the University will inform the Immigration Department accordingly. According to Immigration Regulations, you must leave Hong Kong before the expiry of your limit of stay or within 4 weeks from the date of the termination of study, whichever is earlier; otherwise, you will be committing a criminal offence of breaching your conditions of stay.

15 ASSESSMENT METHODS

Students' performance in a subject can be assessed by continuous assessments and/or examinations, at the discretion of the individual subject offering department. Where both continuous assessment and examinations are used, the weighting of each in the overall subject grade shall be clearly stated in this document. Learning outcome should be assessed by continuous assessment and / or examination appropriately, in line with the outcome-based approach.

Continuous assessment may include tests, assignments, projects, laboratory work, field exercises, presentations and other forms of classroom participation. Continuous Assessment assignments which involve group work should nevertheless include some individual components therein. The contribution made by each student in continuous assessment involving a group effort shall be determined and assessed separately, and they can result in different grades being awarded to students in the same group.

16 GRADING

Assessment grades shall be awarded on a criterion-reference basis. A student's overall performance in a subject shall be graded as follows from 2020/21 onwards. From the grading descriptions for 2019/20 and before, please refer to the previous edition of this handbook:

Grade	Description	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	0.0

'F' is a subject failure grade, whilst all others ('D' to 'A+') are subject passing grades. No credit will be earned if a subject is failed.

At the end of each semester/term, a Grade Point Average (GPA) will be computed as follows, and based on the numeral grade point of all the subjects:

$$\text{GPA} = \frac{\sum \text{Subject Grade Point} \times \text{Subject Credit Value}}{\sum \text{Subject Credit Value}}$$

where n = number of all subjects (inclusive of failed subjects) taken by the student up to and including the latest semester/term. For subjects which have been retaken, only the grade point obtained in the final attempt will be included in the GPA calculation.

In addition, the following subjects will be excluded from the GPA calculation:

- (i) Exempted subjects
- (ii) Ungraded subjects
- (iii) Incomplete subjects
- (iv) Subjects for which credit transfer has been approved without any grade assigned
- (v) Subjects from which a student has been allowed to withdraw (i.e. those with the code 'W')

Subject which has been given an "S" code, i.e. absent from all assessment components, will be included in the GPA calculation and will be counted as "zero" grade point. GPA is thus the unweighted cumulative average calculated for a student, for all relevant subjects taken from the start of the programme to a particular point of time. GPA is an indicator of overall performance and ranges from 0.0 to 4.3 from 2020/21.

Any subject passed after the graduation requirement has been met or subjects taken on top of the prescribed credit requirements for award shall not be taken into account in the grade point calculation for award classification.

17 PROGRESSION AND DE-REGISTRATION

A student will normally have "progressing" status unless he/she falls within the following categories, any one of which shall be regarded as grounds for de-registration from the Programme:

- (i) the student has exceeded the maximum period of registration (applicable to students admitted in or before 2019/20); or

- (ii) the student has reached the final year of the normal period of registration (applicable to students in or after 2020/21); or
- (iii) the student has reached the maximum number of retakes allowed for a failed compulsory subject: or
- (iv) the student's GPA is lower than 1.7 for two consecutive semesters and his/her Semester GPA in the second semester is below 1.7; or
- (v) the student's GPA is lower than 1.7 for three consecutive semesters.

Notwithstanding the above, the Board of Examiners will have the discretion to de-register students with extremely poor academic performance before the time specified in (iv) and (v) above.

18 ACADEMIC PROBATION

The academic probation system is implemented to give prior warning to students who need to make improvement in order to fulfill the GPA requirement of the University. Starting from Semester One of 2020/21 academic year, you will be put on academic probation in the following semester if your GPA is below 1.7. If you are able to obtain a GPA of 1.7 or above by the end of the probation semester, the status of "academic probation" will be lifted. The status of "academic probation" will be reflected on the web assessment results. However, this status will not be displayed in the transcript of studies.

To improve the academic performance of students on academic probation, students on academic probation are required to seek academic advice on their study load and subjects to be taken. These students will normally be required to take a study load of not more than 15 credits. Students should complete the Form 'Study Load for Students on Academic Probation' (**Form AR150**) (AR Website > For Students on Taught Programmes > Application Forms) indicating the proposed study plan and meet with the Academic Advisor(s) to finalize the subjects and numbers of credits to be taken in the semester following academic probation within one week of assessment results announcement.

19 ELIGIBILITY FOR AWARD

A student would be eligible for the award of Master of Science in ESG and Sustainability or Postgraduate Diploma in ESG and Sustainability on satisfying ALL the conditions listed below:

- (i) Accumulation of the requisite number of credits for the award, as defined in this document; and
- (ii) Satisfying all the "compulsory" and "elective" requirements ("elective" requirement is for Master of Science in ESG and Sustainability only) defined.
- (iii) Having a **GPA of 1.7** or above at the end of the programme.

A student is required to graduate as soon as he/she satisfies all the above conditions for award. Upon confirmation of eligibility to graduate or leaving the University, registration for subjects (including the follow-on term of consecutive subjects) in the following semester/Summer Term will be nullified and removed.

Students who meet all the necessary requirements of the University and the programme concerned will be eligible for graduation. Students with graduation status confirmed on or before 15 March will receive the academic award parchment in late March/early April with the award parchment dated 15 March of the year concerned while students with graduation status confirmed after 15 March and before 1 October will receive their parchments in late October/early November with the award parchment dated 30 September of the year concerned. Please visit the AR Website > for

Graduates > Award Parchment for more updated information on the parchment collection arrangement in early March or early October with reference to your graduation timeline.

20 AWARD CLASSIFICATIONS

The following award classifications apply to your programme:

Award Classification	GPA
Distinction	3.6 – 4.3
Credit	3.0 – 3.59
Pass	1.7 – 2.99

The above ranges for different classifications are subject to BoE's individual discussion of marginal cases.

21 LATE ASSESSMENT

If you have been absent from an examination or are unable to complete all assessment components of a subject because of illness, injury or other unforeseeable reasons, you may apply for a late assessment. Application in writing should be made to the Head of Department offering the subject **within five working days** from the date of the examination together with any supporting documents such as a medical certificate. Approval of applications for late assessment and the means for such late assessments shall be given by the Head of Department offering the subject or the Subject teacher concerned, in consultation with the Programme Director.

In case you are permitted to take a late assessment, that examination or other forms of assessment will be regarded as a first assessment and the actual grade attained will be awarded.

22 PROCEDURES FOR APPEAL

22.1 Appeals against Decisions on De-registration

Students appealing against the de-registration decision shall pay a fee of HK\$125. Payment forms are obtainable from the Academic Registry Service Centre. The fee shall be refunded if the appeal is upheld.

Students should complete and submit Form AR149 "Appeal against the Decision of BoE on De-registration" to the General Office of the Department hosting the programme/award (or to the Faculty Office if the programme/award is hosted by the Faculty, or for students on Broad Discipline programme) within one Calendar Week upon the public announcement of the overall results, i.e. the date when the results are announced to students via the web. [For 2023/24, the announcement dates for overall results are xx January 2024 (Semester 1), xx May 2024 (Semester 2) and xx August 2024 (Summer Term).] When submitting the form, the appellant has the responsibility to make known to the Academic Appeals Committee (AAC) full details and evidence that would support his/her appeal.

The appeal by the students will be considered by the Academic Appeals Committee, which will deliberate the appeal cases making reference to the recommendations of

the programme-hosting Department/Faculty and the Faculty Dean/School Board Chairman.

The decisions of the Academic Appeals Committee shall be final within the University.

22.2 Appeals against Decisions on Subject Results

Students appealing against the decision on their assessment results shall pay a fee of HK\$125. Payment forms are obtainable from the Academic Registry Service Centre. If more than one examination paper is involved, an extra fee of HK\$125 will be charged for each additional paper. This fee shall also be refunded if the appeal(s) is/are upheld.

A student should make his/her appeal in writing to his/her Head of Department within one calendar week upon the public announcement of the overall results, i.e. the date when the results are announced to students via the web. The Head of Department shall deal with the appeal if the student is studying in a department-based programme/scheme. If the student is studying in postgraduate schemes, the Head of Department shall refer the appeal to the Scheme Committee Chairman.

The appeal should be accompanied by a copy of the fee receipt, for inspection by the Department concerned. The student should give a complete account of the grounds for the appeal in the letter, and provide any supporting evidence.

Departments should inform the student concerned of the appeal result within one calendar week after either the announcement of the student's overall result or receipt of the letter of appeal, whichever is later.

If the appellant is dissatisfied with the decision, he/she may then appeal in writing to the Registrar within one calendar week from the date of the Department's reply. He/She should provide the following information together with other relevant documents in support of the appeal:

- name in English and Chinese;
- student number;
- programme title, year and class of study;
- subject results appealing against; and
- grounds for appeal

The Registrar shall then refer the case to the Academic Appeals Committee, which shall determine whether there are *prima facie* grounds for a reconsideration of the Subject Teacher's/SARP's decision.

The decisions of the Academic Appeals Committee shall be final within the University.

23 DISMISSAL OF CLASS

If the subject lecturer does not show up after 30 minutes of the scheduled start time, the class is considered cancelled and appropriate follow up arrangements (e.g. rescheduled class, make-up class, etc) will be announced to students in due course.

24 PLAGIARISM AND BIBLIOGRAPHIC REFERENCING

Plagiarism refers to the act of using the creative works of others (e.g. ideas, words, images or sound, etc) in one's own work without proper acknowledgement of the sources. Students are required to submit their original work and avoid any possible suggestion of plagiarism in the work they submit for grading or credit. The University views plagiarism, whether committed intentionally or because of ignorance or negligence, as a serious disciplinary offence. Excuses such as "not knowing that this is required" or "not knowing how to do it" are not accepted. It is the students' responsibility to understand what plagiarism is, and take action steps to avoid plagiarism in their academic work. The golden rule is: "if in doubt, acknowledge".

Students should comply with the University's policy on plagiarism in continuous assessment, bibliographic referencing and photocopying of copyright materials. Please read details on "Plagiarism" given in Appendix 3 of the Student Handbook.

25 COPYRIGHT AND USAGE OF ONLINE LEARNING MATERIALS

The learning and teaching platforms of The Hong Kong Polytechnic University ('PolyU') are for the use of PolyU students to facilitate their learning. The student shall use the platforms and the materials available (including teaching sessions conducted by staff of PolyU) for their personal study only. Where a student needs to download or save the materials available on the platforms for the permitted purposes, the student shall take all necessary measures to prevent their access by other parties. The materials are copyright protected. Save for the permitted purposes, no copying, distribution, transmission or publication of the materials in whole or in part in any form is permitted.

26 PREVENTION OF BRIBERY ORDINANCE

PolyU staff members may in no circumstances solicit or accept an advantage. For relevant details, please refer to the Prevention of Bribery Ordinance (Chapter 201) of the Laws of Hong Kong at <http://www.legislation.gov.hk>.

For details of all the regulations, please refer to the Student Handbook of the relevant year. (accessible at <https://www.polyu.edu.hk/ar/web/en/for-polyu-students/student-handbook/index.html>)

PART II: SUBJECT SYLLABUSES

Subject Code	Subject Title	Page No.
<u>Accounting and Finance</u>		
AF5115	Accounting for Business Analysis	18
AF5312	Principles of Corporate Finance	21
AF5336	Business Risk Management	24
AF5343	Quantitative Methods for Finance	27
AF5344	Investments	30
AF5373	ESG Investment and Green Finance	33
AF5510	Corporate Governance	37
AF5633	Economics of World Energy Markets	42
AF5634	Economics of Sustainability	45
AF5942	Capstone Project on ESG and Sustainability	50
<u>Civil and Environmental Engineering</u>		
CSE508	Environmental Impact Assessment	52
CSE539	Environmental Management Systems and Audit	55
CSE544	Sustainable Development and Environmental Planning	58
CSE548	Global Climate Change and Society Response	61
<u>Management and Marketing</u>		
MM5453	Transformation to Sustainable Smart Cities	64
MM5681	Ethics, Responsibility and Sustainability	68
<u>Building Environment and Energy Engineering</u>		
BSE5411	Building Carbon Footprint Assessment	72
<u>Logistics and Maritime Studies</u>		
LGT5073	Risk Management in Operations	75
<u>Land Surveying and Geo-Informatics</u>		
LSGI523	Smart Cities: Technologies and Solutions	79

The subject syllabuses contained in this Programme Requirement Document are subject to review and change from time to time. The School of Accounting and Finance reserves the right to revise or withdraw the offer of any subject contained in this document. For teaching and learning, students should refer to the updated subject syllabuses distributed to them by the relevant subject lecturers when they take the corresponding subjects.

Subject Code	AF5115
Subject Title	Accounting for Business Analysis
Credit Value	3
Level	5
Normal Duration	One Semester
Pre-requisite / Co-requisite/ Exclusion	None
Objectives	This subject aims to outline and explain the accounting concepts, techniques and current regulatory and governance environment that are pertaining to the preparation, presentation, analysis, understanding, and evaluation of financial reports.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> Understand and apply the accounting concepts and techniques, and evaluate their impact on financial statement figures and presentation; Analyze and evaluate financial statements and financial performance with various tools such as ratio analysis, trend analysis, and common-size financial statements; Assess the accounting policies and governance structure adopted by companies as well as the reporting regulations, such as HKFRS and IFRS, and their impact on the quality of earnings; and Evaluate the impact of financial analysis on capital markets, and business and financial strategy development, investment and business combination activities.
Subject Synopsis/ Indicative Syllabus	<p>Overview of Financial Statements The basic accounting techniques and framework; Accounting concepts; Types of financial statements and their purposes; Relationship between financial statements and investment decisions; Role of ratio analysis; Process and limitations of ratio analysis.</p> <p>Balance Sheet and Its Analysis Classification of assets and liabilities; Depreciation methods; inventory valuation; Treatment of intangible assets and contingent liabilities; Provisions; accruals and prepayments; Leases and off-balance-sheet debt; Asset valuation and mark-to-market valuation; Pensions and other retirement benefits; Share equity and reserves; liquidity; Leverage; Asset management; Common-size balance sheet.</p> <p>Profit and Loss Statement and Its Analysis Revenue recognition; Cost of goods sold; Gross and net profit; Recurrent and non-recurrent items; deferred charges; Extra-ordinary items; Common-size profit and loss statement; profitability ratios; Operating ratios; coverage ratios; Earnings per share.</p>

