

The Hong Kong University of Science and Technology

UG Course Syllabus

Course title: Blue Economy

Course code: OCES 3005

No. of credits: 3

Pre-requisites / co-requisites: Nil

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Office hours: by appointment

Course description

This course explores the concept of the 'Blue Economy', which involves the sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of the ocean ecosystem. Students will gain a comprehensive understanding of the key sectors involved, the opportunities and challenges they present, and the policies and frameworks required to foster sustainability.

Intended learning outcomes (ILOs)

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

1. **Understand** the concept and scope of Blue Economy;
2. **Assess** the sustainability of various marine resource uses for economic benefits;
3. **Propose** innovative solutions for sustainable ocean resources utilization and management;
4. **Communicate** effectively blue economy to non-specialists, such as policymakers and the general public, using non-specialist language and appropriate visual aids.

Syllabus

See Appendix I

Required texts and materials

PowerPoint slides and reference materials will be uploaded to Canvas prior to each lecture.

Assessment and grading

This course will be assessed using criterion-referencing and grades will not be assigned using a curve. Detailed rubrics for each assignment are provided below, outlining the criteria for evaluation.

Assessment tasks

Date	Assessment task*	% of the final grade
Throughout the course	Concept check through Q&A on Mentimeter	8 times x 5 % each
9 & 14 Oct	Infographic presentation	10
20, 25 & 27 Nov	Final presentation	25
4 Dec (due date)	Written Report	25

*Marks will be released on Canvas within two weeks after individual assessment tasks

Mapping of course ILOs to assessment tasks

Assessed task	ILOs	Explanation
Concept check Q&A	1,2	These quizzes will assess students' understanding of the materials taught during lectures.
Infographics presentation	3,4	This 3-minute elevator-pitch infographics presentation will assess students' ability to propose innovative ideas for the sustainable utilization and management of ocean resources. It emphasizes creativity and the clear, concise communication of these ideas to a non-specialist audience.
Final presentation and written report	3,4	To succeed in both the final presentation and the report, students must demonstrate a comprehensive grasp of the course material, apply concepts inventively in practical situations, and clearly articulate their ideas for a broader audience, including specialists and non-specialists alike.

Grading rubrics

Assessment tasks	Rubrics
Concept check Q&A	No rubrics. MC questions.
Infographics presentation	See Appendix II
Final presentation	See Appendix III
Written report	See Appendix IV

Final grade descriptors

Grades	Short description	Elaborate on subject grading description
A	Excellent performance	Demonstrates an outstanding grasp of the concept and knowledge in Blue Economy, as well as the challenges in balancing immediate economic gains and long term sustainability of ocean resources. Exhibits exceptional creativity in proposing innovative approaches for sustainable utilization of ocean resources and proficiently communicate ideas in an oral presentation and written reports.
B	Good performance	Demonstrates a strong understanding of the concept and knowledge in Blue Economy, as well as the challenges in balancing immediate economic gains and long term sustainability of ocean resources. Exhibits high a level of creativity in proposing innovative approaches for sustainable utilization of ocean resources and effectively communicate ideas in an oral presentation and written reports.
C	Satisfactory performance	Displays a basic grasp of the concept and knowledge in Blue Economy, as well as the challenges in balancing immediate economic gains and long term sustainability of ocean resources. Demonstrate some creativity in proposing innovative approaches for sustainable utilization of ocean resources and possess basic skills to communicate ideas in an oral presentation and written reports.
D	Marginal Pass	Exhibits a basic grasp of the subject matter, but has difficulty evaluating tracking techniques and communicating findings effectively.
F	Fail	Lacks fundamental understanding of the course concepts regarding pollution sources, tracking methods and their evaluation. Unable to communicate information effectively and coherently.

Course AI Policy

The use of Generative AI in assessment tasks is permitted. However, you must provide proper credit for any use of generative AI. Failure to do so will be considered academic misconduct.

Please refer to the university's guidelines for more information: https://cei.hkust.edu.hk/en-hk/system/files?file=hkust_policy_principles_for_genai_for_tl_student_version.pdf

Communication and feedback

Marks for individual assessment tasks will be released via Canvas within two weeks of the assessment dates. Students who have questions about the marks should consult the instructor within 5 working days after the marks are released.

Resubmission policy

No resubmission allowed

Academic integrity

Students are expected to adhere to the university's academic integrity policy, uphold HKUST's Academic Honor Code, and maintain the highest standards of academic integrity. The University has zero tolerance of academic misconduct. Please refer to <https://registry.hkust.edu.hk/resource-library/academic-integrity> for the University's definition of plagiarism and ways to avoid plagiarism.

