

## Subject Description Form

<b>Subject Code</b>	AF5130
<b>Subject Title</b>	Sustainable Finance
<b>Credit Value</b>	3
<b>Level</b>	5
<b>Pre-requisite/ Co-requisite/ Exclusion</b>	Nil
<b>Objectives</b>	<p>This subject is designed to provide updated knowledge about 1) the necessity of carbon neutrality; 2) the role of business and financial market in achieving carbon neutrality and sustainability; 3) the key concepts, principles, and regulations of corporate sustainable development and sustainability reporting; 4) different frameworks for incorporating sustainable investing practices from both the investor and corporate boardroom perspectives (The full spectrum of sustainable finance products and strategies across the equity and fixed income asset classes will be covered such as green bonds and sustainability indexing) ; and 5) various carbon pricing schemes/regulations and climate risk related challenges and opportunities for existing companies and entrepreneurs.</p>
<b>Intended Learning Outcomes</b>	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> <li>a. Understand the necessity and urgency of carbon neutrality in sustainable development, and the importance of business in achieving it.</li> <li>b. Understand the mainstream theories, underlying drivers and financial impacts of corporate sustainable activities and disclosure</li> <li>c. Gain an overall picture of how financial market can facilitate sustainability and the transition to carbon neutrality.</li> <li>d. Grasp some important economic principles and approaches to various sustainable investing.</li> <li>e. Identify and evaluate the major types of sustainable finance and green products.</li> <li>f. Equip with the knowledge about the current stage and future trend of sustainable reporting, climate risk, and the mechanism and challenges of various carbon pricing instruments</li> <li>g. Understand how climate risk and carbon neutrality commitment provides new business opportunities and markets (e.g. green Startups)</li> </ol>

**Subject Synopsis/  
Indicative Syllabus**

**Topic 1: Carbon Neutrality and Sustainability**

- Climate risk and global warming challenges
- The impact of climate risk on sustainability
- The necessity of carbon neutrality
- The role of business and financial market in achieving carbon neutrality and sustainability

**Topic 2: Introduction to Business**

- The Nature of business
- The Dynamic Business Environment e.g. low carbon transition
- The importance of business ethics
- The role of sustainability in business ethics and competing in global marketplace

**Topic 3: Essentials of Corporate Finance**

- Business Finance and capital Structure
- The goal of financial management
- Agency cost and corporate governance
- Financial statements and key ratios

**Topic 4: Essentials of Investment**

- Firm value estimation-DCF model
- Information and market efficiency
- Return and risk
- The modern portfolio theory

**Topic 5: Corporate social responsibility (CSR)**

- 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

**Topic 6: Sustainability Reporting**

- Corporate voluntary and mandatory CSR/ESG/Carbon emission disclosure
- ESG metrics by external rating agencies  
The role of sustainability reporting in facilitating carbon neutrality
- Standardization of Sustainability reporting

**Topic 7: Introduction to Sustainable Investing**

- An historical overview and its link to carbon neutrality
- Differentiating between socially focused investing, governance focused investing and environment focused investing
- The size and growth of the Sustainable investing marketplace

	<p><b>Topic 8: Approaches to Sustainable Investing</b></p> <ul style="list-style-type: none"> <li>• Exclusion-based Sustainable investing</li> <li>• Integration-based Sustainable investing</li> <li>• Impact &amp; engagement-based Sustainable investing</li> </ul> <p><b>Topic 9: Sustainable Finance Instruments</b></p> <ul style="list-style-type: none"> <li>• Green and climate bonds</li> <li>• Social bonds</li> <li>• Sustainability bonds</li> <li>• Green loans and Sustainability linked loans</li> </ul> <p><b>Topic 10: Carbon pricing</b></p> <ul style="list-style-type: none"> <li>• Carbon trading systems</li> <li>• Carbon taxes</li> <li>• Carbon offsets</li> <li>• Carbon emission outsourcing</li> <li>• Carbon pricing policies and global cooperation or competition</li> </ul> <p><b>Topic 11: Environmental risk and Entrepreneurship</b></p> <ul style="list-style-type: none"> <li>• Climate change, new risks and opportunities for businesses</li> <li>• Green Startups</li> </ul>
<p><b>Teaching/Learning Methodology</b></p>	<p>This subject comprises of class-contact lectures and workshops. The class-contract lectures will introduce the key concepts, principles, regulations, disclosures, economic forces and challenges for corporate sustainable development and the transition to carbon neutrality, various approaches to sustainable investing, and the mechanism and economic rationale of various carbon pricing instruments. 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’ sustainable practices and investors’ investment. For the group project, students are expected to apply the sustainable principles and investing approaches to construct an appropriate sustainable investment strategy or make internal sustainable strategies to facilitate corporate carbon neutrality transition.</p>

**Assessment Methods in Alignment with Intended Learning Outcomes**

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						
		a	b	c	d	e	f	g
1. Class Participation	10%	√	√	√	√	√	√	√
2. Case Analysis	40%	√	√	√				√
3. Final Project and Presentation	50%	√	√	√	√	√	√	√
Total	100%							

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

**Class Participation:** Students have to attend all classes and participate actively in class discussion including raising 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.

**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 of climate risk, business ethics, sustainable disclosure and investment including one case related to green start-ups. Each case will account for 20% of the overall weighting of this subject.

**Final Project and Presentation:** Students need to form groups (5-6 students) and work on an investment thesis from either an investor perspective or a managerial perspective.

- Investor perspective: Students need to consider themselves as a fund manager to incorporate companies' sustainable performance into their investment strategies.
- Managerial perspective: Students need to consider themselves as firm managers to integrate carbon neutrality into their operating management & strategy
- 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.

<b>Student Study Effort Expected</b>	Class contact:	
	▪ Lectures	33 Hrs.
	▪ Cases discussion and group project presentation	6 Hrs.
	Other student study effort:	
	▪ Reading materials/textbook/cases	26 Hrs.
	▪ Preparing for class discussion and assignments	52 Hrs.
	Total student study effort	117 Hrs.
<b>Reading List and References</b>	<p><b>Reference textbook:</b></p> <p>“Grow the Pie” by Alex Edmans (2020)  <a href="https://www.growthepie.net/">(https://www.growthepie.net/)</a></p> <p>“Essentials of Corporate Finance” by Stephen Ross and Randolph Westerfield and Bradford Jordan (2020)  <a href="https://www.mheducation.com/highered/product/essentials-corporate-finance-ross-westerfield/M9781260013955.html">https://www.mheducation.com/highered/product/essentials-corporate-finance-ross-westerfield/M9781260013955.html</a></p> <p><b>Cases</b> (e.g. Harvard Business School Case and Singapore Management University Case) - important for having a deeper understanding of a particular project or strategy.</p> <p><b>Academic papers</b> - important for understanding the “big picture” and fostering systematic thinking. For example:</p> <ul style="list-style-type: none"> <li>• Baldauf, Garlappi, Yannelis (2019, “Does Climate Change Affect Real Estate Prices?” <i>Review of Financial Studies</i>)</li> <li>• 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>)</li> <li>• Dimson, Karakaş and Li (2015, “Active Ownership” <i>Review of Financial Studies</i>)</li> <li>• Flammer C. (2015, “Does corporate social responsibility lead to superior financial performance? A regression discontinuity approach” <i>Management Science</i>)</li> </ul>	