	<p>Statement of Cash Flows and Its Analysis Purpose and format of statement of cash flows; Importance and measurement of cash flows; Cash flow from operating, investing, and financing activities; Free cash flow; Limitations of cash flow reporting; cash flow ratios.</p> <p>Accounting Issues and Audit Report Accounting standards and financial statement reporting: non-recurring items, valuation of tangible and intangible assets, segment reporting; Equity method of accounting; Earnings management in financial tsunami; Quality of earnings; Significance and Implications of auditors' opinion for financial reporting.</p> <p>Financial Reporting and Analysis for Investments Financial reporting and analysis for marketable securities; Bankruptcy prediction; Other information disclosed in annual reports.</p>																																																						
<p>Teaching/Learning Methodology</p>	<p>This subject comprises of class-contact lectures and workshops. Workshops will be conducted in the form of group discussion, seminar and case study. Students are expected to apply their knowledge to the discussion of the current accounting, business and finance issues faced by an executive of a firm in Hong Kong. It is the basic philosophy of learning in this subject that at least 2 hours of outside preparation are usually required to read the assigned textbook chapter(s) and reading materials, and to prepare solutions to exercises and problems as well as presentations, as a prerequisite for a meaningful 1-hour classroom lecture/seminar.</p>																																																						
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1. Class participation</td> <td>10%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>2. Individual assignment</td> <td>20%</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3. Group project and presentation</td> <td>20%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>4. Final Examination</td> <td>50%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td>100 %</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Class participation – Students have to read assigned reading materials and complete exercises in order to participate actively in class discussion, which would assess their understanding of the key</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d			1. Class participation	10%	✓	✓	✓	✓			2. Individual assignment	20%	✓	✓					3. Group project and presentation	20%	✓	✓	✓	✓			4. Final Examination	50%	✓	✓	✓	✓			Total	100 %						
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed (Please tick as appropriate)																																																			
		a	b	c	d																																																		
1. Class participation	10%	✓	✓	✓	✓																																																		
2. Individual assignment	20%	✓	✓																																																				
3. Group project and presentation	20%	✓	✓	✓	✓																																																		
4. Final Examination	50%	✓	✓	✓	✓																																																		
Total	100 %																																																						

	<p>accounting concepts and techniques, and their applications, analysis and evaluation in financial reporting.</p> <p>Individual assignment – Each student is required to apply the accounting knowledge and techniques to analyze and evaluate the financial position of a company based on its financial statements. The objectives are to test students’ understanding and application of relevant concepts and techniques in accounting and financial analysis to a practical situation.</p> <p>Group project and presentation – Students are required to select a target company for detailed analysis, evaluate its financial performance, and assess its reporting and earnings quality. Students would apply the accounting knowledge and techniques to analyze and evaluate the impact of the macro-economic, business environment, industry, and company operation information on the financial and other qualitative performance indicators.</p> <p>Note: The specific requirements on individual assessment components discussed above could be adjusted based on the pedagogical needs of subject lecturers.</p>	
<p>Student Study Effort Expected</p>	<p>Class contact:</p>	
	<ul style="list-style-type: none"> ▪ Lectures / Seminars 	<p>39 Hrs.</p>
	<p>Other student study effort:</p>	
	<ul style="list-style-type: none"> ▪ Reading materials/textbook, preparing for class discussion, and assignments. 	<p>78 Hrs.</p>
	<p>Total student study effort</p>	<p>117 Hrs.</p>
<p>Reading List and References</p>	<p>Textbook: Kieso, D., Weygandt, J., and Warfield, T. Intermediate IFRS, 4E</p> <p>References: Debra C. Jeter and Paul K. Chaney, Advanced Accounting, 7th Edition Penman, S.H., Financial Statement Analysis and Security Valuation, 5th Edition, McGraw-Hill Education, 2013. Penman, S.H., Accounting for Value, Columbia University Press, 2011.</p> <p>Indicative Journal Reading: Campbell, John Y., Jens Hilscher, and Jan Szilagyi, 2008, In search of distress risk, <i>The Journal of Finance</i> 63, 2899-2939. Dechow, Patricia, Weili Ge, and Catherine Schrand, 2010, Understanding earnings quality: A review of the proxies, their determinants and their consequences, <i>Journal of Accounting and Economics</i> 50, 344-401. Lee, Charles M. C., 2014, Value investing: Bridging theory and practice, <i>China Accounting and Finance Review</i> 16, 10-38.</p>	

Subject Code	AF5312
Subject Title	Principles of Corporate Finance
Credit Value	3
Level	5
Normal Duration	One Semester
Pre-requisite / Co-requisite/ Exclusion	Pre-requisite: None Exclusion: Financial Management (AF5318) Managerial Finance (AF5326) Finance for Executives (AF5327) Corporate Financial Management (AF5331)
Objectives	This course introduces students to the foundation knowledge and techniques in corporate finance, as well as covering more specialised aspects of corporate finance on which other subjects can be built. This course will help students to identify real life corporate finance issues and explain the related observations or phenomena in terms of sound financial theories concepts. Students are also able to apply the up-to-date corporate finance principles and see their impact on corporate policies and strategies.
Intended Learning Outcomes	Upon successful completion of this course, students should be able to: <ul style="list-style-type: none"> a. Understand the major tasks of corporate finance; b. Understand the role of financial markets and interest rate in corporate financing and how they should be incorporated in corporate financing decisions; c. Understand the importance of time value of money and its relevance to corporate financial decisions, and be able to apply the up-to-date knowledge acquired in the course to solve similar capital budgeting problems in other real case situations; d. Understand the return-risk relation and the CAPM; e. Understand issues of cost of capital, capital structure, and different methods of equity and debt financing.
Subject Synopsis/ Indicative Syllabus	<p>Key Concepts of Corporate Finance Corporate finance and the financial manager; goals of corporate management; agency problem, corporate governance and control of the corporation; value of the firm expressed as contingency claims; time value of money and present value.</p> <p>Valuation and Capital Budgeting Evaluation of capital investment decisions using the net present value rule; alternative rules for capital budgeting; Risk and return; the CAPM.</p> <p>Market Efficiency and Behavioral Finance The efficient market hypothesis; behavioral finance; financial tsunami.</p>

	<p>Capital Structure Financial leverage and firm value; implications of Modigliani and Miller propositions; capital structure and cost of capital; optimal capital structure; limits to the use of debt; valuation and capital budgeting for the levered firm.</p> <p>Dividend Policy Types of dividend; dividend policies; factors affecting dividend payout policy.</p> <p>Long-term Equity and Debt Financing Public issue; alternative issue methods; cash offer; announcement of new equity and the value of the firm; cost of new issues; rights; the new-issue puzzle; types of bonds; public issue of bonds; bond refunding; bond rating; private placement of securities.</p>																																																						
<p>Teaching/Learning Methodology</p>	<p>The subject is structured around lectures/seminars, supplemented by exercises within and outside class. Participants are urged to prepare themselves well for each class and to proactively interact with both the instructor and other students. Students should read all relevant chapters a few times and try the practice questions at the end of each chapter. Problem areas should be clarified as early as possible.</p>																																																						
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> <th></th> </tr> </thead> <tbody> <tr> <td>1. Class participation</td> <td>10%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> <tr> <td>2. Group project</td> <td>15%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> <tr> <td>3. Mid-term test</td> <td>25%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. Final examination</td> <td>50%</td> <td></td> <td></td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> <tr> <td>Total</td> <td>100 %</td> <td colspan="6"></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Class participation–Students are required to actively participate in classroom discussion.</p> <p>Group Project – The group project and presentation require students to apply the principles of finance to analyze financial problems, understand the operation of financial markets, and practice presentation and communication skills in English.</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d	e		1. Class participation	10%	✓	✓	✓	✓	✓		2. Group project	15%	✓	✓	✓	✓	✓		3. Mid-term test	25%	✓	✓	✓				4. Final examination	50%			✓	✓	✓		Total	100 %						
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed (Please tick as appropriate)																																																			
		a	b	c	d	e																																																	
1. Class participation	10%	✓	✓	✓	✓	✓																																																	
2. Group project	15%	✓	✓	✓	✓	✓																																																	
3. Mid-term test	25%	✓	✓	✓																																																			
4. Final examination	50%			✓	✓	✓																																																	
Total	100 %																																																						

	<p>Mid-term test–A closed-book test with compulsory multiple choice questions and short analytical questions. It covers the intended learning outcomes (a), (b), and (c).</p> <p>Final examination–3-hour closed book examination with compulsory questions covering most of the intended learning outcomes.</p> <p>Note: The specific requirements on individual assessment components discussed above could be adjusted based on the pedagogical needs of subject lecturers.</p>	
<p>Student Study Effort Expected</p>	<p>Class contact:</p>	
	<ul style="list-style-type: none"> ▪ Lectures / Seminars 	<p>39Hrs.</p>
	<p>Other student study effort:</p>	
	<ul style="list-style-type: none"> ▪ On average, students are expected to spend about 39 hours for reading teaching materials and doing exercise questions. 	<p>39 Hrs.</p>
	<ul style="list-style-type: none"> ▪ On average students are expected to spend 36 hours for the group project discussion, presentation, and report writing. 	<p>36 Hrs.</p>
	<p>Total student study effort</p>	<p>114 Hrs.</p>
<p>Reading List and References</p>	<p><u>Textbook</u></p> <p>Ross, Westerfield, and Jaffe, <i>Corporate Finance</i>, McGraw-Hill, International Edition</p> <p><u>Reference</u></p> <p>Ross, S.A.,R. W. Westerfield & B. D. Jordan, <i>Fundamentals of Corporate Finance</i>, latest edition, McGraw-Hill.</p> <p>Brealey, R., Myers, S., and F. Allen, <i>Principles of Corporate Finance</i>, McGraw-Hill, latest edition.</p> <p>Copeland, T., Weston, J., and Shastri, K., <i>Financial Theory and Corporate Policy</i>, Pearson, latest edition.</p> <p>Shefrin, H., <i>Behavioral Corporate Finance</i>, McGraw-Hill, latest edition.</p>	

Subject Code	AF5336
Subject Title	Business Risk Management
Credit Value	3
Level	5
Normal Duration	One Semester
Pre-requisite / Co-requisite/ Exclusion	Exclusion: Corporate Risk Management (AF5322) Risk Management for Corporations (AF5333)
Objectives	In this subject, students would be given opportunities to interpret the ethical implications of relevant corporate governance issues, and also to evaluate the financial risk management functions of a firm, such as management of the risks when planning and implementing the related company policies. This aims to prepare the students to establish the body of knowledge necessary for independent risk management analysis and decision-making.
Intended Learning Outcomes	On successfully completing this subject, students will be able to: <ul style="list-style-type: none"> (a) identify the role of risk management in business firms; (b) apply a variety of tools to identify, measure and control a firm's risk exposure related to its financing, operation and supply chain in a global market environment; and (c) identify and evaluate issues related to the risk management functions of a firm.
Subject Synopsis/ Indicative Syllabus	<p>Basic Concepts of Risk Management Concept of risk. Classifications of Risk. Meaning of risk management. Objectives of risk management. Evolution of risk management. Utility Theory and Risk management decisions.</p> <p>Risk Management Process Steps in the risk management process. Identification of loss exposures. Risk measurement. Value at risk (VaR). Risk control tools.</p> <p>Financial Risk Management Understanding of derivatives. Identifying, measuring and monitoring market risk. Applications of VaR. Credit exposure of different financial instruments. Credit derivatives.</p> <p>Operational and Supply Chain Risk Management Identifying, measuring and monitoring operational and supply chain risk.</p>
Teaching/Learning Methodology	Lectures will be used to provide theoretical concepts and approaches of the subject. Seminars will be used for case studies, presentation and discussion. Students are required to discuss real-world cases in seminars. They are expected to apply subject knowledge to the discussion of the current corporate risk management issues faced by a

	<p>corporate administrator in their working environment. Ethical issue will also be discussed since the manager’s unethical behavior will increase the risk for the company. Students are expected to actively participate in the seminars and to share their experience and learn from each other.</p>																																																						
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<p>Assessment components include written assignments, discussion, participation and presentation of issues related to risk management and subject final examination set with risk management problems. These assessment components require students to demonstrate their ability to identify and evaluate various issues in financial risk management including but not limited to ethical issues, which is important particularly because manager’s unethical behavior will increase the risk for the company.</p> <p>Students are expected to apply subject knowledge to the discussion of the current corporate risk management issues faced by a corporate administrator in their working environment. Their application of such knowledge will be assessed in their presentation and class discussion.</p> <table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1. Individual Essay</td> <td>20%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. Project Presentation</td> <td>20%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3. Participation</td> <td>10%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. Final Examination</td> <td>50%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td>100%</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Individual Essay – students are required to write an essay on a risk management issue in a corporate environment.</p> <p>Project Presentation – students present a study of how a business firm identifies, measures and controls its different types of risk.</p> <p>Participation – students are required to discuss concepts, issues, problems and cases in business risk management.</p> <p>Final Examination – 3-hour examination with questions, problems and cases that students are required to apply concepts/principles to analyze how firms can identify, measure and control their risks.</p> <p>Note: The specific requirements on individual assessment components discussed above could be adjusted based on the pedagogical needs of subject lecturers.</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c				1. Individual Essay	20%	✓	✓	✓				2. Project Presentation	20%	✓	✓	✓				3. Participation	10%	✓	✓	✓				4. Final Examination	50%	✓	✓	✓				Total	100%						
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed (Please tick as appropriate)																																																			
		a	b	c																																																			
1. Individual Essay	20%	✓	✓	✓																																																			
2. Project Presentation	20%	✓	✓	✓																																																			
3. Participation	10%	✓	✓	✓																																																			
4. Final Examination	50%	✓	✓	✓																																																			
Total	100%																																																						

Student Study Effort Expected	Class contact:	
	<ul style="list-style-type: none"> ▪ 13 weeks of 3 hours seminar each 	39 Hrs.
	Other student study effort:	
	<ul style="list-style-type: none"> ▪ Depends on their backgrounds, on average students are expected to spend around 2 more hours for each contact hour for reading subject materials and preparing/doing coursework assignments. 	78 Hrs.
	Total student study effort	117 Hrs.
Reading List and References	<p><u>Required Text</u></p> <p>Crouhy, M, D. Galai and R. Mark, <i>The Essentials of Risk Management</i>, 2nd edition, McGraw Hill, 2014.</p> <p>Other References</p> <p>Hull, John, <i>Risk Management and Financial Institutions</i>, 5th edition, Wiley, 2018.</p> <p>Chance & Brooks, <i>An Introduction to Derivatives & Risk Management</i>, 10th edition, Cengage Learning, 2016.</p> <p>Lam, James, <i>Enterprise Risk Management: From Incentives to Controls</i>, 2nd edition, Wiley, 2014.</p> <p>Marthinsen, John, <i>Risk Takers: Uses and Abuses of Financial Derivatives</i>, 2nd edition, Pearson, 2009.</p> <p>Jorion, Philippe, <i>Value At Risk: The New Benchmark for Managing Financial Risk</i>, 3rd edition, McGraw Hill, 2007.</p> <p>Lynn, T., J.G. Mooney, P. Rosati, and M. Cummins, <i>Disrupting Finance: FinTech and Strategy in the 21st Century</i>, Palgrave Macmillan, 2019.</p> <p>Additional readings will be distributed in class or put into Blackboard.</p>	

Subject Code	AF5343
Subject Title	Quantitative Methods for Finance
Credit Value	3
Level	5
Duration	One Semester
Pre-requisite / Co-requisite/ Exclusion	Recommended Background Knowledge: Undergraduate level statistical analysis, quantitative analysis, and microeconomics.
Objectives	This course covers the basic concepts and techniques of the classical econometrics, such as sampling theory, probability theory, hypothesis testing, regressions, etc. Considerable attention is devoted to finance applications of the concepts and techniques, so that we need to review basic financial mathematics. Some advanced statistical techniques will be briefly introduced. This course is also designed for those who wish to take the Chartered Financial Analysts (CFA) exams.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: <ul style="list-style-type: none"> a. Develop a systematic understanding of fundamental statistic and econometric concepts and methodologies. b. Apply the concepts and methodologies to explain different problems related to finance and economics. c. Develop ability to resolve real world economic and finance problems by applying the methodologies to data analysis.
Subject Synopsis/ Indicative Syllabus	<p>Basic Financial Mathematics (Review) Compounding and discounting; present value and future value calculations; annuities and perpetuities; dollar and time-weighted rate of return.</p> <p>Basic Statistics Concepts Types of statistical data; measures of central tendency and dispersion</p> <p>Probability Concepts Basic concepts of probability; random variables and probability; probability theorems; covariance and correlation; expected value and variance; probability distributions</p> <p>Sampling and Estimation Random sampling and sampling distributions; point and interval estimates; confidence intervals</p> <p>Hypothesis Testing and Statistical Inference The concepts of hypothesis testing; types of hypothesis testing; analysis of variance</p>