Appendix I - Syllabus

Week	Date	Topic
1	2 Sept 4 Sept	- Course Introduction - Introduction to Blue Economy
2	9 Sept 11 Sept	- Exclusive Economy Zone - Deep sea resources (1)
3	16 Sept 18 Sept	- Deep sea resources (2) - Deep sea resources (3)
4	23 Sept 25 Sept	- Field trip (1) – FMO, Aberdeen - Deep sea resources (4)
5	30 Sept 2 Oct	- Blue carbon (1) - Blue carbon (2)
6	7 Oct 9 Oct	- Public Holiday - Infographic presentation (1)
7	14 Oct 16 Oct	- Infographic presentation (2) - Blue carbon (3)
8	21 Oct 23 Oct	- Blue carbon (4) - Blue Biotechnology (1)
9	28 Oct 30 Oct	- Blue Biotechnology (2) - No class. Field trip on 15 Nov 2025 – HK Maritime Museum
10	4 Nov 6 Nov	- Blue Biotechnology (3) - Blue Biotechnology (3)
11	11 Nov 13 Nov	- Fisheries resources (1) - Fisheries resources (2)
12	18 Nov 20 Nov	- Monetizing blue economy - Final Presentation (1)
13	25 Nov 27 Nov	- Final presentation (2) - Final presentation (3)

Appendix II – Rubrics for 3-Minute Elevator-Pitch Presentation with Infographic presentation

Criteria	Excellent (4)	Good (3)	Fair (2)	Poor (1)
Creativity	Highly original and engaging presentation; unique approach to the topic.	Good creativity; some original elements, but relies on common ideas.	Limited creativity; few original elements; mostly conventional.	Lacks creativity; very basic or clichéd approach to the topic..
Content	Ideas presented clearly; thorough understanding of sustainable utilization and management of ocean resources.	Clear ideas; good understanding, but some aspects lack depth.	Ideas are present but lack clarity or depth.	Ideas are unclear or poorly developed.
Visual Design	Infographic is well-designed, visually appealing, and effectively supports the content.	Infographic is clear and organized but lacks creativity or strong visual impact.	Infographic is somewhat organized but lacks clarity or visual appeal.	Infographic is poorly designed, disorganized, and difficult to read or understand.
Communication	Clear, concise delivery; engages the audience effectively.	Generally clear delivery; engages the audience most of the time.	Delivery lacks clarity; minimal engagement with the audience.	Poor delivery; fails to engage or communicate effectively.
Time Management	Perfectly timed, within the 3-minute limit.	Slightly over/under time but still effective.	Noticeably over/under time; loses effectiveness.	Significantly over/under time; ineffective.

Appendix III – Rubrics for final presentation

Criteria	Excellent (4)	Good (3)	Fair (2)	Poor (1)
Content Knowledge	Comprehensive grasp of course material; insightful application in practical situations.	Good understanding; applies concepts well but lacks some depth.	Basic understanding; limited application of concepts.	Lacks understanding of course material; minimal application.
Clarity of Ideas	Ideas are articulated clearly; easy for all audiences to follow.	Generally clear; some ideas may be difficult for non-specialists to grasp.	Ideas are unclear; audience struggles to follow.	Ideas are poorly articulated; difficult for any audience to understand.
Engagement with Audience	Actively engages the audience; confident delivery with excellent use of body language and eye contact.	Engages the audience; good delivery with some body language.	Minimal engagement; delivery lacks confidence and body language.	No engagement; poor delivery; unprofessional and disengaged.
Use of Visual Aids	Visual aids are highly effective, enhancing understanding and engagement.	Visual aids are good and support the content well.	Visual aids are used but may be unclear or distracting.	Visual aids are poorly designed or not used effectively.
Time Management	Perfectly timed, within the 10-minute limit.	Slightly over/under time but still effective.	Noticeably over/under time; loses effectiveness.	Significantly over/under time; ineffective.

Appendix IV – Rubrics for written report

Criteria	Excellent (4)	Good (3)	Fair (2)	Poor (1)
Content	Thorough analysis; well-developed ideas related to Blue Economy.	Good analysis; ideas are mostly developed but lack depth in some areas.	Basic analysis; limited development of ideas.	Poor analysis; ideas are underdeveloped or irrelevant.
Structure and Organization	Exceptionally well-structured; logical flow that enhances understanding.	Generally well-structured; some issues with flow or organization.	Poor structure; difficult to follow the flow of ideas.	No clear structure; chaotic or confusing organization.
Clarity and Style	Writing is clear, concise, and professional; free of errors.	Mostly clear writing; some grammatical or stylistic errors.	Writing is unclear in places; multiple errors present.	Poor writing; numerous grammatical errors; difficult to read.
References and Citations	All sources are correctly cited; extensive use of relevant literature.	Most sources are cited correctly; good use of relevant literature.	Limited citations; some sources are not relevant or incorrectly cited.	Wrong or no citations; lack of relevant literature.
Word limit	Fully utilize the word limit to (+/- 5 %) effectively present ideas.	Slightly (10 %) over/under time but still effective.	Noticeably (20 %) over/under word limit; loses effectiveness.	Substantially (30%) over/under word limit; ineffective.