

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

Course Overview

Expected Implementation in Academic Year (New format)	AY2026-2027
Semester/Trimester/Others (specify approx. Start/End date)	Semester 1
Course Author * Faculty proposing/revising the course	Assoc Prof David Lallemant
Course Author Email	dlallemant@ntu.edu.sg
Course Title	Overseas Final Year Project
Course Code	ES4111
Academic Units	12
Contact Hours	468
Research Experience Components	Final Year Project (FYP)

Course Requisites (if applicable)

Pre-requisites	Completion of 105 AUs, 3.5 GPA; By permission from the faculty supervisor; ES3307 – Experimental Design & Analysis for Ecology (only Ecology and Ecosystem specialization)
Co-requisites	
Pre-requisite to	
Mutually exclusive to	
Replacement course to	
Remarks (if any)	

Course Aims

Completing an 8-month research attachment in a reputable overseas university allows students to gain insights into the breadth and diversity of research work in an international environment, and build a global network. Students will work with distinguished researchers in world-class laboratories, and develop an understanding of the processes involved in the design, development and implementation of a research project. Students will learn to critically review scientific literature, systematically collect data, and logically analyze results in a specialized area of study. They will also develop and polish their oral and written communication skills. After going through the rigorous research process, students will be well-prepared for higher degree studies (Ph.D.).

Course's Intended Learning Outcomes (ILOs)

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

ILO 1	Formulate appropriate research questions, and prioritize one for study.
ILO 2	Develop a methodology to test your chosen research question.
ILO 3	Coordinate and develop a plan to conduct your research, including safety and risk assessments, and liaising with faculty or research assistants.
ILO 4	Communicate this research proposal in a written document.
ILO 5	Apply the methodology in the lab, field or data collection or processing situation, and collect sufficient data for analysis.
ILO 6	Act appropriately at all times when in the lab.
ILO 7	Produce written documentation of lab/field/data collection or processing work activity throughout the process.
ILO 8	Analyse data quantitatively.
ILO 9	Interpret the results from data analysis.
ILO 10	Identify the influencing factors on the results, and discuss the wider reasons behind their influences.
ILO 11	Communicate these findings both in a written report, as an oral presentation, and as a poster presentation.
ILO 12	Manage your project effectively, including time, resources and other people.

Course Content

Course content will vary depending on the faculty member the student wishes to work with, and the subject they wish to do their research on.

Reading and References (if applicable)

Reading materials will be specific to each project. Suggestions for wider reading will be given by the faculty supervisor. Students will also be required to complete a literature review/topical essay, which will reveal many of the key texts applicable to your project.

Planned Schedule

Week or Session	Topics or Themes	ILO	Delivery Mode	Activities	Readings
1	Research Proposal	1,2,3,4	In-person	Drafting proposal	Varies
2	Interim Report	1,2,3,4,5,6,7	In-person	Review feedback on report. Discussion.	Varies
3	Final written report	1,2,3,4,5,6,7	In-person	Discuss outcome with faculty supervisor	Varies
4	Final Oral presentation	1,2,3,4,5,6,7	In-person	Deliver presentation	Varies
5	Research Competency	1,2,3,4,5,6,7	In-person	Discuss with faculty supervisor	Varies

Learning and Teaching Approach

Approach	How does this approach support you in achieving the learning outcomes?
Active Learning	Students gain responsibility for their project, higher level critical thinking and creative problem solving to address the rigours of completing a research project. You will also develop confidence in your subject material, which will greater aid your presentation abilities. Students will be supported in your active learning by your faculty supervisor, and your peers.

Assessment Structure

Assessment Components (includes both continuous and summative assessment)

No.	Component	ILO	Related PLO or Accreditation	Weightage	Description of Assessment Component	Team/Individual	Rubrics	Level of Understanding
1	Continuous Assessment (CA): Others (Research Proposal)	1,2,3,4		5	Students will prepare a written document outlining the potential areas of research, a specific research question, a set of research objectives, and then a proposed methodology to address the research question. This is designed to show the supervisor that the student understands the research involved.	Individual	Holistic	Extended Abstract

No.	Component	ILO	Related PLO or Accreditation	Weightage	Description of Assessment Component	Team/Individual	Rubrics	Level of Understanding
2	Continuous Assessment (CA): Report/Case study(Interim Report)	1,2,3,4,7		20	Students will prepare a written report with two parts, providing relevant background to the project and contextualizing the research through the introduction, and an outlining the methodology used and settled to tackle the research proposed.	Individual	Holistic	Extended Abstract