	<p>Regression Analysis Linear regression and correlation; multiple regression analysis</p>																																																													
<p>Teaching/Learning Methodology</p>	<p>Concepts and techniques will be introduced through lectures. Students are required to apply the knowledge and skills to solving problems in the form of exercises and project. The use of relevant computer package is required.</p>																																																													
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1. Class Participation</td> <td>10%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. Homework</td> <td>10%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3. Written Project</td> <td>30%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. Final Examination</td> <td>50%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td>100 %</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>The Written Project should contain the following components:</p> <ul style="list-style-type: none"> • State and motivate clearly the finance issue you wish to address in your project. • Make your issue stand out from the finance literature by offering a literature review. • Convert your finance issue to one or two testable hypotheses. • A discussion of the econometric model(s)/techniques you plan to use in your project. • A brief discussion of the data you are using – data sources, definitions, transformation involved (if any), and limitations. • A coherent analysis and discussion of your results. • A conclusion outlining what you have achieved and the problems you have encountered. • A bibliography properly documented. • The whole report should be typed and well set out. You should include tables, graphs, etc. when necessary. <p>Note: The specific requirements on individual assessment components discussed above could be adjusted based on the pedagogical needs of subject lecturers.</p>								Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c				1. Class Participation	10%	✓	✓	✓				2. Homework	10%	✓	✓	✓				3. Written Project	30%	✓	✓	✓				4. Final Examination	50%	✓	✓	✓				Total	100 %						
Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)																																																												
		a	b	c																																																										
1. Class Participation	10%	✓	✓	✓																																																										
2. Homework	10%	✓	✓	✓																																																										
3. Written Project	30%	✓	✓	✓																																																										
4. Final Examination	50%	✓	✓	✓																																																										
Total	100 %																																																													

Student Study Effort Expected	Class contact:	
	Lectures / Seminars	39 Hrs.
	Other student study effort:	
	Reading materials/textbook and working on exercises, depending on each student's background.	78 Hrs.
	Total student study effort	117 Hrs.
Reading List and References	<p>Quantitative Investment Analysis, by Richard Armand Defusco, Dennis W. McLeavey, Jerald E. Pinto, David E. Runkle, 3rd edition, John Wiley & Sons, Inc.</p> <p>Econometric Methods, 4th edition by Jack Johnston and John DiNardo</p> <p>Some additional readings will be distributed in class.</p>	

Subject Code	AF5344
Subject Title	Investments
Credit Value	3
Level	5
Normal Duration	One Semester
Pre-requisite / Co-requisite/ Exclusion	None
Objectives	This course provides a comprehensive coverage of the basic concepts, theories, applications and decision-making rules for financial investments. A balance between theories and applications, particularly in the Asian securities markets, is emphasized.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: <ul style="list-style-type: none"> a. Understand modern portfolio theory and its use in the investment management process; b. Apply various valuation methods on different financial securities including equity, bonds, and derivatives; c. Understand the process of portfolio management and portfolio performance evaluation. d. Understand the challenges and opportunities in applying FinTech and data analytical skills in investment management.
Subject Synopsis/ Indicative Syllabus	<p>The Investment Environment Typical investment instruments; investment process; risk free assets; market indexes and benchmarks; short sales; primary and secondary markets for equities and bonds; investment companies; FinTech.</p> <p>Portfolio Theory Measure of return and risk; risk return trade-off; diversification and portfolio risk; optimal risky portfolios; risk-free lending and borrowing; asset allocation.</p> <p>Asset Pricing Models Capital Asset Pricing Model (CAPM); multi-factor models;</p> <p>Efficient Market Hypothesis Theory and empirical evidence in favour of and against market efficiency; limits to arbitrage; behavioural finance; implication of the debate for investors. Efficient market hypothesis and the financial market turmoil of 2007-09.</p> <p>Fundamentals of Equity Valuation</p>

	<p>Valuation concepts and methods; valuation models such as dividend discount model; P/E based models. Implications of financial bubbles and crises for equity valuation.</p> <p>Fundamentals of Bond Analysis Basic features of debt securities; basic valuation models; yield computation; term structure of interest rates; interest rate risk; duration; management of fixed income portfolios.</p> <p>Fundamentals of Derivatives Securities Basic terminology; option payoffs; option strategies; use of derivatives in portfolio management.</p> <p>Performance Evaluation Time-weighted versus dollar-weighted returns; risk adjustment in performance evaluation; performance attribution analysis.</p>																																																						
<p>Teaching/Learning Methodology</p>	<p>The theoretical aspects of this course will be covered in the class through lectures. This allows direct contact and discussion between lecturer and students. Students learn about FinTech and data science through reading assignments, guest lectures, and hands-on practices. Assignments, newspaper articles, and case studies will be used to illustrate the application of the ideas, and to encourage independent learning skills.</p>																																																						
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1. Class Discussion and Participation</td> <td>10%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>2. Mid-Term Test</td> <td>20%</td> <td>✓</td> <td>✓</td> <td></td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>3. Project</td> <td>20%</td> <td>✓</td> <td></td> <td>✓</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>4. Final Examination</td> <td>50%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td>100 %</td> <td colspan="6"></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Class participation – Students should read assigned readings before the class to prepare for better learning and possible Q&A sessions in class.</p> <p>Homework assignments test students on their understanding of investments theories and valuation methods.</p> <p>Group project – the project applies portfolio theory in the investment management process and portfolio performance evaluation and contains elements of individual efforts on data analysis.</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d			1. Class Discussion and Participation	10%	✓	✓	✓	✓			2. Mid-Term Test	20%	✓	✓		✓			3. Project	20%	✓		✓	✓			4. Final Examination	50%	✓	✓	✓	✓			Total	100 %						
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed (Please tick as appropriate)																																																			
		a	b	c	d																																																		
1. Class Discussion and Participation	10%	✓	✓	✓	✓																																																		
2. Mid-Term Test	20%	✓	✓		✓																																																		
3. Project	20%	✓		✓	✓																																																		
4. Final Examination	50%	✓	✓	✓	✓																																																		
Total	100 %																																																						

	<p>Final examination – 3 hours closed book examination with compulsory questions covering all the intended learning outcomes.</p> <p>Note: The specific requirements on individual assessment components discussed above could be adjusted based on the pedagogical needs of subject lecturers.</p> <p>To reflect the significant technology content in this subject, 10% of the overall weighting of this subject is based on individual assessment concerning technology-related knowledge.</p>	
<p>Student Study Effort Expected</p>	<p>Class contact:</p>	
	<ul style="list-style-type: none"> ▪ Lectures / Seminars 	<p>39 Hrs.</p>
	<p>Other student study effort:</p>	
	<ul style="list-style-type: none"> ▪ Reading 	<p>39 Hrs.</p>
	<ul style="list-style-type: none"> ▪ Homework and Project 	<p>39 Hrs.</p>
	<p>Total student study effort</p>	<p>117 Hrs.</p>
<p>Reading List and References</p>	<p>Bodie, Zvi, Alex Kane and Alan J. Marcus, Essentials of Investments, 11th edition, 2018, McGraw-Hill/Irwin, International edition. (Required Textbook)</p> <p>Bodie, Zvi, Alex Kane and Alan J. Marcus, Investments, 12th edition, 2020, McGraw-Hill/Irwin.</p> <p>Malkiel, Burton G., A Random Walk Down Wall Street: The Time-Tested Strategy for Successful Investing, 12th Edition, 2020, W.W. Norton & Company.</p> <p>Reilly, Frank K., Keith C. Brown, and Sanford J. Leeds, Investment Analysis and Portfolio Management, 11th edition, 2019, Cengage Learning.</p> <p>Topical readings from the financial press about local and international markets.</p>	

Subject Code	AF5373
Subject Title	ESG Investment and Green Finance
Credit Value	3
Level	5
Pre-requisite/ Co-requisite/ Exclusion	Pre-requisite: Principles of Corporate Finance (AF5312)(or equivalent) (Students are also recommended to have background knowledge on Investments)
Objectives	This subject is designed to provide updated knowledge about 1) the key concepts, principles, disclosures, regulations and major challenges (e.g., climate risk and disclosure standardization) of Environmental, Social and Governance (ESG) issues; and 2) different frameworks for incorporating ESG and responsible investing practices from both the investor and corporate boardroom perspectives. The various approaches to ESG investing such as ESG inclusion, ESG engagement and ESG screening, will be covered comprehensively. The full spectrum of ESG products and strategies across the equity and fixed income asset classes will be covered such as green bonds and sustainability indexing.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: <ul style="list-style-type: none"> a. Gain an overall picture of the major concepts, topics, history and future of ESG. b. Grasp some important economic principles and approaches to various ESG investing. c. Identify and evaluate the major types of sustainable finance and green products. d. Understand the mainstream theories, underlying drivers and financial impacts of corporate social responsibility. e. Equip with the knowledge about the current stage and future trend of ESG reporting, the perception of climate risk, and the development for carbon pricing & carbon trading systems.
Subject Synopsis/ Indicative Syllabus	<p>Topic 1: Corporate social responsibility (CSR)</p> <ul style="list-style-type: none"> • Theories of CSR • The role of CSR in shareholders and other various stakeholders • The impacts of CSR on firm performance, financing cost and market competition <p>Topic 2: CSR disclosure and ESG reporting</p> <ul style="list-style-type: none"> • Corporate voluntary and mandatory CSR disclosure • ESG reporting by external rating agencies • International frameworks • Standardization of CSR disclosure and ESG reporting <p>Topic 3: History and background to ESG investing</p> <ul style="list-style-type: none"> • An historical overview • Differentiating between socially focused investing, governance focused investing and environment focused investing

	<ul style="list-style-type: none"> • The size and growth of the ESG marketplace <p>Topic 4: Approaches to ESG investing</p> <ul style="list-style-type: none"> • Exclusion-based ESG investing • Integration-based ESG investing • Impact & engagement-based ESG investing <p>Topic 5: Sustainable finance-ESG related products</p> <ul style="list-style-type: none"> • Green and climate bonds • Social bonds • Sustainability bonds • ESG mutual funds <p>Topic 6: Carbon pricing & carbon trading systems</p> <ul style="list-style-type: none"> • Climate risk and global warming challenges • Carbon pricing • Carbon taxes Vs emissions trading systems • Carbon pricing policies and global cooperation or competition 																																								
<p>Teaching/Learning Methodology</p>	<p>This subject comprises of class-contact lectures and workshops. The class-contact lectures will introduce the key concepts, principles, regulations, disclosures, and challenges for ESG issues, various approaches to ESG investing, and important economic and finance concepts/principles related to CSR. Workshops will be conducted in the form of case analysis, group project discussion and presentation. For the individual case analysis, students are expected to apply their knowledge learned from this subject to analyse the underlying drivers, benefits and costs of firms' ESG practices and investors' investment. For the group project, students are expected to apply the ESG principles and investing approaches to construct an appropriate ESG investment strategy in order to achieve some assigned ESG targets.</p>																																								
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="5">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> </tr> </thead> <tbody> <tr> <td>1. Class Participation</td> <td>10%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> <tr> <td>2. Case Analysis</td> <td>40%</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3. Final Project and Presentation</td> <td>50%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Total</td> <td>100 %</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Class Participation: Students have to read assigned reading materials and participate actively in class discussion including raising</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					a	b	c	d	e	1. Class Participation	10%	✓	✓	✓	✓		2. Case Analysis	40%	✓	✓				3. Final Project and Presentation	50%	✓	✓	✓	✓	✓	Total	100 %					
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed (Please tick as appropriate)																																					
		a	b	c	d	e																																			
1. Class Participation	10%	✓	✓	✓	✓																																				
2. Case Analysis	40%	✓	✓																																						
3. Final Project and Presentation	50%	✓	✓	✓	✓	✓																																			
Total	100 %																																								

	<p>questions, discussing the in-class cases and mini-exercises. The purpose of assessing class participation is to encourage students to actively read pre-class materials, and get timely feedback about students' learning process and understanding level.</p> <p>Case Analysis: Each student has to analyse at least two cases. The assigned cases and case questions will be sent to students one week in advance. Students need submit an analysis report (no more than two pages with bullet points) prior to each in-class case discussion. The objectives of individual case analysis are to test students' understanding and application of relevant ESG concepts and techniques in real cases.</p> <p>Final Project and Presentation: Students need to form groups and work on an investment thesis from either an investor perspective or a managerial perspective.</p> <ul style="list-style-type: none"> • Investor perspective: Students need to consider themselves as a fund manager of a private equity firm, a hedge fund firm, or a general asset management company (e.g., mutual funds) to make investment strategies to meet global challenges. • Managerial perspective: Students need to consider themselves as firm managers to integrate ESG into corporate management & strategy such as green bond assurances, and investments on cleaning techniques to meet regulatory requirement, long-term strategy or gain financial benefits. • Deliverables: (1) prospectus (3-5 pages); (2) Excel worksheet; (3) presentation and Q&As on Week 12&13 (all group members). Note that there are peer evaluations and individual assessment in this group project. The objectives of group project are to test students' ability in applying ESG concepts, principles and investing techniques into practices to meet targeted ESG goals required by asset managers and firm managers. 	
<p>Student Study Effort Expected</p>	<p>Class contact:</p>	
	<ul style="list-style-type: none"> ▪ Lectures 	<p>33 Hrs.</p>
	<ul style="list-style-type: none"> ▪ Cases discussion and group project presentation 	<p>6 Hrs.</p>
	<p>Other student study effort:</p>	
	<ul style="list-style-type: none"> ▪ Reading materials/textbook/cases 	<p>26 Hrs.</p>
	<ul style="list-style-type: none"> ▪ Preparing for class discussion and assignments 	<p>52 Hrs.</p>
	<p>Total student study effort</p>	<p>117 Hrs.</p>
<p>Reading List and References</p>	<ul style="list-style-type: none"> • Recommended reference book: "Grow the Pie" by Alex Edmans (2020) (https://www.growthepie.net/) • Cases (e.g. Harvard Business School Case and Singapore 	

	<p>Management University Case) - important for having a deeper understanding of a particular project or strategy.</p> <ul style="list-style-type: none">• Academic papers - important for understanding the “big picture” and fostering systematic thinking. For example:<ul style="list-style-type: none">• Baldauf, Garlappi, Yannelis (2019, “Does Climate Change Affect Real Estate Prices?” <i>Review of Financial Studies</i>)• Dhaliwal, Li, Tsang and Yang (2011, “Voluntary Nonfinancial Disclosure and the Cost of Equity Capital: The Initiation of Corporate Social Responsibility Reporting” <i>Accounting Review</i>)• Dimson, Karakaş and Li (2015, “Active Ownership” <i>Review of Financial Studies</i>)• Flammer C. (2015, “Does corporate social responsibility lead to superior financial performance? A regression discontinuity approach” <i>Management Science</i>)
--	---

