Annexe A: New/Revised Course Content in OBTL+ Format

Course Overview

The sections shown on this interface are based on the templates UG OBTL+ or PG OBTL+

If you are revising/duplicating an existing course and do not see the pre-filled contents you expect in the subsequent sections e.g. Course Aims, Intended Learning Outcomes etc. please refer to Data Transformation Status for more information.

Expected Implementation in Academic Year	2024/25
Semester/Trimester/Others (specify approx. Start/End date)	Semester 2
Course Author * Faculty proposing/revising the course	Assoc Prof Lee Ser Huay Janice Teresa
Course Author Email	janicelee@ntu.edu.sg
Course Title	Second Major in Sustainability Capstone Project
Course Code	ES5100
Academic Units	3
Contact Hours	39
Research Experience Components	Research Defined Course (at least 50% of deliverables involve practical research activities: problem identification, hypothesis forming, data collection/analysis/interpretation, result communication)

Course Requisites (if applicable)

Pre-requisites	Students with Second Major in Sustainability
Co-requisites	N/A
Pre-requisite to	N/A
Mutually exclusive to	N/A
Replacement course to	N/A
Remarks (if any)	

Course Aims

This is a pass/fail course. This course aims to provide you an opportunity to work in small groups and derive solutions for a real-world sustainability challenge. This course is only available to Second Majors in Sustainability. You will learn to work in an interdisciplinary team and be mentored by a research faculty to work through the process of finding solutions for a real-world sustainability challenge. Such an experience would benefit you either as a postgraduate or in industry.

Over a period of 1 semester, you will conduct research with your team and present your results in a written report and in a recorded oral presentation. You are expected to conduct primary research into a sustainability issue and go through the process of data collection, analysis and interpretation.

At the end of the project, you are encouraged to participate in a sustainability initiative or competition.

Course's Intended Learning Outcomes (ILOs)

Upon the successful completion of this course, you (student) would be able to:

ILO 1	Collaborate effectively with peers from different disciplines
ILO 2	Gain exposure to real-world sustainability challenges
ILO 3	Formulate appropriate research questions, develop methodology to test chosen research question, and interpret results from analysis.
ILO 4	Communicate in written report and through a recorded oral presentation complex concepts to wide audiences
ILO 5	Cultivate autonomy in your learning journey including managing your time, resources, and group members effectively.

Course Content

Course content will vary depending on the sustainability challenge taken up and research faculty the team is working with.

Reading and References (if applicable)

Reading materials will be specific to the project. Students are expected to conduct their own literature review on the subject.

Planned Schedule

Week or Session	Topics or Themes	ILO	Readings	Delivery Mode	Activities
1	Pre-course (about 2 months ahead): Briefing students about capstone projects		No readings	Online	Discussion
2	Stage 1 (Week 1-4): Teams will form their project proposal , test their ideas and work with academic advisors to develop them		No readings	In-person	Discussion
3	Stage 2 (Week 5-9): Teams will execute their proposal and conduct data collection on sustainability problem		No readings	In-person	Group work
4	Stage 3 (Week 10-13): Teams will analyse and interpret their data and develop their written report and recorded presentation		No readings	In-person	Group work

Learning and Teaching Approach

Approach	How does this approach support you in achieving the learning outcomes?
Active Learning	Students should have a sense of ownership and responsibility over their own learning journey from the capstone project. Students should gain a higher level of critical thinking and creative problem solving to address the selected sustainability challenge. Students will be supported by their research faculty advisor and peers.

Assessment Structure

Assessment Components (includes both continuous and summative assessment)

No.	Component	ILO	Related PLO or Accreditation	Weightage	Team/Individual	Rubrics	Level of Understanding
1	Continuous Assessment (CA): Others(Proposal)	1, 2, 3, 4, 5		25	Team	Analytic	Extended Abstract
2	Continuous Assessment (CA): Class Participation(Participation)	1, 4, 5		25	Individual	Holistic	Not Applicable
3	Continuous Assessment (CA): Report/Case study(Written Group Report)	1, 2, 3, 4, 5		25	Team	Analytic	Extended Abstract
4	Continuous Assessment (CA): Oral Test(Recorded Oral Presentation)	1, 2, 3, 4, 5		25	Team	Analytic	Extended Abstract

Description of Assessment Components (if applicable)

Proposal: Students are expected to develop a 2-page proposal which provides a brief background on the sustainability issue, the problem statement or research aim, the proposed methodology, and their expected results. This should be completed by week 4.