No.	Component	ILO	Related PLO or Accreditation	Weightage	Description of Assessment Component	Team/Individual	Rubrics	Level of Understanding
3	Continuous Assessment (CA): Others (Research Log)	5,6,7		10	Students will keep a continuous record of their actions in the lab and analyses, including times and dates, which lab processes were completed, which code workflow was set up for the analyses and any issues with the methodology, and how they solved these issues. The research log is written as part of interim and final report as well as all lab and field documentation.	Individual	Holistic	Extended Abstract

No.	Component	ILO	Related PLO or Accreditation	Weightage	Description of Assessment Component	Team/Individual	Rubrics	Level of Understanding
4	Continuous Assessment (CA): Others(Demonstration of Laboratory or Field competence)	2, 5, 6		15	This will be assessed continuously by the project supervisor, and will consider understanding of lab/field/data collection or processing techniques, correct demonstration of these techniques and overall competence and behaviour whilst conducting research.	Individual	Holistic	Extended Abstract

No.	Component	ILO	Related PLO or Accreditation	Weightage	Description of Assessment Component	Team/Individual	Rubrics	Level of Understanding
5	Continuous Assessment (CA): Report/Case study(Final Report with Graphical abstract)	1, 2, 3, 4, 5, 6, 7		30	Students will prepare a written document for the FYP Panel outlining their research, methodology, data collection, data analysis and interpretation, and discussion of their results. This document will be in the form of a scientific report, which can be used as part of a research portfolio. The student may be required to provide drafts of their final report, the deadlines for which will be decided with the faculty supervisor.	Individual	Holistic	Extended Abstract

No.	Component	ILO	Related PLO or Accreditation	Weightage	Description of Assessment Component	Team/Individual	Rubrics	Level of Understanding
6	Continuous Assessment (CA): Class Participation(Oral Presentation)	1, 2, 3, 4, 5, 6, 7		15	Students will give a 20-minute presentation on their research project. This will include a general overview of their research experience, as well as an overview of the findings outlined in their final written report.	Individual	Holistic	Extended Abstract
7	Continuous Assessment (CA): Others(Research Competency)	1, 2, 3, 4, 5, 6, 7		5	Students will be assessed by the FYP panel for their potential for research based work. The panel will evaluate their overall performance in the report and presentations.	Individual	Holistic	Extended Abstract

Description of Assessment Components (if applicable)

Research Proposal

Students will prepare a written document outlining the potential areas of research, a specific research question, a set of research objectives, and then a proposed methodology to address the research question. This is designed to show the supervisor that the student understands the research involved.

Interim Report

Students will prepare a written report with two parts, providing relevant background to the project and contextualizing the research through the introduction, and an outlining the methodology used and settled to tackle the research proposed.

Research Log

Students will keep a continuous record of their actions in the lab and analyses, including times and dates, which lab processes were completed, which code workflow was set up for the analyses and any issues with the methodology, and how they solved these issues. The research log is written as part of interim and final report as well as all lab and field documentation.

Demonstration of Laboratory or Field competence

This will be assessed continuously by the project supervisor, and will consider understanding of lab/field/data collection or processing techniques, correct demonstration of these techniques and overall competence and behaviour whilst conducting research.

Final Report with Graphical abstract

Students will prepare a written document for the FYP Panel outlining their research, methodology, data collection, data analysis and interpretation, and discussion of their results. This document will be in the form of a scientific report, which can be used as part of a research portfolio. The student may be required to provide drafts of their final report, the deadlines for which will be decided with the faculty supervisor.

Oral Presentation

Students will give a 20-minute presentation on their research project. This will include a general overview of their research experience, as well as an overview of the findings outlined in their final written report.

Research Competency

Students will be assessed by the FYP panel for their potential for research based work. The panel will evaluate their overall performance in the report and presentations.

Formative Feedback

Students will receive either written or verbal formal feedback from their project Supervisor(s) following each assessment criteria.

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
Communication	Advanced
Curiosity	Advanced
Problem Solving	Advanced
Embrace Challenge	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)

Students are expected to complete all assigned pre-class readings and activities, attend all lab sessions/field work appointments/seminar classes punctually and take all scheduled assignments and tests by due dates. Students are expected to take responsibility to follow up with course notes, assignments and course related announcements for seminar sessions they have missed. Students are expected to participate in all discussions and activities.

Policy (Absenteeism)

Absence from scheduled lab sessions/field work appointments/seminar classes without a valid reason will affect your overall course grade. Valid reasons include falling sick supported by a medical certificate. There will be limited make-up opportunities.

Policy (Others, if applicable)

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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. Consult your instructor(s) if you need any clarification about the requirements of academic integrity in the course.

Diversity and inclusion policy

Integrating a diverse set of experiences is important for a more comprehensive understanding of science.

It is our goal at ASE 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, a peer or senior, Janelle or Michel (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 an ASE faculty member.

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Last Updated By: Sze Chun Chau (Dr)