Subject Code	AF5510
Subject Title	Corporate Governance
Credit Value	3
Level	5
Normal Duration	1-semester
Pre-requisite / Co-requisite/ Exclusion	None
Role and Purposes	This subject provides students with an understanding and application of all aspects, and the related nature, of best practices in corporate governance. It enable students to identify and analyze business ethics issues pertaining to corporate governance, explain the theoretical basis for corporate governance and apply the concepts and principles of corporate governance to current corporate governance practices in the working environment, and evaluate corporate governance systems of Hong Kong and PRC listed companies with reference to other jurisdictions.
Subject Learning Outcomes	On successfully completing this subject, students will be able to: <ul style="list-style-type: none"> (a) explain the theoretical basis for corporate governance; (b) identify and analyse business ethics issues pertaining to corporate governance; (c) evaluate the roles of directors, company secretary/governance professional and other relevant parties in performing corporate governance and enhancing corporate governance system of listed companies; (d) identify the features of and evaluate the corporate governance system of PRC companies by reference to corporate governance systems of other developed jurisdictions; and (e) critically evaluate the effectiveness of the Hong Kong corporate governance system in protecting the interests of the investing public, the members and the creditors of Hong Kong companies.
Subject Synopsis/ Indicative Syllabus	<p>General</p> <p>Historical development of the system of corporate governance. Corporate governance theories/reports/principles/codes. Corporate governance approaches. Corporate governance framework. Agency framework for evaluation of alternative corporate governance system. The role of the Companies Registry, the Stock Exchange and the Securities and Futures Commission in the corporate governance system of Hong Kong and PRC companies. Relationship between accounting quality, auditing and corporate governance. Principles of corporate governance in non-profit sector.</p> <p>Business Ethics</p>

	<p>Ethical principles in business. Corporate and individual responsibilities. Ethical dilemmas. Whistle blowing. Individual and corporate standards of behaviour. Corporate codes of conduct. Professional ethics. Ethics and environment. Social responsibility. Corporate sustainability. Stakeholders' interests. Insider trading. Conflict of interests. Ethics and international business.</p> <p>Directors</p> <p>The role, power, responsibilities, liability and ethical issues of executive directors, non-executive directors and independent non-executive directors. Composition, board size and diversity. Succession planning. Duties under the Companies Ordinance, the Securities and Futures Ordinance, the Listing Rules and the Codes of Takeovers and Mergers and Share Buy-backs. Qualification and disqualification of directors. Appointment and vacation of office. Induction and professional development. Corporate culture. Remuneration, loans and compensation for loss of office. Restrictions on securities dealings, Insider dealing and CEO duality. Board effectiveness and board evaluation.</p> <p>Board Committees</p> <p>The roles, duties and effectiveness of audit committee, remuneration committee and nomination committee.</p> <p>Secretary</p> <p>Qualifications, appointment and vacation of office. Roles, duties, responsibilities, liability, skills and ethical issues. The role of the company secretary/governance professional in the corporate governance system.</p> <p>Auditor</p> <p>The position, duties, responsibilities, liability and ethical issues of auditors. Appointment, termination and vacation of office. Access to corporate information. The role of the auditor in the corporate governance system. Relationship with audit committee. Audit quality. Auditors' independence and non-audit services. Role of the Accounting and Financial Reporting Council in the corporate governance system.</p> <p>Risk management and internal control</p> <p>IT governance. The role of the board in risk management and internal control. Establishment and review of risk management and internal control systems. Risk management committee. Cybersecurity and data protection and privacy law.</p> <p>Disclosure of Information</p> <p>Disclosure of corporate information (including financial reporting). Contents of director's report. ESG reporting. Notifiable and connected transactions. Loan transactions. Disclosure of interests in shares and debentures. Disclosure of directors' dealings in securities. Voluntary disclosures.</p> <p>Rights of shareholders and shareholder engagement</p> <p>Right of access to corporate information. The law relating to meetings of shareholders and appointment and removal of directors. Protection of shareholders from abuses (e.g. insider dealing, connected</p>
--	--

	<p>transactions). Restrictions in securities dealings by directors. Communications with shareholders. Shareholder activism. Institutional shareholder role and responsibilities in the corporate governance system.</p> <p>Stakeholder engagement</p> <p>Stakeholder relations. Stakeholder engagement by the board. The role of company secretary/governance professional in stakeholder engagement.</p> <p>Corporate Governance in the PRC</p> <p>The position, power, duties, responsibilities and ethical issues of directors, managers and the supervisory committee. The role of the directors, independent directors, managers, secretaries and the supervisory committee in the corporate governance system of the PRC. Qualification and disqualification of directors, managers, secretaries and members of the supervisory committee. The role and functions of China Securities Regulatory Commission.</p> <p>Other jurisdictions</p> <p>Corporate governance in USA, Europe and Asia</p>																																																		
<p>Teaching/Learning Methodology</p>	<p>Lectures emphasize concepts and key principles of corporate governance with reference to the practical application in the workplace. Seminars provide students with a forum for discussion on the application of concepts to current corporate governance practices in their working environment. Students are required to present cases, problems or articles in seminars.</p>																																																		
<p>Assessment Methods in Alignment with Subject Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="5">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> </tr> </thead> <tbody> <tr> <td>1. Discussion</td> <td>10%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>2. Assignment or Test</td> <td>20%-25%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>3. Presentation</td> <td>15%-20%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>4. Final examination</td> <td>50%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Total</td> <td>100 %</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p><u>Participation in discussion:</u></p> <p>It allows students to freely share their views and experiences in achieving good corporate governance practices in the workplace.</p> <p><u>Test/Assignment/Presentation/Final examination:</u></p>				Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					a	b	c	d	e	1. Discussion	10%	✓	✓	✓	✓	✓	2. Assignment or Test	20%-25%	✓	✓	✓	✓	✓	3. Presentation	15%-20%	✓	✓	✓	✓	✓	4. Final examination	50%	✓	✓	✓	✓	✓	Total	100 %					
Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)																																																	
		a	b	c	d	e																																													
1. Discussion	10%	✓	✓	✓	✓	✓																																													
2. Assignment or Test	20%-25%	✓	✓	✓	✓	✓																																													
3. Presentation	15%-20%	✓	✓	✓	✓	✓																																													
4. Final examination	50%	✓	✓	✓	✓	✓																																													
Total	100 %																																																		

	<p>They require students to (a) understand and to apply the statutory and non-statutory regulations; (b) identify and to analyse business ethics issues and practices; (c) apply the concepts and principles of corporate governance to best practices with reference to other countries' best corporate governance practices; and (d) critically evaluate the effectiveness of the Hong Kong/PRC corporate governance system.</p> <p>Note: In addition, the specific requirements on individual assessment components discussed above could be adjusted based on the pedagogical needs of subject lecturer(s).</p>	
<p>Student Study Effort Required</p>	<p>Class contact:</p>	
	<ul style="list-style-type: none"> ▪ 13 weeks of 3 hours seminar each 	<p>39 Hrs.</p>
	<p>Other student study efforts:</p>	
	<p>Students are expected to prepare for the lectures/seminars, test, pre-assigned readings for discussion in class, group presentations and written reports.</p>	<p>78 Hrs.</p>
	<p>The total student study effort</p>	<p>117 Hrs.</p>
<p>Reading List and References</p>	<p>Bob Tricker, Corporate Governance, latest edition, Oxford University Press.</p> <p>Christine A. Mallin, Corporate Governance, latest edition, Oxford University Press.</p> <p>Mike Wright, Donald S. Siegel, Kevin Keasey, and Igor Filatotchev, the Oxford Handbook of Corporate Governance, latest edition, Oxford University Press.</p> <p>De Jonge, A., Corporate Governance and China's H-Share Market, latest edition, Edward Elgar.</p> <p>Erismann-Peyer, G., Steger, U., and Salzmann, O., The Insider's view on Corporate Governance: The Role of the Company Secretary, latest edition, Palgrave Macmillan.</p> <p>Corporate Governance – An International Review, Blackwell. Business Ethics, European Review, Blackwell Publishing (updated). Crone A., and Matten D., Business Ethics, latest edition, Oxford University Press.</p> <p>De George, Richard T., Business Ethics, latest edition, Prentice Hall.</p> <p>Ferrell, O.C., Fraedrich, J. and Ferrell L., Business Ethics: Ethical Decision Making and Cases, latest edition, Houghton Mifflin Company.</p> <p>Fisher C. and Lovell A., Business Ethics and Values – Individual, Corporate and International Perspectives, latest edition, Prentice Hall.</p>	

	<p>Journal of Business Ethics, Kluwer Academic Publishers.</p> <p>Velasquez, Manuel G., Business Ethics - Concepts and Cases, latest edition, Prentice Hall.</p> <p>Hong Kong Ethics Development Centre, Ethics in Management: A Resource Portfolio for Hong Kong Universities.</p> <p>Cheng, P.W., H.S. Sum and K.T. Yuen, The Hong Kong Company Secretary's Handbook: Practice & Procedure, latest edition, Longman.</p> <p>Stott, V., Hong Kong Company Law, latest edition, Longman.</p> <p>Gu Minkang, Understanding Chinese Company Law, Hong Kong University Press, latest edition.</p> <p>Companies Ordinance, Cap. 622 (and amendments) and all related rules, regulations & orders.</p> <p>Securities and Futures Ordinance, Cap. 571.</p> <p>Financial Reporting Council Ordinance, Cap. 588.</p> <p>Listing Rules, The Stock Exchange of Hong Kong Limited.</p> <p>The Codes on Takeovers and Mergers and Share Buy-backs, SFC.</p> <p>A Guide on Better Corporate Governance Disclosure, Hong Kong Institute of Certified Public Accountants</p> <p>A practical guide to good governance: Directors' Induction, Hong Kong Institute of Chartered Secretaries</p> <p>Guide for Independent Non-Executive Directors, latest edition, The Hong Kong Institute of Directors.</p> <p>Corporate Governance Guide for Boards and Directors, The Stock Exchange of Hong Kong Limited.</p> <p>Guidelines for Effective Audit Committees – Selection, Appointment and Reappointment of Auditors, Accounting and Financial Reporting Council, HK.</p>
--	---

Subject Code	AF5633
Subject Title	Economics of World Energy Markets
Credit Value	3
Level	5
Pre-requisite / Co-requisite/ Exclusion	None
Objectives	Energy is a critical resource for the functioning of a modern economy. The energy-environment-economy interactions are now of increasing importance to businesses, policy makers and civil societies. This course explores the theoretical and empirical perspectives on the demand for energy at sectoral and country levels, energy supply, energy markets, and public policies affecting energy markets. It discusses aspects of crude oil, natural gas, coal, electricity, renewable and nuclear energies, and examines energy-related issues like energy security and greenhouse gases emissions.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. Understand the economic principles underlying energy supply and demand; b. Describe the historical and contemporary issues related to energy in China and globally; c. Explain basic energy market dynamics, with a focus on how consumers and producers respond to policies and prices; d. Apply economics and finance principles to the analysis of specific energy industries and policy issues; e. Demonstrate awareness of the ethical implications and considerations involved in the economic approach to understanding energy markets; f. Apply data science and data visualization in analyzing the global energy markets.
Subject Synopsis/ Indicative Syllabus	<p>Global Energy System and Economics Global energy dilemma; energy demand analysis; energy supply; energy forecasting</p> <p>Crude Oil Market Reserve estimation and reporting; history of the oil industry; oil benchmarks and price formation; peak oil hypothesis; oil trade</p> <p>Natural Gas Market Hub pricing and oil indexation; gas transport and storage economics; gas supply and consumption; gas trade and development of markets; energy data visualization (1)</p>

	<p>Coal Market Coal types and properties; historical development of the industry; global benchmark and trading; coal supply and demand analysis</p> <p>Electricity Market Economics of power generation and dispatch; cost of power generation; load division; power market regulation; energy data visualization (2)</p> <p>Renewable Energy Drivers for renewable energy; generation technologies; economics of renewable energy supply</p> <p>Energy Policy and Politics The focus of domestic energy policy priorities; geopolitics and international dimensions of energy supply; multi-criteria policy design and its consequences on optimal policy design</p> <p>Ethics and Energy Economics Ethical considerations in energy market design; Ethical topics surrounding energy infrastructure and resource extraction; Ethical limits of energy economics</p>																																																														
<p>Teaching/Learning Methodology</p>	<p>This subject is delivered primarily through lectures/seminars, supplemented by exercises, presentations and discussions. The focus of the readings, lectures, class conversations and assessment tasks will be both practical and technical in nature. Students are advised to go through the readings before class and be prepared to actively participate in class.</p>																																																														
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> <th>f</th> </tr> </thead> <tbody> <tr> <td>1. Group project and presentation</td> <td>15%</td> <td></td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> <tr> <td>2. Mid-term test</td> <td>20%</td> <td>✓</td> <td></td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> <tr> <td>3. Individual assignment on energy data science</td> <td>10%</td> <td></td> <td></td> <td>✓</td> <td></td> <td></td> <td>✓</td> </tr> <tr> <td>4. Participation</td> <td>5%</td> <td>✓</td> <td></td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> <tr> <td>5. Final Exam</td> <td>50%</td> <td>✓</td> <td></td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> <tr> <td>Total</td> <td>100 %</td> <td colspan="6"></td> </tr> </tbody> </table> <p>Note: The specific requirements on individual assessment components discussed above could be adjusted based on the pedagogical needs of subject lecturers.</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d	e	f	1. Group project and presentation	15%		✓	✓	✓	✓		2. Mid-term test	20%	✓		✓	✓	✓		3. Individual assignment on energy data science	10%			✓			✓	4. Participation	5%	✓		✓	✓	✓		5. Final Exam	50%	✓		✓	✓	✓		Total	100 %						
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed (Please tick as appropriate)																																																											
		a	b	c	d	e	f																																																								
1. Group project and presentation	15%		✓	✓	✓	✓																																																									
2. Mid-term test	20%	✓		✓	✓	✓																																																									
3. Individual assignment on energy data science	10%			✓			✓																																																								
4. Participation	5%	✓		✓	✓	✓																																																									
5. Final Exam	50%	✓		✓	✓	✓																																																									
Total	100 %																																																														

	To reflect the significant technology content in this subject, 10% of the overall weighting of this subject is based on individual assessment concerning technology-related knowledge.	
Student Study Effort Expected	Class contact:	
	▪ Lectures/Seminars	39 Hrs.
	Other student study effort:	
	▪ Reading materials/textbook	39 Hrs.
	▪ Group project and presentation	39 Hrs.
	Total student study effort	117 Hrs.
Reading List and References	<p>Textbook: Bhattacharyya, S. C. (2019). <i>Energy economics: concepts, issues, markets and governance</i>. Springer Nature.</p> <p>References: Carol A. Dahl, <i>International Energy Markets: Understanding Pricing, Policies and Profits</i>, Pennwell, 2004 Andrew Inkpen and Michael H. Moffett, <i>The Global Oil and Gas Industry: Management, Strategy and Finance</i>, Pennwell, 2011 Pippo Ranci and Guido Cervigni, <i>The Economics of Electricity Markets: Theory and Policy</i>, Edward Elgar, 2013</p> <p>Indicative Journal Readings: Smith, James L. (2009). "World Oil: Market or Mayhem?", <i>Journal of Economic Perspectives</i>, 23(3), pp. 145-164 Smith, James L. (2012). "On the portents of peak oil (and other indicators of resource scarcity)", <i>Energy Policy</i>, 44, pp.68-78 Li, Raymond (2010). "The evolution of the international steam coal market", <i>International Journal of Energy Sector Management</i>, 4(4), pp.519-534 Wolfram, C., Shelef, O., & Gertler, P. (2012). "How will energy demand develop in the developing world?", <i>Journal of Economic Perspectives</i>, 26(1), pp.119-38. Woo, C.K., Liu, Y., Zarnikau, J., Shiu, A., Luo, X., & Kahrl, F. (2018). "Price elasticities of retail energy demands in the United States: New evidence from a panel of monthly data for 2001–2016", <i>Applied Energy</i>, 222, pp.460-474 Woo, C. K., Horowitz, I., Horii, B., Orans, R., & Zarnikau, J. (2012). Blowing in the wind: vanishing payoffs of a tolling agreement for natural-gas-fired generation of electricity in Texas. <i>The Energy Journal</i>, 33(1).</p>	

