

SINGAPORE MANAGEMENT UNIVERSITY

**SSOC110 G1 SUSTAINABILITY PRACTICUM: Promoting Mangrove Forests for Global Sustainability (also counts as a Social Science practicum)**

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**NOTE: The course includes a two-day, one night mandatory fieldtrip to Bintan, Week 5 (September 20-21) with estimated costs TBD (estimated S\$250).**

**Course Overview**

In this practicum, we will focus on an aspect of sustainability in the region. Part of the class will focus on deepening our understanding of nuanced aspects of sustainable development. The course will involve a partner working on real-world sustainability projects. The entire course will be hands-on and involve a fieldwork component.

This practicum will focus on an issue vital to sustainability—the effort to protect, maintain and strengthen mangrove forests worldwide. Mangroves play an underappreciated role in sustainability, reflecting several of the United Nation’s [Sustainability Development Goals](#). First, reflecting goal 13 (carbon action), mangrove forests absorb substantially more carbon than most forests, meaning that they play a net positive role in the fight to reduce the amount of carbon in the atmosphere. Secondly, reflecting goals 1 and 2 (poverty and hunger), many coastal communities directly or indirectly depend on mangroves for their livelihoods. Third, because mangrove forests are home to a rich variety of animal, plant and aquatic life, preserving them is essential to promoting goal 15 (protecting biodiversity). Finally, mangroves are lynchpins for protecting coral reefs and ocean ecosystems, reflecting goal 14 (life below sea).

Mangroves are especially relevant to Singapore and the region. In 1820, mangroves covered around 13 percent of Singapore’s land. Today, about 0.5 percent of the land hosts mangrove forests. Around the region, mangrove forests are vital to the sustainable development of ASEAN nations, including Indonesia (home to the largest mangrove forests), Malaysia, Thailand and the Philippines.

In this practicum, we will work directly with an innovative, grassroots organization in Bintan, Pengudang Mangrove. We will visit Bintan Week 5, taking the 2:20 pm ferry on Friday September 20 and returning to Singapore in the evening of September 21.

During the four phases of this practicum described in the section below, students will learn, hands-on, the process of translating research into action through participating in practical design thinking exercises. Throughout, we will be learning and applying design thinking principles to benefit these organizations directly.

**Note: the class is graded on a pass-fail basis. The class has no pre-requisite.**

## **Class structure**

Each three-hour weekly session will involve a combination of lectures, discussions and group activities focused on specific topics. All students must attend every session. The semester is broken into four unequal phases:

Phase 1: Discovery. We'll learn as much as we can about mangroves, Bintan, Indonesia, sustainability—both in class and through a site visit. Through this process, students will break into groups, each with a specific sub-problem as their focus for the design thinking phase.

Phase 2: Design thinking. Students will participate actively in design thinking exercises intended to translate their sub-problem of focus into an actionable result—a unique, innovative intervention designed to address (at least potentially) the sub-problem.

Phase 3: Testing phase. During this phase, students will take steps to test the plausibility of their idea and refine their designs.

Phase 4: Presentation. Students will present their ideas and receive feedback. After the semester, students will submit two pieces of writing: individual reflections and a group-written grant application based on their ideas.

## **Course Objectives**

1. Sensitivity to Developments in Asia:  
Enhance academic and practical understanding of the role of mangrove forests in Indonesia, the region and the world. Obtain sufficient knowledge about these issues to engage in design thinking exercises that generate practical and innovative ideas designed to address these problems.
2. Disciplinary Knowledge:  
Critically evaluate specific sustainability issues through the lens of several social science disciplines, including sociology, political science and psychology. Deepen our knowledge of the sustainability development goals.
3. Critical Thinking:  
Apply design thinking methodology to generate and refine innovative and practical approaches that can address specific problems.
4. Intercultural Understanding and Thinking:  
To understand how different cultures experience specific problems differently. To display cultural understanding in designing solutions. To learn to interact meaningfully with villagers from Indonesia.
5. Communication:  
To hone the skill of presenting innovative ideas to stakeholders and experts clearly and engagingly.

Accessibility and Accommodations: SMU strives to make learning experiences accessible for all. If you anticipate or experience physical or academic barriers due to disability, please let me know immediately. You are also welcome to contact the university's disability support team if you have questions or concerns about academic accommodations: [included@smu.edu.sg](mailto:included@smu.edu.sg)

## Course schedule

Due to the nature of practicum, please consider this course schedule to be subject to change depending on class needs.

