SEE1005: GLOBAL SUSTAINABLE TECHNOLOGIES AND FINANCE

Effective Term
Semester A 2024/25

Part I Course Overview

Course Title
Global Sustainable Technologies and Finance

Subject Code
SEE - School of Energy and Environment
Course Number
1005

Academic Unit
School of Energy and Environment (E2)

College/School
School of Energy and Environment (E2)

Course Duration
One Semester

Credit Units
3

Level
B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil

Precursors
Nil

Equivalent Courses
Nil

Exclusive Courses
Nil

Part II Course Details

Abstract

This course introduces students to concepts related to sustainability, finance and environmental science and engineering. Underlying factors that fall under Environmental, social and governance pillars will be introduced. Key principles related to broader sustainability context and global initiatives will be addressed. Analysis of ESG factors that affect industry and company performance, and security valuation across a range of asset classes will be emphasized. Sustainable development will be emphasized throughout the course, and the role of policy and economic strategies will be discussed. A quantitative framework will be adopted to aid the analysis of ESG and other disclosures for sustainability decision-making for both internal strategic and shareholder investing. This course intends to lay the foundation for students to pursue advanced courses in their subsequent study.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Demonstrate an understanding on key environmental issues and their financial implications in the 21st century and the importance of sustainable development	10		x	
2	Apply fundamental principles in economics and finance, and environmental science and engineering	40		x	
3	Analyze the current and future financial instruments and environmental technologies	40	x	x	
4	Explain the role of policy and economic strategies for ESG performance across all sectors	10		x	

A1: Attitude
Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability
Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments
Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Learning and Teaching Activities (LTAs)

	LTAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Lecture	Explain key concepts and principles related to economics and finance, and environmental science and engineering	1, 2, 3, 4	2.5 hrs/wk
2	Tutorial	Solidify students' concepts and understanding with practice	2, 3, 4	0.5 hr/wk

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	In-class test	1, 2, 3, 4	20	
2	Assignment	1, 2, 3, 4	25	
3	In-class presentation	1, 2, 3, 4	5	

Continuous Assessment (%)

50

Examination (%)

50

Examination Duration (Hours)

2

Additional Information for ATs

Examination duration: 2 hrs
Percentage of continuous assessment, examination, etc.: 50% by continuous assessment; 50% by exam

To pass a course, a student must do ALL of the following:
1) obtain at least 30% of the total marks allocated towards continuous assessment (combination of assignments, pop quizzes, term paper, lab reports and/ or quiz, if applicable);
2) obtain at least 30% of the total marks allocated towards final examination (if applicable); and
3) meet the criteria listed in the section on Assessment Rubrics.

Assessment Rubrics (AR)

Assessment Task

1. In-class test

Criterion

Ability to explain concepts, analyze and solve problems related to Sustainable Technologies and Finance

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal levels

Assessment Task

2. Assignment

Criterion

Ability to explain concepts, analyze and solve problems related to Sustainable Technologies and Finance

Excellent (A+, A, A-)
High

Good (B+, B, B-)
Significant

Fair (C+, C, C-)
Moderate

Marginal (D)
Basic

Failure (F)
Not even reaching marginal levels

Assessment Task
3. Presentation

Criterion
Ability to relate the concepts from the class to the real-world practice

Excellent (A+, A, A-)
High

Good (B+, B, B-)
Significant

Fair (C+, C, C-)
Moderate

Marginal (D)
Basic

Failure (F)
Not even reaching marginal levels

Assessment Task
4. Final exam

Criterion
Ability to explain concepts, analyze and solve problems related to Sustainable Technologies and Finance

Excellent (A+, A, A-)
High

Good (B+, B, B-)
Significant

Fair (C+, C, C-)
Moderate

Marginal (D)
Basic

Failure (F)
Not even reaching marginal levels

Part III Other Information

Keyword Syllabus

- Global trends in Sustainable Technologies and Finance
- Environmental, Social and Governance reporting and investing
- Local and global energy and environmental issues (e.g. Climate change, clean water)
- Sustainable development
- Triple bottom line (TBL) accounting
- ESG integration among stakeholders within the investment industry
- Basic policy and economic strategies in the energy and environmental sectors
- Renewable energy technologies
- Energy conservation and management technologies
- Climate change mitigation and adaptation
- Circular economy (e.g., resource recovery)
- Clean and technological innovation
- Green and ESG-related products
- Blue economy

Reading List

Compulsory Readings

	Title
1	HKEX. HOW TO PREPARE AN ESG REPORT- A Step-by-Step Guide to ESG Reporting. March 2020.
2	Business Economic Council (BEC), BEC Handbook: Understanding Materiality for Environmental, Social and Governance Reporting

Additional Readings

	Title
1	Current and important scientific articles will be provided to supplement lecture materials.