Subject Code	AF5634
Subject Title	Economics of Sustainability
Credit Value	3
Level	5
Pre-requisite / Co-requisite/ Exclusion	None
Objectives	The subject is one on economics of the environment, with special attention on sustainability. This subject aims to provide an integrated overview of environmental economics and sustainable development from a global perspective. Students are introduced to the economic concepts and theories for analysing sustainable development and practices. It also focuses on the policy instruments which have been suggested as a means of achieving sustainability. It also investigates the impact of policy instruments on economics with the application of data analysis.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. demonstrate deeper knowledge and understanding of mainstream economics and alternative economic paradigms of sustainability b. provide informed comment on the interconnections between the natural environment and the operations of our economic system c. understand the role of microeconomics and macroeconomics in sustainable development d. demonstrate in-depth knowledge of different economic tools for assessing environmental problems e. demonstrate in-depth knowledge of different strategies for reconciling environmental concerns with requirements of economic growth and development f. demonstrate awareness of the ethical implications and considerations involved in the economic approach to environmental problems g. understand how economists make use of data to analyse the impact of climate-change policies
Subject Synopsis/ Indicative Syllabus	<p>Economic Theory and Sustainable Development</p> <p>Economics and the environment Fundamental concepts in environmental economics Identifying environmental objectives – Sustainable development</p>

	<p>Concepts of sustainability Trends and challenges of sustainability Environmental policy planning</p> <p>Measuring and Achieving Sustainable Development: Macroeconomic Approaches Defining conventional gross net product (GNP) Modifying GNP for missing (nonmarket) values – green GNP Genuine savings Critical capital concerns and strong sustainability Monetary and fiscal policies</p> <p>Modeling the Market Process: A Review of the Basics Market models: The Fundamentals The Model of Supply and Demand Economic criteria of efficiency Welfare measures</p> <p>Modeling Market Failure Environmental problems: A market failure Externalities Modeling environmental damage as negative externality The absence of property rights</p> <p>Conventional Solutions to Environmental Problems The Command-and-Control Strategies: The Case of Standards Incentive-Based Strategies: Emission Charges and Subsidies Incentive-Based Strategies: Transferable Discharge Permits Usage of data to analyse the impact of climate-change policies</p> <p>Analytical Tools for Environmental Planning Concept of risk Risk assessment Risk management Assessing costs and benefits for environmental decision making Benefit-cost analysis in environmental decision making</p> <p>Ethics and Environmental Economics The ethical limits of environmental economics Ethical concerns of economic value-judgment</p>
<p>Teaching/Learning Methodology</p>	<p>The course is comprised of a seminar of three hours per week, students' presentations, and Individual assignments.</p> <p>The 3-hour seminar per week includes a 2-hour lecture and 1-hour tutorial. The lectures will be structured to help students to understand various topics relating to environment economics and sustainability. The tutorials will provide students with the opportunity to deepen their understanding of the concepts taught in lectures and to apply the theories and economic tools to the analysis of environmental problems. The activities in tutorials include presentation and discussion of tutorial questions and environmental case studies.</p>

	<p>Students are required to submit individual assignments of different topics and they are expected to interact with their lecturer and other classmates in preparing answers for the questions in the assignments.</p> <p>To reflect the significant technology content in this subject, 10% (or more) of the overall weighting of this subject is based on individual assessment concerning technology-related knowledge.</p>																																																																						
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="7">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> <th>f</th> <th>g</th> </tr> </thead> <tbody> <tr> <td>1.Attendance and participation</td> <td>5%</td> <td></td> <td>✓</td> <td></td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> <tr> <td>2.Group presentation</td> <td>10%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> <tr> <td>3.Mid-term test</td> <td>20%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>4.Individual Assignment</td> <td>15%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>5.Examination</td> <td>50%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Total</td> <td>100 %</td> <td colspan="7"></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Oral presentations are used to assess how well the students understand the content of materials and ability to organize and structure the materials.</p> <p>Individual assignments are used to test students' ability in understanding the materials and measure their evaluation abilities.</p> <p>Mid-term test and final examination are used to test students' overall ability in applying the knowledge learnt in the subject.</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)							a	b	c	d	e	f	g	1.Attendance and participation	5%		✓		✓	✓	✓		2.Group presentation	10%	✓	✓	✓	✓	✓	✓		3.Mid-term test	20%	✓	✓	✓		✓	✓	✓	4.Individual Assignment	15%	✓	✓	✓		✓	✓	✓	5.Examination	50%	✓	✓	✓		✓	✓	✓	Total	100 %							
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed (Please tick as appropriate)																																																																			
		a	b	c	d	e	f	g																																																															
1.Attendance and participation	5%		✓		✓	✓	✓																																																																
2.Group presentation	10%	✓	✓	✓	✓	✓	✓																																																																
3.Mid-term test	20%	✓	✓	✓		✓	✓	✓																																																															
4.Individual Assignment	15%	✓	✓	✓		✓	✓	✓																																																															
5.Examination	50%	✓	✓	✓		✓	✓	✓																																																															
Total	100 %																																																																						
<p>Student Study Effort Expected</p>	<table border="1"> <tr> <td colspan="2">Class contact:</td> <td></td> </tr> <tr> <td>▪ Lectures/Seminars</td> <td></td> <td>39 Hrs.</td> </tr> <tr> <td colspan="2">Other student study effort:</td> <td></td> </tr> <tr> <td>▪ Reading subject textbooks and materials</td> <td></td> <td>42 Hrs.</td> </tr> <tr> <td>▪ Preparation for tutorial homework and presentation</td> <td></td> <td>27 Hrs.</td> </tr> </table>		Class contact:			▪ Lectures/Seminars		39 Hrs.	Other student study effort:			▪ Reading subject textbooks and materials		42 Hrs.	▪ Preparation for tutorial homework and presentation		27 Hrs.																																																						
Class contact:																																																																							
▪ Lectures/Seminars		39 Hrs.																																																																					
Other student study effort:																																																																							
▪ Reading subject textbooks and materials		42 Hrs.																																																																					
▪ Preparation for tutorial homework and presentation		27 Hrs.																																																																					

	Total student study effort	108 Hrs.
<p>Reading List and References</p>	<p>Andersen, D. C. (2017). Do Credit Constraints Favor Dirty Production? Theory and Plant-Level Evidence. <i>Journal of Environmental Economics and Management</i> 84, 189–208.</p> <p>Andersson, Julius J. (2019). "Carbon Taxes and CO2 Emissions: Sweden as a Case Study." <i>American Economic Journal: Economic Policy</i>, 11 (4): 1-30.</p> <p>Baumol, W.J., and Oates, W.E. (1988) <i>The Theory of Environmental Policy</i>. Cambridge University Press.</p> <p>Bovenberg, A Lans & Mooij, Ruud A. (1994). Environmental Levies and Distortionary Taxation, <i>American Economic Review</i>, 84(4), pp. 1085-1089, September.</p> <p>Bovenberg, A Lans & Goulder, Lawrence H. (1996). Optimal Environmental Taxation in the Presence of Other Taxes: General-Equilibrium Analyses, <i>American Economic Review</i>, 86(4), pp. 985-1000, September.</p> <p>Curtis, E. M. (2017). Who Loses Under Cap-And-Trade Programs? The Labor Market Effects of the NOx Budget Trading Program. <i>Review of Economics and Statistics</i> 100(1), 151–166.</p> <p>Dang, V. A., Gao, N., & Yu, T. (2022). Climate policy risk and corporate financial decisions: Evidence from the NOx budget trading program. <i>Management Science</i>.</p> <p>Fullerton, D., & Metcalf, G. E. (1997). Environmental Taxes and the Double-Dividend Hypothesis: Did You Really Expect Something for Nothing? (No. w6199). NBER.</p> <p>Grainger, Corbett A., and Charles D. Kolstad. (2010). Who Pays a Price on Carbon? <i>Environmental and Resource Economics</i>, 46(3), pp. 359-376.</p> <p>Greenstone, M. (2002). The Impacts of Environmental Regulations on Industrial Activity: Evidence from the 1970 and 1977 Clean Air Act Amendments and the Census of Manufactures. <i>Journal of Political Economy</i> 110(6), 1175–1219.</p> <p>Muehlenbachs, L., E. Spiller, and C. Timmins. 2015. "The Housing Market Impacts of Shale Gas Development," <i>American Economic Review</i>, 105(12): 3633-59.</p> <p>Nguyen, J. H., & Phan, H. V. (2020). Carbon risk and corporate capital structure. <i>Journal of Corporate Finance</i>, 64, 101713.</p> <p>Phaneuf, D. J., & Requate, T. (2016). <i>A Course in Environmental Economics: Theory, Policy, and Practice</i>. Cambridge University Press.</p>	

	<p>Vona, F., G. Marin, D. Consoli, and D. Popp (2018). Environmental Regulation and Green Skills: An Empirical Exploration. <i>Journal of the Association of Environmental and Resource Economists</i> 5(4),713–753.</p> <p>Weitzman, M.L. (1974). Prices vs. Quantities. <i>Review of Economic Studies</i>, 41(4), pp. 477-491.</p> <p>Yip, C. M. (2018). On the Labor Market Consequences of Environmental Taxes. <i>Journal of Environmental Economics and Management</i> 89, 136–152.</p> <p>Thomas, J. M. and Callan, S. J. (2013). <i>Environmental Economics and Management: Theory, Policy, and Applications</i>, 6e. Mason, OH: South-Western, Cengage Learning.</p> <p>Field, B. C., and Field, M. K. (2012). <i>Environmental Economics: An Introduction</i>, 6e. New York: McGraw-Hill.</p> <p>Booth, D.E. (1994). Ethics and the limits of environmental economics. <i>Ecological Economics</i> 9(3): 241-252.</p> <p>Johansson-Stenman, O. (1998). The importance of ethics in environmental economics with a focus on existence values. <i>Environmental and Resource Economics</i> 11(3-4): 429-442.</p> <p>Other academic journal articles.</p>
--	--

Subject Code	AF5942
Subject Title	Capstone Project on ESG and Sustainability
Credit Value	3
Level	5
Normal Duration	One Semester
Pre-requisite / Co-requisite/ Exclusion	N/A
Objectives	This subject allows students to integrate theory with practice through an individual assignment which requires intensive and extensive investigation to come up with a quality report with relevant findings and sound recommendations. It aims to develop and measure the students' abilities to analyze and solve complex ESG related problems.
Intended Learning Outcomes	Upon completion of the project, students should be able to: <ul style="list-style-type: none"> a. Identify contemporary problems or critical issues that are related to ESG and sustainability; b. design and select the appropriate research methodologies by making reference to well-established literature; c. collect and analyse relevant data, provide solutions to problems and draw appropriate conclusions and recommendations; d. carry out study in a logical, disciplined and timely manner; and e. apply appropriate presentation skills to write up a project report in a clear, concise, precise and systematic manner.
Subject Synopsis/ Indicative Syllabus	There is no formal syllabus. Students are required to carry out, under the supervision of their supervisors, a series of activities which are set out in the Project outline.
Teaching/Learning Methodology	An introduction seminar will be given at the beginning to explain the key issues of the subject; students are then required to carry out their 3-credit projects in consultation with their supervisors. Either group or individual projects are allowed. The number of students of each group must not exceed 2. The quality and scope of the project must reflect both the size of the group and the credits to be obtained from this subject.

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Subject learning outcomes to be assessed (Please tick as appropriate)				
			a	b	c	d	e
	Proposal write-up	25%	✓	✓			
	Final written report	75%	✓	✓	✓	✓	✓
	Total	100 %					
<p>Explanation of the appropriateness of the assessment methods in assessing the outcomes:</p> <p>The project proposal enables students to identify the problem area or critical issues and design and select the appropriate research methodologies. The final project report allows students to conduct their study and come up with sound recommendations.</p>							
Student Study Effort Expected	Class contact:						
	▪ Discussion with project supervisor						14 Hrs.
	Other student study effort:						
	▪ Self-study						115 Hrs.
	Total student study effort						129 Hrs.
Reading List and References	(Specific to the project topic)						

Subject Code	CSE508
Subject Title	Environmental Impact Assessment
Credit Value	3
Level	5
Pre-requisite/ Co-requisite/ Exclusion	<u>Recommended background knowledge:</u> Engineering or applied science undergraduate background.
Objectives	To provide students with an overview and understanding of the principles and current practices of environmental impact assessment (EIA). In particular, emphasis will be placed on environmental impact assessment studies relevant to Hong Kong.
Intended Learning Outcomes	Upon completion of the subject, students will be able: <ul style="list-style-type: none"> a. to conduct EIA studies in a team; b. to perform environmental monitoring work within the EIA cycle; c. to critically comment EIA reports and other related documents; d. to be able to analyse complex environmental issues and to seek the best possible practical solutions for large infrastructural development project; and e. to understand the relationship among project EIA, Strategic Environmental Assessment (SEA) and sustainable development.
Subject Synopsis/ Indicative Syllabus	<p><u>Keyword syllabus:</u></p> <ul style="list-style-type: none"> i) <u>Development of Environmental Impact Assessment</u> Historical review. Environmental assessment development in the world and Hong Kong. ii) <u>Scope and Objectives of Environmental Impact Assessment</u> Environmental considerations: land use, planning, development and management. EIA aims and objectives. Environmental assessment and sustainable development. iii) <u>Methodology and Assessment Techniques</u> Methods for assessing direct impacts and indirect impacts. Modeling and miscellaneous assessment techniques. Methods for air, water, noise and ecology assessment. Other environmental issues (risk, visual, cultural and social-economical impacts). iv) <u>Monitoring and Baseline Studies</u> Environmental effects. Baseline studies requirements. Special field studies. Environmental monitoring and audit.