	Topic
Week 1 Discovery	Orientation: SMU-X, Practicum, Course Requirements, Mangroves, Poverty/Development, Design thinking; poster
Week 2 Discovery	Class session: Bintan/Indonesia; Mangroves; Fieldwork; Safety briefing
Week 3 Discovery	Class session: Forming groups/Further research/discussion/finalizing research questions
Week 4 Discovery	Class session: Bintan/Indonesia; Fieldwork; Safety briefing
Week 5 Discovery	Fieldtrip to Bintan (mandatory): Departs: Friday Sep 20 14:00 (must be at the Tanah Merah Ferry Terminal (50 Tanah Merah Ferry Road) by 12:50 pm. Returns: Saturday Sept 21 [evening]
Week 6 Discovery	Working session: Other models/outside experts/Introduction to posters (CAPS PIE- context, audience, purpose) - 3cs (clear, consistent, concise)
Week 7 Design thinking	Design Thinking Workshop 1: Adam Gerard
Week 8 Testing phase	Group work/ Refining ideas (No class)
Week 9 Testing phase	Working session: Online meetings with partner? CEC workshop/critique previous posters/practice presenting previous posters (12-1:30?)
Week 10 Design thinking	Design Thinking Workshop 2: Adam Gerard
Week 11 Testing phase	Working session: Final draft of posters; practice presenting w/ Rubric; soft copy
Week 12 Presentation	Class session: Finalize posters Reflection on social sciences, design thinking Working session: Elevator pitches; rehearsal
Week 13 Presentation	Presentation: Poster display
Week 14 Presentation	Memo due (No class)

## Course components (pass-fail) – components subject to change

Group research results written report (Week 7)	20 percent
Design thinking application and workshop participation (Weeks 7, 10)	15 percent
Final presentation—poster session (Week 13)	15 percent
Conclusions memo (Week 14)	25 percent
Class participation and presentations (throughout the semester)	15 percent

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## **Note on the fieldtrip**

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The organization uses an social enterprise-like model by using funds generated from ecotourism to plant and preserve mangrove forests around the island. We will visit the organization, which will include an interview with the main organizers and members, local villagers, and other stakeholders. During this, we will experience first-hand the ecotourism model, including opportunities to learn crafts and cooking classes taught by villagers.

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## **Class components**

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### **Group research results written report**

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By Week 3, each group will have a generating a 'living list' of research questions. Before Week 7, each group will present the results of their secondary research in a brief 1,000-1,500 word written report.

### **Design thinking application and workshop participation**

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Weeks 7 and 10, Adam Gerard, design thinking professional, will conduct workshops structured to allow students to apply design thinking principals to each group's particular issue. Prof Gerard will evaluate the quality of each student's participation in these workshops based on a set of criteria.

### **Final presentation**

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Students will develop a poster of their ideas and suggestions based on the design thinking exercise. One session will focus on poster development and refinement. The posters will be evaluated according to specific criteria.

### **Conclusions memo**

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Each group will compile a conclusion memo of between 1500-2000 words based on their design thinking exercises that highlights the specific issue of focus, discusses the idea that emerged from the design thinking process and its justification, the results of prototyping and recommendations. These are due on Week 14.

### **Class participation**

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I expect each student to participate fully in class activities and discussions. Students are not evaluated based on the volume that they say, but the degree to which their participation adds value to the discussion. Participation takes many forms, including expressing your opinion, answering or asking questions, participating in group discussions, extending or respectfully disagreeing with others' opinions, and encouraging others to participate. Understanding the assigned readings is essential to contributing to the discussion. Class attendance is expected, but is insufficient to do well in class participation. (Class participation does not include participation in the workshops, which is assessed separately.)

At the end of the semester, I will give you the opportunity to evaluate your own participation based on: a) the extent you participated fully, and b) the extent to which your participation added value to the discussion. I will consider this voluntary evaluation in assessing your performance.

Note: students must attend all classes and be punctual. Especially important are Weeks 1, 5 (fieldtrip mandatory), 7 (Design thinking), 10 (Design thinking) and 13 (poster session).