

UGRD_LKCSB_2520_MGMT242_WILSON TENG



Singapore Management University

COURSE INFORMATION

Course Code & Title MGMT242 - Corporate Sustainable Product and System Design	Academic Year / Term AY2025-26 January Term	Effective Start Date 25/08/2025
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Offering Unit / Department / School LKCSB	Course Career Undergraduate
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Course Units CU:	Grading Basis GRD - Graded
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Course Description

Companies increasingly seek to be more sustainable, but many firms struggle to operationalize the concepts within their organizations and supply chain, or to translate theoretical concepts into practical value for themselves and their customers. Sustainability practitioners must not only help develop (i.e., design) and sell a sustainable product or service, but an entire mind-set, and where necessary, to devise changes in business models and operations. The course will guide students, working in teams, through a development process involving market and strategic assessment, positioning of the product (including its sustainability attributes), customer-centric design, and business model innovation. This will in turn lead students to develop value propositions and marketing, which will be presented in a final pitch session to the client's representatives. The primary methodology will consist of design thinking

techniques, which will be broadly used and adapted to the sustainability context. Phases of design include the understanding of candidate consumers' (users') needs by qualitative means, creation of basic product concepts and prototypes, and the testing and validation of prototypes with users. Implications will also be drawn for the client's business model. Note that the course may be more time-intensive than a content-based or normal SMU-X course, as it centers on a project with a methodology (design thinking), but also involves content on sustainability and business, and involves some use of analytical techniques such as secondary market research (e.g. assembling of data on consumer segment numbers). Note that the data and analysis may change depending on the client involved. As an example, a past class client was a multinational nutritional supplements company interested in servicing Asian markets with a sustainability value proposition. Future clients will be different firms.

Course Learning Outcomes

By the end of this course, students will be able to:

- Describe basic societal concepts and frameworks on sustainability and be able to guide a corporate's sustainability-based product and/or service design with these frameworks.
- Conduct a strategic and/or market assessment for a specific product, including the manner of orientation (towards sustainability) of selected consumer markets (including overseas ones). This may include conducting qualitative and secondary research on potential customers.
- Identify and solve a problem of how corporations can become more sustainable by innovating to meet consumer needs. Specifically, design a value proposition via design thinking for a selected customer segment, including the devising of a strategy to improve the product's acceptance by the firm's potential customers and its broader market.

SMU Graduate Learning Outcomes

Collaboration and leadership, Communication, Critical thinking & problem solving, Ethics and social responsibility, Innovation and enterprising skills, Multidisciplinary knowledge, Resilience, Understanding of sustainability issues

Discipline Specific Competencies

Futures Thinking, Innovation and Entrepreneurship, Integrated Problem-Solving, One or more business functions that are affected by digital technologies, Systems Thinking

Course Area(s)

AREA - Business Options, AREA - Business-Oriented Electives, AREA - Econ Major Rel/Econ Options, AREA - Grad Req - Sustainability (Intake 2024 onwards), AREA - Social Sciences/PLE Major-related, AREA - Strategic Management Electives, AREA - Sustainability Management Core, ENRL - SS Enrolment: 6 ISEP; 1 SUSEP

CLASS SECTION INFORMATION

Instructor(s)

WILSON TENG - (wilson teng@smu.edu.sg)

Instruction Mode

In Person

Consultations**Teaching Assistants**

As this is a project-based course with design thinking methodology involved, there will be at least 40-60 minutes allocated for group work during class after week 3 onwards. Groups are *strongly* encouraged to seek consultation from me during our normal class time. Individuals or groups who require consultation outside of class time may schedule separate times with me.

and

Office Location

LKCSB Level 5 Adjunct Suite

Assessment Components (New)

Category	Description	Weightage
Class Participation	Class Participation	20

Category	Description	Weightage
Projects/Assignments	Group Project	45

Category	Description	Weightage
Class Participation	Peer Evaluation	5

Category	Description	Weightage
Projects/Assignments	Individual Final Assignment	30

Instructional Methods and Expectations

Class Participation

Participation is a central part of the learning process in this class. Your participation mark reflects your contribution to your classmates' learning. This includes attendance, preparation prior to class including reading assigned materials and completion of mini assignments, and active participation in class discussions and group activities in class.

Groupings and Group Size

You are encouraged to find your own group members, based on diversity requirements. Each group of 4-5 members should have a diverse mix of majors, gender and nationality (including exchange students). The group-member list should be submitted to the TA no later than the second week of class.

Individual Assignment

There will be one individual assignment in the semester. The assignment will give students an opportunity to demonstrate their own research and critical thinking capability outside of their group. The assignment will be described in detail in class.

Group Projects and Pitches

The objective of the project is to allow students to apply what they have learnt in class to a client's sustainability challenge. Students will be required to use design thinking framework understand the needs of stakeholders (including customers), ideate solutions to enhance acceptance of sustainable products/services and build prototypes to validate assumptions and gain early feedback. There will be at least 2 project presentations to the client during this course. Details will be provided during the project kick-off in week 2.