	<p>Air, water, ecological, socioeconomic, visual, risk impact assessments. Environmental quality and regulatory requirements. Mitigation and control measures.</p> <p>v) <u>Environmental Impact Statement</u> Role of Environmental Impact Statement, Statement Scope & Content, Report writing techniques.</p> <p>vi) <u>Case Studies</u> Selected case studies on the EIA of infrastructure and other development projects.</p>																																						
<p>Teaching/Learning Methodology</p>	<p>The subject teaching will include the following elements:</p> <ol style="list-style-type: none"> Lectures – to introduce the basic concepts and assessment methods; Tutorials – to answer student questions in the learning processes; Group discussion and presentations – to let students play different roles in the EIA process; Reading materials and video presentations – to give students examples in local EIA case studies; Seminars on EIA practices by invited speakers from government agencies and professional environmental consultants; and Course work and term project (individual cases study) on EIA in Hong Kong. 																																						
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a.</th> <th>b.</th> <th>c.</th> <th>d.</th> <th>e.</th> <th></th> </tr> </thead> <tbody> <tr> <td>1. Continuous Assessment</td> <td>50%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> <tr> <td>2. Written Examination</td> <td>50%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> <tr> <td>Total</td> <td>100%</td> <td colspan="6"></td> </tr> </tbody> </table> <p>Written examination is evaluated by final examination.</p> <p>Students must attain at least Grade D in both coursework and final examination (whenever applicable) in order to attain a passing grade in the overall result.</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a.	b.	c.	d.	e.		1. Continuous Assessment	50%	✓	✓	✓	✓	✓		2. Written Examination	50%	✓	✓	✓	✓	✓		Total	100%						
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed (Please tick as appropriate)																																			
		a.	b.	c.	d.	e.																																	
1. Continuous Assessment	50%	✓	✓	✓	✓	✓																																	
2. Written Examination	50%	✓	✓	✓	✓	✓																																	
Total	100%																																						
<p>Reading List and References</p>	<p>The following texts provide the majority of the basic materials to be covered in lectures. Students will need to study other publications including case studies.</p>																																						

	<p>Barbara Caroll, 2002. <i>Environmental Impact Assessment Handbook: A Practical Guide for Planners, Developers and Communities</i>. Thomas Telford, London.</p> <p>Canter, L.W., <i>Environmental Impact Assessment</i>, 2nd Ed., McGraw-Hill, (1996).</p> <p>Christopher Wood. 2003. <i>Environmental Impact Assessment: A Comparative Review</i>. Prentice Hall, New Jersey.</p> <p>Hong Kong Environmental Protection Department http://www.epd.gov.hk/eia/</p> <p>Riki Therivel, Peter Morris, 2001. <i>Methods of Environmental Impact Assessment</i>, Spon Press, London.</p>
--	---

Subject Code	CSE539
Subject Title	Environmental Management Systems and Audit
Credit Value	3
Level	5
Pre-requisite/ Co-requisite/ Exclusion	<u>Mutual exclusions:</u> Environmental Planning and Management (CSE524)
Objectives	To provide students with an overview and practical skills related Environmental Management System (EMS) and the implementation process, particularly on the ISO14001 EMS standard. To introduce environmental auditing principles to students; to develop the practical skills of conducting various environmental audits.
Intended Learning Outcomes	Upon completion of the subject, students will be able: a. to understand the needs for environmental management systems; b. to analyse corporate environmental issues, and develop implementation plan of appropriate EMS; c. to help reviewing the EMS running and improving its performance; d. to understand the various environmental audits and auditing processes; and e. to conduct basic environmental audit.
Subject Synopsis/ Indicative Syllabus	<u>Keyword Syllabus</u> i) <u>Environmental Objectives, Environmental Policy and Legislation</u> Environmental policy and regulation; sustainable development; economical incentives in corporation environmental management. ii) <u>Environmental Management System</u> Corporate environmental programme; development of environmental management system (EMS); global environmental reporting. iii) <u>Environmental Management System Standard (ISO14000)</u> Structure of ISO14000; ISO14001 EMS; Life cycle analysis; Environmental labelling. iv) <u>Implementing EMS</u> Environmental effects and environmental targets; environmental management plan; environmental manual and documentation, and EMS audit. v) <u>Environmental Audit</u> Different types of environment audits; audit programme planning; audit protocol.

	<p>vi) <u>Environmental Audit Process</u></p> <p>The pre-audit phase; on-site activities; audit report and follow up action plans.</p>																																	
<p>Teaching/Learning Methodology</p>	<p>The subject teaching will include the following elements:</p> <ol style="list-style-type: none"> Lectures – to introduce the basic concepts of EMS and environmental audits; Tutorials – to answer student questions in the learning processes; Group discussion and presentations – to let students working together with a case study; Reading materials and video presentations – to give students practical examples on EMS and audit; Seminars on EMS and/or environmental audit by invited speakers from corporate environmental directors and managers; and Course work and term project (individual cases study) on EMS or environmental audit. 																																	
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="5">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a.</th> <th>b.</th> <th>c.</th> <th>d.</th> <th>e.</th> </tr> </thead> <tbody> <tr> <td>1. Continuous Assessment</td> <td>50%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>2. Written Examination</td> <td>50%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Total</td> <td>100%</td> <td colspan="5"></td> </tr> </tbody> </table> <p>Written examination is evaluated by final examination.</p> <p>Students must attain at least Grade D in both coursework and final examination (whenever applicable) in order to attain a passing grade in the overall result.</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					a.	b.	c.	d.	e.	1. Continuous Assessment	50%	✓	✓	✓	✓	✓	2. Written Examination	50%	✓	✓	✓	✓	✓	Total	100%					
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed (Please tick as appropriate)																														
		a.	b.	c.	d.	e.																												
1. Continuous Assessment	50%	✓	✓	✓	✓	✓																												
2. Written Examination	50%	✓	✓	✓	✓	✓																												
Total	100%																																	
<p>Reading List and References</p>	<p>Christopher Sheldon, 2002. <i>Installing Environmental Management Systems: A Step-by-step Guide</i>. Earthscan, London.</p> <p>David Nelson, 1998. <i>International Environmental Auditing</i>. Government Institutes, Rockville, MD. USA.</p> <p>Gayle Woodside, 2002. <i>ISO 14001 Auditing Manual</i>. McGraw-Hill, New York.</p> <p>Jacob Bregman, 2002. <i>Environmental Compliance Handbook</i>. Lewis Publishers, Boca Raton, Fla.USA.</p>																																	

	John Kinsella, 1999. <i>Handbook for Implementing An ISO 14001 Environmental Management System: A Practical Approach</i> . EMCON, Bothell, WA. USA.
--	---

Subject Code	CSE544
Subject Title	Sustainable Development and Environmental Planning
Credit Value	3
Level	5
Pre-requisite/ Co-requisite/ Exclusion	Nil
Objectives	To provide students with an overview and understanding of the theories and current practices in sustainable development. The global perspective will be emphasized and environmental and energy planning will be introduced. This will equip students with a sound knowledge to appreciate water-energy-climate nexus and social responsibilities at private citizen, corporate, and governmental levels.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able:</p> <ol style="list-style-type: none"> to understand the fundamentals of sustainable development and its strategies; to understand climate change, ozone depletion, global carbon cycle, carbon footprint, non-renewable and renewable energy; to apply concept and knowledge to real life scenarios, such as choice of transportation means, energy planning, urban planning, personal carbon-footprint calculation; to assess and discuss the implications of personal, corporate and governmental actions to sustainability, based on which, to come up with appropriate environmental planning strategies, and to learn how to write a sustainability assessment report in the format of executive summary.
Subject Synopsis/ Indicative Syllabus	<p><u>Keyword Syllabus</u></p> <ol style="list-style-type: none"> <u>Introduction to Sustainable Development</u> The need of sustainability; issues with sustainability, nine planetary boundaries; history of sustainable development. <u>Sustainable Development and Environmental Planning</u> Definition, components, indicators, and assessment of sustainable development; the United Nation's Sustainable Development Goals (SDGs); Hong Kong's approach toward sustainability. <u>Environmental Issues</u> Global energy balance, greenhouse effect, global warming, Paris agreement, ozone depletion, ocean acidification, population growth. <u>Global Carbon Cycle and Carbon Footprint Calculation</u> Global carbon cycle; life-cycle carbon footprint of different energy forms, commercial products, transportation choices, and personal activities; corporate carbon accounting, carbon sequestration;

	<p>v) <u>Renewable Energy and Its Planning</u> Energy efficiency; nuclear power (non-renewable); wind power; hydropower; bio-energy; solar energy; geothermal energy; the future of renewables</p> <p>vi) <u>Energy-Water-Food-Climate- Nexus and Future Cities.</u> Inter-dependence of energy, water, food, and climate; future cities and its planning strategies.</p>																																	
<p>Teaching/Learning Methodology</p>	<p>The lectures will introduce the concept of sustainable development and its corresponding environmental planning strategies. Relevant topics will be introduced in a sequential and gradual order. Case studies and in-lecture calculations will be used to enhance the learning outcomes. Group projects and class discussions will be employed to promote team spirit and group learning. Real-life scenarios and locally relevant examples will be used in the lectures and group discussions. Planning strategies at personal, corporate, and local, and global levels will be discussed in a hierarchical manner.</p>																																	
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="5">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a.</th> <th>b.</th> <th>c.</th> <th>d.</th> <th>e.</th> </tr> </thead> <tbody> <tr> <td>1. Continuous Assessment</td> <td>30%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>2. Written Examination</td> <td>70%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> <tr> <td>Total</td> <td>100%</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>The continuous assessment will be based on one individual homework, one project report and one oral presentation.</p> <p>Written examination is evaluated by final examination.</p> <p>Students must attain at least Grade D in both coursework and final examination (whenever applicable) in order to attain a passing grade in the overall result.</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					a.	b.	c.	d.	e.	1. Continuous Assessment	30%	✓	✓	✓	✓	✓	2. Written Examination	70%	✓	✓	✓	✓		Total	100%					
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed (Please tick as appropriate)																														
		a.	b.	c.	d.	e.																												
1. Continuous Assessment	30%	✓	✓	✓	✓	✓																												
2. Written Examination	70%	✓	✓	✓	✓																													
Total	100%																																	
<p>Reading List and References</p>	<p>Books</p> <p>R. T. Wright & D. F. Boorse (2017) Environmental Science: Towards A Sustainable Future, 13th Ed., Pearson Education.</p> <p>Sergio C. Capareda (2020) Introduction to Renewable Energy Conversions, CRC Press/Taylor & Francis.</p> <p>The 2030 Agenda for Sustainable Development, The United Nations</p>																																	

	Hong Kong 2030: Planning Vision and Strategy – Strategic Environmental Assessment, Planning Department, Hong Kong Government.
--	---

Subject Code	CSE548
Subject Title	Global Climate Change and Society Response
Credit Value	3
Level	5
Pre-requisite/ Co-requisite/ Exclusion	<u>Recommended background knowledge:</u> Engineering or science background at undergraduate level. Basic knowledge of physics and environmental science.
Objectives	To provide students with an overview of the current state of science and debates in global climate change, develop ability to critically examine the complicated scientific, political, and social issues related to global climate change.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. understand scientific, economic, and ecological issues underlying the threat of global climate change, and the institutions engaged in negotiating an international response; b. identify an integrated approach to analyze climate change and develop policies for dealing with climate change; c. promote policy based on solid science and active communications; d. have creative and critical thinking and an ability to work independently.
Subject Synopsis/ Indicative Syllabus	<u>Keyword Syllabus</u> i) <u>Introduction to climate change</u> Historical overview of climate change science; changes in atmospheric constituents and radiative forcing: how human activities are affecting the radiative energy balance in the atmosphere; Changes throughout the climate system. ii) <u>Changes in different systems with global warming</u> Past climate change and its causes; coupling between changes in the climate system and biogeochemistry; climate models and their evaluation; understanding and attributing climate change; global and regional projections of future changes in climate. iii) <u>Impacts of observed and future climate changes to various aspects</u> Freshwater resources and their management; ecosystem; food, fiber and forest products; coastal systems and low-lying areas; industry, settlement and society; human health. iv) <u>Response to climate change: adaption and mitigation</u> Assessment of adaptation practices, options, constraints and capacity; Synergies and trade-offs between adaptation and mitigation; assessing key vulnerabilities and the risk from climate change; Perspectives on climate change and sustainability.

	<p>Mitigation in varied systems: energy supply, transport and its infrastructure, residential and commercial buildings, industry, agriculture, forestry, waste management.</p> <p>Governments' attitudes and policies around the world; developed countries and developing countries: UN climate change conferences and international organizations, local government's efforts, non-governmental activities; roles of the media.</p>																																														
<p>Teaching/Learning Methodology</p>	<p>Lectures: will introduce fundamental knowledge and theoretical basis for climate change and its society response. Students will be required to take a mid-term test, which allow them to thoroughly understand taught contents.</p> <p>Guest lecturers: will be invited to share a broad perspective of key environmental issues. They will provide a critical exposition of the current status and future challenges related to climate change issues. Ample opportunities will be provided for classroom discussions.</p> <p>Video Clips: will be presented to provide students additional information on global climate change.</p> <p>Workshops/seminars: for students to present and discuss key problems and potential issues for selected case studies.</p> <p>Independent study: require students to prepare an individual report based on a specific climate change issue. Students are also required to give an oral presentation.</p>																																														
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a.</th> <th>b.</th> <th>c.</th> <th>d.</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1. Continuous Assessment</td> <td>40%</td> <td>✓</td> <td>✓</td> <td></td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>2. Presentation</td> <td>20%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>3. Final exam</td> <td>40%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td>100%</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Assessment will include a written report, an oral presentation, and a 2-hour final exam.</p> <p>Students must attain at least Grade D in both coursework and final examination (whenever applicable) in order to attain a passing grade in the overall result.</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a.	b.	c.	d.			1. Continuous Assessment	40%	✓	✓		✓			2. Presentation	20%	✓	✓	✓	✓			3. Final exam	40%	✓	✓	✓	✓			Total	100%						
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed (Please tick as appropriate)																																											
		a.	b.	c.	d.																																										
1. Continuous Assessment	40%	✓	✓		✓																																										
2. Presentation	20%	✓	✓	✓	✓																																										
3. Final exam	40%	✓	✓	✓	✓																																										
Total	100%																																														

<p>Reading List and References</p>	<p><u>Books</u></p> <p>B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds), <i>Climate Change 2007: Mitigation of Climate Change</i>, Cambridge University Press, 2007.</p> <p>Dessler Andrew, <i>Introduction to Modern Climate Change</i>, Cambridge University Press, 2012.</p> <p>IPCC, 2007: <i>Climate Change 2007: Synthesis Report</i>. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland, 104 pp.</p> <p>IPCC, 2014: <i>Climate Change 2014: Synthesis Report</i>. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp.</p> <p>Jenkins Adam, <i>Climate Change Adaption: Ecology, Mitigation and Management</i>, Nova Science Publisher, 2011.</p> <p>Julie K. Gines, <i>Climate management issues: economics, sociology, and politics</i>, ebrary, CRC Press , 2012.</p> <p>Parry Martin, Canziani Osvaldo, Palutikof Jean, Van der Linden Paul, Hanson Clair, <i>Impacts, Adaptation and Vulnerability</i>, Cambridge University Press, 2007.</p> <p>Solomon Susan, Qin Dahe, Manning Martin, Marquis Melinda, Averyt Kristen, Tignor Melinda M. B., <i>The Physical Science Basis</i>, Cambridge University Press, 2007.</p> <p><u>Websites</u></p> <p>Intergovernmental Panel on Climate Change http://www.ipcc.ch</p>
---	--

