

# UGRD\_LKCSB\_2620\_MGMT242\_WILSON TENG



Singapore Management University

## COURSE INFORMATION

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### Course Code & Title

MGMT242 - Sustainable Business Design

### Effective Start Date

11/01/2027

### Offering Unit / Department / School

LKCSB

### Course Career

Undergraduate

### Course Units

CU:

### Grading Basis

GRD - Graded

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### Course Description

Many of the environmental and social impacts of products, services and systems are determined at the design stage. This SMU-X course teaches students to design for sustainability, using systemic, circular, regenerative and behavioural design approaches to co-create solutions with industry or community partners. Working on a live design brief, student teams will map systems and stakeholders, uncover user insights, ideate, prototype and test concepts, and translate them into viable sustainable business designs. Along the way, students will build practical design capabilities (design research, systems mapping, co-design, prototyping and behavioural design) while contributing to more liveable, inclusive and sustainable communities.

## **Course Learning Outcomes**

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

- Map complex sustainability challenges using systemic design tools (e.g., systems maps, stakeholder maps, life-cycle thinking) and reframe them as design opportunities.
- Apply human-centred and participatory co-design methods to uncover user and stakeholder insights.
- Prototype and test sustainable products, services or systems using circular, regenerative and behavioural design principles.
- Translate validated design concepts into sustainable business designs that create economic, environmental and social value.
- Collaborate in multidisciplinary design teams to co-create and present solutions with a real client.

## **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

## **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

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**Instructor(s)**

WILSON TENG - (wilsonteng@smu.edu.sg)

**Instruction Mode**

In Person

**Consultations**

**Teaching Assistants**

As this is an SMU-X course that involves substantial project work, 40-60 minutes of most class sessions from Week 4 onwards will be allocated to team discussions, project work, and consultations.

Teams are strongly encouraged to use this time to seek feedback and guidance from the instructor. Students or teams requiring additional support may arrange consultations outside class by appointment.

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**Office Location**

LKCSB Level 5 Adjunct Suite

**Assessment Components (New)**

| Category*           | Weightage*         |    | Assessment/Submission Period* |         |                  |      |
|---------------------|--------------------|----|-------------------------------|---------|------------------|------|
| Class Participation | 20                 |    | Week 14                       |         |                  |      |
| Description         | Individual Group?* | or | With Component?*              | Writing | With Component?* | Oral |
| Class Participation | Individual         |    | Yes                           |         | Yes              |      |

|                                          |                                    |                                                 |                                |                |                                |             |
|------------------------------------------|------------------------------------|-------------------------------------------------|--------------------------------|----------------|--------------------------------|-------------|
| <b>Category*</b><br>Projects/Assignments | <b>Weightage*</b><br>45            | <b>Assessment/Submission Period*</b><br>Week 13 |                                |                |                                |             |
| <b>Description</b><br>Group Project      | <b>Individual Group?*</b><br>Group | or                                              | <b>With Component?*</b><br>Yes | <b>Writing</b> | <b>With Component?*</b><br>Yes | <b>Oral</b> |

|                                          |                                         |                                                 |                                |                |                               |             |
|------------------------------------------|-----------------------------------------|-------------------------------------------------|--------------------------------|----------------|-------------------------------|-------------|
| <b>Category*</b><br>Projects/Assignments | <b>Weightage*</b><br>5                  | <b>Assessment/Submission Period*</b><br>Week 13 |                                |                |                               |             |
| <b>Description</b><br>Peer Evaluation    | <b>Individual Group?*</b><br>Individual | or                                              | <b>With Component?*</b><br>Yes | <b>Writing</b> | <b>With Component?*</b><br>No | <b>Oral</b> |

|                                                   |                                         |                                                 |                                |                |                               |             |
|---------------------------------------------------|-----------------------------------------|-------------------------------------------------|--------------------------------|----------------|-------------------------------|-------------|
| <b>Category*</b><br>Projects/Assignments          | <b>Weightage*</b><br>30                 | <b>Assessment/Submission Period*</b><br>Week 14 |                                |                |                               |             |
| <b>Description</b><br>Individual Final Assignment | <b>Individual Group?*</b><br>Individual | or                                              | <b>With Component?*</b><br>Yes | <b>Writing</b> | <b>With Component?*</b><br>No | <b>Oral</b> |

## Instructional Methods and Expectations

### Class Participation

Active participation is essential to the collaborative learning environment of this course. Students are expected to contribute insights, challenge assumptions constructively, and support the learning of peers through thoughtful engagement. This includes attendance, punctuality, preparation for class through assigned readings, completion of weekly reflections, and meaningful contributions to class discussions and group activities.

### Group Formation

Students are encouraged to form their own teams. Each team should comprise 5-6 members and aim for a diverse mix of majors, year of study, gender, and nationality (including exchange students). Team membership must be submitted to the TA by the end of Week 1. To facilitate collaboration, teams are expected to sit together from Week 2 onwards.

### Group Project

Teams will work with an external client to investigate a sustainability challenge, identify stakeholder needs, develop and test solutions, and deliver recommendations supported by evidence and stakeholder feedback. Each team will make at least two project presentations to the client during the course. Project expectations will be introduced during the Week 3 client briefing.

