

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	AY 2020-21
Semester/Trimester/Others (specify approx. Start/End date)	Semester 1
Course Author * Faculty proposing/revising the course	Lee-Chua Lee Hong
Course Author Email	clhlee@ntu.edu.sg
Course Title	Final Year Project
Course Code	MT4005
Academic Units	8
Contact Hours	288
Research Experience Components	Final Year Project (FYP)

Course Requisites (if applicable)

Pre-requisites	Year 3 Standing
Co-requisites	
Pre-requisite to	
Mutually exclusive to	
Replacement course to	
Remarks (if any)	

Course Aims

Final year students will carry out independent Final Year Research Project work on any of the following disciplines in Maritime Studies: maritime logistics; shipping management; maritime technology; maritime science, shipping strategy; ship chartering; case studies; etc.

This will provide an opportunity for you to strategize a research programme; and acquire teamwork skills as it may involve 2 to 3 students.

The research project duration is over the entire academic year or calendar year.

A formal report will be required, and each student is required to make an oral presentation on the research work as made.

Course's Intended Learning Outcomes (ILOs)

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

ILO 1	Conduct and strategize an independent research investigation in maritime studies
ILO 2	Integrate concepts learnt in various subjects to Maritime Studies
ILO 3	Offer deep insights in an area of specialization within the discipline
ILO 4	Work effectively in team
ILO 5	write a full report and present findings as appropriate

Course Content

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Reading and References (if applicable)

Not applicable.

Planned Schedule

Week or Session	Topics or Themes	ILO	Readings	Delivery Mode	Activities
1	Week 1: Project Briefing	A,C,F	N/A		N/A
2	Week 2-7: Project Planning	A,B,L	N/A		N/A
3	Week 5-25: Project execution	A,B, C,D,F ,H,J	N/A		N/A
4	Week 13: Interim Report	B,C,F ,H,I	N/A		N/A
5	Week 23: Final Report	A,B, C,D, H,I	N/A		N/A
6	Week 26: Oral Presentation	H, I	N/A		N/A

Learning and Teaching Approach

Approach	How does this approach support you in achieving the learning outcomes?
Introduction of Project	You will need to understand the objectives, along with the relevant backgrounds to strategize your intended investigations.
Literature Review	You need to review published literature of related topics to your project. The review needs to be critical on what has been achieved and why you are continuing to work on this topic. The review enables you to integrate related concepts as learnt in class.
Methodology	This requires you to allocate the team members to analyse all factors in the problem and formulate a workable method or approach for the solution, noting dependency of constraints. A good and effective teamwork is desired.
Result Analysis and Discussion	You will develop the skills to analyse and interpret the results obtained from the experiments or simulations, with relations to deeper insights to area of investigations within the discipline, and eventually able to discuss the results and their limitations, drawing good conclusions.
Conclusion and Recommendation of Future Work	You will develop the skills to conclude what you have found from the research and to recommend meaningful future works through a full report and physical presentation of the facts and related studies.

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(Continuous Assessments (CA))	1, 2, 3, 5	A,B,C,D, E, F, H, K	30	Individual	Holistic	Extended Abstract
2	Continuous Assessment (CA): Others(Final Report)	2,3	A, B, C, D, E, F, H	55	Individual	Holistic	Extended Abstract
3	Continuous Assessment (CA): Presentation(Oral Presentatios)	5	H, I, J	15	Individual	Holistic	Extended Abstract

Description of Assessment Components (if applicable)

Program Learning Outcome

Competency

- A. Develop an overall awareness of maritime activities, port and shipping industry and their association with economy and trade. Describe and apply concepts and theories in sub-fields as contributing to the maritime industry and integrate various related themes, skills, and knowledge
- B. Understand and manage the maritime environment
- C. Apply related information pertaining to procedures, operations and management of maritime entities and operational issues in the maritime industry
- D. Capture and analyse market data using analytical tools, conduct related research in the maritime arena, as well as design, develop and execute maritime projects
- E. Appreciate the maritime environment for vocations and career options

Creativity

- F. Approach and solve basic maritime problems, through both strategic and research methods, and put theoretical knowledge into practical applications in related industries
- G. Develop maritime related risk management strategies.

Communications

- H. Communicate shipping and maritime management in policy, strategy, and prevailing issues and requirements in an organization and to achieve good teamwork.
- I. Write professional reports and conduct public speaking confidently

Character

- J. Recognize the importance of a strong and just leadership, comply to ethical standards, and uphold highest standards of integrity as a professional

Civic Mindedness

- K. Integrate all related skills and knowledge into the industry and exercise due diligence as a highly responsible professional, contributing towards nation and the society.

Formative Feedback

Student is expected to have regular discussions with supervisor on the progress and status of the research project to ensure the objectives are achieved over 2 semesters.