Subject Code	MM5453
Subject Title	Transformation to Sustainable Smart Cities
Credit Value	3
Level	5
Pre-requisite/ Co-requisite/ Exclusion	Nil
Objectives	<p>The world's population will reach over 10 billion by 2050, out of which approximately 80% will be residing in cities by then. So definitely, the successful and sustainable Smart City is to make people happier, healthier, smarter and more prosperous. The Government and other organizations have to integrate Environmental, Social, and Governance (ESG) by using Big Data Analytics into their business culture, practice, and model as imperative and successful factors that will yield better organization performance.</p> <p>This subject covers topics from different perspectives, including (1) strategy, goals, plan and trend in Smart Cities, (2) innovation and emerging technologies, (3) digital to smart transformation, (4) smart city products, solutions and services, (5) Environmental, Social, and Governance (ESG), (6) relationships and success Factors in sustainable Smart Cities.</p>
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> develop holistic knowledge and skill of the sustainable smart cities applied for organization performance measures appreciate emerging technologies and business innovation for corporate innovation and transformation identify the critical issues on ESG and develop a practical project proposal for helping and towards improving smartness and sustainability apply research findings and use cases to achieve and articulate the relationships and success factors in sustainable Smart Cities develop effective communication and improve presentation skill on group project
Subject Synopsis/ Indicative Syllabus	<ol style="list-style-type: none"> Sustainable Smart Cities Emerging Technologies Innovation and Transformation Smart city projects - products, solutions and services Environmental, Social, and Governance Research and development
Teaching/Learning Methodology	<p>This course provides both theoretical and practical learning outcomes and requires a certain level of commitment regarding attention, time, and effort. The lecture will introduce the updates,</p>

	<p>trends, techniques, conceptual models, and a list of relevant readings covering important and relevant issues. Use case sharing will be by guest speakers in their area of expertise. Studies and readings form the basis of class discussions in which the applicability of various techniques, models and methodologies will be discussed. In addition, some sessions will be devoted to more in-depth studies of specific problems by small groups, which will aim for collaborative learning and sharing through the class discussion, individual sharing and group presentation.</p>																																																											
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="5">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> </tr> </thead> <tbody> <tr> <td>Continuous Assessment*</td> <td>100%</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>1. Class participation</td> <td>20%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> <tr> <td>2. Individual essay[#]</td> <td>30%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> <tr> <td>3. Group project</td> <td>35%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>4. Group presentation</td> <td>15%</td> <td></td> <td></td> <td></td> <td></td> <td>✓</td> </tr> <tr> <td>Total</td> <td>100 %</td> <td colspan="5"></td> </tr> </tbody> </table> <p>*Weighting of assessment methods/tasks in continuous assessment may be different, subject to each subject lecturer.</p> <p># Different essays may address different outcomes.</p> <p>To pass this subject, students are required to obtain Grade D or above in the overall subject grade.</p> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Class work and the group project will require students to apply innovation and emerging technologies in management to handle transformation issue which arise in actual organization performance, which involves ESG of the outcomes. The individual essay will also assess ESG outcomes. The presentation will assess their ability to communicate effectively. Feedback is given to students immediately following the presentations and all students are invited to join this discussion.</p>						Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					a	b	c	d	e	Continuous Assessment*	100%						1. Class participation	20%	✓	✓	✓	✓		2. Individual essay [#]	30%	✓	✓	✓	✓		3. Group project	35%	✓	✓	✓	✓	✓	4. Group presentation	15%					✓	Total	100 %					
Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)																																																										
		a	b	c	d	e																																																						
Continuous Assessment*	100%																																																											
1. Class participation	20%	✓	✓	✓	✓																																																							
2. Individual essay [#]	30%	✓	✓	✓	✓																																																							
3. Group project	35%	✓	✓	✓	✓	✓																																																						
4. Group presentation	15%					✓																																																						
Total	100 %																																																											

Student Study Effort Expected	Class contact:	
	▪ Lectures	39 Hrs.
	Other student study effort:	
	▪ Preparation for Lectures	26 Hrs.
	▪ Preparation for assignment / group project and presentation / examination	55 Hrs.
	Total student study effort	120 Hrs.
Reading List and References	<p>Textbook</p> <p>Ibrahim, M. (2020). <i>Smart Sustainable Cities: Transformation towards Future Cities</i>. Mobi.</p> <p>Reference Journals and Consulting Papers</p> <p>Armentano, R. (2018). <i>The Internet of Things: Foundation for smart cities, eHealth and ubiquitous computing</i>. Boca Raton, FL: CRC Press, Taylor & Francis Group.</p> <p>CAIA Association. (2021). "Systemic Impact and ESG Investing in Smart Cities". Retrieved from https://caia.org/blog/2021/02/02/systemic-impact-and-esg-investing-in-smart-cities</p> <p>Henisz, W., Koller, T. & Nuttall, R. (2019). "Five Ways that ESG Creates Value." <i>The McKinsey Quarterly</i>.</p> <p>Hong Kong Exchanges and Clearing Limited. (2019). "Corporate Social Responsibility". Retrieved from https://www.hkexgroup.com/Corporate-Social-Responsibility?sclang=en</p> <p>Karim Suhag, A., Solangi, S. R., Larik, R. S. A., Lakh, M. K. & Tagar, A. H. (2017). "The Relationship of Innovation with Organizational Performance." <i>International Journal of Research-Granthaalayah</i> 5(2): 292-306.</p> <p>KPMG China, "Integrating ESG into your business", January 2020. https://home.kpmg/cn/en/home/insights/2020/01/integrating-esg-into-your-business.html</p> <p>KPMG China, "Future Hong Kong 2030 - Public and private sector insights for smart city development", 2020. https://home.kpmg/cn/en/home/insights/2020/04/future-hong-kong-2030.html</p> <p>Pettit, C., Bakelmun, A., Lieske, S. N., Glackin, S., Thomson, G., Shearer, H., & Newman, P. (2018). <i>Planning support systems for smart cities. City, culture and society</i>, 12, 13-24.</p>	

	<p>South China Morning Post (2017). Corporate Social Responsibility Highly Valued by Hong Kong Listed Companies. Hong Kong.</p> <p>Tavanti, M. (2015). Global Sustainability Reporting Initiatives: Integrated Pathways for Economic, Environmental, Social, and Governance Organizational Performance. Corporate Social Performance: Paradoxes, Pitfalls Pathways to the Better World. A. Stachowicz-Stanusch. USA, Information Age Publishing 301-323.</p> <p>Tsujimoto, M., Kajikawa, Y., Tomita, J. & Matsumoto, Y. (2018). "A Review of the Ecosystem Concept - Towards Coherent Ecosystem Design." Technological Forecasting & Social Change 136: 49-58.</p> <p>Other Reference Journals</p> <p>Sustainable Cities and Society</p> <p>Frontiers in Sustainable Cities</p> <p>Sustainable development of smart cities: A systematic review of the literature</p>
--	--

Subject Code	MM5681
Subject Title	Ethics, Responsibility and Sustainability
Credit Value	3
Level	5
Normal Duration	1-semester
Pre-requisite/ Co-requisite/ Exclusion	None
Objectives	<p>Ethics cut across a diverse range of business functions and sectors to inform students the important and relevance of corporate social and environmental responsibility. Whatever the specific business setting, be it accountancy, finance, logistics, marketing or management, the examination of corporate interaction with stakeholders and the notion of social responsibility and ethical behaviour are a matter of concerning as it facilitates corporations to achieve business sustainability. Specifically, this subject contributes to MBA Programme Outcome 4 (Global Outlook)/MSc BM Programme Outcome 5 (Global Outlook) and MBA Programme Outcome 5 (Ethics, Responsibility and Sustainability)/MSc BM Programme Outcome 6 (Ethical Thinking).</p>
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> Understand and internalize the concepts of ethics, responsibility and sustainability from a stakeholder's perspective and their development in the global environment (MBA Outcome 4 & 5/ MSc BM Outcome 5 & 6) Analyse the business relevance of ethics, responsibility and sustainability (MBA Outcome 5/ MSc BM Outcome 6) Appreciate CSR as a business model for achieving business ethics, responsibility and sustainability (MBA Outcome 5/ MSc BM Outcome 6) Assess the business impact of ethics, responsibility and sustainability (MBA Outcome 5/ MSc BM Outcome 6) Apply appropriate CSR approaches to handle critical ethics, responsibility and sustainability issues (MBA Outcomes 5/ MSc BM Outcome 6) Identify the linkage of this subject with other business disciplines (MBA Outcome 4/ MSc BM Outcome 5) Apply appropriate CSR approaches to handle ethics issues when involving one or more of the five technology elements (A – Artificial Intelligence (AI); B – Blockchain; C – Cloud Computing; D – Data Science; E – Entrepreneurship)

<p>Subject Synopsis/ Indicative Syllabus</p>	<p>Part I : Overview</p> <ol style="list-style-type: none"> 1. Ethics, Responsibility and Sustainability: A Stakeholder Perspective 2. Ethical Theories and Babson Framework for Ethical and Responsible Decision <p>Part II : Corporate and Its Stakeholders</p> <ol style="list-style-type: none"> 3. Corporate Responsibility to Investors / Shareholders 4. Corporate Responsibility to Employees 5. Corporate Responsibility to Consumers 6. Corporate Responsibility to Suppliers 7. Corporate Responsibility to the Community 8. Corporate Responsibility to the Natural Environment <p>Part III : CSR in Practice</p> <ol style="list-style-type: none"> 9. CSR in Hong Kong 10. CSR in China 11. Corporate Social Performance and CSR Management in Global Environment 																																																													
<p>Teaching/Learning Methodology</p>	<p>Lectures will provide a general understanding of major issues on individual topics concerning ethics, corporate social responsibility and sustainability. The focus will be on the controversies over the need for corporations to be socially responsible. On this basis, seminars will allow students to consider, reflect and debate contending issues of CSR with reference to empirical cases of responsible/non-responsible business practices. Continuous assessment will comprise class exercises, small-group case study and presentation, as well as quizzes. In addition, guest speakers may also be invited to share CSR practices in business or community.</p>																																																													
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="7">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a.</th> <th>b.</th> <th>c.</th> <th>d.</th> <th>e.</th> <th>f.</th> <th>g.</th> </tr> </thead> <tbody> <tr> <td>Continuous Assessment</td> <td>50%</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>1. Individual Assignments</td> <td>15%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td>✓</td> <td></td> <td>✓</td> </tr> <tr> <td>2. Classroom Performance (including class exercises & quizzes)</td> <td>15%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td>✓</td> <td></td> <td>✓</td> </tr> <tr> <td>3. Group Project</td> <td>20%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Examination</td> <td>50%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> </tbody> </table>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)							a.	b.	c.	d.	e.	f.	g.	Continuous Assessment	50%								1. Individual Assignments	15%	✓	✓	✓		✓		✓	2. Classroom Performance (including class exercises & quizzes)	15%	✓	✓	✓		✓		✓	3. Group Project	20%	✓	✓	✓	✓	✓	✓	✓	Examination	50%	✓	✓	✓	✓	✓	✓	✓
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed (Please tick as appropriate)																																																										
		a.	b.	c.	d.	e.	f.	g.																																																						
Continuous Assessment	50%																																																													
1. Individual Assignments	15%	✓	✓	✓		✓		✓																																																						
2. Classroom Performance (including class exercises & quizzes)	15%	✓	✓	✓		✓		✓																																																						
3. Group Project	20%	✓	✓	✓	✓	✓	✓	✓																																																						
Examination	50%	✓	✓	✓	✓	✓	✓	✓																																																						

	Total	100 %		
	<p><i>Notes:</i></p> <ol style="list-style-type: none"> <i>1. Weighting of assessment methods/tasks in continuous assessment may be different, subject to each subject lecturer.</i> <i>2. To pass this subject, students are required to obtain Grade D or above in the overall subject grade.</i> <p>To reflect the significant technology content in this subject, 15% (Individual Assignments) of the overall weighting of this subject is based on individual assessment concerning technology-related knowledge.</p> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <ol style="list-style-type: none"> Individual assignment (usually in essay format) will be used to assess individual students' comprehensive power, critical thinking, analytical ability and written skill. Classroom performance including class exercises, group discussion, case studies, presentation, and quizzes would be able to assess students' understanding of key issues in individual topics of ethics, responsibility and sustainability. Group project enables the students to work as a team to do a more in-depth study of a selected topic on ethics, responsibility and sustainability in China/Hong Kong to assess their knowledge as well as their research, presentation and written skills. The 3-hour examination is a good tool to test students' capability to formulate coherent and insightful answers on questions in those CSR topics they are well prepared. 			
Student Study Effort Expected	Class contact:			
	▪ Lectures and Seminars	39 Hrs.		
	Other student study effort:			
	▪ Preparation for lectures	39 Hrs.		
	▪ Preparation for assignments / group project and presentation / quiz / examination	78 Hrs.		
Reading List and References	<p><u>Textbooks:</u></p> <ol style="list-style-type: none"> Crane, A., Matten, D., Glozer, S., Spence, L. (2019). Business Ethics: Managing Corporate Citizenship and Sustainability in the Age of Globalization, Second International Edition, Oxford University Press. 			

2. Lawrence, A.T. and Weber, J. (2020). Business & Society: Stakeholders, Ethics, Public Policy. 16th Edition. McGraw Hill Education.
3. DesJardins, J. R. (2020). An introduction to business ethics. 6th Edition. McGraw-Hill Education.

Reference Books:

4. Hoffman, W. M., Frederick, R. E., & Schwartz, M. S. (Eds.). (2014). Business ethics: Readings and cases in corporate morality. John Wiley & Sons.
5. Werther Jr, W. B., & Chandler, D. (2010). Strategic corporate social responsibility: Stakeholders in a global environment. Sage publications.
6. Hopkins, M. (2012). The planetary bargain: Corporate social responsibility matters. Routledge.
7. Blowfield, M., & Murray, A. (2014). Corporate responsibility. Oxford University Press.