Participation: A peer assessment on team members' participation will be conducted at the end of the semester.

Written group report: Students are expected to develop a written research report (8-10 pages) that provides an Introduction, Methods, Results, Discussion and Conclusion section, along with a reference section. The report should build on the proposal and include the findings of the students and how they interpret their data. This should be completed by week 13.

Recorded oral presentation: Students are expected to develop a recorded oral presentation (12-15 min) that go over the student's semester long research project. This should follow the structure of the written report (Introduction, Methods, Results, Discussion, Conclusion). This should be completed by week 13.

Formative Feedback

You will receive feedback on your research progress from your faculty advisor. You will receive written and verbal feedback from your advisor about your report and presentations.

NTU Graduate Attributes/Competency Mapping

This course intends to develop the following graduate attributes and competencies (maximum 5 most relevant)

Attributes/Competency	Level
Adaptability	Advanced
Care for Environment	Advanced
Collaboration	Advanced
Communication	Advanced
Problem Solving	Advanced

Course Policy

Policy (Academic Integrity)

Good academic work depends on honesty and ethical behaviour. The quality of your work as a student relies on adhering to the principles of academic integrity and to the NTU Honour Code, a set of values shared by the whole university community. Truth, Trust and Justice are at the core of NTU's shared values. As a student, it is important that you recognize your responsibilities in understanding and applying the principles of academic integrity in all the work you do at NTU. Not knowing what is involved in maintaining academic integrity does not excuse academic dishonesty. You need to actively equip yourself with strategies to avoid all forms of academic dishonesty, including plagiarism, academic fraud, collusion and cheating. If you are uncertain of the definitions of any of these terms, you should go to the academic integrity website for more information. On the use of technological tools (such as Generative AI tools), different courses / assignments have different intended learning outcomes. Students should refer to the specific assignment instructions on their use and requirements and/or consult your instructors on how you can use these tools to help your learning. Consult your instructor(s) if you need any clarification about the requirements of academic integrity in the course.

Policy (General)

You are expected to complete all assigned readings, activities, assignments, attend all classes punctually and complete all scheduled assignments by due dates. You are expected to take responsibility to follow up with assignments and course related announcements. You are expected to participate in all project critiques, class discussions and activities.

Policy (Absenteeism)

In-class activities make up a significant portion of your course grade. Absence from class without a valid reason will affect your participation grade. Valid reasons include falling sick supported by a medical certificate and participation in NTU's approved activities supported by an excuse letter from the relevant bodies. There will be no make-up opportunities for in-class activities.

Policy (Others, if applicable)

Diversity and inclusion policy
Integrating a diverse set of experiences is important for a more comprehensive understanding of science.
It is our goal to create an inclusive and collaborative learning environment that supports a diversity of perspectives and learning experiences, and that honours your identities; including ethnicity, gender, socioeconomic status, sexual orientation, religion or ability.
To help accomplish this:
- If you are neuroatypical or neurodiverse, have dyslexia or ADHD (for example), or have a social anxiety disorder or social phobia;
- If you feel like your performance in the class is being impacted by your experiences outside of class;
- If something was said in class (by anyone, including the instructor) that made you feel uncomfortable;
Please speak to your teaching team, our school pastoral officer Christina Tee or a peer or senior (either in-person or via email) about how we can help facilitate your learning experience.
As a participant in course discussions, you should also strive to honour the diversity of your classmates. You can do this by: using preferred pronouns and names; being respectful of others opinions and actively making sure all voices are being heard; and refraining from the use of derogatory or demeaning speech or actions.

All members of the class are expected to adhere to the NTU anti-harassment policy. if you witness something that goes against this or have any other concerns, please speak to your instructors or a faculty member.

Last Updated Date: 04-07-2025 03:55:31

Last Updated By: Michel Ang Yan Xia