### Peer Evaluation

Each student will evaluate the contributions of their teammates to the group project. While the group project is assessed as a team effort, peer evaluations will be considered when determining individual grades. The instructor reserves the right to adjust an individual's project grade based on peer feedback and evidence of contribution.

### Individual Final Assignment

Students will complete one individual assignment in which they critically analyze a sustainability challenge and develop evidence-based recommendations using concepts and frameworks covered in the course. Detailed requirements will be provided during the semester.

## Weekly Lesson Plan

| WEEK | TITLE                                       | TOPICS                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Introducing Sustainable Design              | <ul style="list-style-type: none"> <li>• Sustainability through a design lens</li> <li>• Core themes of sustainable design</li> <li>• Introduction to design thinking for sustainability</li> </ul>                                                                                                                                                                                                                                      |
| 2    | Understanding Sustainable Design Strategies | <ul style="list-style-type: none"> <li>• Why corporations invest in sustainability</li> <li>• Evolution of sustainable design approaches</li> <li>• Product-centric to systemic design</li> <li>• Design thinking (I). Empathy: user need-finding</li> <li>• Class activity: Empathise exercise</li> </ul>                                                                                                                               |
| 3    | Project Briefing & Kick-off                 | <ul style="list-style-type: none"> <li>• Introduction to client and site visit where practicable</li> <li>• Business context, project objectives and outcomes expected.</li> <li>• Design challenges explained and expected outcomes.</li> </ul>                                                                                                                                                                                         |
| 4    | Discovering Systemic Sustainable Innovation | <ul style="list-style-type: none"> <li>• Emotional durability design</li> <li>• Design learning from nature</li> <li>• Product-Service system design</li> <li>• From End-of-pipe to Source intervention</li> <li>• Design thinking (II): Ideation</li> <li>• Class activity: Brainstorming exercise</li> <li>• <i>In-class project work and consultations</i></li> </ul>                                                                 |
| 5    | Designing Sustainable Solutions             | <ul style="list-style-type: none"> <li>• Circular economic principles</li> <li>• Systems thinking and circular design</li> <li>• Circular business models               <ul style="list-style-type: none"> <li>• Regenerative design</li> </ul> </li> <li>• Design thinking (III): Prototyping and testing</li> <li>• Class activity: Building a testable prototype</li> <li>• <i>In-class project work and consultations</i></li> </ul> |

| WEEK | TITLE                                            | TOPICS                                                                                                                                                                                                                                                                                      |
|------|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6    | <b>Interim Presentations 1</b>                   | <b>First interim presentations: internal review</b><br>• In-class project work and team consultations                                                                                                                                                                                       |
| 7    | Designing Sustainable Business Models            | <ul style="list-style-type: none"> <li>• Lean startup framework</li> <li>• Sustainable business model canvas <ul style="list-style-type: none"> <li>• Participatory co-design</li> </ul> </li> <li>• <i>In-class project work and consultations</i></li> </ul>                              |
| 8    | <b><i>Recess week</i></b>                        |                                                                                                                                                                                                                                                                                             |
| 9    | <b>Interim Presentations 2</b>                   | <b>Second interim presentations: with client</b><br>• <i>In-class project work and team consultations</i>                                                                                                                                                                                   |
| 10   | Bridging the Sustainability Intention-Action Gap | <ul style="list-style-type: none"> <li>• Intention-action gap in sustainability</li> <li>• Behavioural design and hook framework</li> <li>• Nudging: Choice architecture to influence consumer behaviours</li> <li>• <i>In-class project work and consultations</i></li> </ul>              |
| 11   | Designing for Social Innovation                  | <ul style="list-style-type: none"> <li>• Social sustainability and environmental sustainability</li> <li>• Placemaking and community design</li> <li>• Case Study: Co-creating inclusive spaces with communities (URA)</li> <li>• <i>In-class project work and consultations</i></li> </ul> |
| 12   | Designing for Sustainable Transformation         | <ul style="list-style-type: none"> <li>• Case discussions on different approaches to sustainable transformation</li> <li>• <i>In-class project work and consultations</i></li> </ul> <p><b>** Case study will be assigned during the semester</b></p>                                       |
| 13   | <b>Final Presentations</b>                       | <b>Final presentations</b>                                                                                                                                                                                                                                                                  |
| 14   | <b>No exam</b>                                   | • Individual final assignment due at 12 noon                                                                                                                                                                                                                                                |

## **Recommended Textbooks and Readings**

The following books are available in SMU Library either as hardcopies and/or online versions.

### Core Text:

1. Liu, X., Zhong, F., Zhang, J. (2025); Design for Sustainability. Springer.

### Supplementary Texts:

1. Ometto A.R., Sarkis J., Evans S. (Ed) (2024); A Systemic Transition to Circular Economy. Springer.
2. Ries Eric. (2017); The Lean Startup. Random House.
3. Kumar, Vijay (2012); 101 Design Methods: A Structured Approach for Driving Innovation in Your Organization. Wiley.

Students are expected to complete the assigned readings and individual reflections before each class and contribute actively to class discussions. Completion of the weekly reflections contributes to the class participation grade.

## **Other Information**

### **LKCSB Attendance Policy**

Students with unexcused absences from class for 4 or more sessions may be given an 'F' for that class. Late class attendance and non-completion of blended learning materials may be counted as an absence from class.

## **UNIVERSITY POLICIES**

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### **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](mailto: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.