Journals:

8. Business and Professional Ethics Journal
9. Business and Society
10. Business and Society Review
11. Business Ethics - A European Review
12. Business Ethics Quarterly
13. Corporate Social Responsibility and Environmental Management
14. Journal of Business Ethics
15. The Journal of Corporate Citizenship

**Selected journal articles for reading is listed in the course outline.*

Subject Code	BSE5411
Subject Title	Building Carbon Footprint Assessment
Credit Value	3
Level	5
Pre-requisite/ Co-requisite/ Exclusion	Nil
Objectives	<ol style="list-style-type: none"> 1. To gain an understanding of climate change and national and international gas emissions targets and reporting requirements. 2. To develop skills in carrying out carbon impact assessment for buildings. 3. To gain an understanding of how to achieve a measure reduction target in greenhouse gas emissions in building construction, operation and maintenance. 4. To formulate low-carbon strategies for building designs. 5. To acquire basic skills on conducting carbon reporting assessments for companies and organizations based on international and local carbon reporting guidelines.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. understand the impacts of climate change, and the international and local mitigation strategies and policies; b. understand the impacts of buildings on carbon emissions; c. appreciate the concept of embodied carbon and the carbon footprint of materials and products (using both a process based end to end lifecycle approach and input-output techniques); d. estimate the embodied energy and carbon footprints of the building material use, and energy use due to building operation; e. identify and prioritize appropriate cost effective design and operating strategies to reduce greenhouse gas emissions in a variety of scenarios; and f. apply appropriate quantification methodologies for greenhouse gas emissions mitigation and reporting.
Subject Synopsis/ Indicative Syllabus	<p>Climate Change and Potential International and Local Challenges: climate change; international collaborative efforts, Kyoto Protocol, impact of buildings.</p> <p>Major Carbon Reduction Policies: carbon tax, emission trading, energy saving labels etc.</p> <p>Greenhouse Gas: types and sources, emissions and removals from building activities, accounting and reporting for buildings.</p>

	<p>Low Carbon Building Design and Building Carbon Footprint Assessment: embodied energy and carbon emissions for material use and operations in buildings, carbon-cost curves, achieving low carbon design through the application of both conventional and state-of-the-art mitigation strategies with the lifecycle cost considerations.</p> <p>Building Carbon Audit and Reporting: purposes and functions, overseas and local developments, regulatory control or voluntary participation, carbon accounting protocols (e.g. ISO14064), product carbon accounting standards (e.g. PAS2060:2010).</p> <p>Quantification methodologies: physical and operational boundaries of buildings, scopes of carbon emissions and removals from buildings, data requirements and analyses.</p>																																														
<p>Teaching/Learning Methodology</p>	<p>a. Lectures will be delivered to introduce the concept relating to climate change, carbon impact assessment, auditing etc.</p> <p>b. Workshops will be organized to enable the students to apply what they learn in lectures.</p> <p>c. Students will be required to present their solutions and findings obtained from workshop to their peers and lecturers in workshops.</p> <p>d. Final examination will be held to examine the learning outcomes of students.</p>																																														
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> <th>f</th> </tr> </thead> <tbody> <tr> <td>1. Continuous Assessments</td> <td>40%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td>✓</td> </tr> <tr> <td>2. Workshops</td> <td>20%</td> <td></td> <td></td> <td></td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>3. Examination</td> <td>40%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Total</td> <td>100%</td> <td colspan="6"></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d	e	f	1. Continuous Assessments	40%	✓	✓	✓			✓	2. Workshops	20%				✓	✓	✓	3. Examination	40%	✓	✓	✓	✓	✓	✓	Total	100%						
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed (Please tick as appropriate)																																											
		a	b	c	d	e	f																																								
1. Continuous Assessments	40%	✓	✓	✓			✓																																								
2. Workshops	20%				✓	✓	✓																																								
3. Examination	40%	✓	✓	✓	✓	✓	✓																																								
Total	100%																																														
<p>Reading List and References</p>	<p>Clark DH. <i>What Color is Your Building?</i> RIBA (2013).</p> <p>Environmental Protection Department (2015), <i>Hong Kong Greenhouse Gas Inventory</i>.</p>																																														

	<p>Environmental Protection Department and Electrical and Mechanical Services Department (2010), <i>Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong</i>.</p> <p>Franchetti MJ and Apul D. <i>Carbon Footprint Analysis: Concepts, Methods, Implementation, and Case Studies</i> (2012), CRC Press Inc.</p> <p>International Energy Agency (2017), <i>CO2 Emissions from Fuel Combustion</i>.</p> <p>International Organization for Standardization. <i>ISO-14064:1 Greenhouse gases – Part 1: Specification with Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals</i>, ISO (2006).</p> <p><u><i>IPCC, IPCC FIFTH ASSESSMENT REPORT, CLIMATE CHANGE (2020)</i></u></p>
--	--

Subject Code	LGT5073
Subject Title	Risk Management in Operations
Credit Value	3
Level	5
Normal Duration	One Semester
Pre-requisite / Co-requisite/ Exclusion	Pre-requisite/Co-requisite: None Exclusion: ISE548 Risk and Crisis Management
Objectives	<p>This subject seeks to develop the knowledge and analytical/practical skills necessary in organizations, with strong emphasis on operations management and quality management, for making risk management decisions to ensure business continuity through the application of the principles and practices of the full spectrum of entire risk management programme, covering risk management, business continuity (contingency) planning and crisis management.</p> <p>This subject contributes to the following Intended Learning Outcomes for the following programme(s):</p> <p>MSc in Operations Management</p> <p>#2: Develop the specific operations management knowledge</p>
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> Analyze the inherent risks in businesses and operations by applying the correct and basic principles and fundamental understanding of risk and risk management. Comprehend the logical and sequential approach of risk management comprising identification, assessment (analysis and measurement), selection of risk management strategies, implement appropriate risk management solutions and actions, and finally measure and evaluate risk management performances. Use the correct risk management concepts to devise appropriate strategies and tactics for risk management, business continuity (contingency) plans, and crisis management plan. Be familiar with risk management in operations to a level that is adequate for continued self-enhancement of knowledge and practical applications of risk management, business continuity (contingency) planning and crisis management. Explore and understand how emerging technologies (for examples, artificial intelligence, blockchain, cloud computing etc.) lead to emerging risks, crises and disruptive events that cause negative and positive impacts on business objectives, and how the emerging risks, crises and disruptive events are managed by risk management, business continuity (contingency) planning and crisis management respectively.

<p>Subject Synopsis/ Indicative Syllabus</p>	<p>Introduction and Understanding the Correct Principles and Concepts of Risks: origin of risk, definition of risk, elements of risk, risk and uncertainty, risk perception, risk exposure, risk response, classification of risk, sources of risk, causes of risk, typical organizational risks in businesses and operations, and supply chain risks.</p> <p>Fundamental of Risk Management: development of risk management, understanding of risk management, contributions of risk management, roles and responsibilities for risk management, and enterprise of risk management.</p> <p>Risk Management Process for Negative Risks: the logical and sequential steps of risk management process covering determination of risk management objectives (aligns with corporate objective), identification of all potential and inherent risks, assessment and evaluation of risks (including risk analysis, risk measurement and the use of risk matrix), selection of risk management strategies, identification of risk management actions (the logical steps to identify risk problems and root causes (risk factors and hazards) on the basis to determine the risk management actions), implementation of risk management actions, and finally the performance measurement of the effectiveness and efficiency of risk management actions.</p> <p>Risk Management Strategies and Techniques: risk management strategies for negative and positive risks, the corresponding techniques to manage negative risks, and the use of derivatives to hedge and manage speculative risks.</p> <p>Business Continuity (Contingency) Planning and Crisis Management: the extension of the entire risk management programme to cover business continuity (contingency) planning and crisis management, the understanding, basis and purposes of business continuity (contingency) planning and crisis management, and the details of preparing and implementing business continuity (contingency) planning and crisis management.</p> <p>Risk Culture: national culture and organizational culture, chain effect of culture, overview of organizational culture and its determinants, risk and organizational culture, risk culture, and revisit of risk perception and risk attitude.</p> <p>Supply Chain Risk and Risk Management: fundamental of supply chain risks, overview and understanding of supply chain risk management, and supply chain risk management process.</p> <p>Entire Risk Management Programme and Emerging Technologies: negative and positive risks (technology risks) arising from emerging technologies (for examples, artificial intelligence, blockchain, cloud computing etc.) Business continuity (contingency) planning and crisis management to manage disruptive event and social media crisis respectively arising from emerging technologies.</p>
---	--

<p>Teaching/Learning Methodology</p>	<p>Lecture: Learn academic concepts and practical techniques/methods of the entire risk management programme aims at allowing students to acquire the correct understanding of the principles and concepts of risk and risk management, and then putting and applying the academic concepts and practical applications of risk management, business continuity (contingency) and crisis management approaches, techniques and methods into contexts.</p> <p>Coursework and final examination: Learn to practically apply risk management, business continuity (contingency) and crisis management approaches, techniques and methods, and to study selected topics in-depth.</p>																																													
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> <th></th> </tr> </thead> <tbody> <tr> <td>Coursework</td> <td>50%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> <tr> <td>Final Examination</td> <td>50%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> <tr> <td>Total</td> <td>100 %</td> <td colspan="6"></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Since the course focuses on risk management in operations, case analysis and learning from practical and work-based experiences forms an important constituent of students' learning and assessment.</p> <p>The coursework assesses the abilities of students to understand, comprehend and apply the knowledge and skills in risk management, together with business continuity (contingency) planning and crisis management, to reinforce and apply the academic principles/concepts and practical applications learnt during the lectures that enable their applications in real-life operational and commercial situations.</p> <p>The final examination tests the abilities of the students to understand and comprehend all basic concepts, knowledge, techniques and methods of risk management, business continuity (contingency) planning and crisis management; and also their abilities of the students to apply all basic skills to resolve the case analysis and problems in risk management, business continuity (contingency) planning and crisis management.</p> <p>Not less than 10% of the course grade will be assigned to assess the learning outcome item (e) in the coursework or one examination question in the final examination (to be decided by the subject lecturer).</p>								Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d	e		Coursework	50%	✓	✓	✓	✓	✓		Final Examination	50%	✓	✓	✓	✓	✓		Total	100 %						
Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)																																												
		a	b	c	d	e																																								
Coursework	50%	✓	✓	✓	✓	✓																																								
Final Examination	50%	✓	✓	✓	✓	✓																																								
Total	100 %																																													
<p>Student Study Effort Expected</p>	<p>Class contact:</p>																																													
	<p>Lectures / tutorials</p>							<p>39 Hrs.</p>																																						

	Other student study effort:	
	Self study for preparing lectures, tutorials and final examination	45 Hrs.
	Preparation group assignment	42 Hrs.
	Total student study effort	126 Hrs.
Reading List and References	<p><u>Recommended Reference Books:</u></p> <ul style="list-style-type: none"> • Blunden, T & Thirlwell, J. (2010). <i>Mastering operational risk</i>. Harlow, England, New York: Financial Times Prentice Hall. • Devlin, E.S. (2007) <i>Crisis management planning and execution</i>. Boca Raton, FL: Auerbach Publications, c2007. • Haimes, Y. Y. (2004) <i>Risk Modeling, Assessment and Management</i>. New York: Wiley. • Handfield, R.B. & McCormack, K. (ed.) (2008) <i>Supply chain risk management: Minimizing disruptions in global sourcing</i>. Boca Raton, Fla.: Auerbach Publications. • Hubbard, D.W. (2009) <i>The failure of risk management: Why it's broken and how to fix it</i>. Hoboken, N.J.: J. Wiley & Sons. • Oliver, E.C. (2011). Catastrophic disaster planning and response [electronic resource]. Boca Raton: CRC Press. • Trim, P.R.J. & Caravelli, J. (ed.) (2009). <i>Strategizing resilience and reducing vulnerability</i>. New York: Nova Science Publishers. <p><u>Recommended Journals:</u></p> <ul style="list-style-type: none"> • International Journal of Risk Assessment and Management • Journal of Risk and Financial Management • Risk Management in Financial Institutions • Journal of Business Continuity & Emergency Planning • Institute of Risk Management (IRM) • The Public Risk Management Association, US (PRIMA) • The Public Risk Management Association, UK (ALARM) • Association of Insurance and Risk Managers <p><u>Recommended International Standard:</u></p> <p>ISO3100 (2018) Risk Management</p>	

Subject Code	LSGI523
Subject Title	Smart Cities: Technologies and Solutions
Credit Value	3
Level	5
Pre-requisite/ Co-requisite/ Exclusion	Nil
Objectives	This course aims to provide an in-depth view into the core concepts of smart cities, the key technologies that underpin their developments, as well as various urban solutions and policy implications. Students will obtain a comprehensive view of the history and evolution of smart cities, the role of new technologies (e.g., urban computing, spatial data infrastructure, artificial intelligence, internet of things), as well as government structures, ideologies and notions of citizenship in shaping Smart City initiatives.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> Identify salient spatial, technological and governance characteristics of smart cities Obtain in-depth knowledge of emerging technologies and solutions for smart city developments Participate in a social science discourse on smart city developments in Hong Kong, the Greater Bay Area (GBA) and beyond Critically analyze and evaluate smart city initiatives with respect to contents, sectors, governance and citizenship, and meanwhile, develop ideas to design smart city initiatives
Subject Synopsis/ Indicative Syllabus	<ol style="list-style-type: none"> Introduction to smart cities <ul style="list-style-type: none"> Smart city concepts, characteristics, and components History and evolution of smart cities Overview of the state-of-art technologies Smart city infrastructures and technologies <ul style="list-style-type: none"> Urban sensing and internet of things Spatial big data analytics Artificial intelligence Information and communication technologies (ICTs) 3D spatial data infrastructure Cloud & edge computing Urban computing Robotics

	<ul style="list-style-type: none"> • Human-Machine Interactions <p>3. Smart city solutions – perspectives from governments, industries, and academia.</p> <ul style="list-style-type: none"> • Smart <i>governance</i> (e.g., Common Spatial Data Infrastructure and interoperability) • Smart <i>environment</i> (e.g., urban air quality monitoring and control; water pollution, urban heat island; urban light pollution; urban tree management) • Smart <i>mobility</i> (e.g., traffic management in cities; walkability) • Smart <i>economy</i> (e.g., financial technologies; smart tourism; construction and property management) • Smart <i>living</i> (e.g., ageing population; smart home; sustainable urban development) • Smart <i>people</i> (e.g., education on smart cities) <p>4. Privacy and ethics</p> <p>5. Student innovation on future smart cities</p> <ul style="list-style-type: none"> • Direct students to propose a new idea on smart cities in one of the six areas mentioned above (or beyond) using the latest technologies • Write a report on the feasibility, design and implementation of the idea • Use PolyU Campus or the city of Hong Kong as a living laboratory for the design <p>Present on the design to the whole class and invite guests from industry or public sectors who are interested in smart cities proposals</p>																						
<p>Teaching/Learning Methodology</p>	<p>1. Lectures and seminars to explain smart city concepts, government practices, and technological innovations in smart cities.</p> <p>2. Extracurricular reading and in-class presentations to reinforce learning experiences</p> <p>3. A final report that allows students to provide a comprehensive review of smart city development & initiatives in contemporary cities, along with their proposed urban solutions by incorporating the latest smart city technologies.</p>																						
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="4">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>1. Continuous Assessment</td> <td>100%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Total</td> <td>100 %</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)				a	b	c	d	1. Continuous Assessment	100%	✓	✓	✓	✓	Total	100 %				
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed (Please tick as appropriate)																			
		a	b	c	d																		
1. Continuous Assessment	100%	✓	✓	✓	✓																		
Total	100 %																						

	<p>Generative AI can only serve as a tool for assisting initial idea development and proofreading for project presentation and report, and any involvement of generative AI tools must be clearly acknowledged and referenced. Students are required to make close link between the subject contents and the proposed case-specific scenario to encourage critical thinking.</p>	
<p>Student Study Effort Expected</p>	<p>Class contact:</p>	
	<ul style="list-style-type: none"> ▪ Lectures 	<p>39 Hrs.</p>
	<p>Other student study effort:</p>	
	<ul style="list-style-type: none"> ▪ Reading of reference materials 	<p>52 Hrs.</p>
	<ul style="list-style-type: none"> ▪ Writing project report 	<p>39 Hrs.</p>
<p>Reading List and References</p>	<p>Noveck, Beth Simone. Smart citizens, smarter state: The technologies of expertise and the future of governing. Harvard University Press, 2015.</p> <p>Batty, Michael, et al. "Smart cities of the future." The European Physical Journal Special Topics 214.1 (2012): 481-518.</p> <p>Nam, Taewoo, and Theresa A. Pardo. "Conceptualizing smart city with dimensions of technology, people, and institutions." Proceedings of the 12th annual international digital government research conference: digital government innovation in challenging times. ACM, 2011.</p> <p>Townsend, Anthony M. Smart cities: Big data, civic hackers, and the quest for a new utopia. WW Norton & Company, 2013.</p> <p>Singleton, Alex D., Seth Spielman, and David Folch. Urban analytics. Sage, 2017.</p>	

The information in this document is correct at the time of production (September 2023), and is subject to review and change.