NTU Graduate Attributes/Competency Mapping

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

Attributes/Competency	Level
Communication	Advanced
Critical Thinking	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)

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)

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Last Updated By: Yang, En-Hua

Rubrics of MT4005 Final Year Project

Appendix 1: Continuous Assessment Criteria for MT4005 Final Year Project

Criteria	Details	Unsatisfactory (25%)	Satisfactory (50%)	Good (75%)	Exemplary (100%)
Approach during year (30 Marks)	Project Plan/Strategy (5)	Unable to plan activities to complete tasks assigned, even after supervisor's feedback.	With help from supervisor, able to make reasonable research plan to achieve the goals.	Able to plan research activities with minimal supervision. The plan is reasonable with proper background knowledge.	Able to make clear, reasonable, and effect research plan with all technical details to achieve the objectives without much help from supervisor.
	Ability to extend ideas and expand on suggestions (10)	Unable to extend ideas or expand on suggestions, even after supervisor's feedback.	Able to partially extend ideas and expand on suggestions with basic understanding.	Able to extend ideas and expand on suggestions with good understanding.	Able to extend ideas and expand on suggestions beyond expectation.
	General Initiative on the project (5)	Poor initiative, relying on supervisor, even after supervisor's feedback.	Making some initiative to meet the goals and scope of the project.	Able to take good initiative to achieve the goals and scope of work for most of project duration.	Highly motivated and able to take initiative to gain new knowledge and acquire skills related to project in achieving the goals.
	Progress Report (10)	Unable to complete the progress report on time, even after supervisor's feedback.	Able to complete the progress report but lacking in content, understandings and logic.	Able to complete the progress report with good content, understandings and logic.	The progress report is completed in time, and well written.

Appendix 2: Final Report and Oral Presentation Assessment Criteria for MT4005 Final Year Project

You are expected to submit a full technical report of around 40 pages. The oral presentation will be 30 minutes (including 15 minutes of questioning time).

Criteria	Details	Unsatisfactory (25%)	Satisfactory (50%)	Good (75%)	Exemplary (100%)
Report Presentation (10 Marks)	English, spelling, punctuation and style (5)	Many typos and grammatical errors with poorly constructed sentences. Report is not properly formatted, even after supervisor's feedback.	Some typos and grammatical errors. Report is properly formatted.	No typos or errors of any kind. Properly constructed sentences. Well-organized chapters and properly formatted report.	No typos or errors of any kind. Properly formatted report. Report is very well organised and written.
	Logical and orderly layout of report (5)	Layout of report is not logical, even after supervisor's feedback.	Layout and order of report is acceptable and reasonable logical.	Layout and order of report is good and logical.	Clear layout and order of report with logical link among the chapters.
Development, discussion and conclusion of work (45 Marks)	Understanding of the problem and limitations as demonstrated in the analysis of all factors in the problem, noting dependency of constraints. (10)	Poor analysis and not all the factors are considered, even after supervisor's feedback.	Adequate analysis and some factors are considered.	The factors are logically analyzed; trends are identified with further discussion.	Logical in-depth analysis is conducted; new ideas are proposed for possible new knowledge.
	Ability and independence in acquiring relevant data and information for the project. (10)	No relevant data acquired, and poor information and literature reviewed even after supervisor's feedback.	Relevant data acquired, and adequate information and literature are reviewed, but lacking in understandings and logic.	New and interesting data acquired, and information and literature reviewed are good for the project.	High quality and new data acquired, and information reviewed reflecting student's deep understanding of the topic.
	Analysis and discussion of results, showing the ability of the student to interpret the data obtained. (15)	No relevant results and poor discussion. Outcomes are oversimplified, even after supervisor's feedback. No reflection of work done.	Relevant results and adequate discussion are presented, but lacking in understandings and logic. Little reflection of work done.	New and interesting results with good discussion, and suggestions for future work. Highlight	High quality and new results, promising for a peer-reviewed publication, reflecting student's deep understanding of the topic. Recognized the

				some limitations of current work.	limitation of what has been achieved. Good suggestions for future work.
	The use of references - must be critical and give evidence of having read the related subject areas which are pertinent to the topic under investigation (a list of references alone is of NO use). (5)	Few and not up to date references are listed. Lack of citing in literature review of report, even after supervisor's feedback.	Adequate references are listed and cited in the report.	Good references are listed and cited in the literature review and throughout the report.	Excellent use and citing of references throughout the report. An in-depth literature review is conducted to highlight the research gap.
	Conclusions and recommendations, showing the ability of the student in making appropriate and relevant conclusions and recommendations based on the study. (5)	No conclusions drawn; related outcomes are oversimplified, even after supervisor's feedback. No reflection of work done.	Relevant results and adequate conclusions are made, but lacking in understandings and logic. Little reflection of work done.	Good conclusions are made in connection with the results and suggestions for future work. Highlight some limitation of current work.	Logical in-depth conclusions reflecting student's deep understanding of the topic. Recognized the limitation of what has been achieved. Good suggestions for future work.
Oral Presentation (15 Marks)	Contents, Organisation, and Q & A (15)	Poor content and slide design and presentation sequence is not logical. Unable to understand and answer questions, even after supervisor's feedback.	Adequate contents, average slide design, and reasonable depth of explanation. Able to understand and answer some questions.	Logical sequence, able to highlight major outcomes and offer good explanation, substantial effort in slide design. Able to understand and answer most questions.	Relevant content beyond the scope of project, able to correlate major outcomes to developments in the field, refreshing slide design. Able to understand and answer all questions, and also provide additional relevant information.