Weekly Lesson Plan

WEEK	TITLE	TENTATIVE TOPICS (ACTUAL TOPICS TO BE FINALISED AFTER CLIENT PROJECT IS CONFIRMED BY INSTRUCTOR)
1	Overview of course; Introduction	<ul style="list-style-type: none"> • Definitions of sustainability, sustainability drivers and trends • Sustainable Development Goals • Introduction to design thinking and role of design in sustainability • Case Study: Redesign the shopping cart
2	Sustainability and design	<ul style="list-style-type: none"> • Why corporations invest in sustainability (brief introduction) • Frameworks for assessing sustainability • Design thinking (I). Empathy: User need-finding • In class activity: Empathise exercise
3	Project briefing & kick-off	<ul style="list-style-type: none"> • Introduction to Client & site visit (where possible) • Business context, project objectives and outcomes. • Design challenge explained and outcomes expected
4	Sustainability markets and design	<ul style="list-style-type: none"> • NetZero 2050 and Carbon markets • Design of sustainability markets • Design thinking (II): Ideation • In class activity: Brainstorming exercise

5	Innovation and sustainability	<ul style="list-style-type: none"> • Sustainable innovation & strategy design • Design thinking (III): Prototyping and validation • In class activity: Building a prototype • In-class project work and team consultations
6	Interim Presentation 1	<ul style="list-style-type: none"> • Initial Presentation - Empathy/Ideation • In-class project work and team consultations
7	Circular economy and design of products, services & systems	<ul style="list-style-type: none"> • Circular Economic principles • Systems Thinking and Circular design • Circular Business Models • In-class project work and team consultations
8	<i>Recess week</i>	
9	Interim Presentation 2	<ul style="list-style-type: none"> • Initial Presentation – Prototypes • In-class project work and team consultations
10	Building Liveable & Sustainable cities	<ul style="list-style-type: none"> • Liveability Framework: Systems Enablers & Desired Outcomes • Case Studies: Singapore's Masterplan, New York City and Bilbao (Spain). • In-class project work and team consultations
11	Sustainability Policy Design & Nudging	<ul style="list-style-type: none"> • ESG Policy Design considerations • Nudging: Choice architecture to influence consumer/citizen behaviours • Case Study: Singapore's Green Plan 2030 • In-class project work and team consultations
12	Philanthropy as Business Strategy	<ul style="list-style-type: none"> • Why focus on the Social aspect of ESG framework • Doing Good and Doing Well as Business strategy • Case Studies: Temasek, DBS and SingTel • In-class project work and team consultations
13	Final Presentations	<ul style="list-style-type: none"> • Final Project Presentations
14	No exam	

Recommended Textbooks and Readings

There is no assigned textbook for this course.

Reference books (Available in SMU Library: hardcopies and online version):

1. Iannuzzi, Al. (2012); Greener products: the making and marketing of sustainable brands. CRC Press.
2. Kumar, Vijay (2012); 101 Design Methods: A Structured Approach for Driving Innovation in Your Organization. Wiley.

Students are expected to complete assigned readings from the lesson plan prior to the relevant class session, to facilitate fruitful class discussion. Reflection questions to be completed before class contributes to your class participation grade.

UNIVERSITY POLICIES

Academic Integrity

All acts of academic dishonesty (including, but not limited to, plagiarism, cheating, fabrication, facilitation of acts of academic dishonesty by others, unauthorized possession of exam questions, or tampering with the academic work of other students) are serious offences.

All work (whether oral or written) submitted for purposes of assessment must be the student's own work. Penalties for violation of the policy range from zero marks for the component assessment to expulsion, depending on the nature of the offence.

When in doubt, students should consult the instructors of the course. Details on the SMU Code of Academic Integrity may be accessed at <https://smu.sharepoint.com/sites/oasis/SitePages/DOS-WKLSWC/UCSC.aspx>.

Responsible Use of AI

The University recognises the importance of equipping students with the skills to navigate an AI-driven world. While AI tools may support learning, they must be used judiciously and responsibly. Students must not present AI-generated output as their own work.

Each course may set specific guidelines on the use of AI in assessments. Students are required to follow these guidelines carefully and should seek clarification from the instructors if uncertain.

Misuse of AI constitutes a breach of academic integrity and will be subject to the same penalties as other acts of academic dishonesty.

Copyright Notice

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Accessibility

SMU strives to make learning experiences accessible for all. Students who anticipate or experience physical or academic barriers due to disability are encouraged to inform the course instructor as soon as possible. Students may also contact the university's disability services team if they have questions or concerns about academic provisions:

accessibility@smu.edu.sg. Please be aware that the accessible tables in our seminar room should remain available for students who require them.

Digital Readiness for Teaching and Learning (DRTL)

As part of emergency preparedness, instructors may conduct lessons online via the Zoom platform during the term, to prepare students for online learning. During an actual emergency, students will be notified to access the Zoom platform for their online lessons. The class schedule will mirror the current face-to-face class timetable unless otherwise stated.